robucon pneumatiek-hydrauliek

Rexroth
Bosch Group
Sales Partner

Schakel richting blokeer 2/2 3/2 4/2 4/3 N.O. N.C. ventielen Cartridge uitvoering

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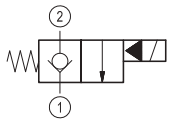
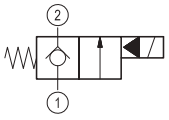
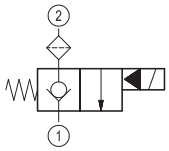
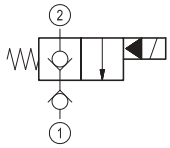
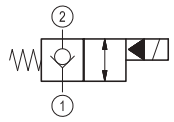
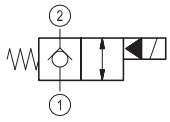
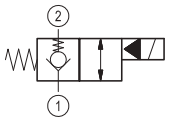
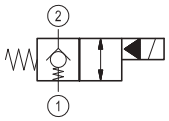
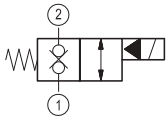
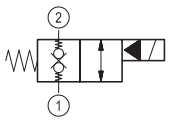
Solenoid - On-off pilot operated

Pilot operated poppet 2-way normally closed

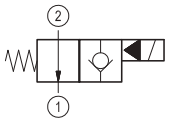
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEI-8I-06-NC	350 (5000)	up to 30 (8)	CA-08A-2N	S8	18323-01	669
	VEI-8A-06-NC	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-02	673
	VEI-8A-09-NC	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-03	689
	VEI-8A-12-NC	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-04	697
	VEI-8A-06-NC	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-02	673
	VEI-8A-09-NC	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-03	689
	VEI-8A-12-NC	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-04	697
	VEI-8I-06-NC	350 (5000)	up to 30 (8)	CA-08A-2N	S8	18323-01	669
	VEI-8A-06-NC-019-E	350 (5000)	up to 40 (11)	Special 019-E	S8	18323-20	677
	VEI-8A-09-NC	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-03	689
	VEI-8A-12-NC	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-04	697
	VEI-8I-06-NC	350 (5000)	up to 30 (8)	CA-08A-2N	S8	18323-01	669
	VEI-8A-06-NC	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-02	673
	VEI-8A-06-NC-ET	350 (5000)	40 (11)	CA-08A-2N	S8	18323-09	681
	VEI-8A-10-NC	350 (5000)	up to 70 (18)	CA-10A-2N	S8	18323-11	685
	VEI-8A-12-NC	350 (5000)	up to 150 (40)	CA-12A-2N	S8	18323-13	693
	VEI-8A-16A-NC	350 (5000)	up to 150 (40)	CA-16A-2N	S8	18323-17	701
	VEI-8A-09-NC	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-03	689
	VEI-8A-12-NC	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-04	697
	VEI-8A-06-NC-019-E	350 (5000)	up to 40 (11)	Special 019-E	S8	18323-20	677
	VEI-8A-06-NC	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-02	673
	VEI-8A-10-NC	350 (5000)	up to 70 (18)	CA-10A-2N	S8	18323-11	685
	VEI-8A-12-NC	350 (5000)	up to 150 (40)	CA-12A-2N	S8	18323-13	693
	VEI-8A-16A-NC	350 (5000)	up to 150 (40)	CA-16A-2N	S8	18323-17	701
	VEI-8A-09-NC	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-03	689
	VEI-8A-12-NC	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-04	697
	VEI-8A-2B-16-NC-NSS	350 (5000)	260 (69)	Special 004	S8	18323-15	705
	VEI-8A-06-NC-019-E	350 (5000)	up to 40 (11)	Special 019-E	S8	18323-20	677

Solenoid - On-off pilot operated

Pilot operated poppet 2-way normally closed

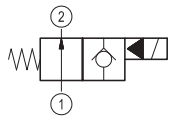
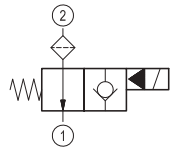
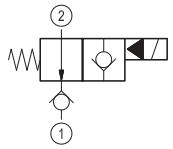
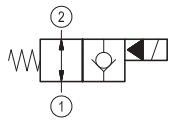
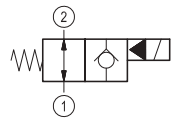
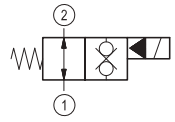
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEI-8A-06-NC	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-02	673
	VEI-8A-10-NC	350 (5000)	up to 70 (18)	CA-10A-2N	S8	18323-11	685
	VEI-8A-12-NC	350 (5000)	up to 150 (40)	CA-12A-2N	S8	18323-13	693
	VEI-8A-09-NC	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-03	689
	VEI-8A-12-NC	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-04	697
	VEI-8A-06-NC	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-02	673
	VEI-8A-10-NC	350 (5000)	up to 70 (18)	CA-10A-2N	S8	18323-11	685
	VEI-8A-12-NC	350 (5000)	up to 150 (40)	CA-12A-2N	S8	18323-13	693
	VEI-8A-09-NC	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-03	689
	VEI-8A-12-NC	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-04	697
	VEI-8A-06-NC	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-02	673
	VEI-8A-06-NC-ET	350 (5000)	40 (11)	CA-08A-2N	S8	18323-09	681
	VEI-8A-10-NC	350 (5000)	up to 70 (18)	CA-10A-2N	S8	18323-11	685
	VEI-8A-12-NC	350 (5000)	up to 150 (40)	CA-12A-2N	S8	18323-13	693
	VEI-8A-16A-NC	350 (5000)	up to 150 (40)	CA-16A-2N	S8	18323-17	701
	VEI-8A-09-NC	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-03	689
	VEI-8A-12-NC	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-04	697
	VEI-8A-06-NC	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-02	673
	VEI-8A-10-NC	350 (5000)	up to 70 (18)	CA-10A-2N	S8	18323-11	685
	VEI-8A-12-NC	350 (5000)	up to 150 (40)	CA-12A-2N	S8	18323-13	693
	VEI-8A-09-NC	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-03	689
	VEI-8A-12-NC	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-04	697

Pilot operated poppet 2-way normally open

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEI-8I-06-NA	350 (5000)	up to 30 (8)	CA-08A-2N	S8	18323-05	709
	VEI-8A-06-NA	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-06	713
	VEI-8A-09-NA	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-07	725
	VEI-8A-12-NA	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-08	733

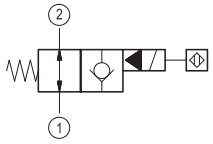
Solenoid - On-off pilot operated

Pilot operated poppet 2-way normally open

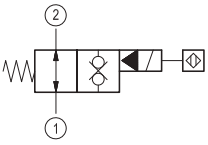
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEI-8A-06-NA	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-06	713
	VEI-8A-09-NA	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-07	725
	VEI-8A-12-NA	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-08	733
	VEI-8I-06-NA	350 (5000)	up to 30 (8)	CA-08A-2N	S8	18323-05	709
	VEI-8A-06-NA-019-E	350 (5000)	up to 40 (11)	Special 019-E	S8	18323-21	717
	VEI-8A-09-NA	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-07	725
	VEI-8A-12-NA	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-08	733
	VEI-8I-06-NA	350 (5000)	up to 30 (8)	CA-08A-2N	S8	18323-05	709
	VEI-8A-06-NA	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-06	713
	VEI-8A-10-NA	350 (5000)	up to 70 (18)	CA-10A-2N	S8	18323-12	721
	VEI-8A-12A-NA	350 (5000)	up to 150 (40)	CA-12A-2N	S8	18323-14	729
	VEI-8A-16A-NA	350 (5000)	up to 150 (40)	CA-16A-2N	S8	18323-18	737
	VEI-8A-09-NA	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-07	725
	VEI-8A-12-NA	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-08	733
	VEI-8A-06-NA-019-E	350 (5000)	up to 40 (11)	Special 019-E	S8	18323-21	717
	VEI-8A-06-NA	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-06	713
	VEI-8A-10-NA	350 (5000)	up to 70 (18)	CA-10A-2N	S8	18323-12	721
	VEI-8A-12A-NA	350 (5000)	up to 150 (40)	CA-12A-2N	S8	18323-14	729
	VEI-8A-16A-NA	350 (5000)	up to 150 (40)	CA-16A-2N	S8	18323-18	737
	VEI-8A-09-NA	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-07	725
	VEI-8A-12-NA	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-08	733
	VEI-8A-2B-16-NA-NSS	350 (5000)	up to 260 (69)	Special 004	S8	18323-16	741
	VEI-8A-06-NA	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-06	713
	VEI-8A-10-NA	350 (5000)	up to 70 (18)	CA-10A-2N	S8	18323-12	721
	VEI-8A-12A-NA	350 (5000)	up to 150 (40)	CA-12A-2N	S8	18323-14	729
	VEI-8A-16A-NA	350 (5000)	up to 150 (40)	CA-16A-2N	S8	18323-18	737
	VEI-8A-09-NA	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-07	725
	VEI-8A-12-NA	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-08	733

Solenoid - On-off pilot operated

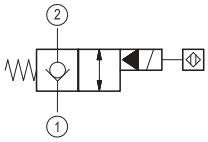
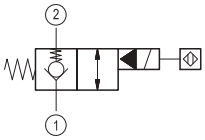
Pilot operated poppet 2-way normally open proximity sensor

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEI-8A-2A-06-NA-S-M-NSS	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18325-07	745
	VEI-8A-2A-09-NA-S-M-NSS	350 (5000)	up to 70 (18)	Special 076-E	S8	18325-08	749
	VEI-8A-2A-09-NA-S-M-NSS	350 (5000)	up to 70 (18)	Special 017-E	S8	18325-09	753
	VEI-8A-2A-12-NA-S-M-NSS	350 (5000)	up to 150 (40)	Special 021-E	S8	18325-10	757

Pilot operated poppet 2-way normally open double lock proximity sensor

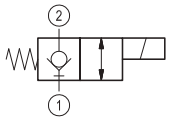
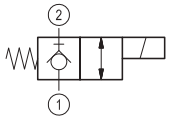
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEI-8A-2T-06-NA-S-M-NSS	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18325-16	761
	VEI-8A-2T-09-NA-S-M-NSS	350 (5000)	up to 70 (18)	Special 017-E	S8	18325-15	765

Pilot operated poppet 2-way normally closed proximity sensor

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VESP-8A-2A-12A/00-2A05-N7	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18325-03	769
	VESP-16G-16A/00-2A-N7	350 (5000)	up to 150 (40)	Special 021-E	S7	18325-05	777
	VESP-12G-16A/00-2A05-N7	350 (5000)	up to 70 (18)	Special 017-E	S7	18325-04	773
	VESP-16G-16A/00-2A-N7	350 (5000)	up to 150 (40)	Special 021-E	S7	18325-05	777

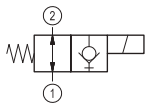
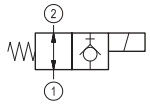
Solenoid - On-off direct acting

Direct acting 2-way poppet type normally closed

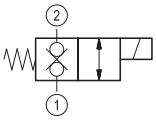
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VED-8I-NC	350 (5000)	1.5 (0.4)	CA-08A-2N	S8	18324-06	783
	VED-8I-NC	350 (5000)	1.5 (0.4)	CA-08A-2N	S8	18324-06	783

Solenoid - On-off direct acting

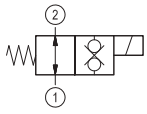
Direct acting 2-way poppet type normally open

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VED-8I-NA	350 (5000)	1.5 (0.4)	CA-08A-2N	S8	18324-07	787
	VED-8I-NA	350 (5000)	1.5 (0.4)	CA-08A-2N	S8	18324-07	787

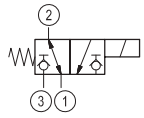
Direct acting 2-way poppet type normally closed double lock

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEDT-08A-A-12.7-NC	250 (3600)	15 (4)	CA-08A-2N	S8	18324-01	791
	VEDT-08A-A-16-NC	250 (3600)	25 (7)	CA-08A-2N	S7	18324-03	795
	VEDT-08F-A-16	250 (3600)	25 (7)	Special CA-08F-2N	S7	18324-04	799
	KSDE U/R 8	500 (7250)	5 (1.3)	T-8A	GZ37	18136-12	947
	KSDE 0	350 (5000)	20 (5)	Special	GZ37	18136-23	957
	KSDE U/R 1	500 (7250)	20 (5)	T-13A	GZ37	18136-20	965

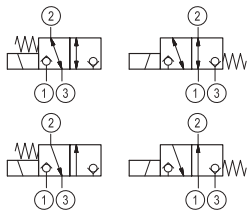
Direct acting 2-way poppet type normally open double lock

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEDT-08F-A-16	250 (3600)	25 (7)	Special CA-08F-2N	S7	18324-04	799
	KSDE U/R 8	500 (7250)	5 (1.3)	T-8A	GZ37	18136-12	947
	KSDE 0	350 (5000)	20 (5)	Special	GZ37	18136-23	957
	KSDE U/R 1	500 (7250)	20 (5)	T-13A	GZ37	18136-20	965

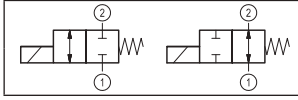
Direct acting poppet 3-way 2-position

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEDT-08A-32	250 (3600)	15 (4)	CA-08A-3N	S8	18324-05	803

Direct acting seat valve 3-way 2-position

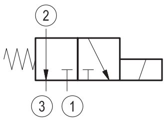
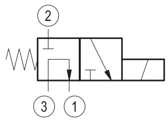
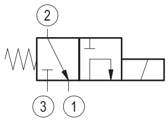
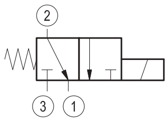
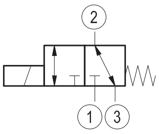
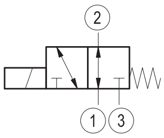
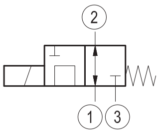
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	KSDER1-C	350 (5000)	12 (3)	T-11A	GZ37	18136-21	973
	KSDER1-U	350 (5000)	12 (3)	T-11A	GZ37	18136-21	973
	KSDEU1-C	500 (7250)	6 (2)	T-11A	GZ37	18136-21	973
	KSDEU1-U	500 (7250)	6 (2)	T-11A	GZ37	18136-21	973

Direct acting spool type 2-way 2-position

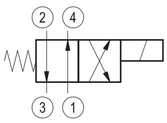
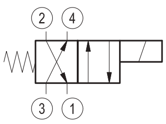
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	KKDER1 N-P	350 (5000)	55 (15)	T-13A	GZ37	18136-06	1001
	KKDER8 N-P	350 (5000)	45 (12)	T-8A	GZ37	18136-08	981

Solenoid - On-off direct acting

Direct acting 3-way 2-position spool type

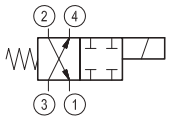
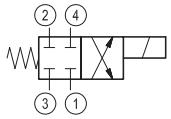
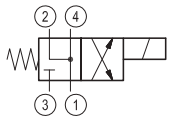
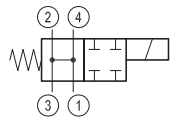
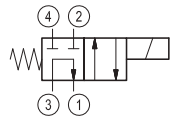
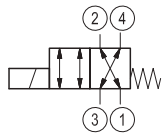
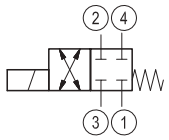
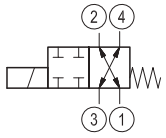
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEDS-08A-32	315 (4500)	20 (5)	CA-08A-3N	S8	18324-50	807
	VED-10A-32	210 (3000)	20 (6)	CA-10A-3N	S7	18324-58	819
	VEDS-12A-32	315 (4500)	60 (16)	CA-12A-3N	R5	18324-56	831
	VEDS-08A-32	315 (4500)	20 (5)	CA-08A-3N	S8	18324-50	807
	VED-10A-32	210 (3000)	20 (6)	CA-10A-3N	S7	18324-58	819
	VEDS-08A-32	315 (4500)	20 (5)	CA-08A-3N	S8	18324-50	807
	VED-10A-32	210 (3000)	20 (6)	CA-10A-3N	S7	18324-58	819
	VEDS-08A-32	315 (4500)	20 (5)	CA-08A-3N	S8	18324-50	807
	VED-10A-32	210 (3000)	20 (6)	CA-10A-3N	S7	18324-58	819
	KKDER1-C	350 (5000)	60 (16)	T-11A	GZ37	18136-04	1011
	KKDER8-C	350 (5000)	30 (12)	T-9A	GZ37	18136-09	991
	KKDER1-U	350 (5000)	60 (16)	T-11A	GZ37	18136-04	1011
	KKDER8-U	350 (5000)	30 (12)	T-9A	GZ37	18136-09	991
							
	KKDER8-G	350 (5000)	30 (12)	T-9A	GZ37	18136-09	991

Direct acting 4-way 2-position spool type

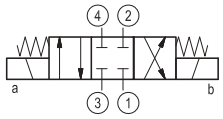
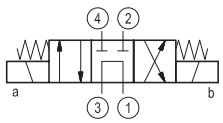
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEDS-08A-42	210 (3000)	16 (4)	CA-08A-4N	S8	18324-51	811
	VED-10A-42	210 (3000)	20 (5)	CA-10A-4N	S7	18324-59	823
	VEDS-08A-42	210 (3000)	16 (4)	CA-08A-4N	S8	18324-51	811

Solenoid - On-off direct acting

Direct acting 4-way 2-position spool type

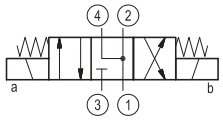
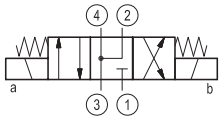
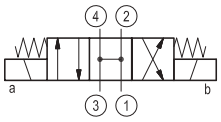
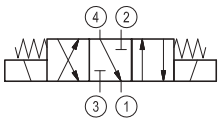
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VED-10A-42	210 (3000)	20 (5)	CA-10A-4N	S7	18324-59	823
	VEDS-08A-42	210 (3000)	16 (4)	CA-08A-4N	S8	18324-51	811
	VED-10A-42	210 (3000)	20 (5)	CA-10A-4N	S7	18324-59	823
	VEDS-08A-42	210 (3000)	16 (4)	CA-08A-4N	S8	18324-51	811
	VEDS-08A-42	210 (3000)	16 (4)	CA-08A-4N	S8	18324-51	811
	VEDS-08A-42	210 (3000)	16 (4)	CA-08A-4N	S8	18324-51	811
	KKDER1-D	350 (5000)	40 (11)	T-31A	GZ37	18136-05	1021
	KKDER1-E	350 (5000)	40 (11)	T-31A	GZ37	18136-05	1021
	KKDER1-F	350 (5000)	40 (11)	T-31A	GZ37	18136-05	1021

Direct acting 4-way 3-position spool type

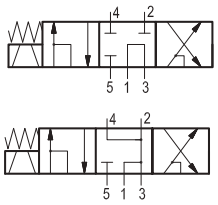
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEDS-08A-43	315 (4500)	20 (5)	CA-08A-4N	S8	18324-52	815
	VED-10A-43	210 (3000)	20 (6)	CA-10A-4N	S7	18324-60	827
	VEDS-08A-43	315 (4500)	20 (5)	CA-08A-4N	S8	18324-52	815
	VED-10A-43	210 (3000)	20 (6)	CA-10A-4N	S7	18324-60	827

Solenoid - On-off direct acting

Direct acting 4-way 3-position spool type

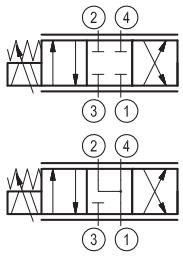
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEDS-08A-43	315 (4500)	20 (5)	CA-08A-4N	S8	18324-52	815
	VED-10A-43	210 (3000)	20 (6)	CA-10A-4N	S7	18324-60	827
	VEDS-08A-43	315 (4500)	20 (5)	CA-08A-4N	S8	18324-52	815
	VEDS-08A-43	315 (4500)	20 (5)	CA-08A-4N	S8	18324-52	815
	VED-10A-43	210 (3000)	20 (6)	CA-10A-4N	S7	18324-60	827
	VEDS-08A-43	315 (4500)	20 (5)	CA-08A-4N	S8	18324-52	815

Direct acting 5-way 3-position spool type

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEDS-10A-53	250 (3600)	25 (7)	CA-10A-4N	GZ37	18158	1031

Solenoid - Electro-proportional

Electro-proportional Direct acting 4-way 3-position

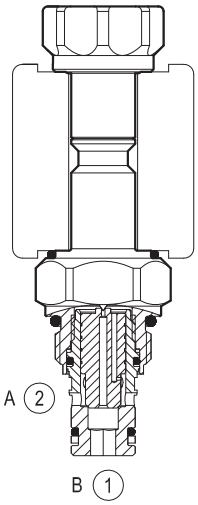
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEPS-10A-43	350 (5000)	25 (7)	Size 10	GP37	18162	1133

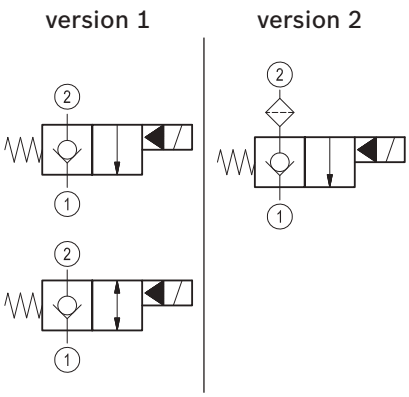
RE 18323-01/02.11
Replaces: RE 18323-01/08.10

Solenoid operated valves pilot operated poppet type 2-way normally closed

Common cavity, Size 08

VEI-8I-06-NC OD.15 - X - 18 - Y - S0





General

Weight	kg (lbs)	0.11 (0.24)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Max. proof pressure	bar (psi)	420 (6000)
Flow range	l/min. (gpm)	0.5-30 (0.1-8)
Fatigue cycle life	cycles	1 million cycles at 350 bar
Max. internal leakage	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	39-51 (29-38)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-08A-2N see RE 18325-75
Seal kit version 1-2	code material no.	RG08A201052100 R901101437
Seal kit coil	code material no.	RG12I1PNBR7010 R934003957
Other technical data		See data sheet RE 18350-50

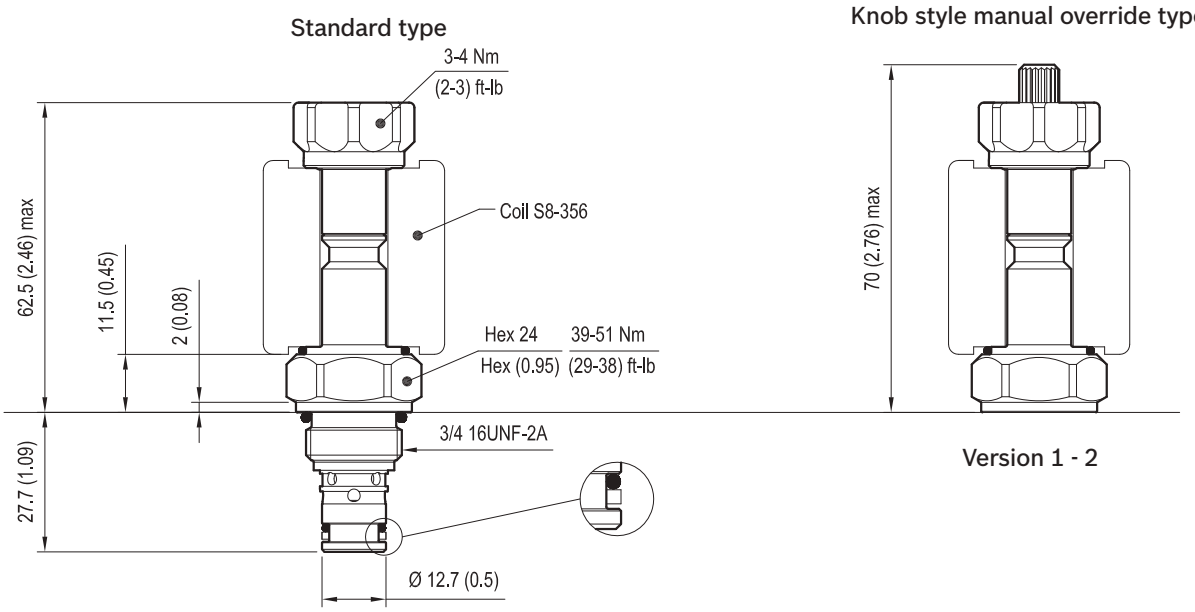
Electrical

Type of voltage		DC voltage
Coil type		S8-356 see RE 18325-90
Supply voltage		See data sheet RE 18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90

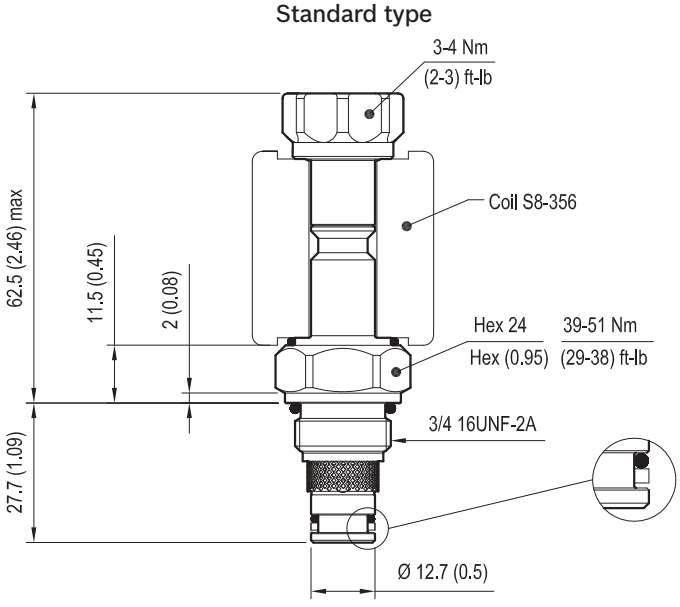
Note: Coils must be ordered separately.

Dimensions

Version 1: Solenoid operated valve, poppet 2-way normally closed



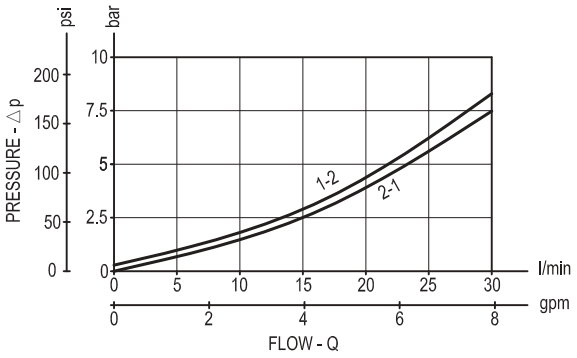
Version 2 : Solenoid operated valve, poppet 2-way normally closed - filter



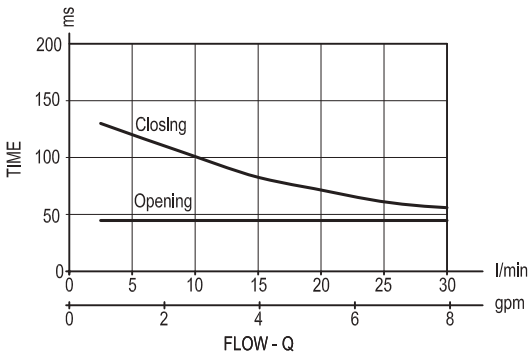
mm (Inches)

Performance graphs

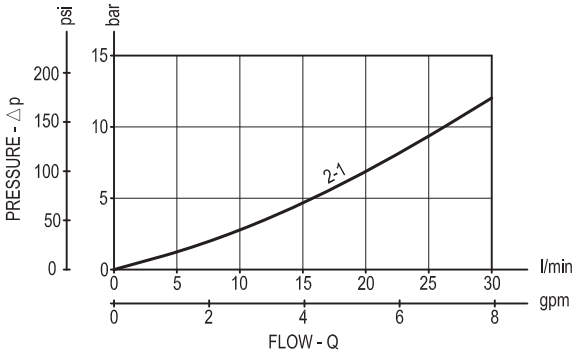
Version 1



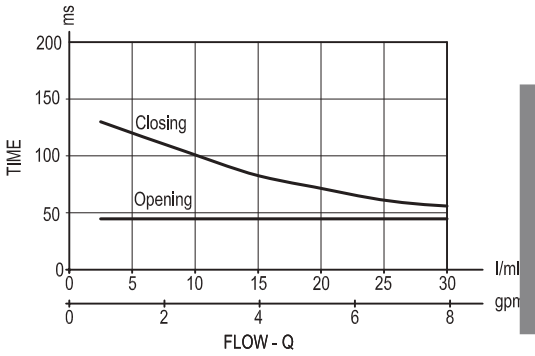
Standard



Version 2



Standard



4

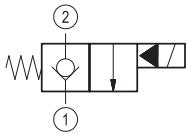
Ordering code

OD.15	*	18	*	S0

Solenoid operated valves
poppet type 2-way
normally closed

Tube not welded

monodirectional type



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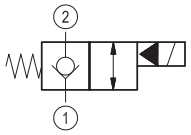
bidirectional type



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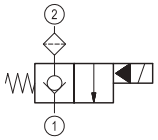
monodirectional type with filter



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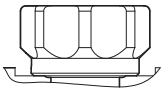
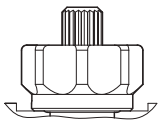
standard type

3I =



knob style manual override

3M =



Common cavity: CA-08A-2N

Type	Material number
OD1501183IS000	R901090962
OD1501183MS000	R901090966
OD1505183IS000	R901090953
OD1505183MS000	R901090950
OD1507183IS000	R901091142
OD1507183MS000	R934003486

Type	Material number

Bosch Rexroth Oil Control S.p.A.
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Fax +39 059 547 848
cartridges@oilcontrol.com
www.boschrexroth.com

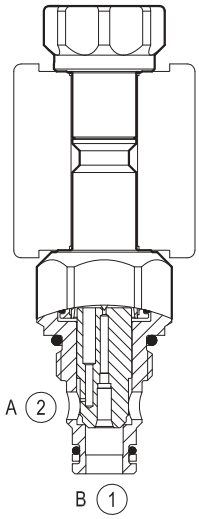
RE 18323-02/09.11
Replaces: RE 18323-02/02.11

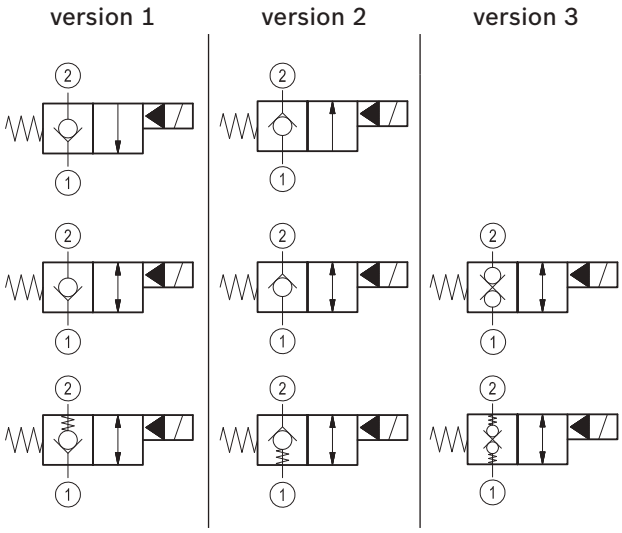
Solenoid operated valves pilot operated poppet type 2-way normally closed

Common cavity, Size 08

VEI-8A-06-NC

OD.15 - X - Y - Z - S





General

Weight	kg (lbs)	0.16 (0.35)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Max. proof pressure	bar (psi)	420 (6000)
Flow range	l/min. (gpm)	0.5-40 (0.1-11)
Fatigue cycle life	cycles	1 million cycles at 350 bar
Max. internal leakage	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	39-51 (29-38)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-08A-2N see RE 18325-70
Seal kit version 1	code material no.	RG08A2010520100 R901101437
Seal kit version 2-3	code material no.	RG08A2010530100 R901101544
Seal kit coil	code material no.	RG12A1PNBR7010 R934003958
Other technical data		See data sheet RE 18350-50

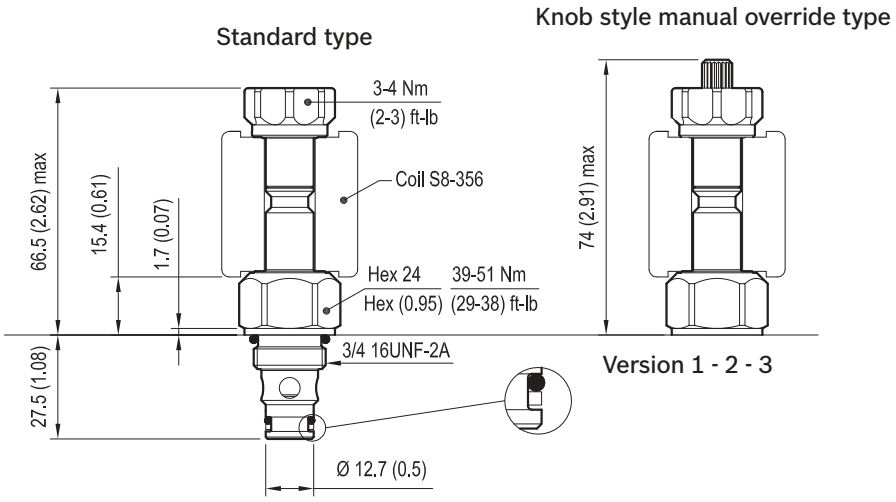
Electrical

Type of voltage		DC voltage
Coil type		S8-356 see RE 18325-90
Supply voltage		See data sheet RE 18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90

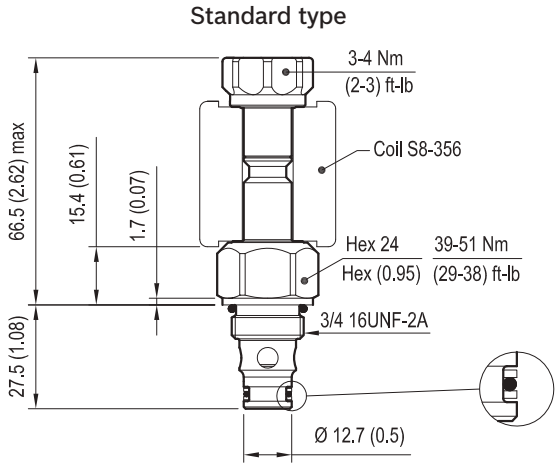
Note: Coils must be ordered separately.

Dimensions

Version 1: Solenoid operated valve, poppet 2-way normally closed



Version 2: Solenoid operated valve, poppet 2-way normally closed
Version 3: Solenoid operated valve, poppet 2-way double lock normally closed

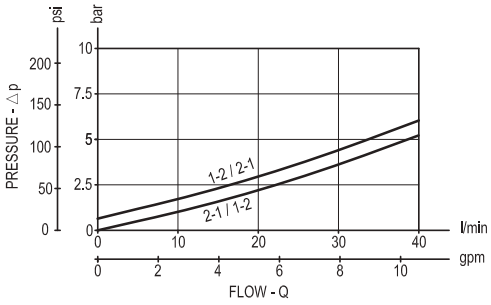


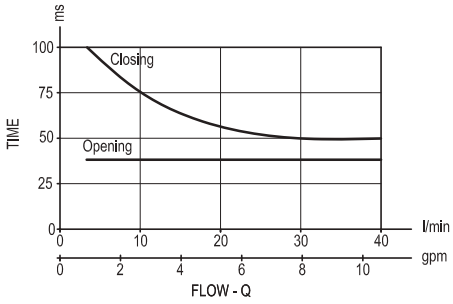
mm (Inches)

Performance graphs

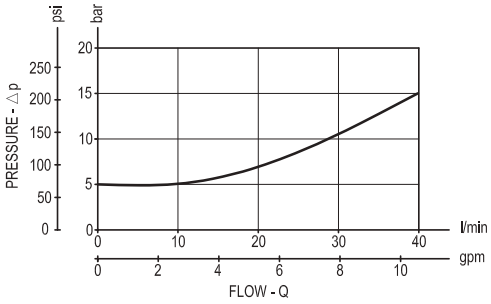
Version 1 - Version 2

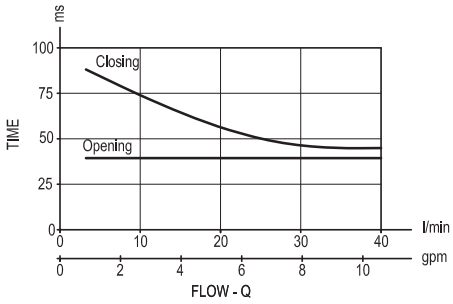
Standard





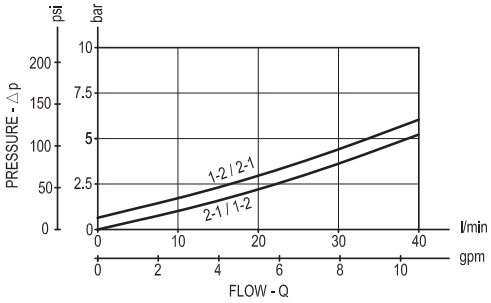
Extra spring

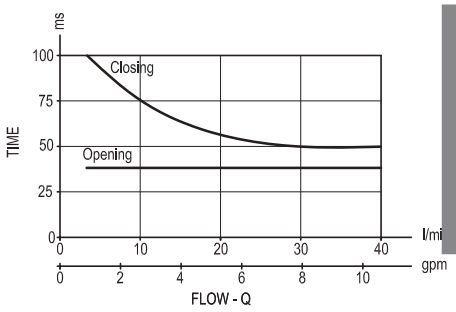




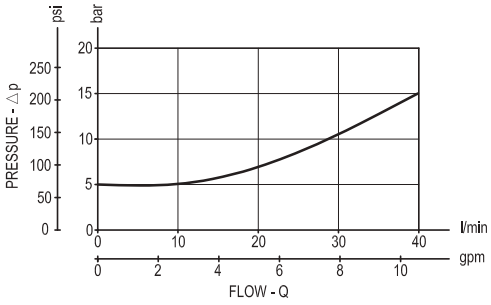
Version 3

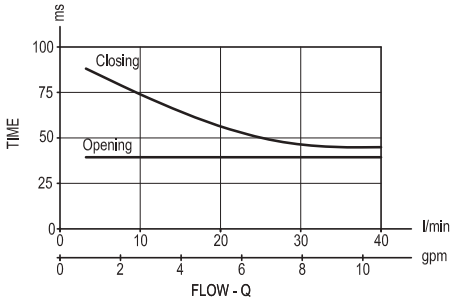
Standard





Extra spring





4

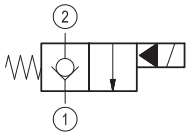
Ordering code

OD.15	X	Y	Z	*

Solenoid operated valves poppet type 2-way normally closed

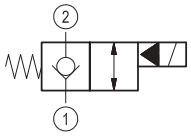
X

monodirectional type



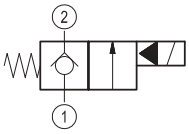
= 01

bidirectional type



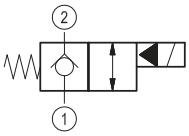
= 05

monodirectional type



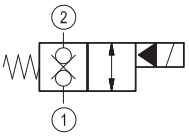
= 09

bidirectional type



= 03

bidirectional type



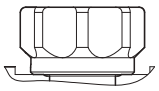
= 31

Y

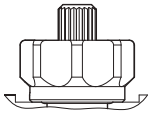
18 = Common cavity: CA-08A-2N

Z

3A = standard type



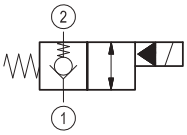
3D = knob style manual override



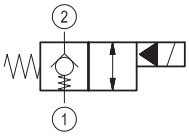
*****

S0 = Tube not welded

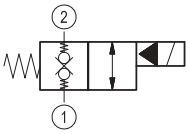
S8 = Tube not welded with extra spring



for X= 05



for X= 03



for X= 31

Type	Material number
OD1501183AS000	R901091096
OD1501183DS000	R901091101
OD1503183AS000	R934000779
OD1503183AS800	R934003063
OD1503183DS000	R901091112
OD1503183DS800	R934003064
OD1505183AS000	R901083058
OD1505183AS800	R934003080
OD1505183DS000	R901087979

Type	Material number
OD1509183AS000	R901091150
OD1509183DS000	R901091151
OD1531183AS000	R901082015
OD1531183AS800	R934000104
OD1531183DS000	R901091164

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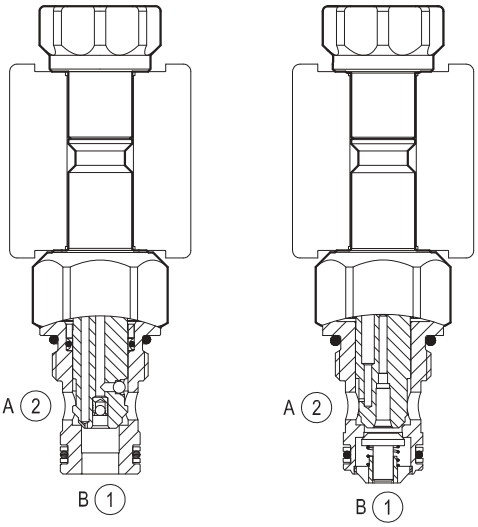
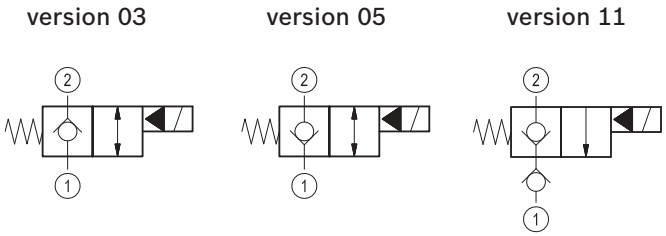
RE 18323-20/11.11
Replaces: RE 18323-20/09.11

Solenoid operated valves pilot operated poppet type 2-way normally closed

Special cavity, 019-E

VEI-8A-06-NC OD.15 - X - 19 - Z





General

Weight	kg (lbs)	0.13 (0.29)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Max. proof pressure	bar (psi)	420 (6000)
Flow range	l/min. (gpm)	0.5-40 (0.1-11)
Fatigue cycle life	cycles	1 million cycles at 350 bar
Max. internal leakage	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	39-51 (29-38)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Special cavity		019-E see RE 18325-75
Seal kit version 03-11	code material no.	RG19E201053010 R934003561
Seal kit version 05	code material no.	RG19E201052010 R934003560
Seal kit coil	code material no.	RG12A1PNBR7010 R934003958
Other technical data		See data sheet RE 18350-50

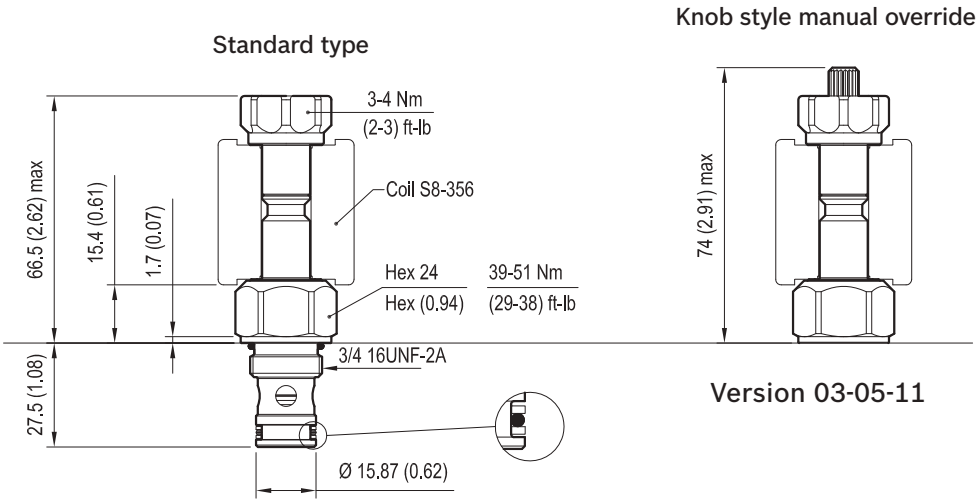
Electrical

Type of voltage		DC voltage
Coil type		S8-356 see RE 18325-90
Supply voltage		See data sheet RE 18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90

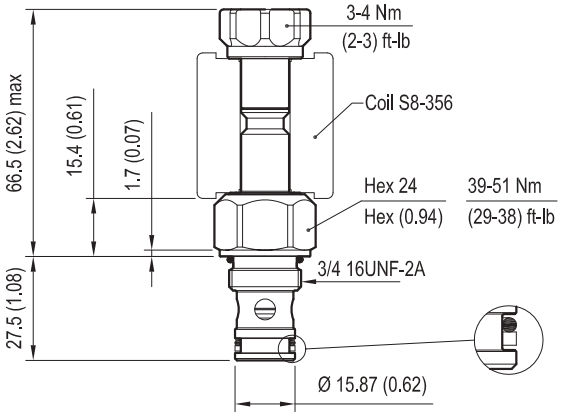
Note: Coils must be ordered separately.

Dimensions

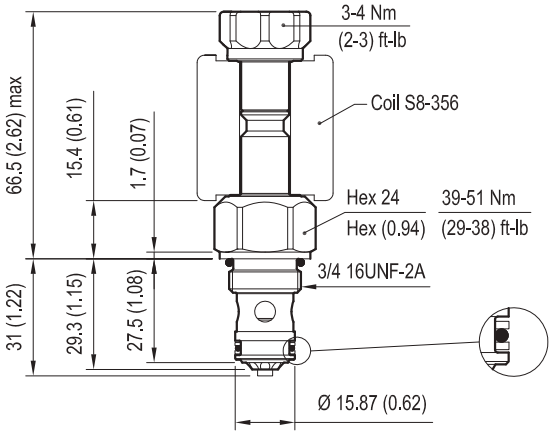
Version 03: Solenoid operated valve, poppet 2-way normally closed



Version 05: Solenoid operated valve, poppet 2-way normally closed



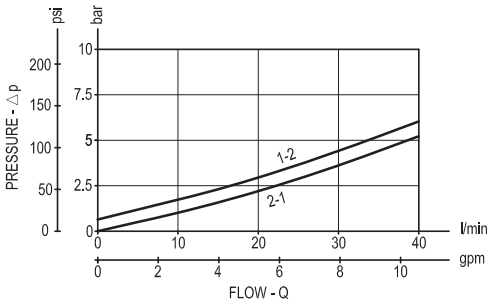
Version 11: Solenoid operated valve, poppet 2-way normally closed

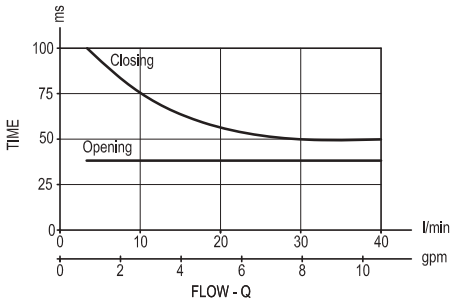


mm (Inches)

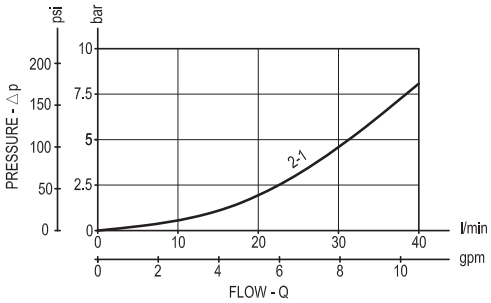
Performance graphs

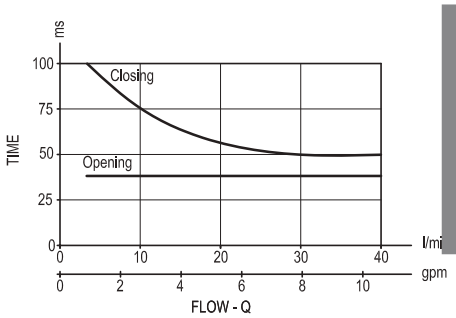
Version 03-05





Version 11





4

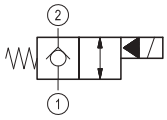
Ordering code

OD.15	X	19	Z	*

Solenoid operated valves
poppet type 2-way
normally closed

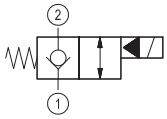
S0 = Tube not welded

bidirectional type



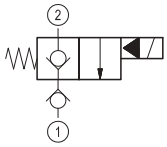
03 =

bidirectional type



05 =

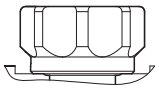
monodirectional type



11 =

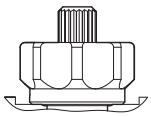
standard type

3A =



knob style manual override

3D =



Special cavity: 019-E

Type	Material number
OD1503193AS00	R934000785
OD1503193DS00	R934000786
OD1505193AS00	R934000895
OD1505193DS00	R934000898
OD1511193AS000	R901091157
OD1511193DS000	R901091158

Type	Material number

Bosch Rexroth Oil Control S.p.A.
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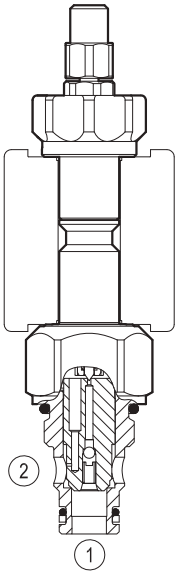
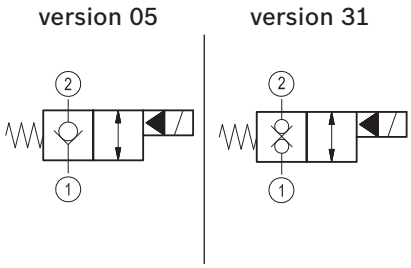
RE 18323-09/08.10
Replaces: 01.06

Solenoid operated valves pilot operated poppet 2-way normally closed

Common cavity, Size 08

VEI-8A-06-NC-ET OD.15 - X - 18.3C - Z





General

Weight	kg (lbs)	0.13 (0.29)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Rated flow	l/min. (gpm)	40 (11)
Max. internal leakage	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	39-51 (29-38)
Filtration		Nominal value max. 25µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-08A-2N see RE 18325-70
Seal kit - version 05	code material no.	RG08A2010520100 R901101437
Seal kit - version 31	code material no.	RG08A2010530100 R901101544
Seal kit coil	code material no.	RG12A1PNBR7010 R934003958
Other technical data		See data sheet RE 18350-50

Electrical

Type of voltage		DC voltage
Coil type		S8-356 see RE 18325-90
Supply voltage		See data sheet RE 18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90

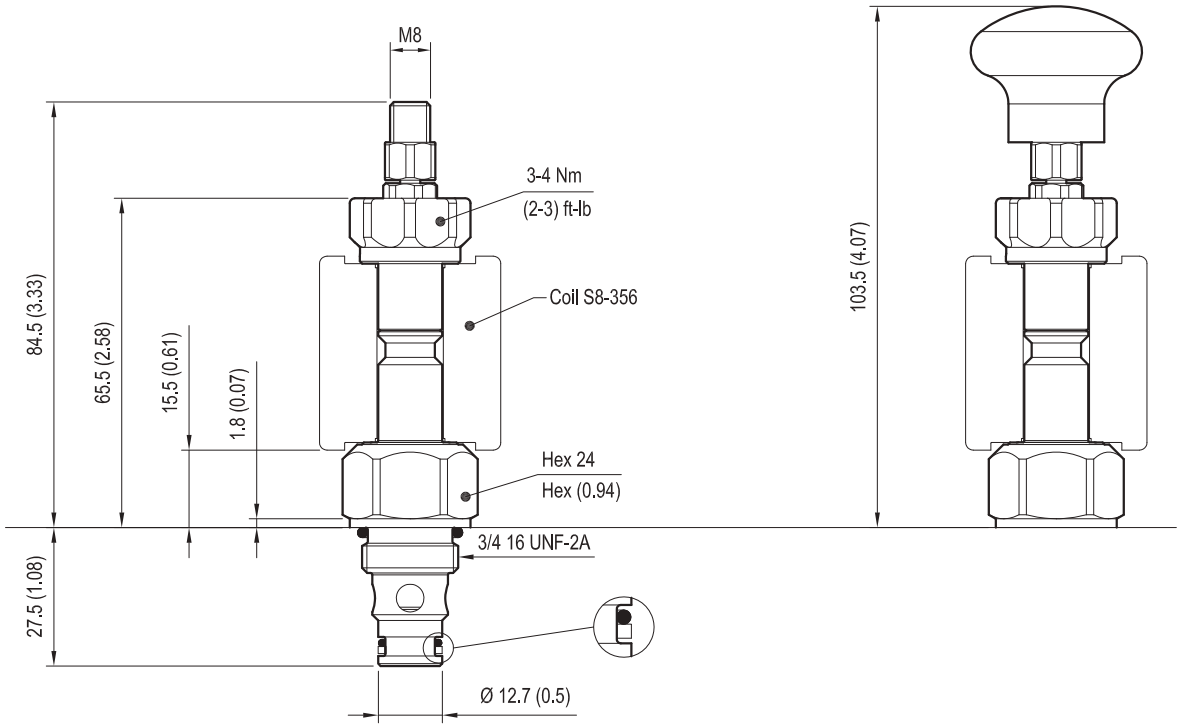
Note: Coils must be ordered separately.

Dimensions

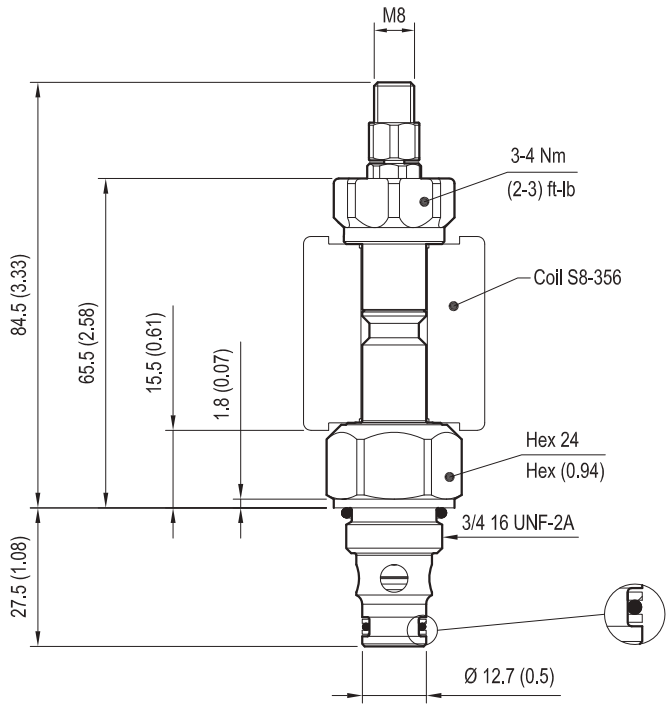
Version 05: Solenoid operated valves poppet 2-way normally closed

Cable operated pull style override

Hand operated pull style override



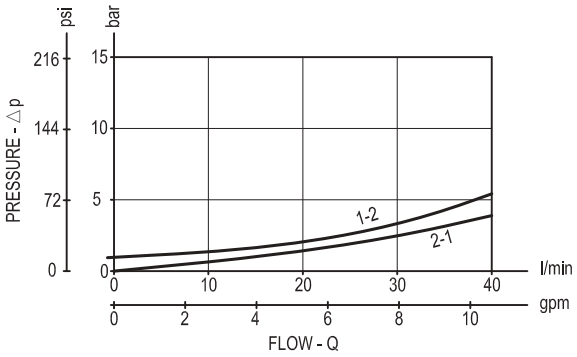
Version 31: Solenoid operated valves poppet 2-way double lock normally closed

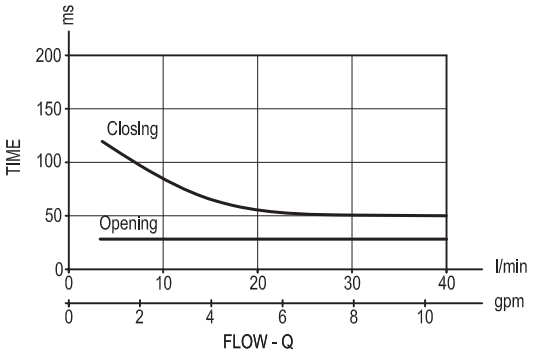


mm (Inches)

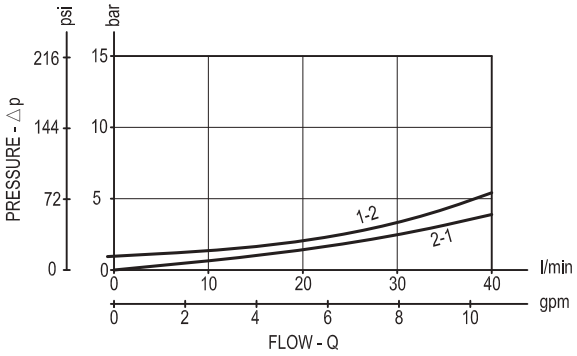
Performance graph

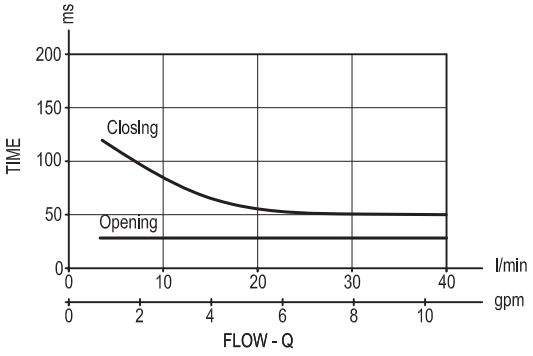
Version 05





Version 31



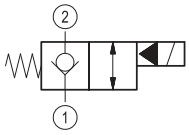


4

Ordering code

OD.15	*	18	3C	*

Solenoid operated valves poppet 2-way normally closed



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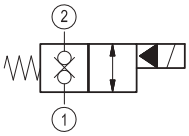
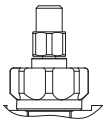


= 31

Cable operated pull style override

S0 =



Hand operated pull style override

S1 =

Common cavity: CA-08A-2N

Type	Material number
OD1505183CS000	R901094735
OD1505183CS100	R901094737
OD1531183CS000	R901109982
OD1531183CS100	R901109983

Type	Material number

Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
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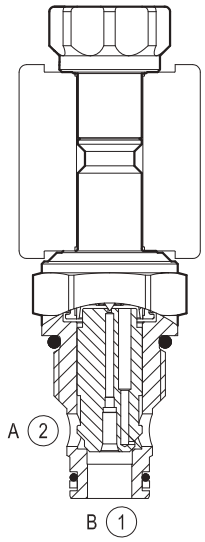
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
cartridges@oilcontrol.com
www.boschrexroth.com

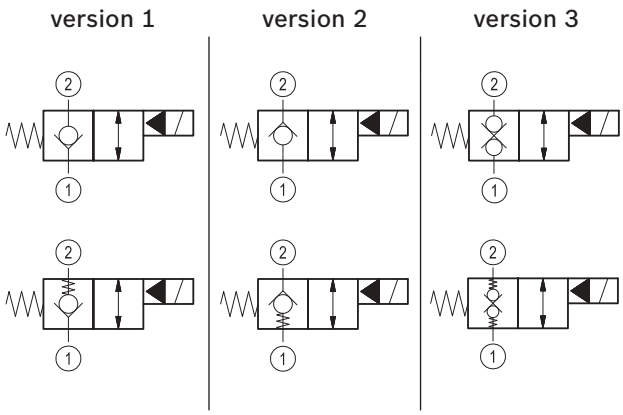
RE 18323-11/02.11
Replaces: RE 18323-11/08.10

Solenoid operated valves pilot operated poppet type 2-way normally closed

Common cavity, Size 10

VEI-8A-10-NC **OD.15 - X - 36 - Y - Z**





General

Weight	kg (lbs)	0.16 (0.35)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Max. proof pressure	bar (psi)	420 (6000)
Flow range	l/min. (gpm)	2-70 (0.5-18)
Fatigue cycle life	cycles	1 million cycles at 350 bar
Max. internal leakage	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	44-56 (33-42)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-10A-2N see RE 18325-75
Seal kit version 1	code material no.	RG10A2010520100 R901111363
Seal kit version 2-3	code material no.	RG10A2010530100 R901111366
Seal kit coil	code material no.	RG12A1PNBR7010 R934003958
Other technical data		See data sheet RE 18350-50

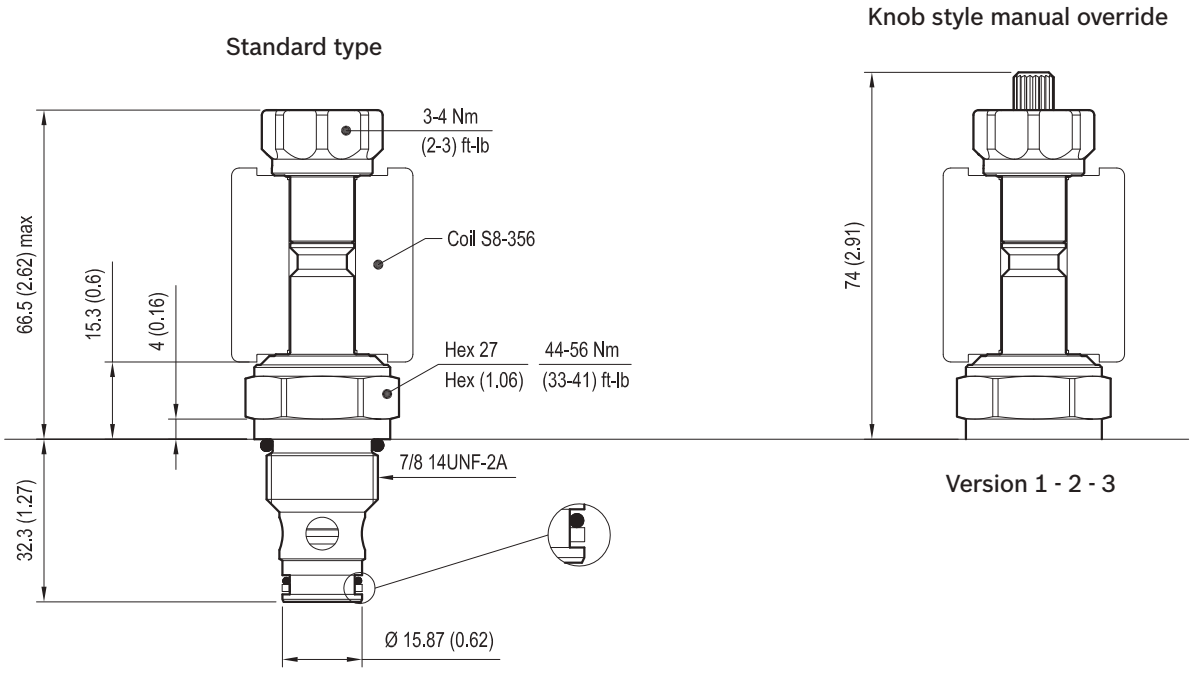
Electrical

Type of voltage		DC voltage
Coil type		S8-356 see Re 18325-90
Supply voltage		See data sheet RE 18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90

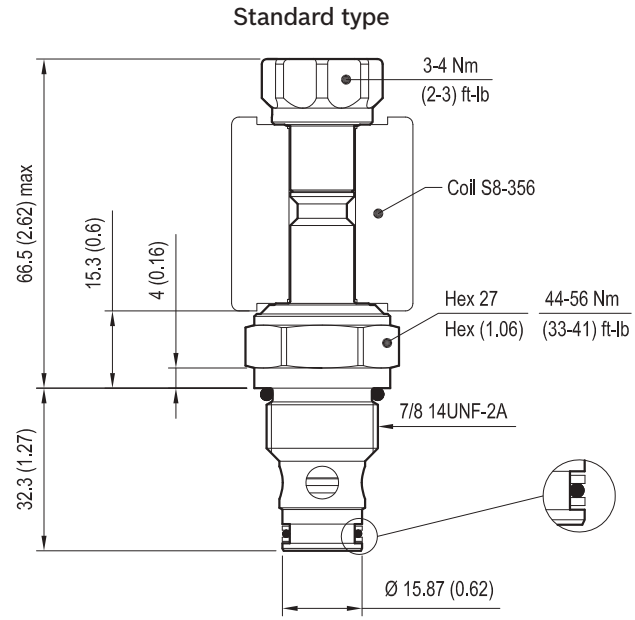
Note: Coils must be ordered separately.

Dimensions

Version 1: Solenoid operated valve, poppet 2-way normally closed



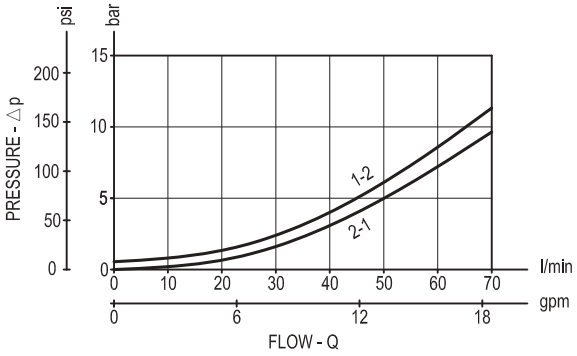
Version 2: Solenoid operated valve, poppet 2-way normally closed
Version 3: Solenoid operated valve, poppet 2-way double lock normally closed



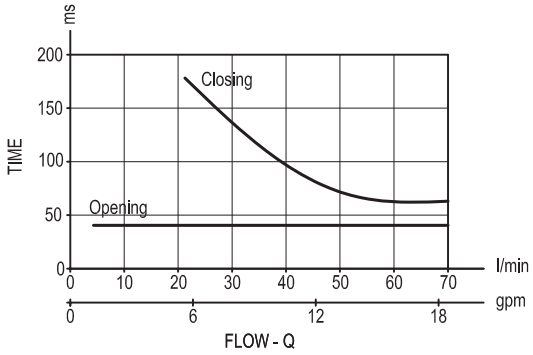
mm (Inches)

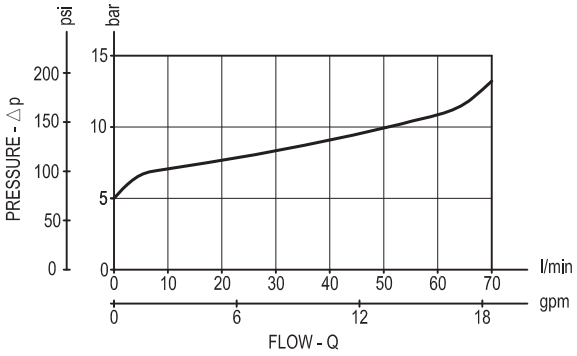
Performance graphs

Version 1 - Version 2

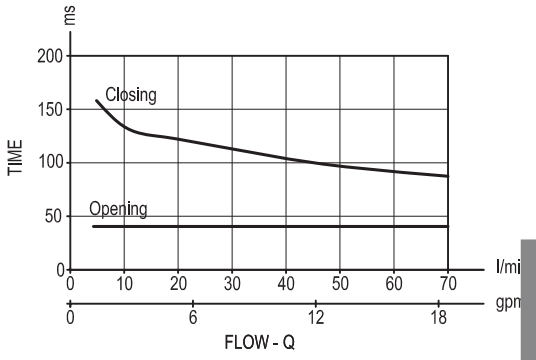


Standard

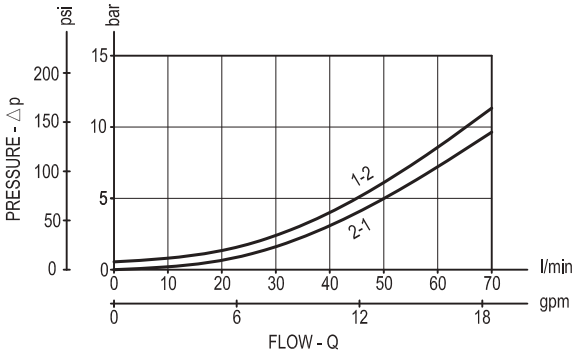




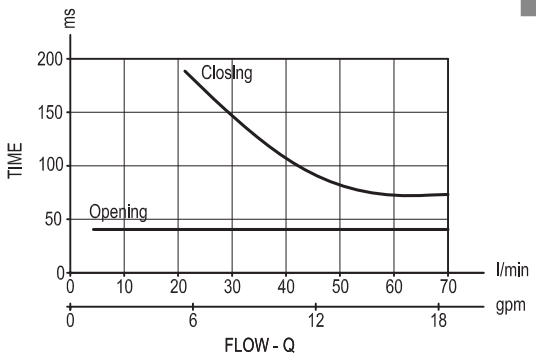
Extra spring

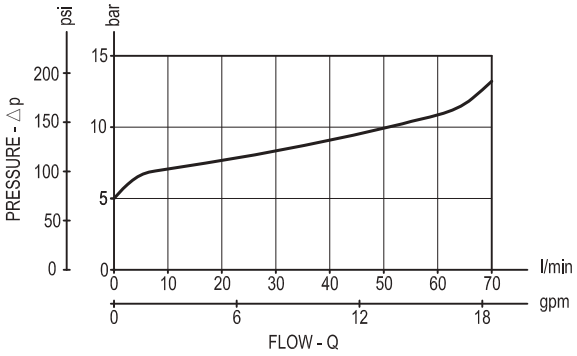


Version 3

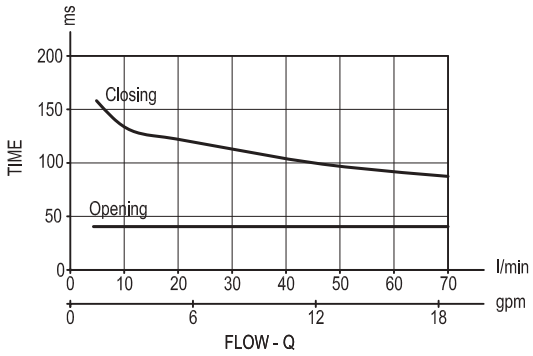


Standard





Extra spring



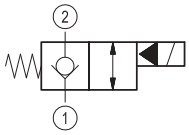
4

Ordering code

OD.15	X	36	*	*

Solenoid operated valves poppet type 2-way normally closed

bidirectional type



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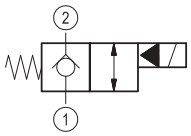
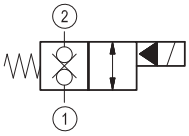
bidirectional type



= 03

double lock

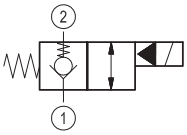


= 31

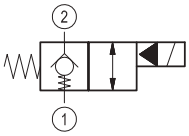
Common cavity: CA-10A-2N

S0 = Tube not welded

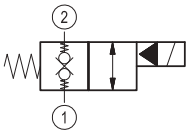
S8 = Tube not welded with extra spring



for X= 05

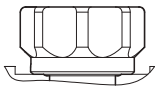


for X= 03

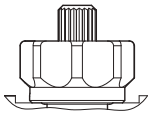


for X= 31

3A = standard type



3D = knob style manual override



Type	Material number
OD1503363AS000	R901091113
OD1503363AS800	R901091114
OD1503363DS800	R901109956
OD1505363AS000	R901090947
OD1505363AS800	R901090945
OD1505363DS000	R901080482
OD1505363DS800	R901109969
OD1531363AS000	R901091166
OD1531363AS800	R901109984

Type	Material number
OD1531363DS000	R901091167
OD1531363DS800	R901109985

Bosch Rexroth Oil Control S.p.A.
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cartridges@oilcontrol.com
www.boschrexroth.com

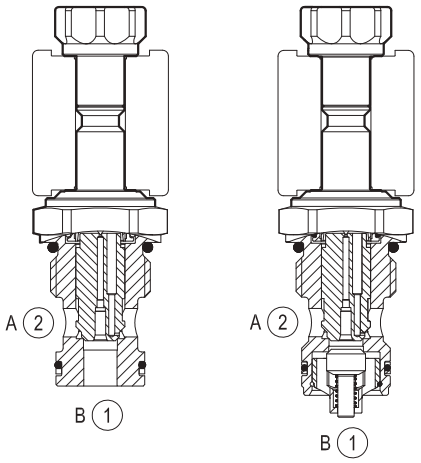
RE 18323-03/02.11
Replaces: RE 18323-03/08.10

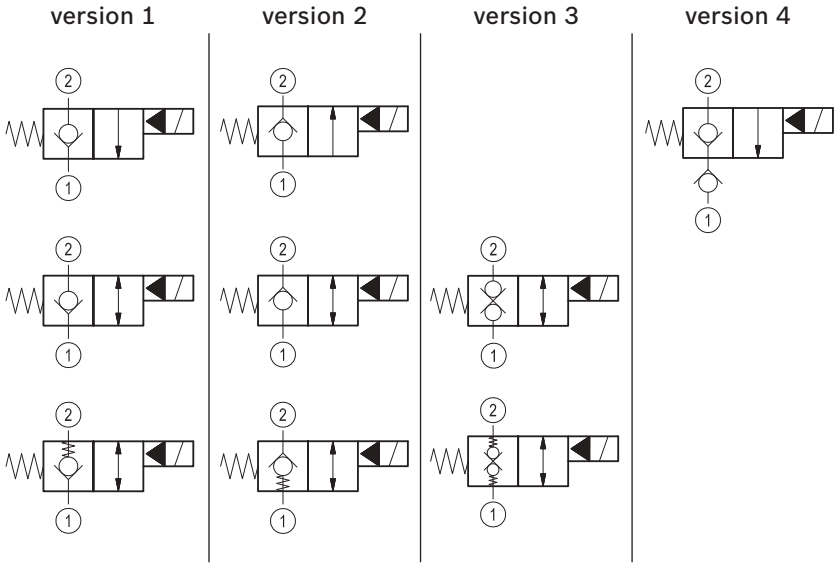
Solenoid operated valves pilot operated poppet type 2-way normally closed

Special cavity, 017-E

VEI-8A-09-NC

OD15 - X - 17 - Y - Z





General

Weight	kg (lbs)	0.24 (0.53)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Max. proof pressure	bar (psi)	420 (6000)
Flow range	l/min. (gpm)	2-70 (0.5-18)
Fatigue cycle life	cycles	1 million cycles at 350 bar
Max. internal leakage	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	54-66 (40-49)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		017-E see RE 18325-75
Seal kit - version 1	code material no.	RG17E201052010 R934003562
Seal kit - version 2-3-4	code material no.	RG17E201053010 R934003563
Seal kit coil	code material no.	RG12A1PNBR7010 R934003958
Other technical data		See data sheet RE 18350-50

Electrical

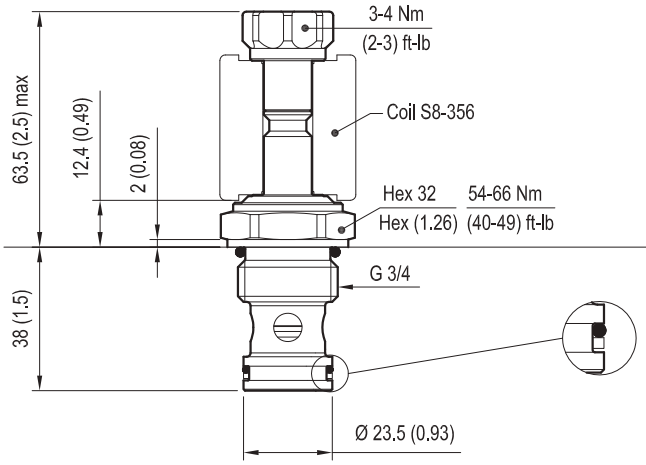
Type of voltage		DC voltage
Coil type		S8-356 see RE 18325-90
Supply voltage		See data sheet RE 18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90

Note: Coils must be ordered separately.

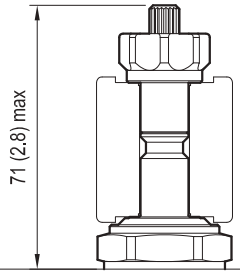
Dimensions

Version 1: Solenoid operated valve, poppet 2-way normally closed

Standard type



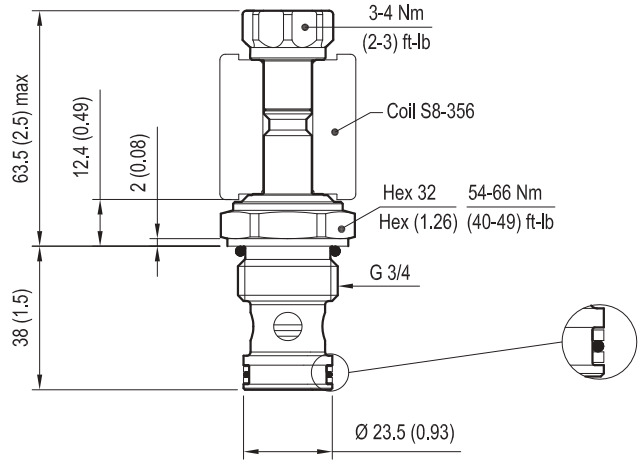
Knob style manual override type



Version 1 - 2 - 3 - 4

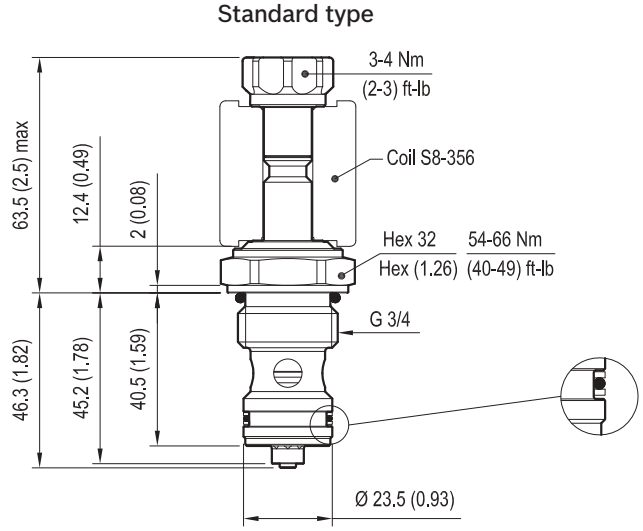
Version 2: Solenoid operated valve, poppet 2-way normally closed
Version 3: Solenoid operated valve, poppet 2-way double lock normally closed

Standard type



Version 4: Solenoid operated valve, poppet 2-way normally closed

Standard type

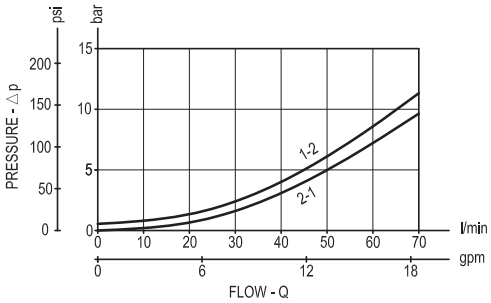


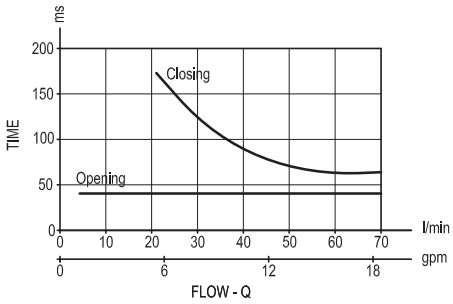
mm (Inches)

Performance graphs

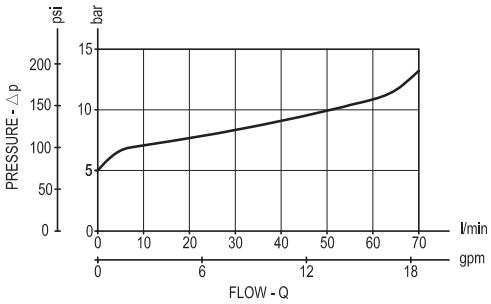
Version 1 - Version 2

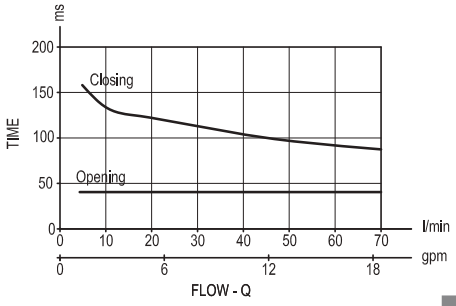
Standard





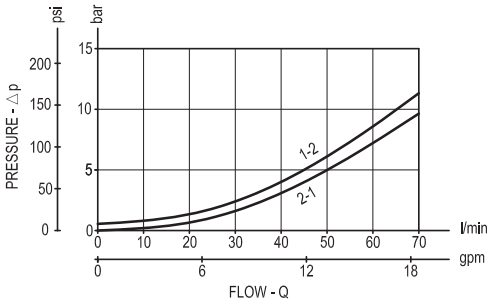
Extra spring

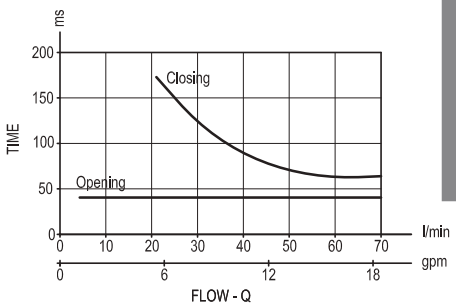




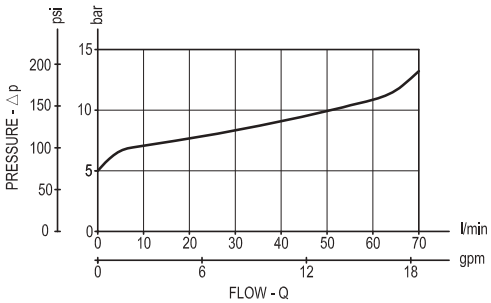
Version 3

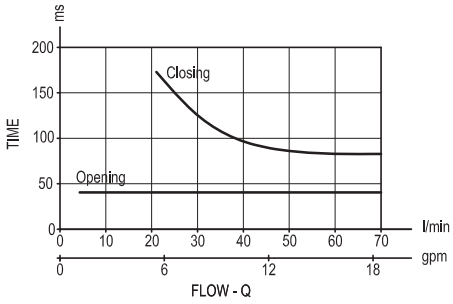
Standard





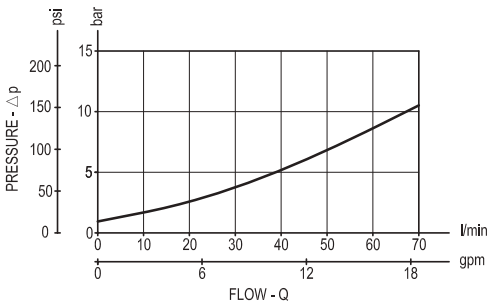
extra spring

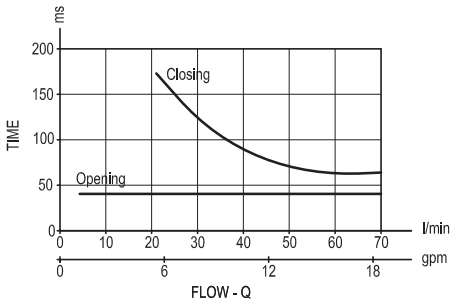




Version 4

Standard



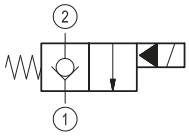


4

Ordering code

OD.15	*	17	*	*

Solenoid operated valves
poppet type 2-way
normally closed

monodirectional type

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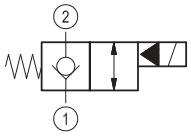
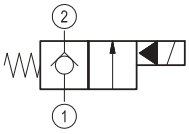
bidirectional type

= 05

monodirectional type

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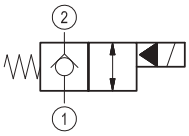
bidirectional type

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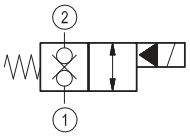
bidirectional type

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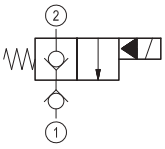
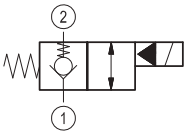
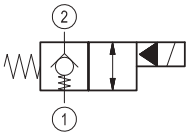
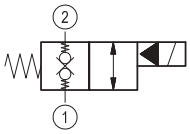
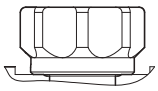
monodirectional type

= 11

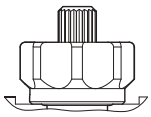
S0 = Tube not welded

S8 = Tube not welded with extra spring

for X= 05


for X= 03


for X= 31

standard type
3A = 

knob style manual override
3D = 

Special cavity: 017-E

Type	Material number
OD1501173AS000	R901176045
OD1501173DS000	R934000679
OD1503173AS000	R901113664
OD1503173AS800	R934000773
OD1503173DS000	R901180257
OD1503173DS800	R934003061
OD1505173AS000	R901113673
OD1505173AS800	R901119220
OD1505173DS000	R901125249

Type	Material number
OD1505173DS800	R934000846
OD1509173AS000	R934001038
OD1509173DS000	R934001039
OD1511173AS000	R934001072
OD1511173DS000	R934001075
OD1531173AS000	R901113682
OD1531173AS800	R934001116
OD1531173DS000	R934001120
OD1531173DS800	R934003111

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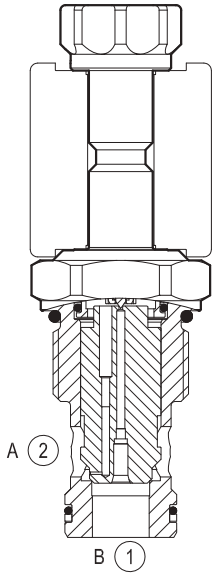
Fax +39 059 547 848
cartridges@oilcontrol.com
www.boschrexroth.com

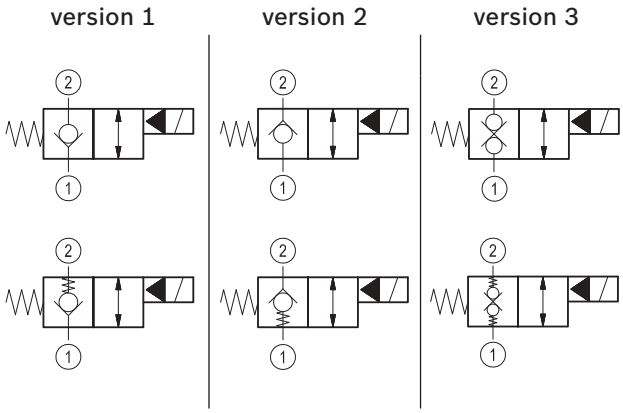
RE 18323-13/08.10
Replaces: RE 00162-02/01.06

Solenoid operated valves pilot operated poppet type 2-way normally closed

Common cavity, Size 12

VEI-8A-12A-NC OD.15 X - 89 - Y - Z





General

Weight	kg (lbs)	0.22 (0.48)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Flow range	l/min. (gpm)	5-150 (1-40)
Max. internal leakage	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	54-66 (40-49)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-12A-2N see RE 18325-75
Seal kit - version 1	code material no.	RG12A2010520100 R901111377
Seal kit - version 2-3	code material no.	RG12A2010530100 R930003374
Seal kit coil	code material no.	RG12A1PNBR7010 R934003958
Other technical data		See data sheet RE 18350-50

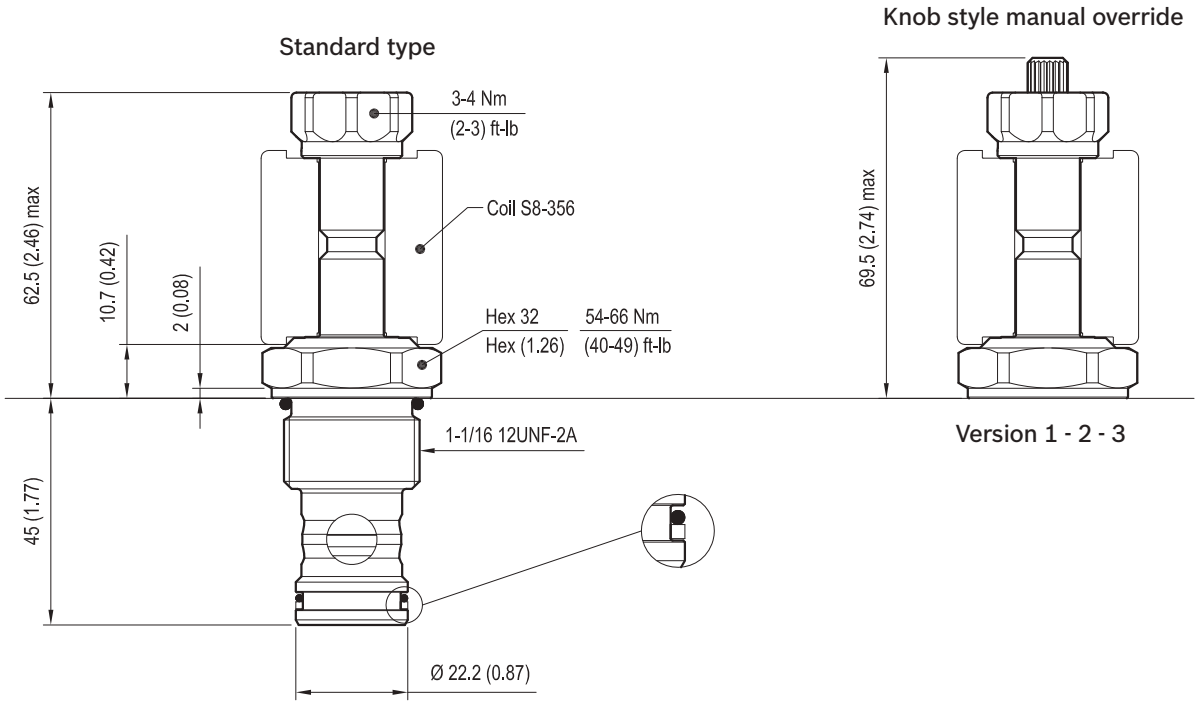
Electrical

Type of voltage		DC voltage
Coil type		S8-356 see RE 18325-90
Supply voltage		See data sheet RE 18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90

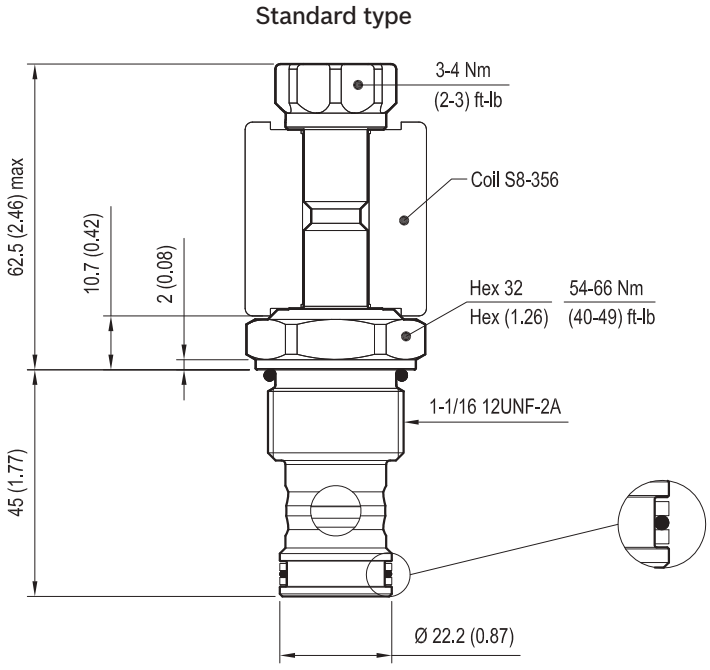
Note: Coils must be ordered separately.

Dimensions

Version 1: Solenoid operated valve, poppet 2-way normally closed



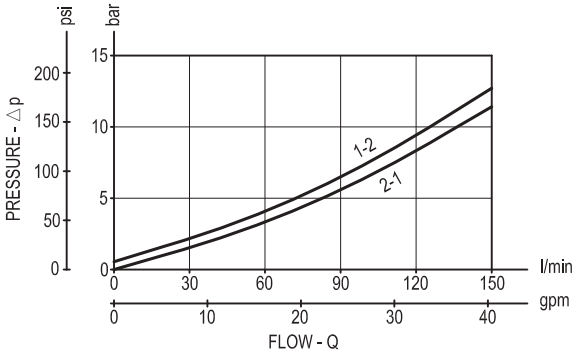
Version 2: Solenoid operated valve, poppet 2-way normally closed
Version 3: Solenoid operated valve, poppet 2-way double lock normally closed



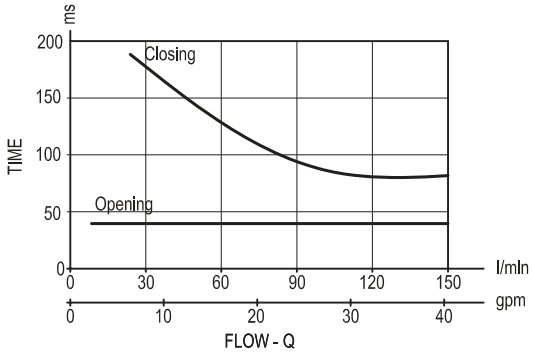
mm (Inches)

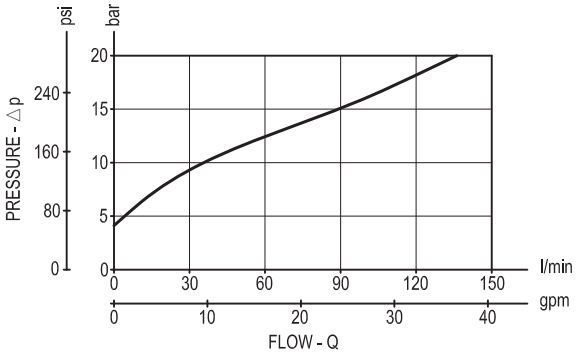
Performance graphs

Version 1 - Version 2

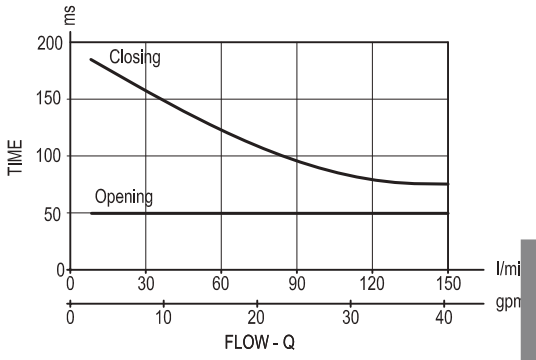


Standard

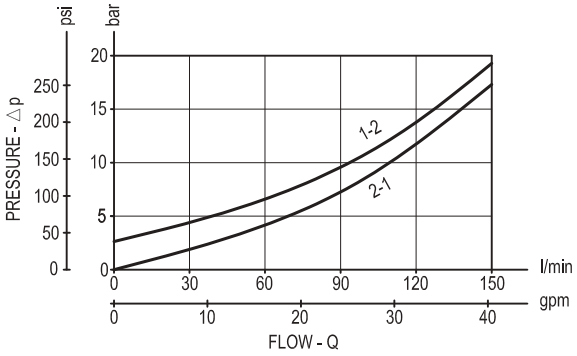




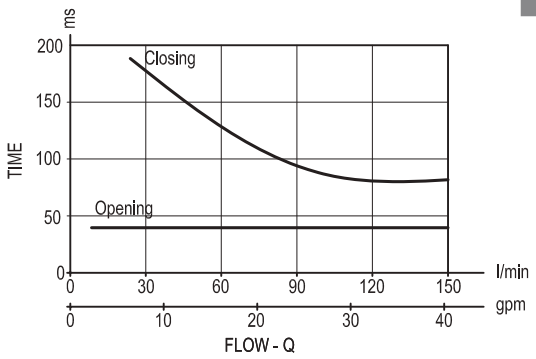
Extra spring

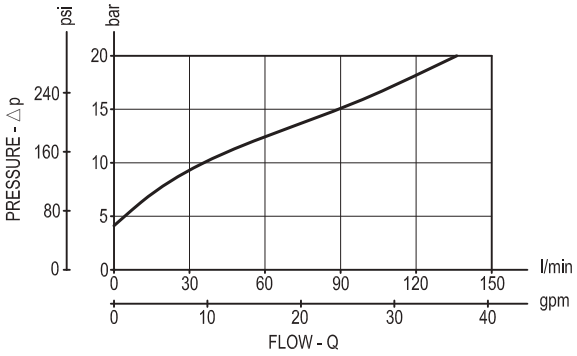


Version 3

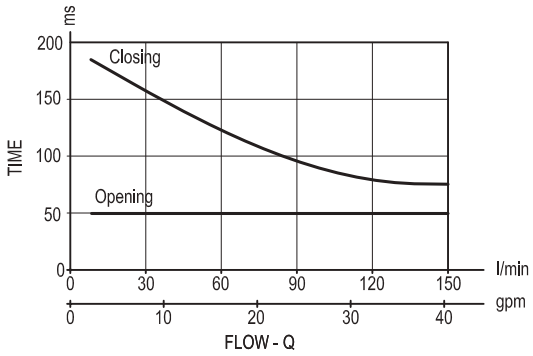


Standard





Extra spring



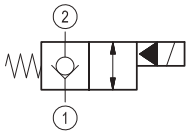
4

Ordering code

OD.15	*	89	*	*

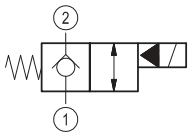
Solenoid operated valves poppet type 2-way normally closed

bidirectional type



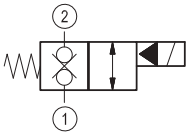
= 05

bidirectional type



= 03

double lock

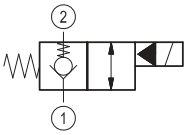


= 31

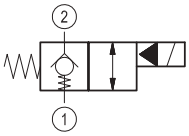
Common cavity: CA-12A-2N

S0 = Tube not welded

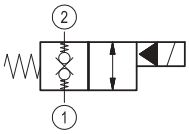
S8 = Tube not welded with extra spring



for X= 05



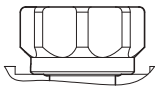
for X= 03



for X=31

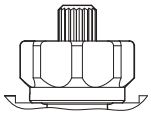
standard type

3A =



knob style manual override

3D =



Type	Material number
OD1503893AS000	R901091116
OD1503893AS800	R901109961
OD1503893DS000	R901091117
OD1503893DS800	R901109962
OD1505893AS000	R901091127
OD1505893AS800	R901091128
OD1505893DS000	R901091129
OD1505893DS800	R901109978
OD1531893AS000	R901091168

Type	Material number
OD1531893AS800	R901091169
OD1531893DS000	R901091170
OD1531893DS800	R901109990

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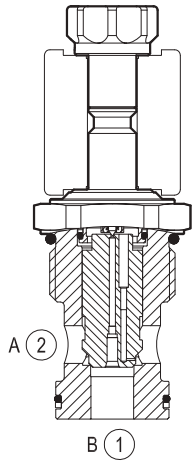
cartridges@oilcontrol.com
www.boschrexroth.com

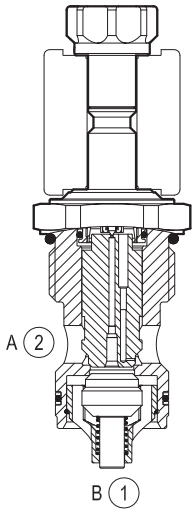
RE 18323-04/02.11
Replaces: RE 18323-04/12.10

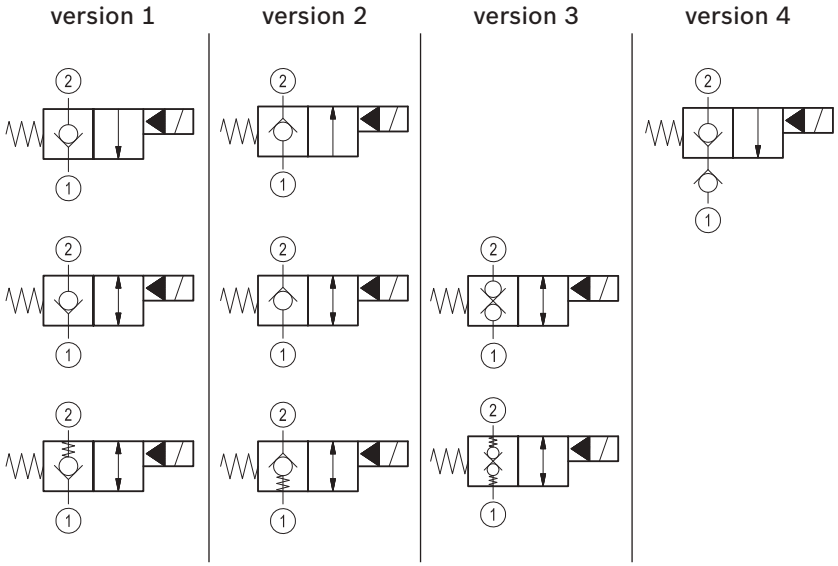
Solenoid operated valves pilot operated poppet type 2-way normally closed

Special cavity, 021-E

VEI-8A-12-NC **OD.15 - X - 21 - Y - Z**







General

Weight	kg (lbs)	0.34 (0.75)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Max. proof pressure	bar (psi)	420 (6000)
Flow range	l/min. (gpm)	5-150 (1-40)
Fatigue cycle life	cycles	1 million cycles at 350 bar
Max. internal leakage	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	80-100 (59-74)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		021-E see RE 18325-75
Seal kit - version 1	code material no.	RG21E201052010 R934003566
Seal kit - version 2-3	code material no.	RG21E201053010 R934003567
Seal kit coil	code material no.	RG12A1PNBR7010 R934003958
Other technical data		See data sheet RE 18350-50

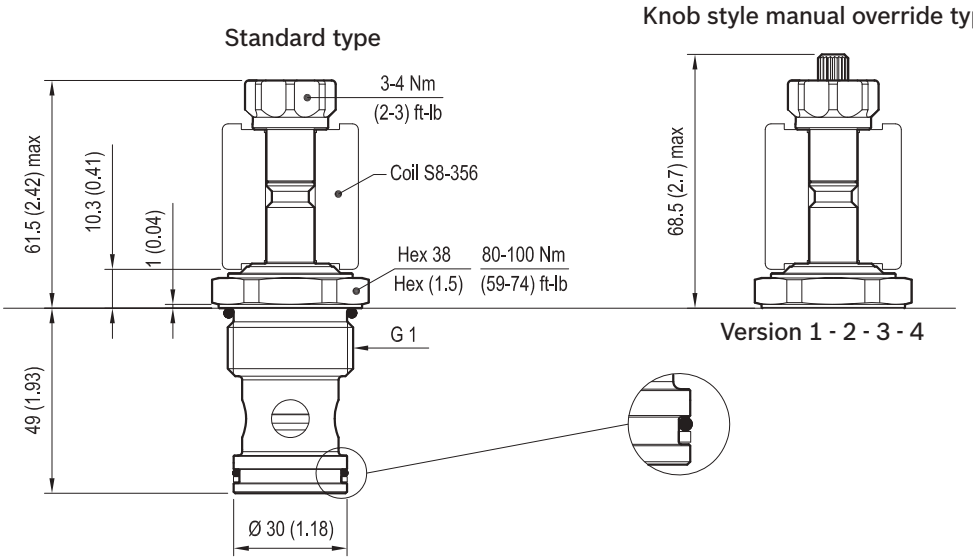
Electrical

Type of voltage		DC voltage
Coil type		S8-356 see RE 18325-90
Supply voltage		See data sheet RE 18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90

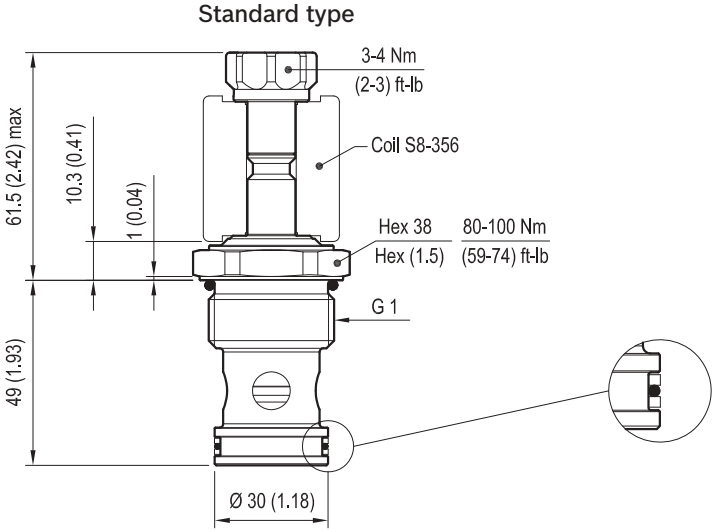
Note: Coils must be ordered separately.

Dimensions

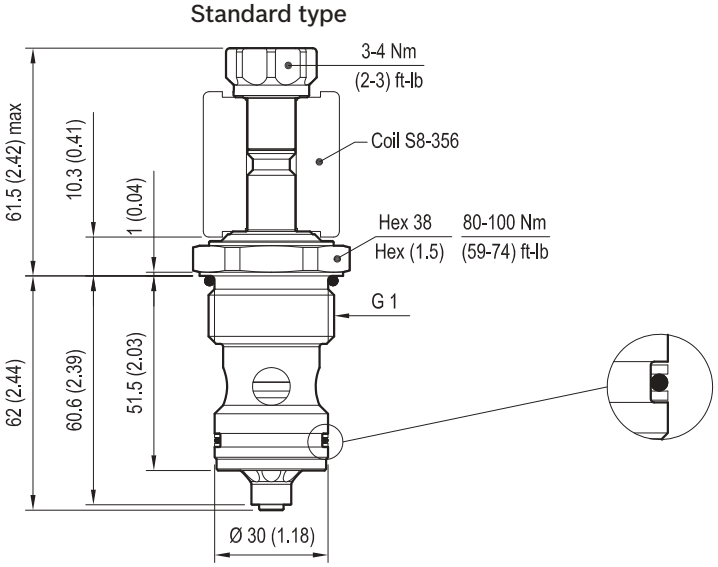
Version 1: Solenoid operated valve, poppet 2-way normally closed



Version 2: Solenoid operated valve, poppet 2-way normally closed
Version 3: Solenoid operated valve, poppet 2-way double lock normally closed



Version 4: Solenoid operated valve, poppet 2-way normally closed

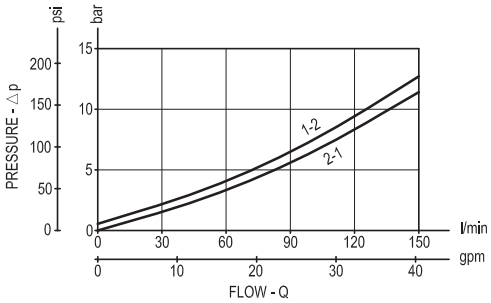


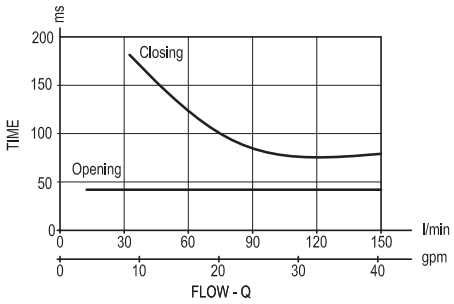
mm (Inches)

Performance graphs

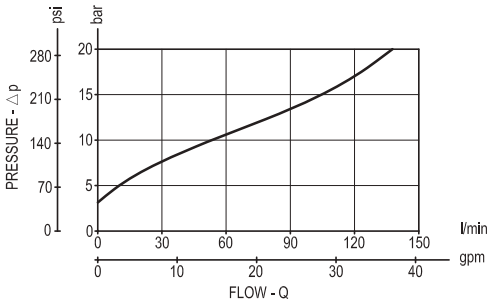
Version 1 - Version 2

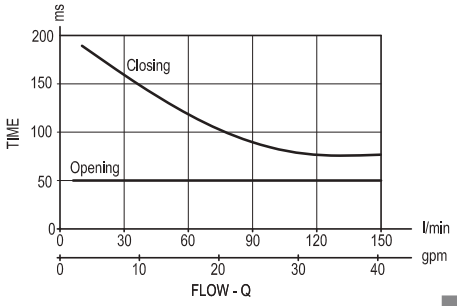
Standard





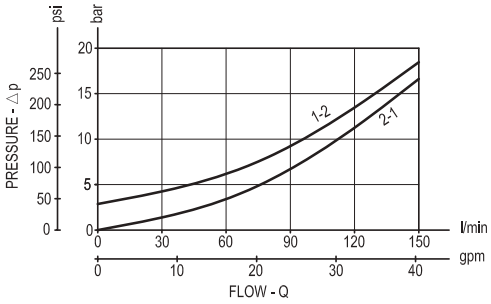
Extra spring

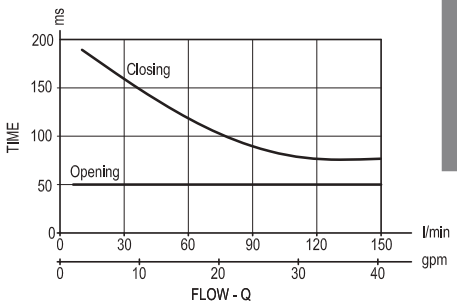




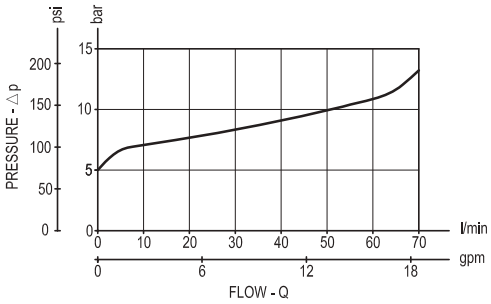
Version 3

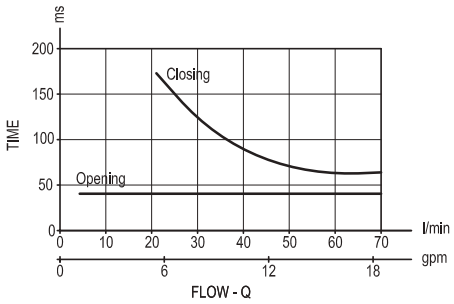
Standard





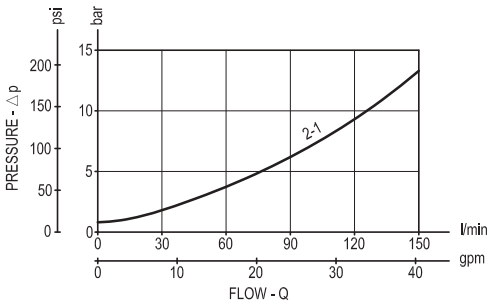
Extra spring

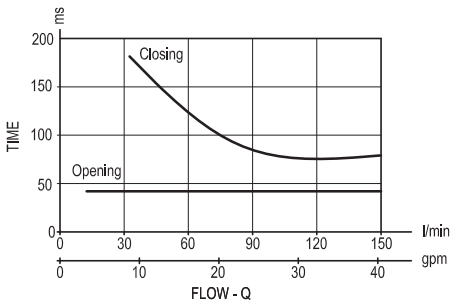




Version 4

Standard



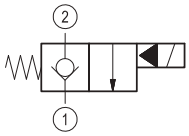


Ordering code

OD.15	*	21	*	*

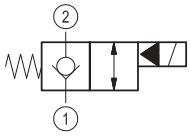
Solenoid operated valves poppet type 2-way normally closed

monodirectional type



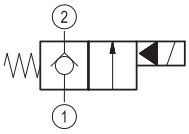
= 01

bidirectional type



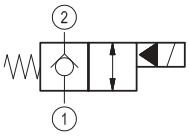
= 05

monodirectional type



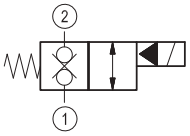
= 09

bidirectional type



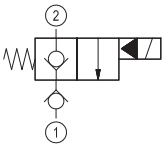
= 03

bidirectional type



= 31

monodirectional type

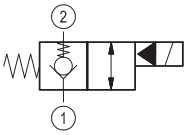


= 11

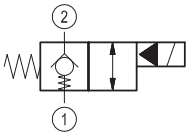
Special cavity: 021-E

S0 = Tube not welded

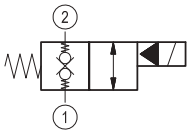
S8 = Tube not welded with extra spring



for X= 05

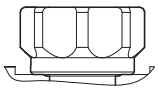


for X= 03

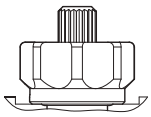


for X= 31

standard type

3A = 

knob style manual override

3D = 

Type	Material number
OD1501213AS000	R901144300
OD1501213AS800	R934000707
OD1501213DS000	R901085462
OD1503213AS000	R901113666
OD1503213AS800	R934003065
OD1503213DS000	R934000792
OD1503213DS800	R934003066
OD1505213AS000	R901104395
OD1505213AS800	R901119221

Type	Material number
OD1505213DS000	R901119267
OD1509213AS000	R901132881
OD1511213AS000	R901138183
OD1511213AS800	R934001086
OD1531213AS000	R901104412
OD1531213AS800	R901119002
OD1531213DS000	R901132876
OD1531213DS800	R901125793

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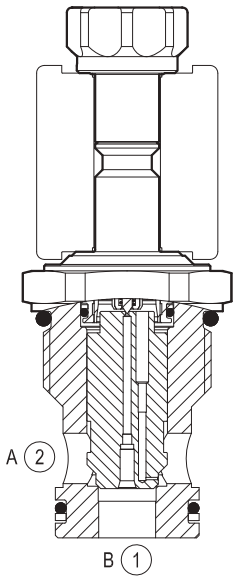
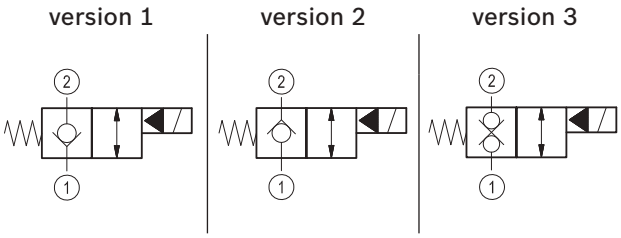
RE 18323-17/02.11
Replaces: RE 18323-17/08.10

Solenoid operated valves pilot operated poppet type 2-way normally closed

Common cavity, Size 16

VEI-8A-16A-NC **OD.15 - X - 75 - Y - S0**





General

Weight	kg (lbs)	0.32 (0.71)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Max. proof pressure	bar (psi)	420 (6000)
Flow range	l/min. (gpm)	5-150 (1-40)
Fatigue cycle life	cycles	1 million cycles at 350 bar
Max. internal leakage	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	80-100 (59-74)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-16A-2N see RE 18325-75
Seal kit - version 1	code material no.	RG16A2010520100 R901111386
Seal kit - version 2-3	code material no.	RG16A2010530100 R930003262
Seal kit coil	code material no.	RG12A1PNBR7010 R934003958
Other technical data		See data sheet RE 18350-50

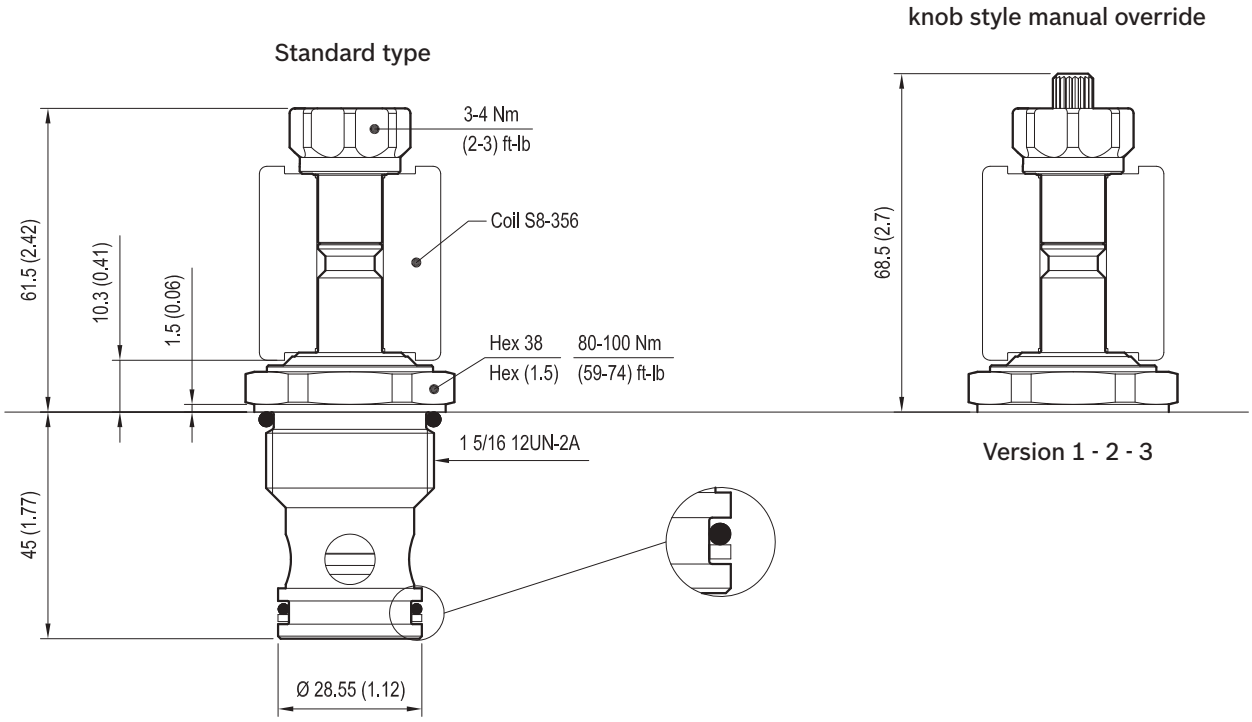
Electrical

Type of voltage		DC voltage
Coil type		S8-356 see RE 18325-90
Supply voltage		See data sheet RE 18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90

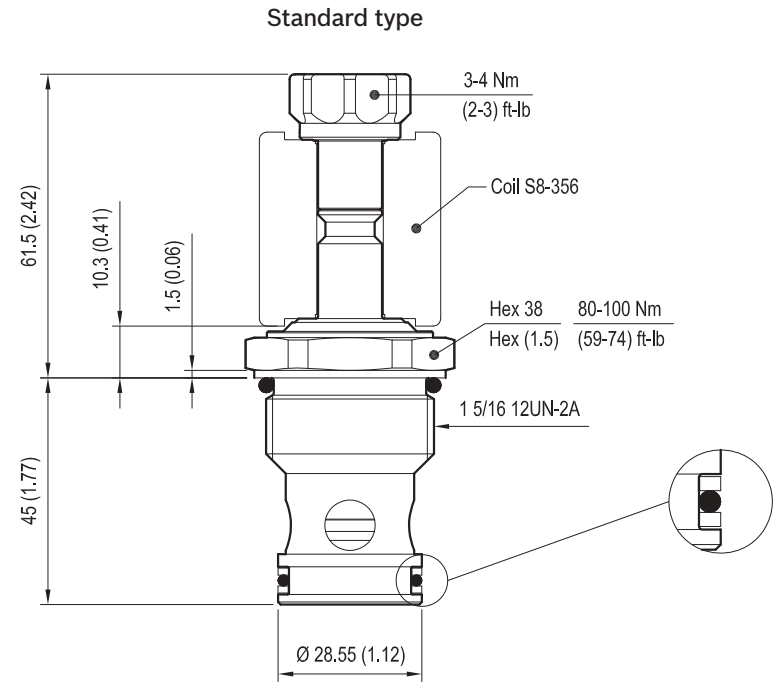
Note: Coils must be ordered separately.

Dimensions

Version 1: Solenoid operated valve, poppet 2-way normally closed



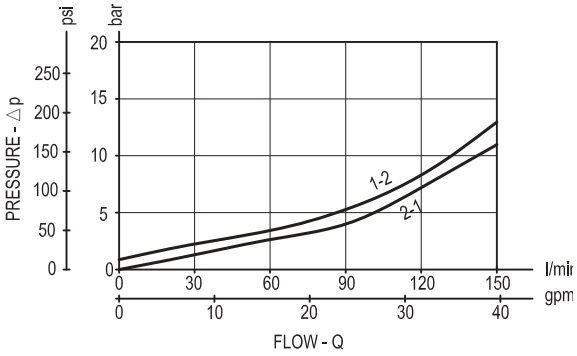
Version 2: Solenoid operated valve, poppet 2-way normally closed
Version 3: Solenoid operated valve, poppet 2-way double lock normally closed



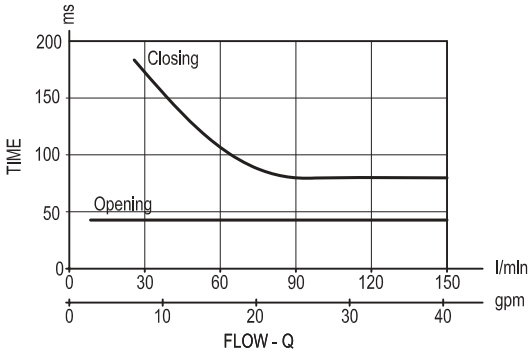
mm (Inches)

Performance graphs

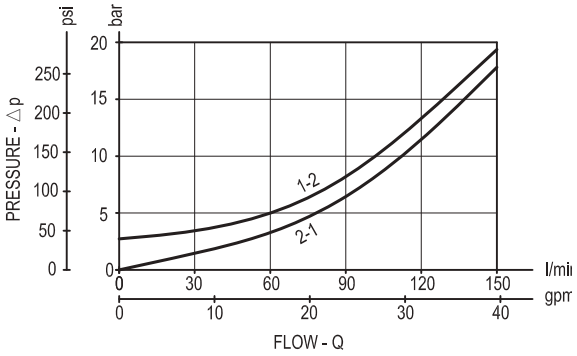
Version 1 - Version 2



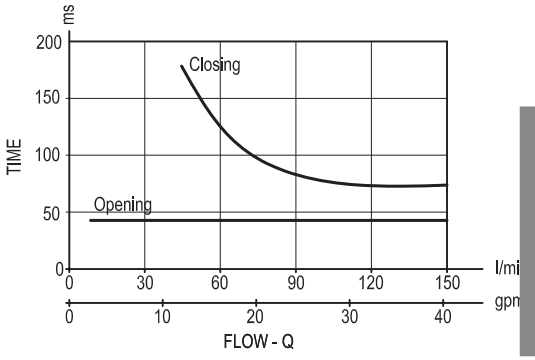
Standard



Version 3

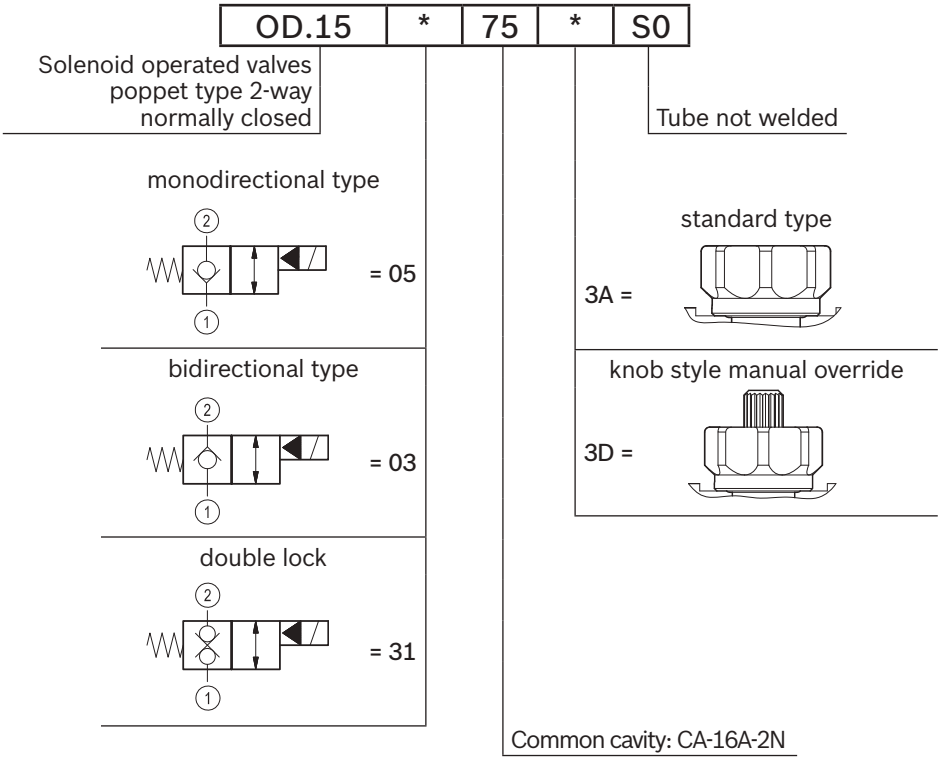


Standard



4

Ordering code



Type	Material number
OD1503753AS000	R901094726
OD1505753AS000	R901094745
OD1505753DS000	R901094746
OD1531753AS000	R901094747
OD1531753DS000	R901094748

Type	Material number

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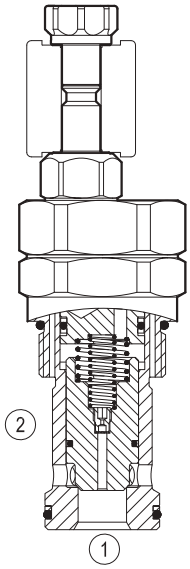
RE 18323-15/02.11 1/4
Replaces: RE 18323-15/08.10

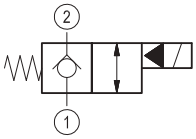
Solenoid operated valves pilot operated poppet type 2-way normally closed

Special cavity, 004

VEI-8A-2B-16-NC-NSS **OD.15.03.04 - Y - S0**



version 03



General

Weight	kg (lbs)	1.13 (2.5)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Max. proof pressure	bar (psi)	420 (6000)
Rated flow	l/min. (gpm)	260 (69)
Fatigue cycle life	cycles	1 million cycles at 350 bar
Max. internal leakage	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	110-130 (81-96)
Filtration		Nominal value max. 25µm (NAS 8) ISO 4406 19/17/14
Special cavity		004 see RE 18325-75
Seal kit	code material no.	RG0004020520100 R930001696
Seal kit coil	code material no.	RG12A1PNBR7010 R934003958
Other technical data		See data sheet RE 18350-50

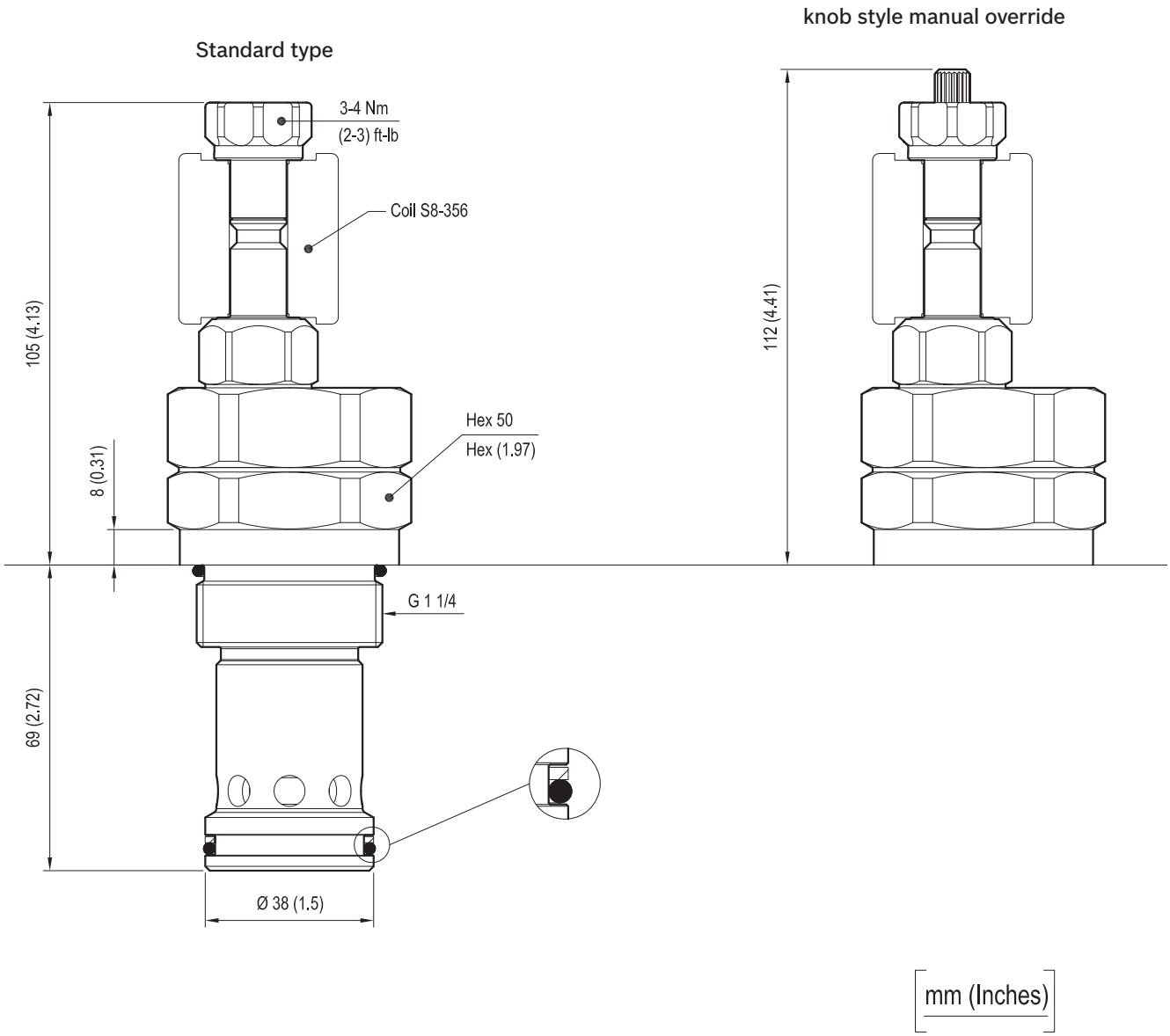
Electrical

Type of voltage		DC voltage
Coil type		S8-356 see RE 18325-90
Supply voltage		See data sheet RE 18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle coil	%	100 see RE 18325-90
Type of protection		See data sheet RE 18325-90

Note: Coils must be ordered separately.

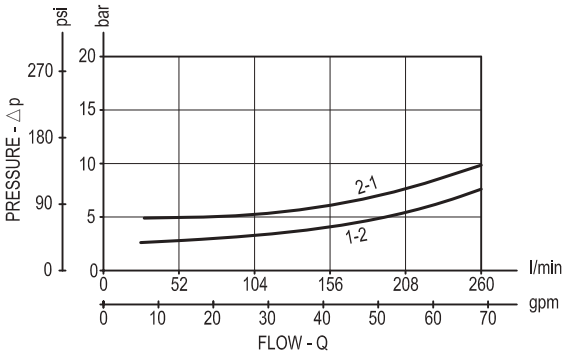
Dimensions

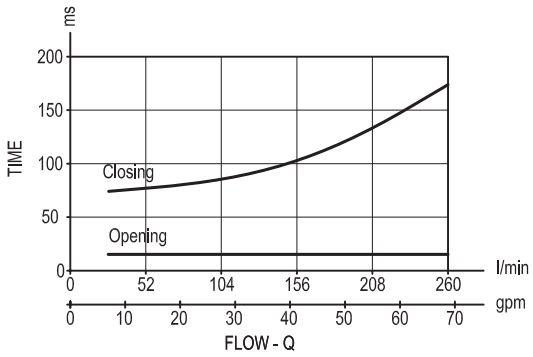
Solenoid operated valve, poppet 2-way normally closed - Special cavity



Performance graphs

Version 03



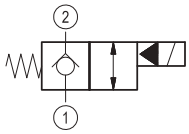


4

Ordering code

OD.15	03	04	*	S0

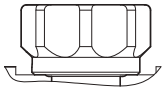
Solenoid operated valves
poppet type 2-way
normally closed



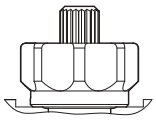
Special cavity: 004

Tube not welded

standard type

3A = 

knob style manual override

3D = 

Type	Material number
OD1503043AS000	R934000764
OD1503043DS000	R901091110

Type	Material number

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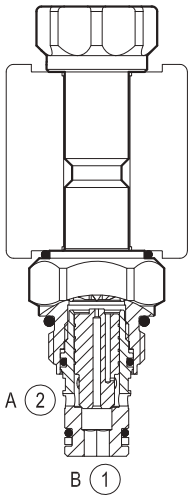
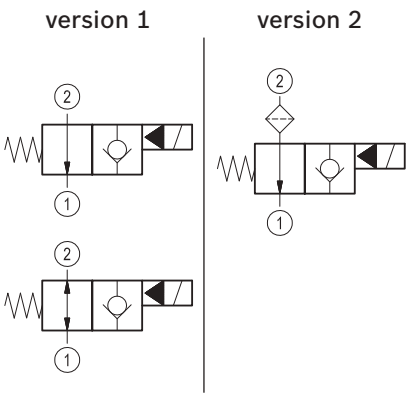
RE 18323-05/02.11
Replaces: RE 18323-05/08.10

Solenoid operated valves pilot operated poppet type 2-way normally open

Common cavity, Size 08

VEI-8I-06-NA OD-15 - X - 18 - Y - S0





4

General

Weight	kg (lbs)	0.11 (0.24)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Max. proof pressure	bar (psi)	420 (6000)
Flow range	l/min. (gpm)	0.5-30 (0.1-8)
Fatigue cycle life	cycles	1 million cycles at 350 bar
Max. internal leakage	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	39-51 (29-38)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-08A-2N see RE 18325-75
Seal kit	code material no.	RG08A2010520100 R901101437
Seal kit coil	code material no.	RG12I1PNBR7010 R934003957
Other technical data		See data sheet RE 18350-50

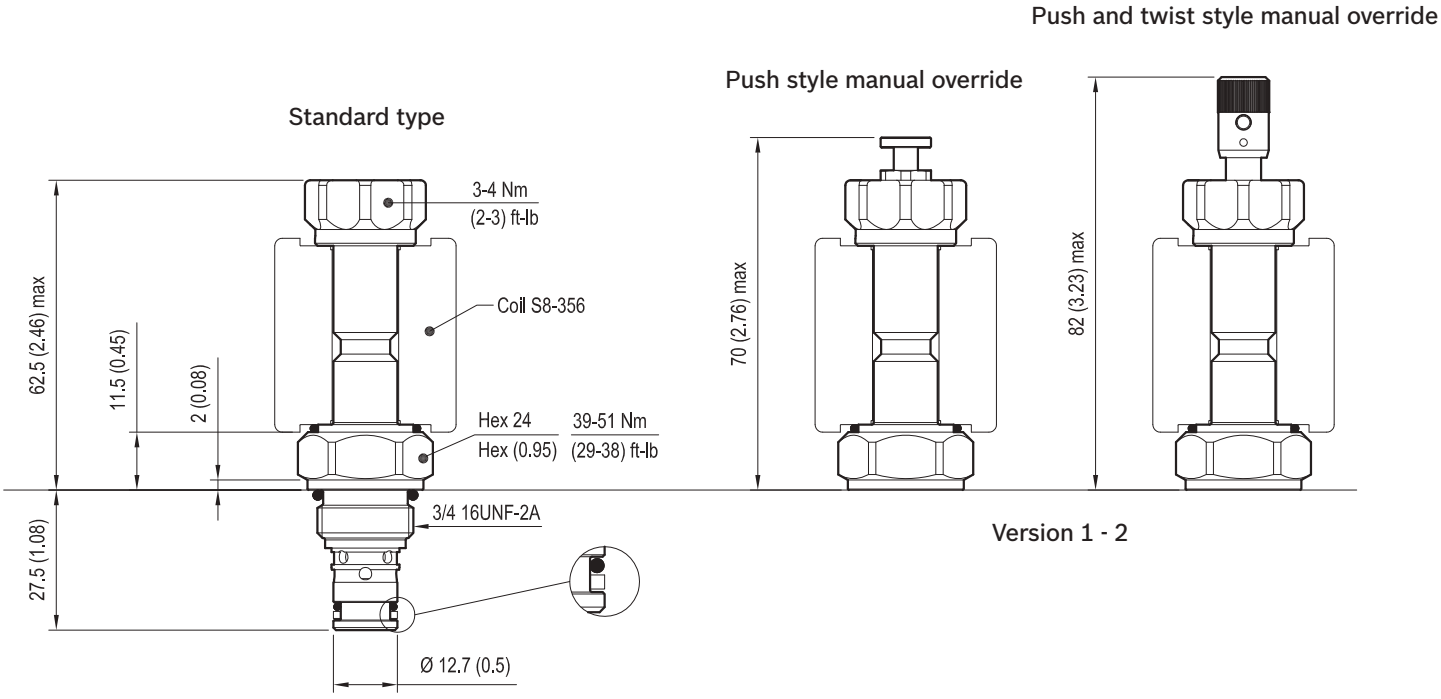
Electrical

Type of voltage		DC voltage
Coil type		S8-356 see RE 18325-90
Supply voltage		See data sheet RE 18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90

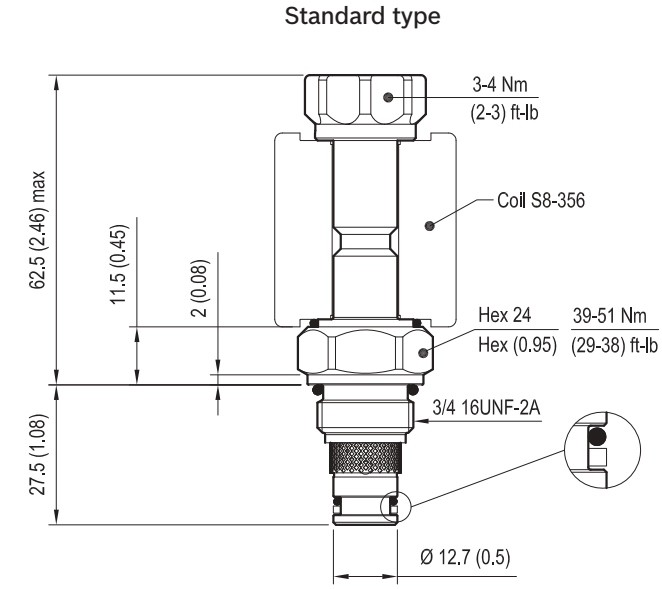
Note: Coils must be ordered separately.

Dimensions

Version 1: Solenoid operated valve, poppet 2-way normally open



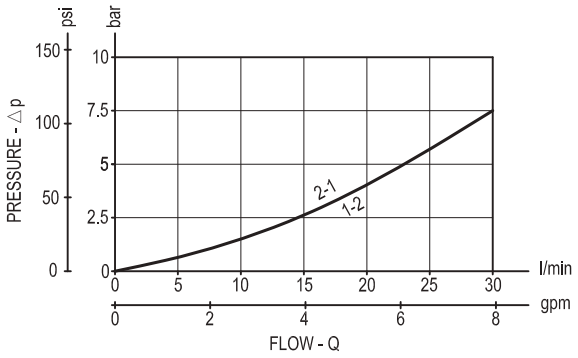
Version 2 : Solenoid operated valve, poppet 2-way normally open - filter



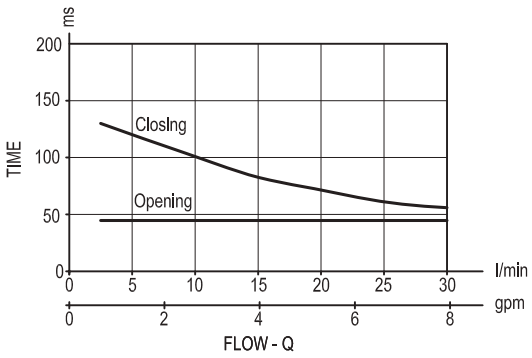
[mm (Inches)]

Performance graphs

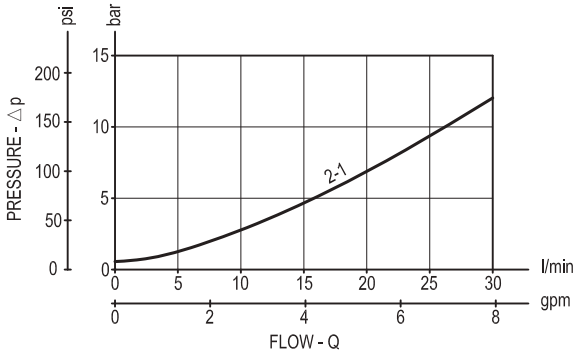
Version 1



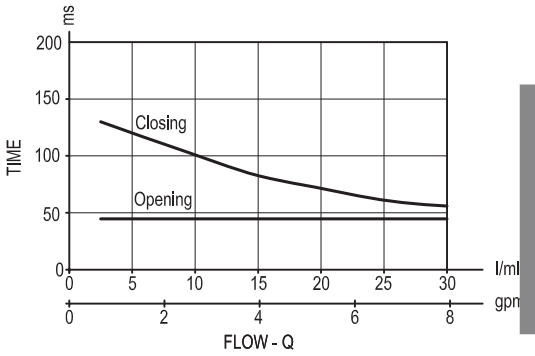
Standard



Version 2



Standard



4

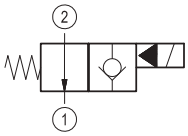
Ordering code

OD.15	*	18	*	S0

Solenoid operated valves poppet type 2-way normally open

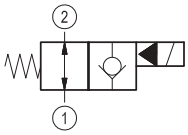
Tube not welded

monodirectional type



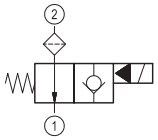
= 02

bidirectional type



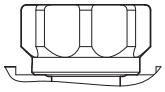
= 06

monodirectional type with filter

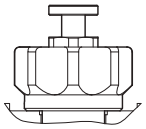


= 08

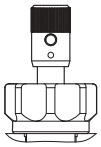
standard type

1I = 

Push style manual override

1L = 

Push and twist style manual override

1M = 

Common cavity: CA-08A-2N

Type	Material number
OD1502181IS000	R901091107
OD1502181LS000	R901091108
OD1502181MS000	R901094588
OD1506181IS000	R901091133
OD1506181LS000	R901091134
OD1506181MS000	R901091135
OD1508181IS000	R901091146
OD1508181LS000	R901091148
OD1508181MS000	R901091149

Type	Material number

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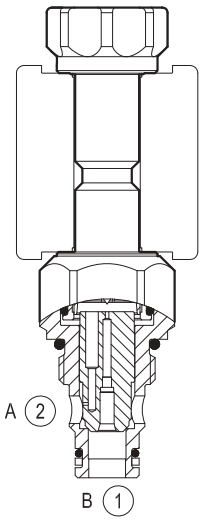
cartridges@oilcontrol.com
www.boschrexroth.com

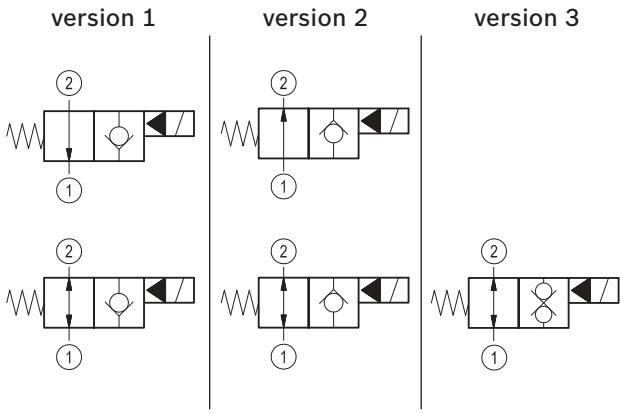
RE 18323-06/09.11
Replaces: RE 18323-06/02.11

Solenoid operated valves pilot operated poppet type 2-way normally open

Common cavity, Size 08

VEI-8A-06-NA OD.15 - X - Y - Z - S0





General

Weight	kg (lbs)	0.12 (0.26)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Max. proof pressure	bar (psi)	420 (6000)
Flow range	l/min. (gpm)	1.5-40 (0.4-11)
Fatigue cycle life	cycles	1 million cycles at 350 bar
Max. internal leakage	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	39-51 (29-38)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-08A-2N see RE 18325-70
Seal kit version 1	code material no.	RG08A2010520100 R901101437
Seal kit version 2-3	code material no.	RG08A2010530100 R901101544
Seal kit coil	code material no.	RG12A1PNBR7010 R934003958
Other technical data		See data sheet RE 18350-50

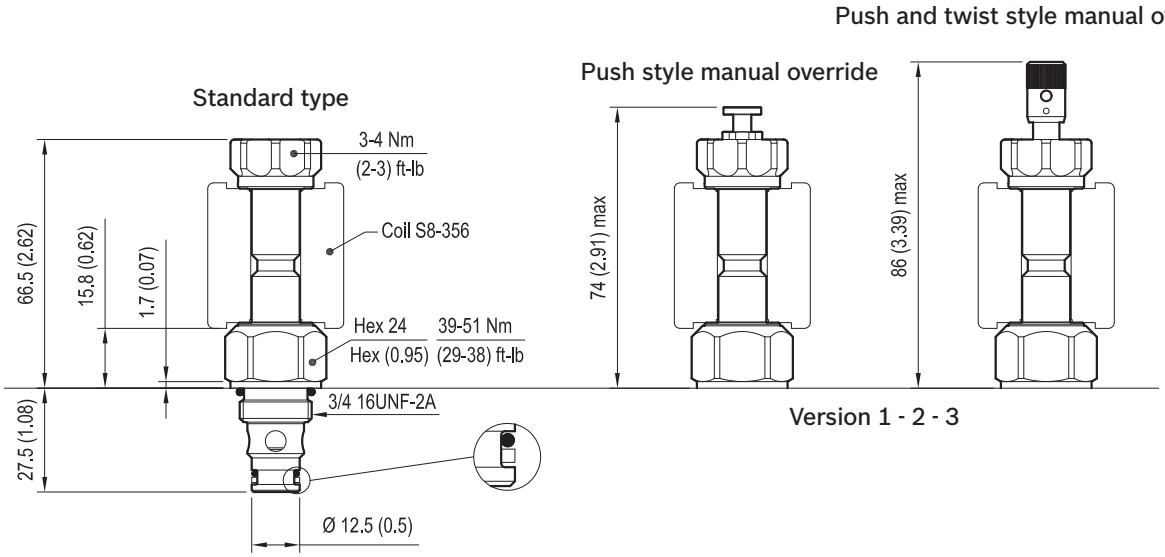
Electrical

Type of voltage		DC voltage
Coil type		S8-356 see RE 18325-90
Supply voltage		See data sheet RE 18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90

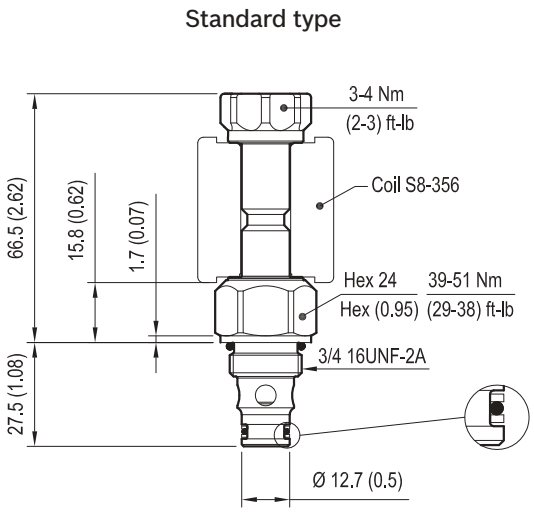
Note: Coils must be ordered separately.

Dimensions

Version 1: Solenoid operated valve, poppet 2-way normally open



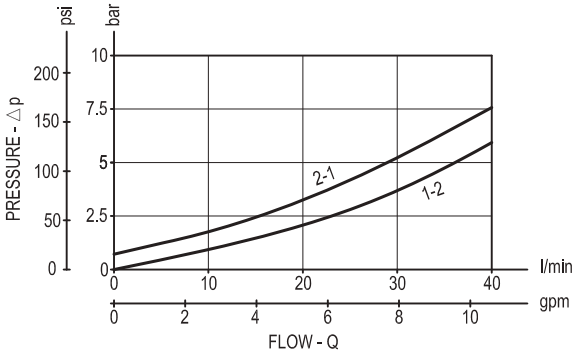
Version 2: Solenoid operated valve, poppet 2-way normally open
Version 3: Solenoid operated valve, poppet 2-way double lock normally open



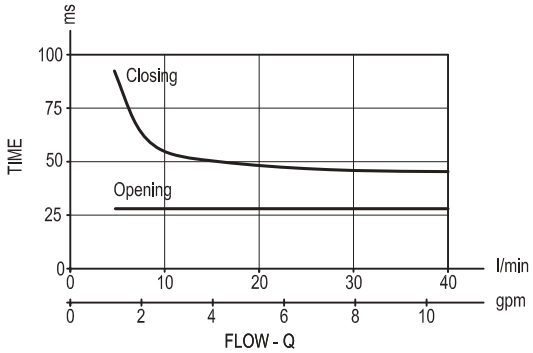
mm (Inches)

Performance graphs

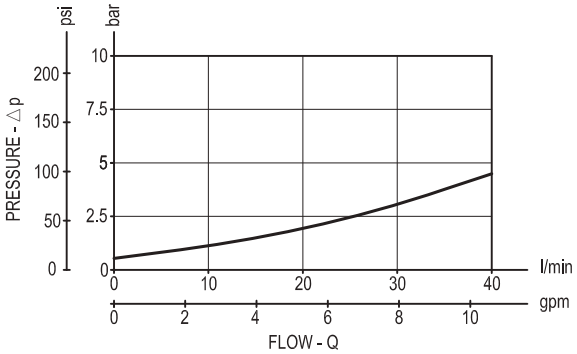
Version 1 - Version 2



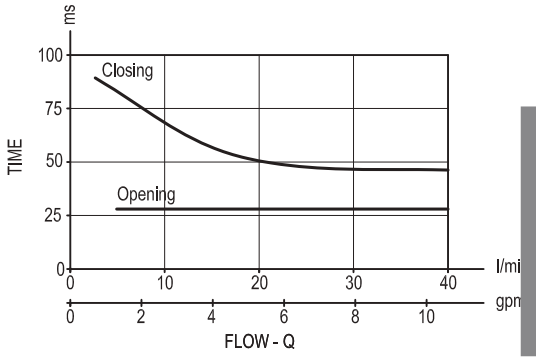
Standard



Version 3



Standard



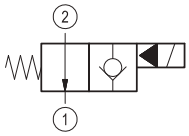
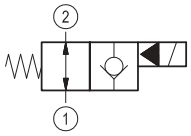
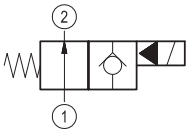
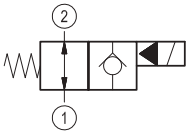
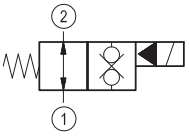
4

Ordering code

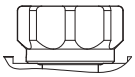
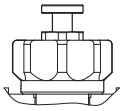
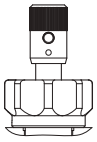
OD.15	X	Y	Z	S0

Solenoid operated valves poppet type 2-way normally open

Tube not welded

X:
- monodirectional type  = 02
- bidirectional type  = 06
- monodirectional type  = 10
- bidirectional type  = 04
- bidirectional type  = 32

Y:
- 18 = Common cavity: CA-08A-2N

Z:
- standard type 1A = 
- Push style manual override 1B = 
- Push and twist style manual override 1C = 

Type	Material number
OD1502181AS000	R901091102
OD1502181BS000	R901091105
OD1502181CS000	R901091106
OD1506181AS000	R901091130
OD1506181BS000	R901091131
OD1506181CS000	R901091132
OD1504181AS000	R901091121
OD1504181BS000	R901091122
OD1504181CS000	R901091123

Type	Material number
OD1510181AS000	R901091152
OD1510181BS000	R901091154
OD1510181CS000	R901091155
OD1532181AS000	R901091171
OD1532181BS000	R901091173
OD1532181CS000	R901091174

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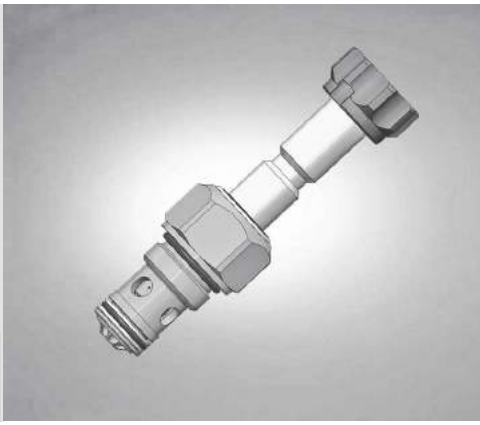
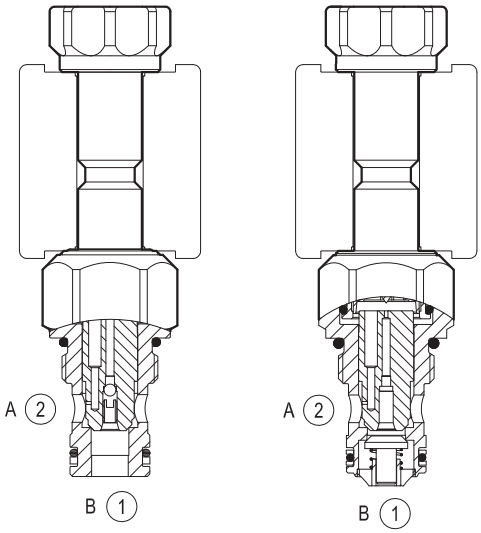
RE 18323-21/11.11
Replaces: RE 18323-21/09.11

Solenoid operated valves pilot operated poppet type 2-way normally open

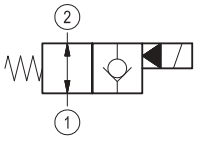
Special cavity, 019-E



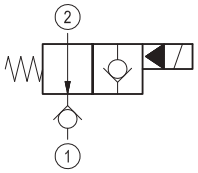
VEI-8A-06-NA OD.15 - X - 19 - Z



version 06



version 12



4

General

Weight	kg (lbs)	0.13 (0.29)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Max. proof pressure	bar (psi)	420 (6000)
Flow range	l/min. (gpm)	1.5-40 (0.4-11)
Fatigue cycle life	cycles	1 million cycles at 350 bar
Max. internal leakage	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	39-51 (29-38)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Special cavity		019-E see RE 18325-75
Seal kit version 06	code material no.	RG19E201052010 R934003560
Seal kit version 12	code material no.	RG19E201053010 R934003561
Seal kit coil	code material no.	RG12A1PNBR7010 R934003958
Other technical data		See data sheet RE 18350-50

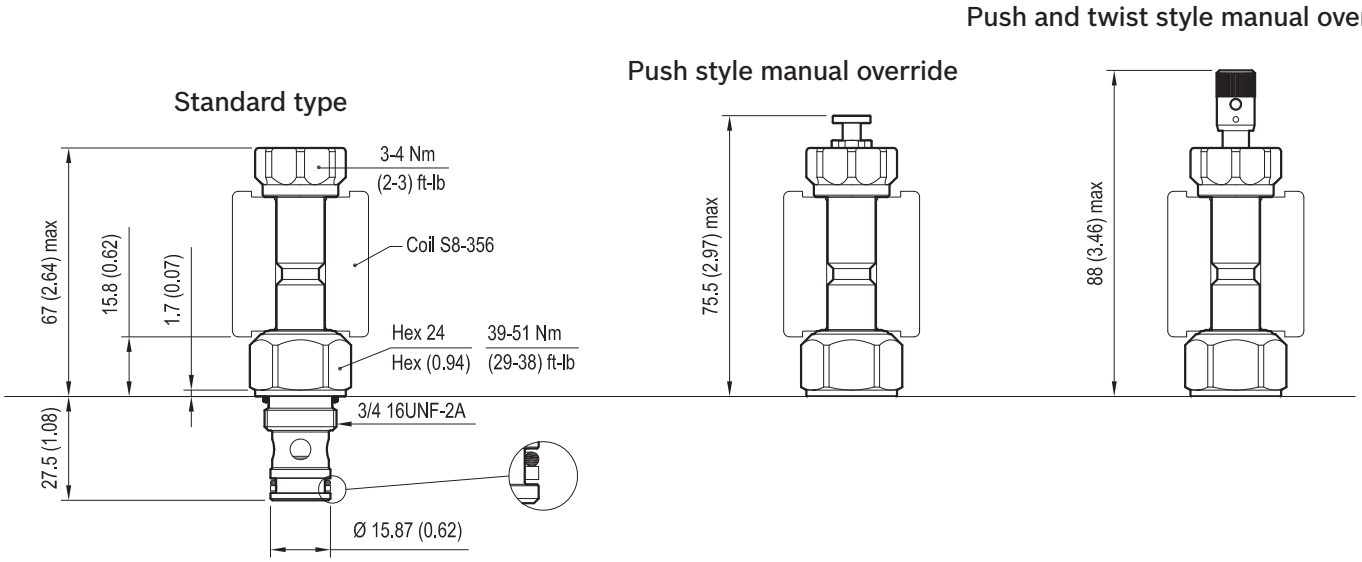
Electrical

Type of voltage		DC voltage
Coil type		S8-356 see RE 18325-90
Supply voltage		See data sheet RE 18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90

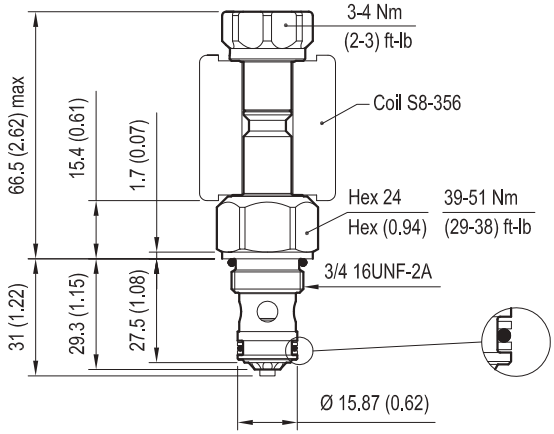
Note: Coils must be ordered separately.

Dimensions

Version 06: Solenoid operated valve, poppet 2-way normally open



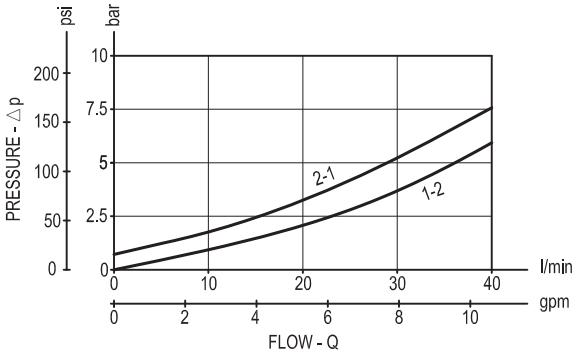
Version 12: Solenoid operated valve, poppet 2-way normally open

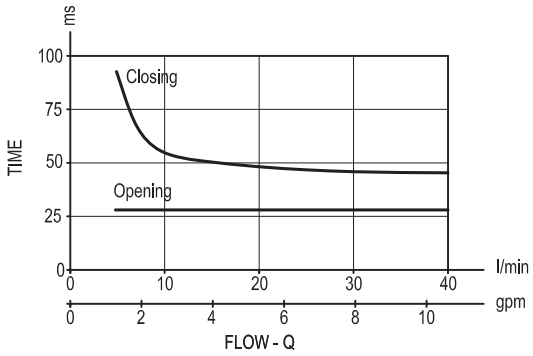


[mm (Inches)]

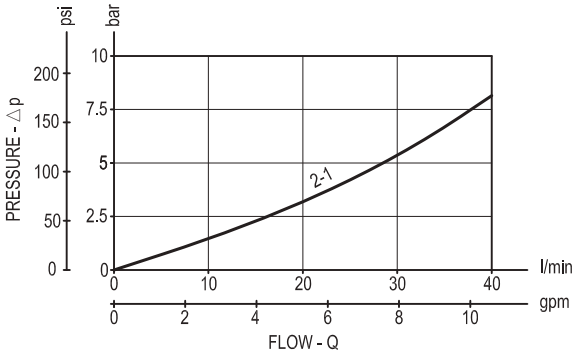
Performance graphs

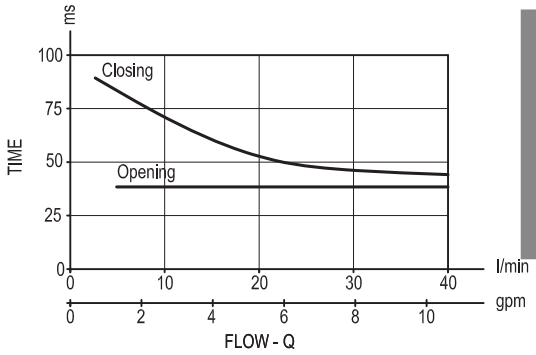
Version 06





Version 12





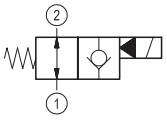
4

Ordering code

OD.15 | X | 19 | Z | S0

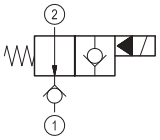
Solenoid operated valves
poppet type 2-way
normally open

bidirectional type



06 =

monodirectional type



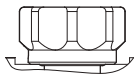
12 =

Special cavity: 019-E

Tube not welded

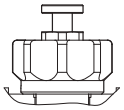
standard type

1A =



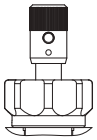
Push style manual override

1B =



Push and twist style manual override

1C =



Type	Material number
OD1506191AS000	R934000989
OD1506191BS000	R934000990
OD1506191CS000	R934000991
OD1512191AS000	R901091159
OD1512191BS000	R901091161
OD1512191CS000	R901091162

Type	Material number

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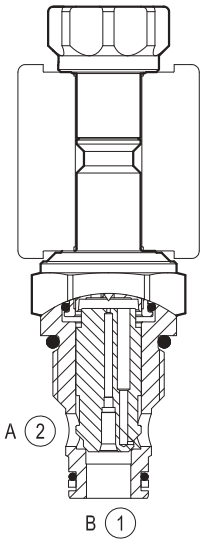
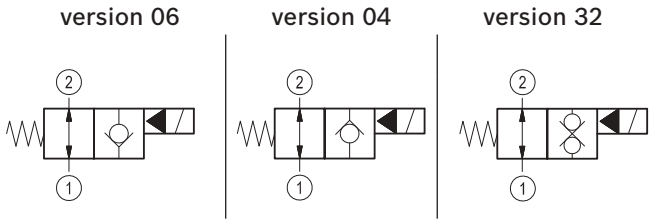
RE 18323-12/03.11
Replaces: RE 18323-12/02.11

Solenoid operated valves pilot operated poppet type 2-way normally open

Common cavity, Size 10

VEI-8A-10-NA **OD.15 - X - 36 - Y - S0**





General

Weight	kg (lbs)	0.16 (0.35)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Max. proof pressure	bar (psi)	420 (6000)
Flow range	l/min. (gpm)	2-70 (0.5-18)
Fatigue cycle life	cycles	1 million cycles at 350 bar
Max. internal leakage	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	44-56 (33-42)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-10A-2N see RE 18325-75
Seal kit - version 1	code material no.	RG10A2010520100 R901111363
Seal kit - version 2-3	code material no.	RG10A2010530100 R901111366
Seal kit coil	code material no.	RG12A1PNBR7010 R934003958
Other technical data		See data sheet RE 18350-50

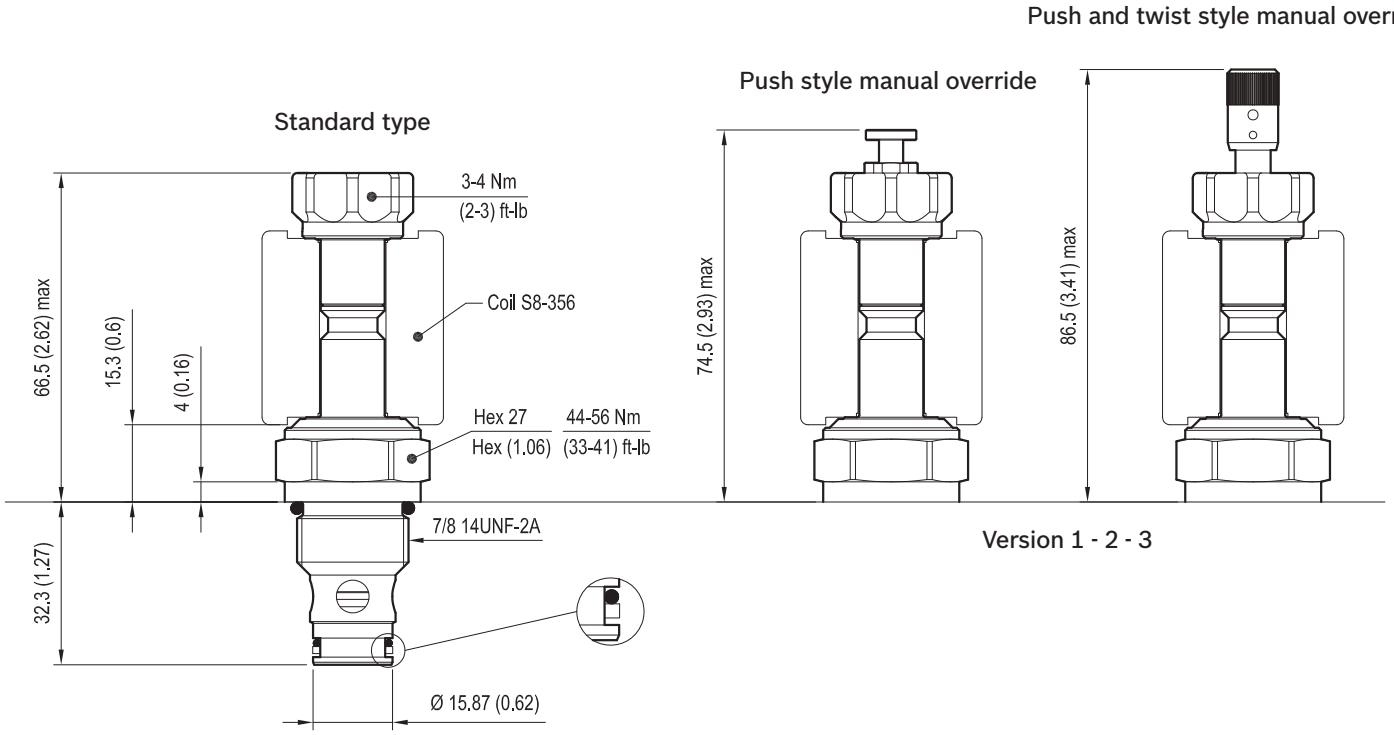
Electrical

Type of voltage		DC voltage
Coil type		S8-356 see RE 18325-90
Supply voltage		See data sheet RE 18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90

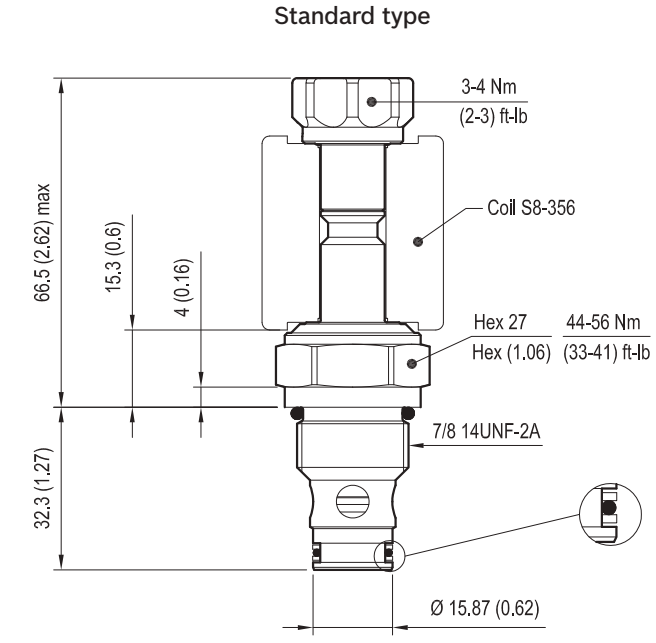
Note: Coils must be ordered separately.

Dimensions

Version 1: Solenoid operated valve, poppet 2-way normally open



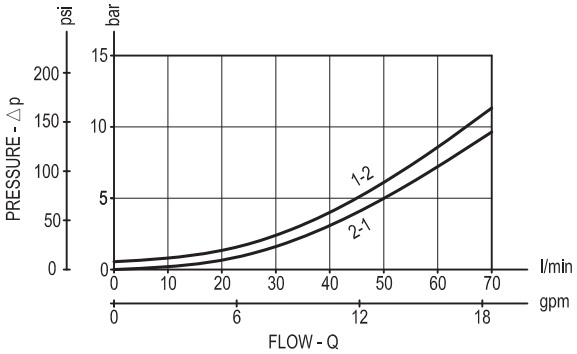
Version 2: Solenoid operated valve, poppet 2-way normally open
Version 3: Solenoid operated valve, poppet 2-way double lock normally open



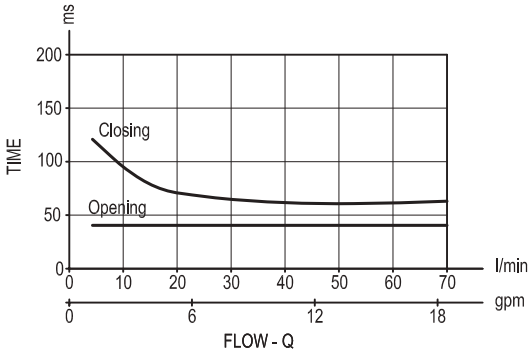
[mm (Inches)]

Performance graphs

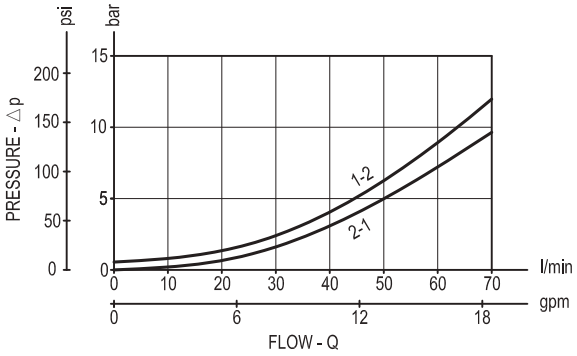
Version 06 - Version 04



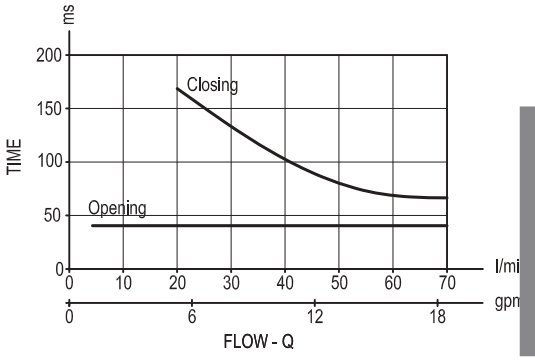
Standard



Version 32



Standard



4

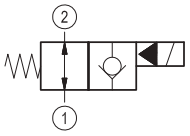
Ordering code

OD.15	*	36	*	S0

Solenoid operated valves poppet type 2-way normally open

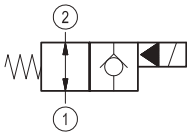
Tube not welded

bidirectional type



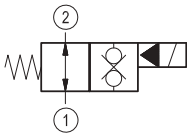
= 06

bidirectional type



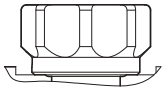
= 04

bidirectional type

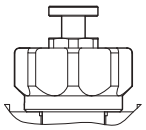


= 32

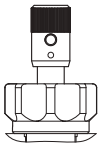
standard type

1A = 

Push style manual override

1B = 

Push and twist style manual override

1C = 

Common cavity: CA-10A-2N

Type	Material number
OD1504361AS000	R901091124
OD1504361BS000	R901091125
OD1504361CS000	R901091126
OD1506361AS000	R901080489
OD1506361BS000	R901091136
OD1506361CS000	R901091137
OD1532361AS000	R901091175
OD1532361BS000	R901091176
OD1532361CS000	R901091178

Type	Material number

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cartridges@oilcontrol.com
www.boschrexroth.com

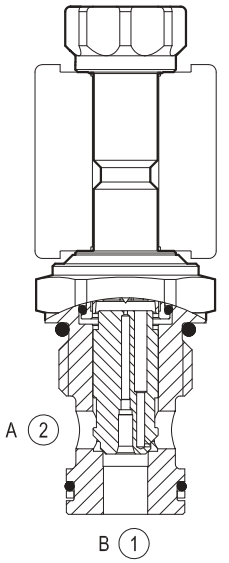
RE 18323-07/02.11
Replaces: RE 18323-07/01.11

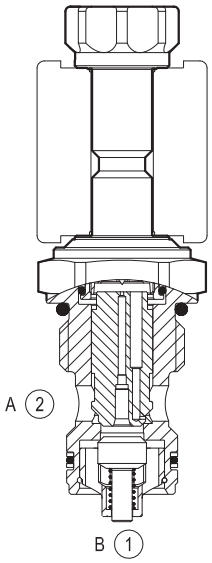
Solenoid operated valves pilot operated poppet type 2-way normally open

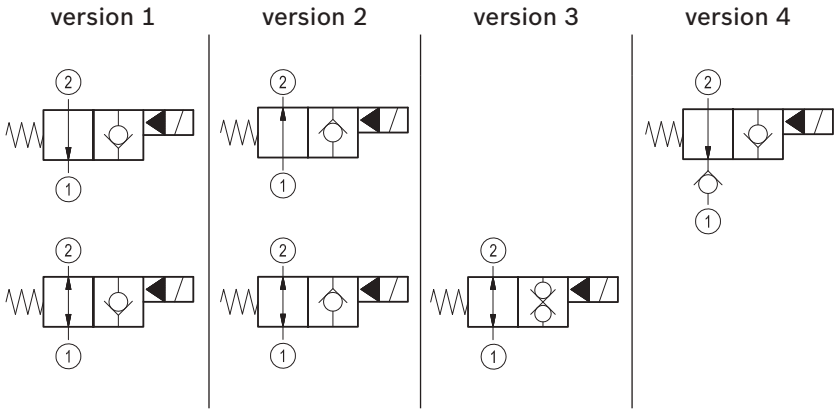
Special cavity, 017-E

VEI-8A-09-NA

OD.15 - X - 17 - Y - S0







General

Weight	kg (lbs)	0.21 (0.46)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Max. proof pressure	bar (psi)	420 (6000)
Flow range	l/min. (gpm)	2-70 (0.5-18)
Fatigue cycle life	cycles	1 million cycles at 350 bar
Max. internal leakage	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	54-66 (40-49)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		017-E see RE 18325-75
Seal kit - version 1	code material no.	RG17E201052010 R934003562
Seal kit - version 2-3-4	code material no.	RG17E201053010 R934003563
Seal kit coil	code material no.	RG12A1PNBR7010 R934003958
Other technical data		See data sheet RE 18350-50

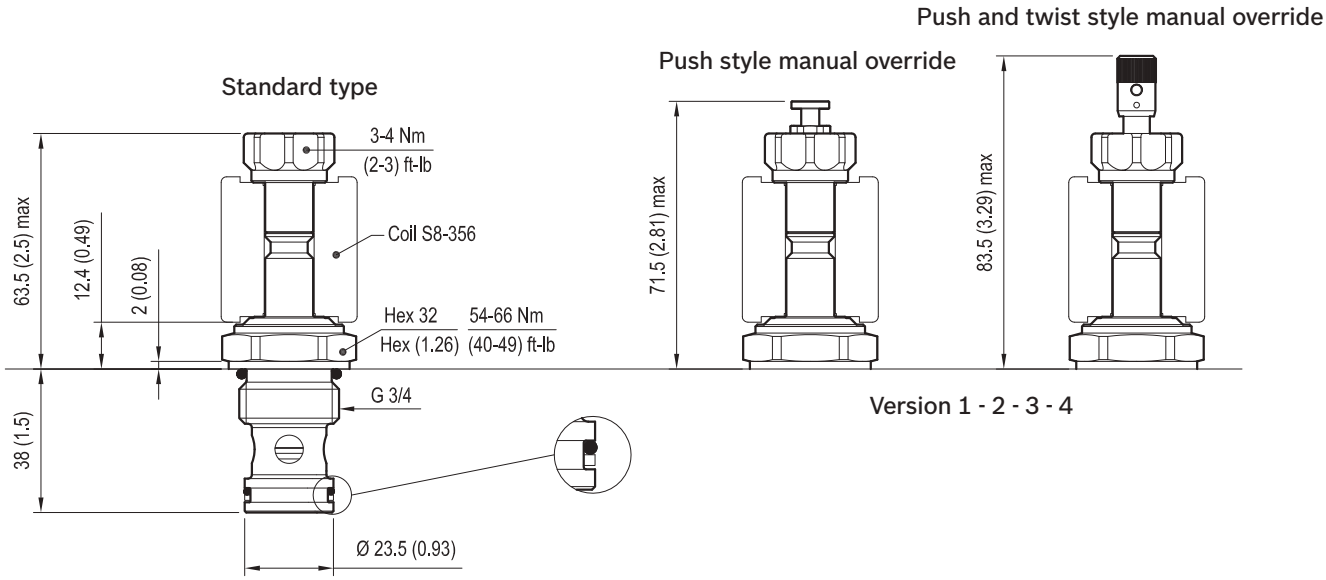
Electrical

Type of voltage		DC voltage
Coil type		S8-356 see RE 18325-90
Supply voltage		See data sheet RE 18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90

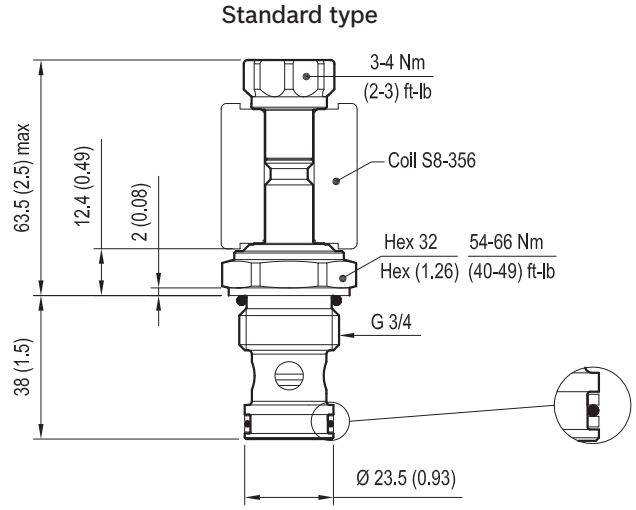
Note: Coils must be ordered separately.

Dimensions

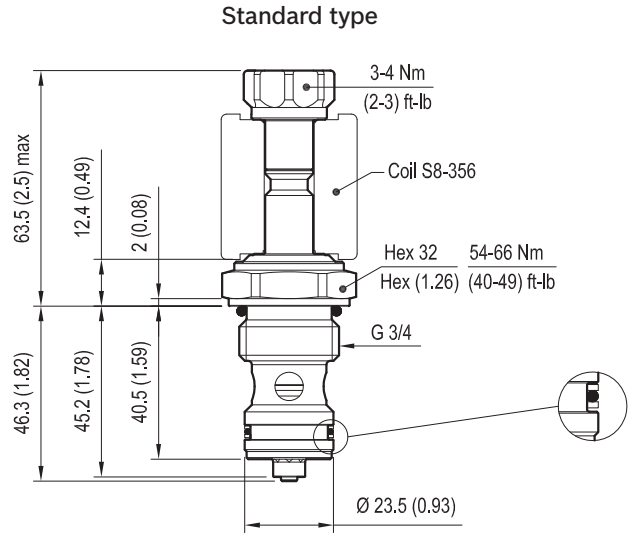
Version 1: Solenoid operated valve, poppet 2-way normally open



Version 2: Solenoid operated valve, poppet 2-way normally open
Version 3: Solenoid operated valve, poppet 2-way double lock normally open



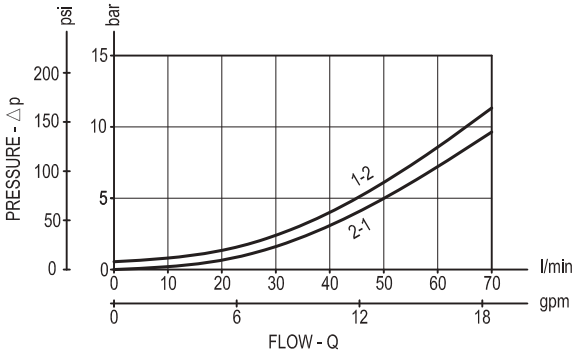
Version 4: Solenoid operated valve, poppet 2-way normally open



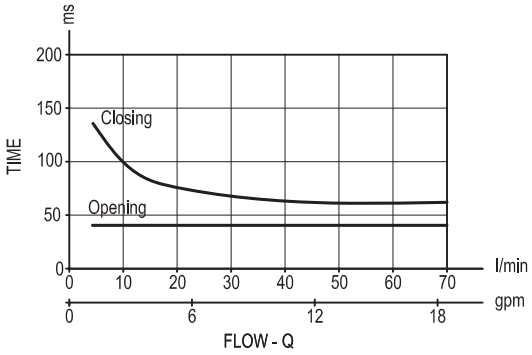
[mm (Inches)]

Performance graphs

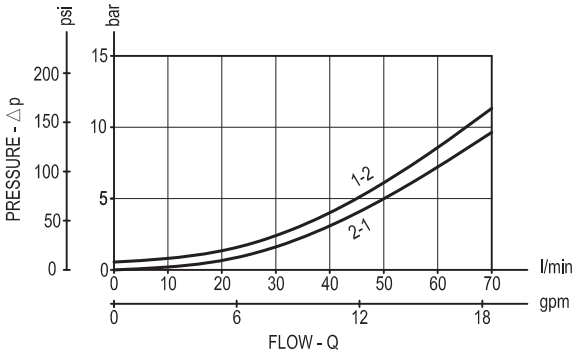
Version 1 - Version 2



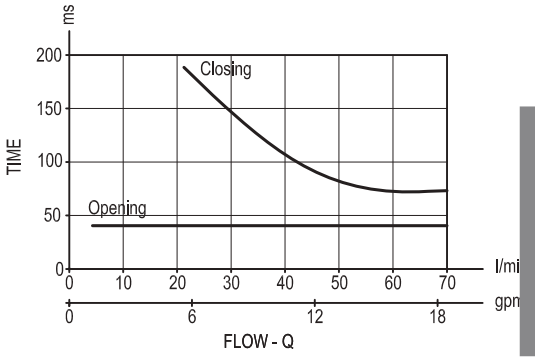
Standard



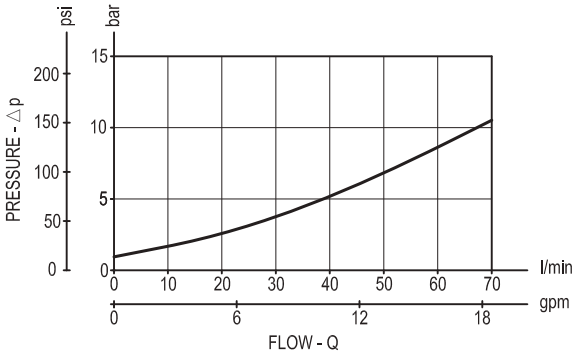
Version 3



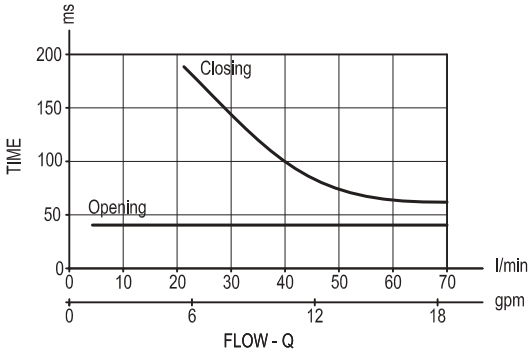
Standard



Version 4



Standard



4

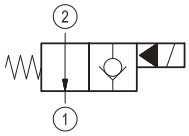
Ordering code

OD.15	*	17	*	S0

Solenoid operated valves poppet type 2-way normally open

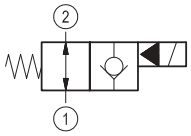
Tube not welded

monodirectional type



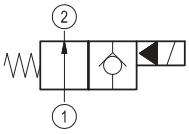
= 02

bidirectional type



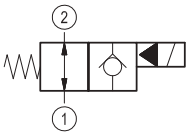
= 06

monodirectional type



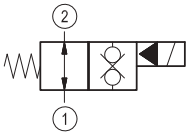
= 10

bidirectional type



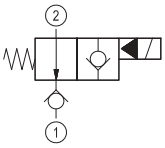
= 04

bidirectional type



= 32

monodirectional type

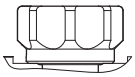


= 12

Special cavity: 017-E

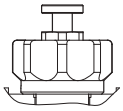
standard type

1A =



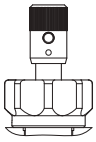
Push style manual override

1B =



Push and twist style manual override

1C =



Type	Material number
OD1502171AS000	R934000718
OD1502171BS000	R934000721
OD1502171CS000	R901177370
OD1506171AS000	R901113677
OD1506171BS000	R901113680
OD1506171CS000	R934000956
OD1504171AS000	R901113668
OD1504171BS000	R901113669
OD1504171CS000	R934000809

Type	Material number
OD1510171AS000	R934001051
OD1510171BS000	R934004148
OD1510171CS000	R934001052
OD1512171AS000	R934001090
OD1532171AS000	R901113683
OD1532171BS000	R901113684
OD1532171CS000	R934001189

Bosch Rexroth Oil Control S.p.A.
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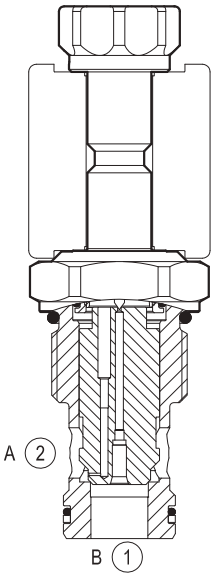
Tel. +39 059 887 611
Fax +39 059 547 848
cartridges@oilcontrol.com
www.boschrexroth.com

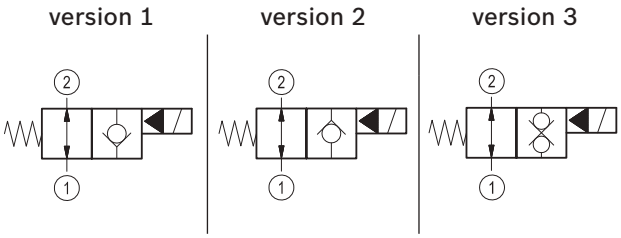
RE 18323-14/08.10 1/4
Replaces: RE 00162-02/01.06

Solenoid operated valves pilot operated poppet type 2-way normally open

Common cavity, Size 12

VEI-8A-12A-NA **OD.15 - X - 89 - Y - S0**





General

Weight	kg (lbs)	0.23 (0.51)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Flow range	l/min. (gpm)	5-150 (1-40)
Max. internal leakage	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	54-66 (40-49)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-12A-2N see RE 18325-75
Seal kit - version 1	code material no.	RG12A2010520100 R901111377
Seal kit - version 2-3	code material no.	RG12A2010530100 R930003374
Seal kit coil	code material no.	RG12A1PNBR7010 R934003958
Other technical data		See data sheet RE 18350-50

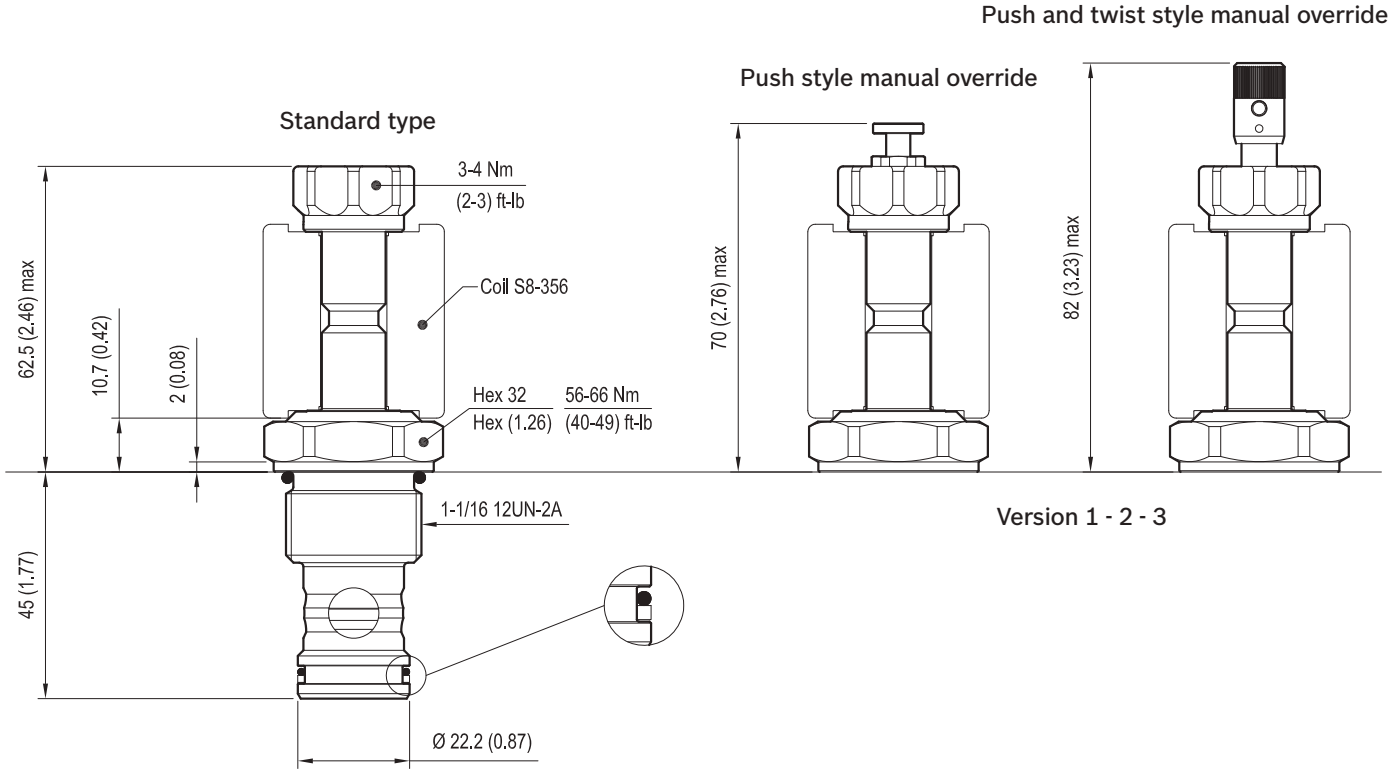
Electrical

Type of voltage		DC voltage
Coil type		S8-356 see RE 18325-90
Supply voltage		See data sheet RE 18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90

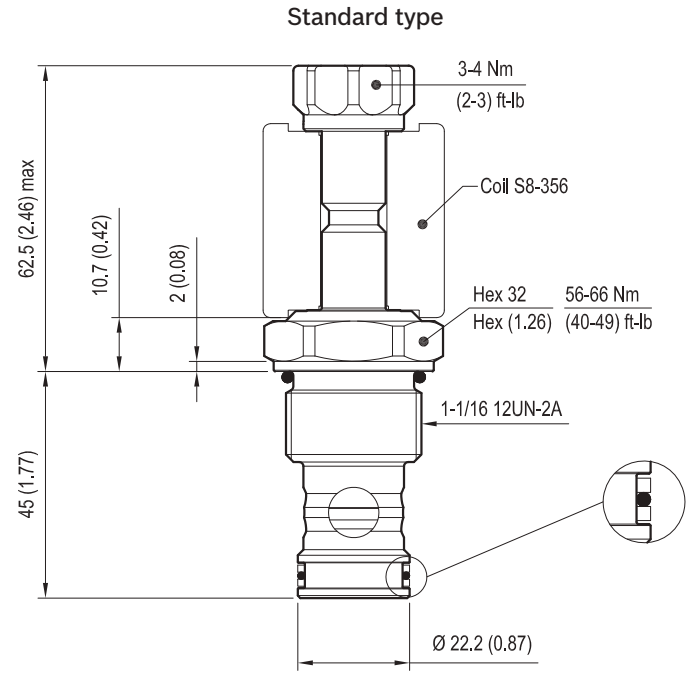
Note: Coils must be ordered separately.

Dimensions

Version 1: Solenoid operated valve, poppet 2-way normally open



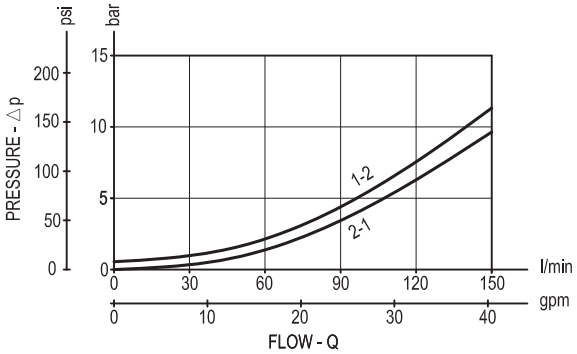
Version 2: Solenoid operated valve, poppet 2-way normally open
Version 3: Solenoid operated valve, poppet 2-way double lock normally open



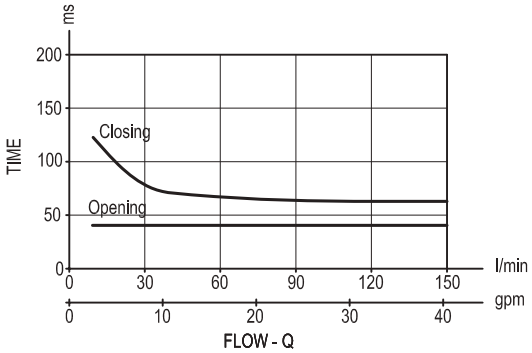
mm (Inches)

Performance graphs

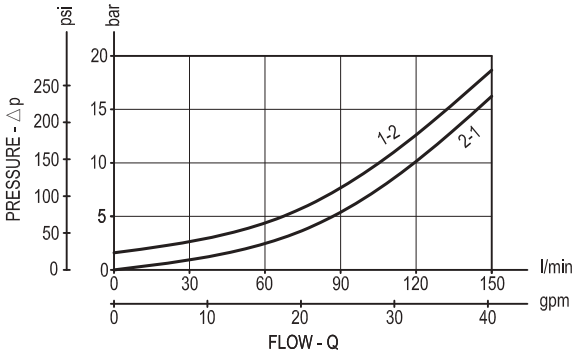
Version 1 - Version 2



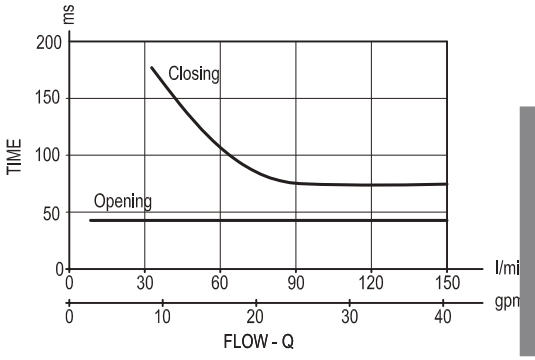
Standard



Version 3



Standard



4

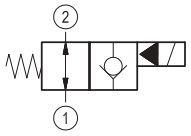
Ordering code

OD.15	*	89	*	S0

Solenoid operated valves poppet type 2-way normally open

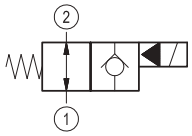
Tube not welded

monodirectional type



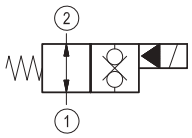
= 06

bidirectional type



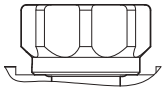
= 04

monodirectional type with

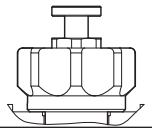


= 32

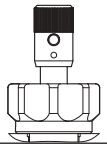
standard type

1A = 

Push style manual override

1B = 

Push and twist style manual override

1C = 

Common cavity: CA-12A-2N

Type	Material number
OD1504891AS000	R901090961
OD1504891BS000	R901090960
OD1506891AS000	R901091139
OD1506891BS000	R901091140
OD1506891CS000	R901091141
OD1532891AS000	R901091179
OD1532891BS000	R901091180
OD1532891CS000	R901091182

Type	Material number

Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
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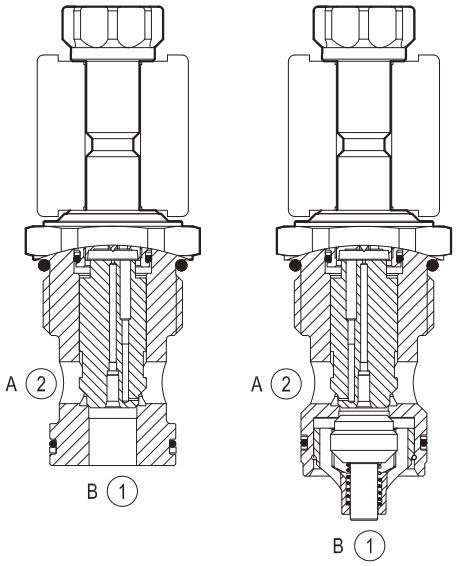
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
cartridges@oilcontrol.com
www.boschrexroth.com

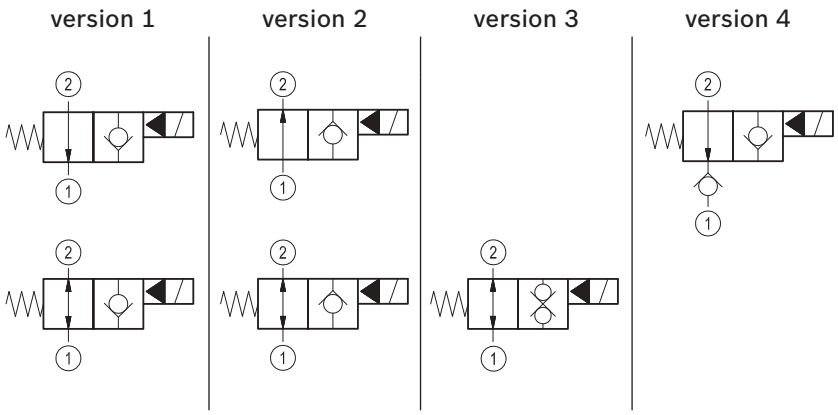
RE 18323-08/02.11
Replaces: RE 18323-08/08.10

Solenoid operated valves pilot operated poppet type 2-way normally open

Special cavity, 021-E

VEI-8A-12-NA OD.15 - X - 21 - Y - S0





General

Weight	kg (lbs)	0.34 (0.75)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Max. proof pressure	bar (psi)	420 (6000)
Flow range	l/min. (gpm)	5-150 (1-40)
Fatigue cycle life	cycles	1 million cycles at 350 bar
Max. internal leakage	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	80-100 (59-74)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		021-E see RE 18325-75
Seal kit - version 1	code material no.	RG21E201052010 R934003566
Seal kit - version 2-3-4	code material no.	RG21E201053010 R934003567
Seal kit coil	code material no.	RG12A1PNBR7010 R934003958
Other technical data		See data sheet RE 18350-50

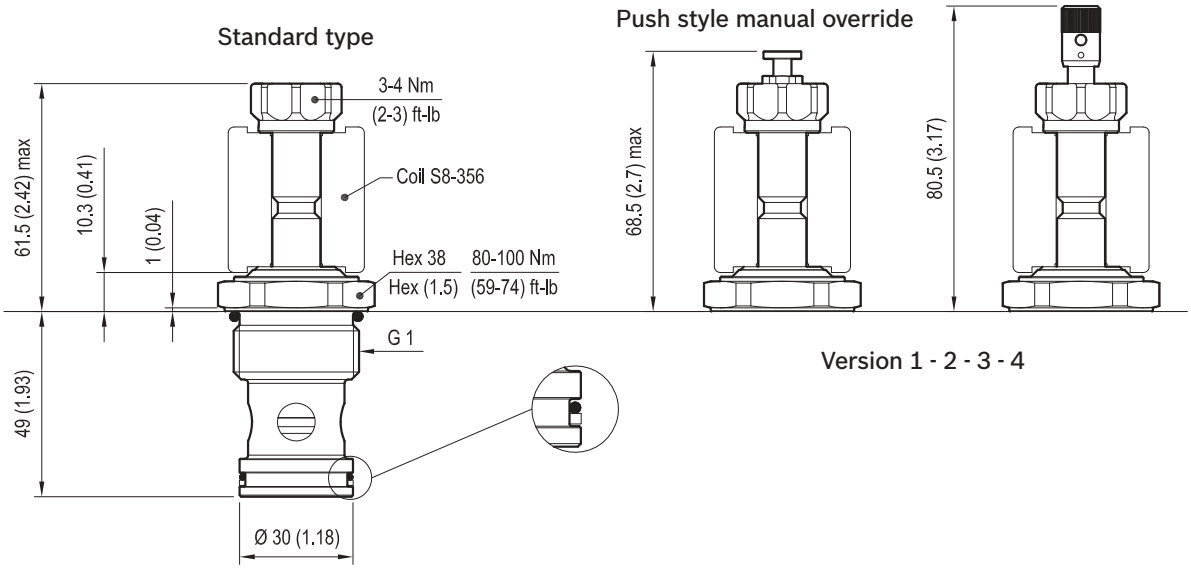
Electrical

Type of voltage		DC voltage
Coil type		S8-356 see RE 18325-90
Supply voltage		See data sheet RE 18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90

Note: Coils must be ordered separately.

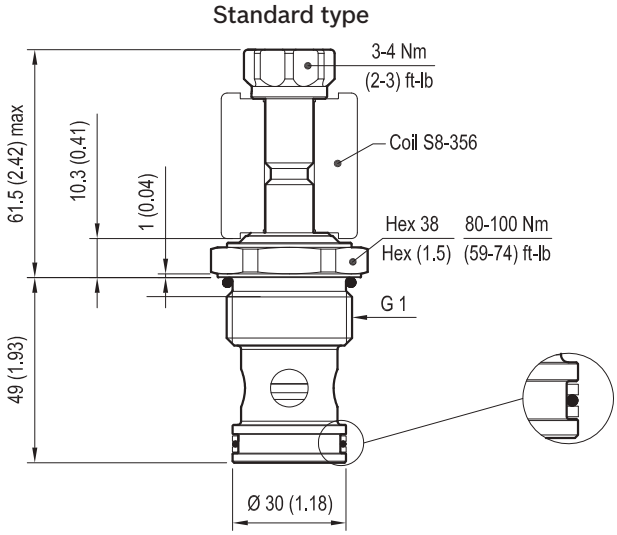
Dimensions

Version 1: Solenoid operated valve, poppet 2-way normally open

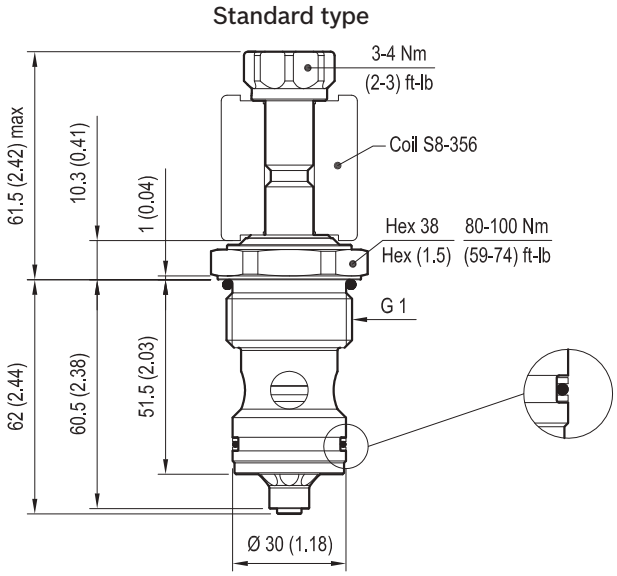


Version 2: Solenoid operated valve, poppet 2-way normally open

Version 3: Solenoid operated valve, poppet 2-way double lock normally open



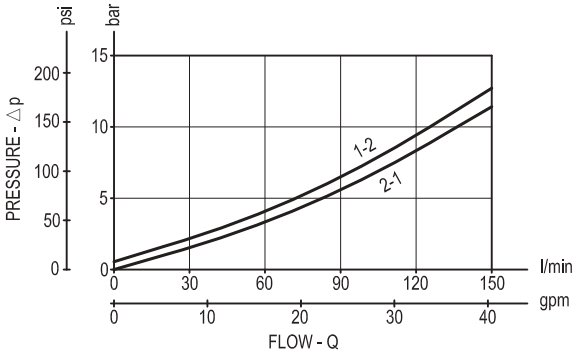
Version 4: Solenoid operated valve, poppet 2-way normally open



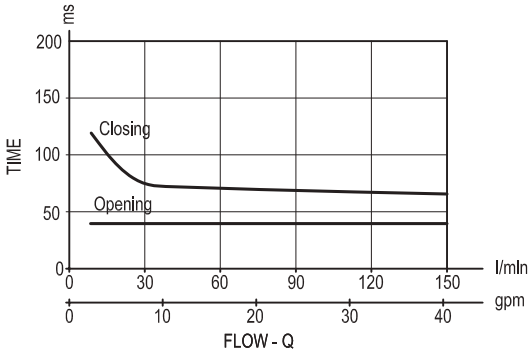
mm (Inches)

Performance graphs

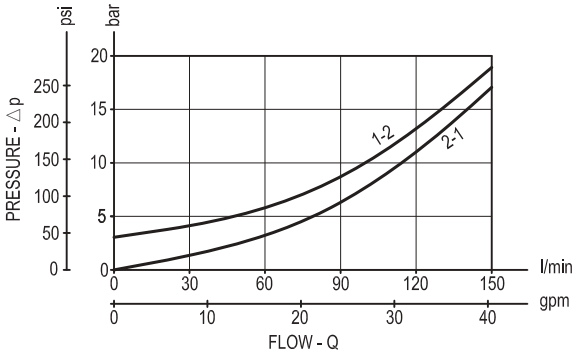
Version 1 - Version 2



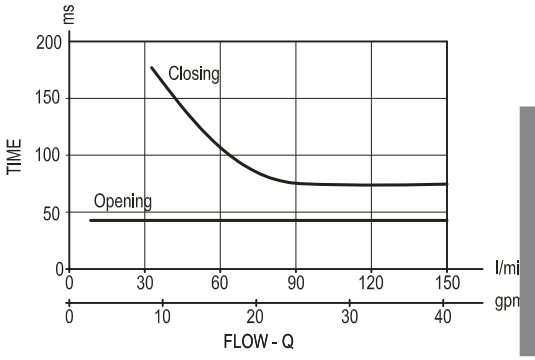
Standard



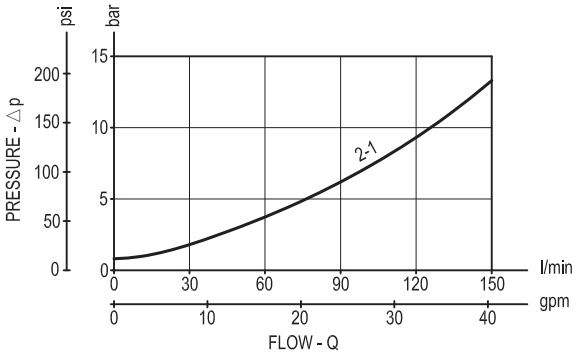
Version 3



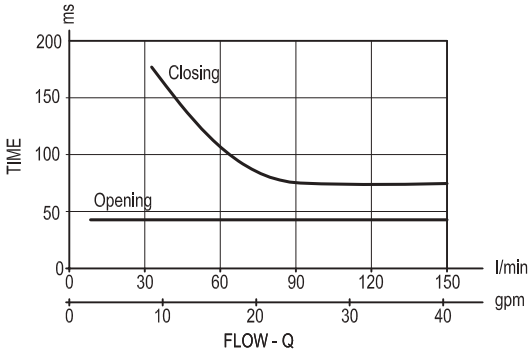
Standard



Version 4



Standard



4

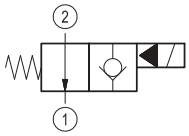
Ordering code

OD.15	*	21	*	S0

Solenoid operated valves poppet type 2-way normally open

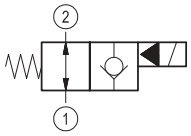
Tube not welded

monodirectional type



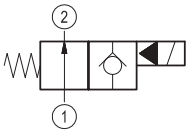
= 02

bidirectional type



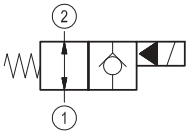
= 06

monodirectional type



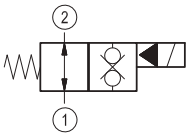
= 10

bidirectional type



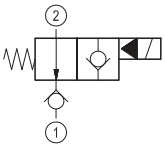
= 04

bidirectional type



= 32

monodirectional type

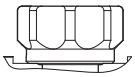


= 12

Special cavity: 021-E

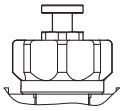
standard type

1A =



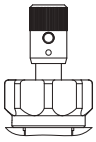
Push style manual override

1B =



Push and twist style manual override

1C =



Type	Material number
OD1502211AS000	R987067733
OD1502211BS000	R901186074
OD1502211CS000	R934000758
OD1504211AS000	R901113671
OD1504211BS000	R901113672
OD1504211CS000	R934000820
OD1506211AS000	R901104409
OD1506211BS000	R901113681
OD1506211CS000	R901172041

Type	Material number
OD1510211AS000	R901085464
OD1510211BS000	R934001061
OD1512211AS000	R934001100
OD1512211BS000	R934001101
OD1512211CS000	R934001102
OD1532211AS000	R901104415
OD1532211BS000	R901113685
OD1532211CS000	R901191824

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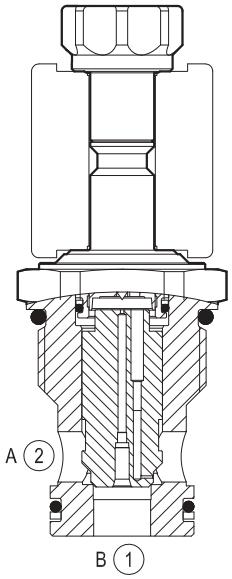
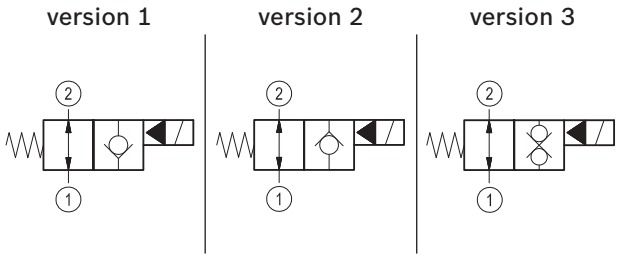
RE 18323-18/02.11
Replaces: RE 18323-18/08.10

Solenoid operated valves pilot operated poppet type 2-way normally open

Common cavity, Size 16

VEI-8A-16A-NA **OD.15 - X - 75 - Y - S0**





General

Weight	kg (lbs)	0.32 (0.71)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Max. proof pressure	bar (psi)	420 (6000)
Flow range	l/min. (gpm)	5-150 (1-40)
Fatigue cycle life	cycles	1 million cycles at 350 bar
Max. internal leakage	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	80-100 (59-74)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-16A-2N see RE 18325-75
Seal kit - version 1	code material no.	RG16A2010520100 R901111386
Seal kit - version 2-3	code material no.	RG16A2010530100 R930003262
Seal kit coil	code material no.	RG12A1PNBR7010 R934003958
Other technical data		See data sheet RE 18350-50

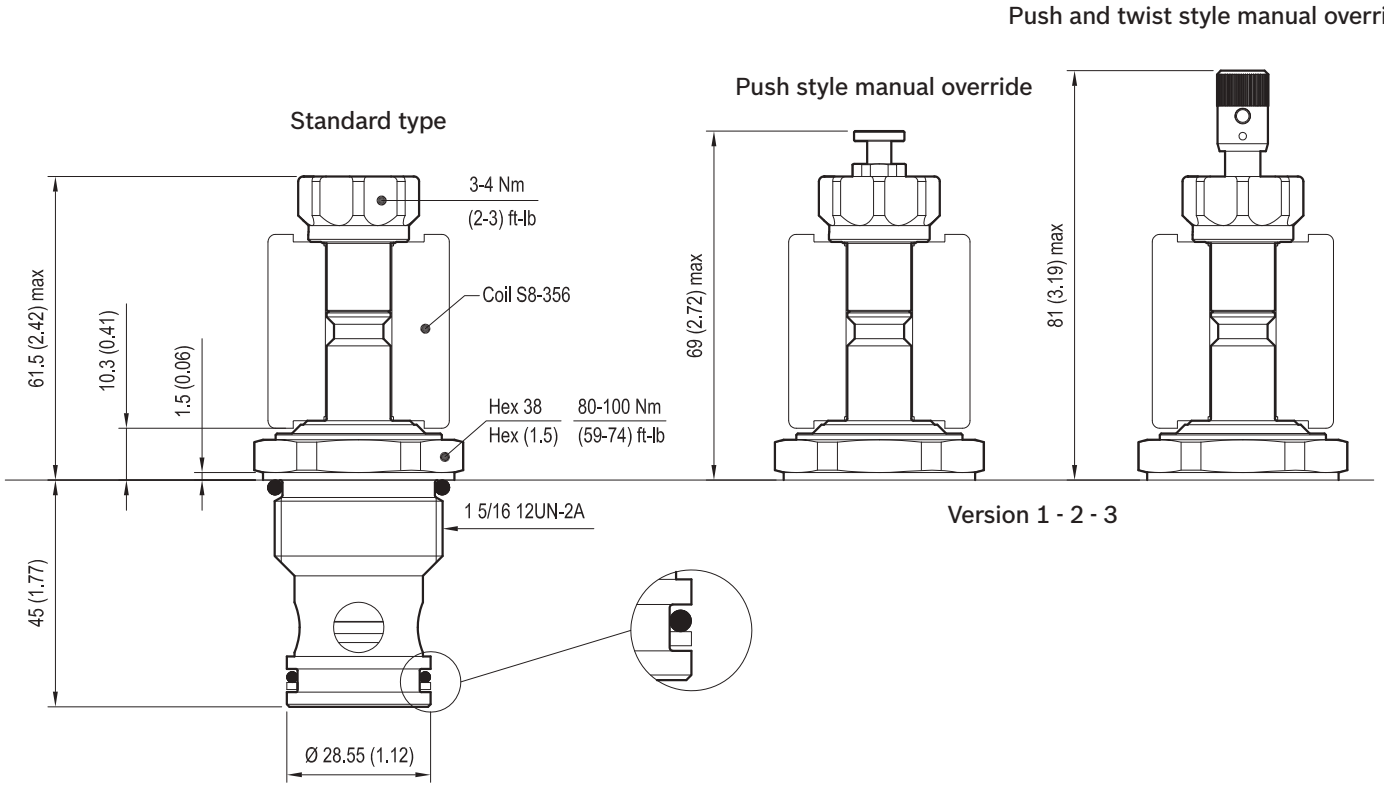
Electrical

Type of voltage		DC voltage
Coil type		S8-356 see RE 18325-90
Supply voltage		See data sheet RE 18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90

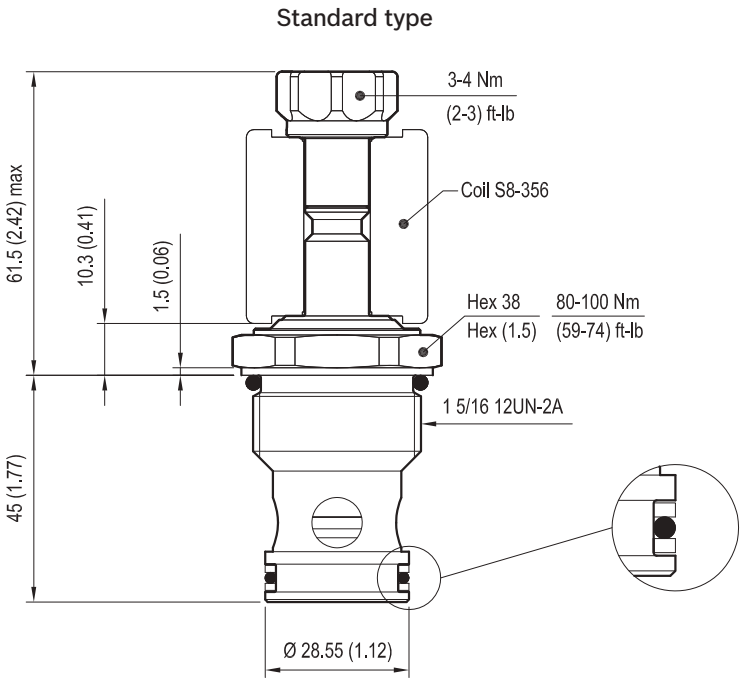
Note: Coils must be ordered separately.

Dimensions

Version 1: Solenoid operated valve, poppet 2-way normally open



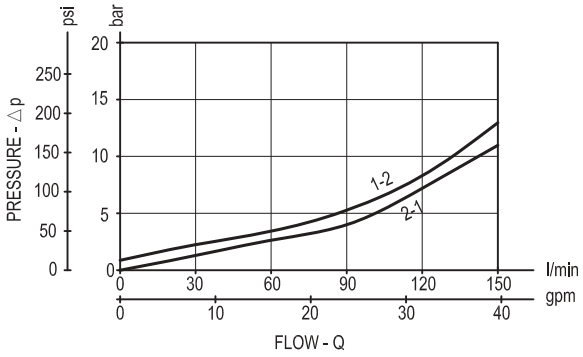
Version 2: Solenoid operated valve, poppet 2-way normally open
Version 3: Solenoid operated valve, poppet 2-way double lock normally open



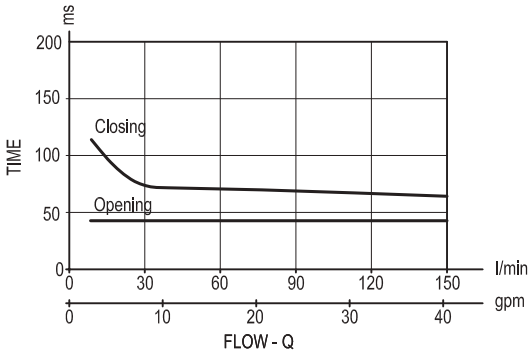
mm (Inches)

Performance graphs

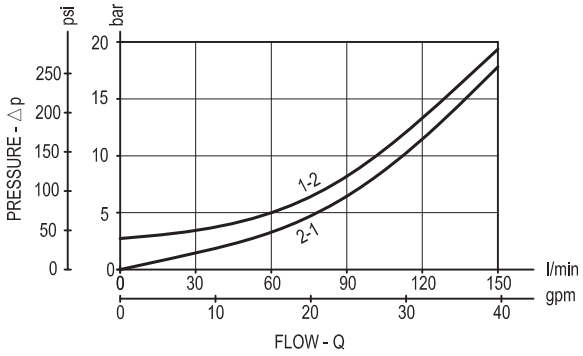
Version 1 - Version 2



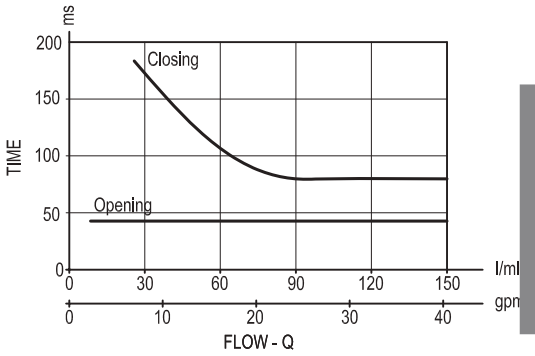
Standard



Version 3



Standard



4

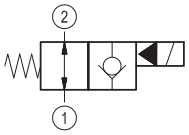
Ordering code

OD.15	*	75	*	S0

Solenoid operated valves poppet type 2-way normally open

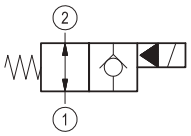
Tube not welded

bidirectional type



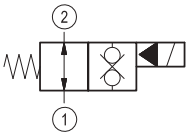
= 06

bidirectional type



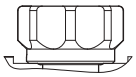
= 04

double lock

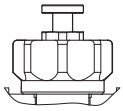


= 32

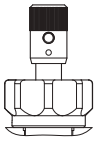
standard type

1A = 

Push style manual override

1B = 

Push and twist style manual override

1C = 

Common cavity: CA-16A-2N

Type	Material number
OD1504751AS000	R901094731
OD1506751AS000	R901095953
OD1506751BS000	R901095955
OD1506751CS000	R901095956
OD1532751AS000	R901094753
OD1532751BS000	R901094754
OD1532751CS000	R901094755

Type	Material number

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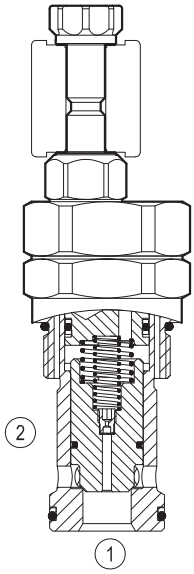
RE 18323-16/02.11
Replaces: RE 18323-16/08.10

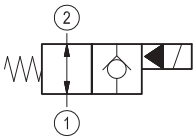
Solenoid operated valves pilot operated poppet 2-way normally open

Special cavity, 004

VEI-8A-2B-16-NA-NSS **OD.15.04.04 - Y - S0**



version 04



4

General

Weight	kg (lbs)	1.13 (2.5)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Max. proof pressure	bar (psi)	420 (6000)
Rated flow	l/min. (gpm)	260 (69)
Fatigue cycle life	cycles	1 million cycles at 350 bar
Max. internal leakage	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	110-130 (81-96)
Filtration		Nominal value max. 25µm (NAS 8) ISO 4406 19/17/14
Special cavity		004 see RE 18325-75
Seal kit	code material no.	RG0004020520100 R930001696
Seal kit coil	code material no.	RG12A1PNBR7010 R934003958
Other technical data		See data sheet RE 18350-50

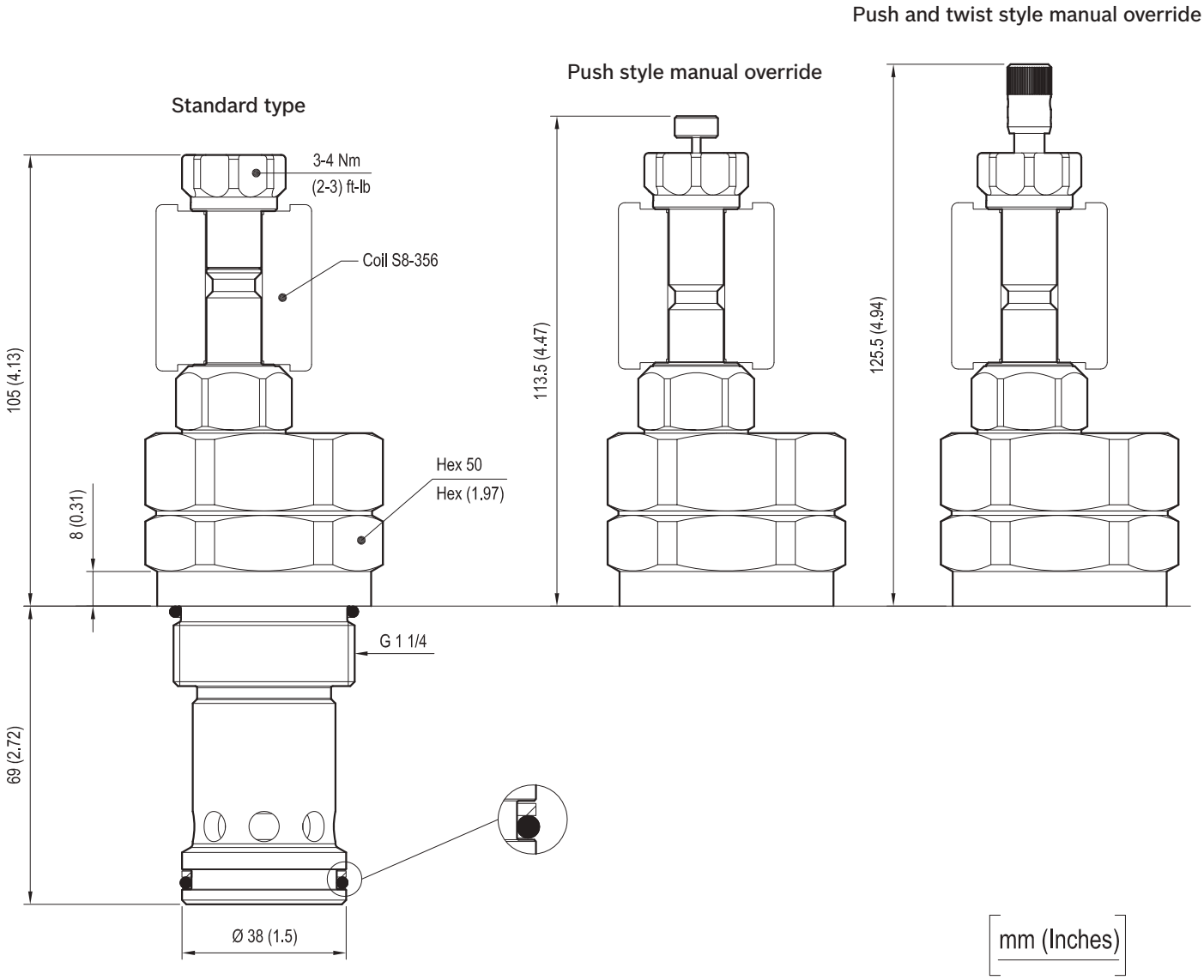
Electrical

Type of voltage		DC voltage
Coil type		S8-356 see RE 18325-90
Supply voltage		See data sheet RE 18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle coil	%	100 see RE 18325-90
Type of protection		See data sheet RE 18325-90

Note: Coils must be ordered separately.

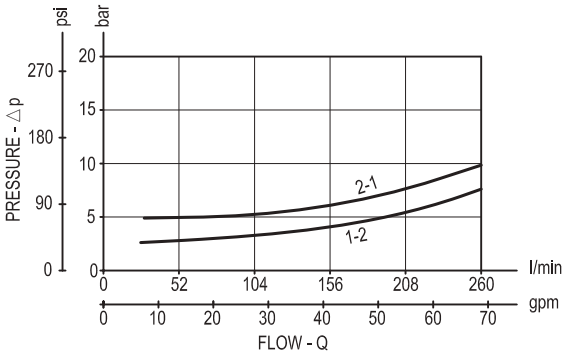
Dimensions

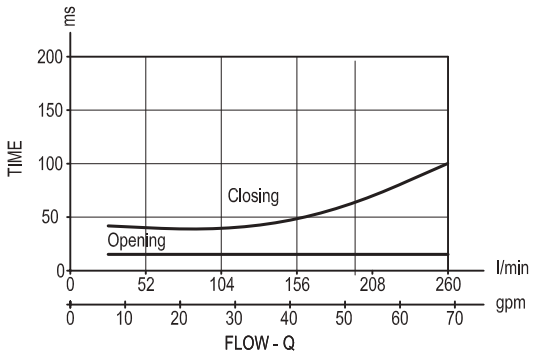
Solenoid operated valve, poppet 2-way normally open - Special cavity



Performance graphs

Version 04



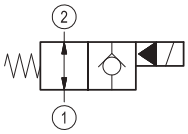


4

Ordering code

OD.15	04	04	*	S0

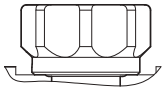
Solenoid operated valves poppet type 2-way normally open



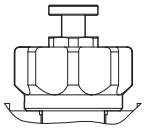
Special cavity: 004

Tube not welded

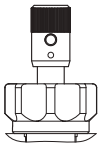
1A = standard type



1B = Push style manual override



1C = Push and twist style manual override



Type	Material number
OD1504041AS000	R901091118
OD1504041BS000	R901091119
OD1504041CS000	R901091120

Type	Material number

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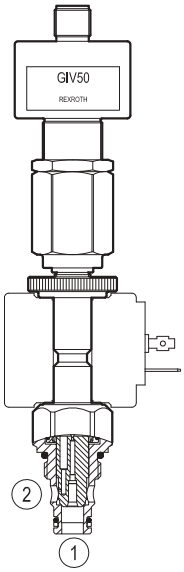
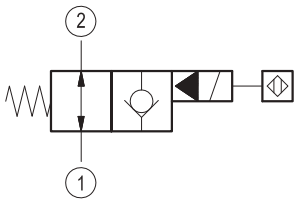
Solenoid operated valves pilot operated poppet 2-way normally open proximity sensor

Common cavity, Size 08

VEI-8A-2A-06-NA-S-M-NSS OD.15.06.18.1D.S2 - Z



Version 06



2A06

4

General

Weight	kg (lbs)	0.75 (1.7)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5075)
Flow range	l/min.(gpm)	2.5-40 (0.66-11)
Max. internal leakage	drops/min.	15
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 15 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	30-35 (22-26)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-08A-2N see RE 18325-70
Seal kit	code material no.	RG08A201052010 R901101437
Other technical data		See data sheet RE 18350-50

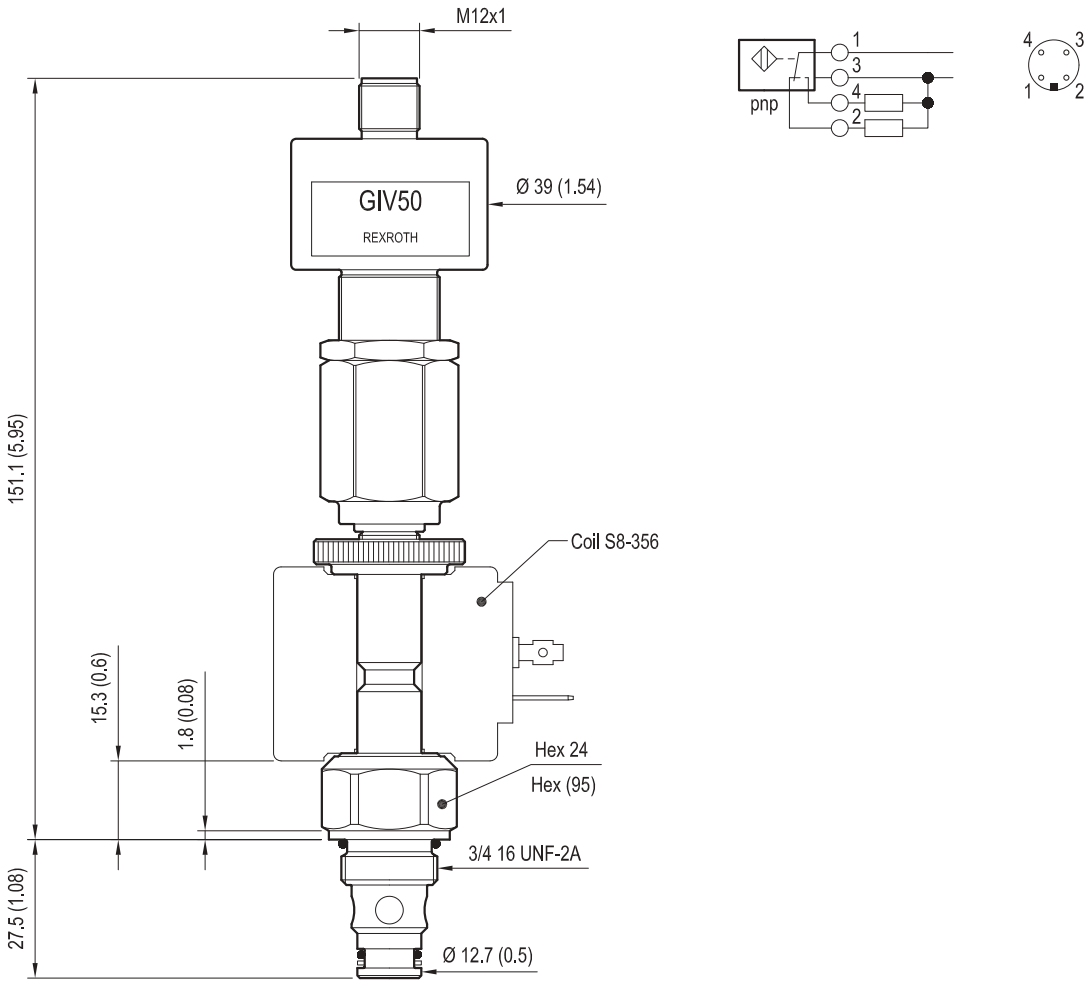
Electrical

Type of voltage		DC voltage
Coil type		S8-356
Supply voltage		See data sheet RE18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle	%	100 see RE 18325-90
Type of protection		See data sheet RE 18325-90

Please consider that a proper fuction of the valve is guaranteed only if the position of the monitor is not modified; each cartridge is provided of a torque confirmation mark, intended as anti-tampering device.

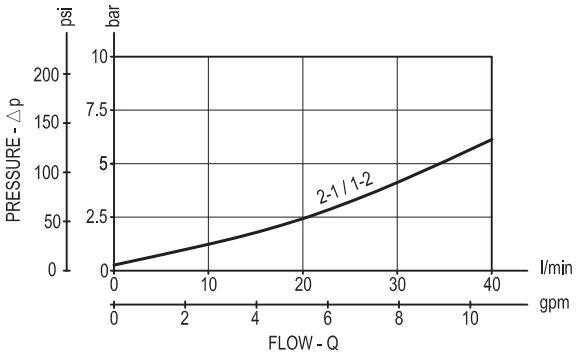
Dimensions

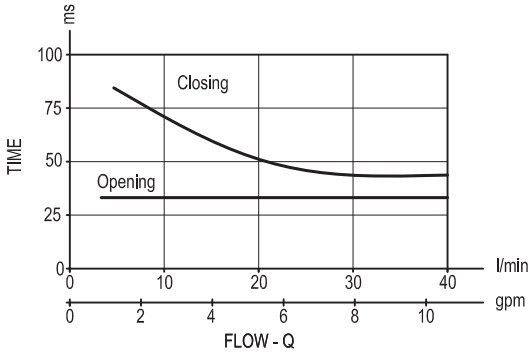
Solenoid operated valves poppet 2-way normally open proximity sensor



mm (Inches)

Performance graphs



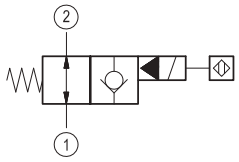


4

Ordering code

OD.15	06	18	1DS2	Z

Solenoid operated valves poppet 2-way normally open proximity sensor



OB = 12 V DC

OC = 24 V DC

Note: please consult factory for different voltages.

Common cavity: CA-08A-2N

Type	Material number
OD1506181DS2OB	R934001226
OD1506181DS2OC	R934001227

Type	Material number

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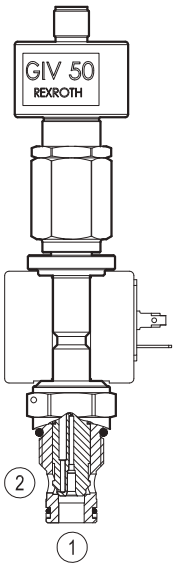
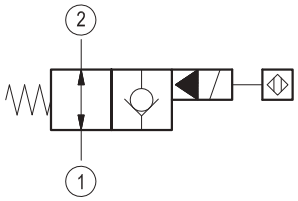
Solenoid operated valves pilot operated poppet 2-way normally open proximity sensor

Special cavity, 076-E

VEI-8A-2A-09-NA-S-M-NSS OD.15.06.76.1D.S2 - Z



Version 06



2A06

General

Weight	kg (lbs)	0.75 (1.7)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5075)
Flow range	l/min.(gpm)	2.5-70 (0.66-18)
Max. internal leakage	drops/min.	15
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 15 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	41-47 (30-35)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Special cavity		076-E see RE 18325-75
Seal kit	code material no.	RG10A201052010 R901111363
Other technical data		See data sheet RE 18350-50

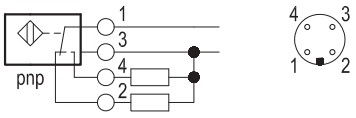
Electrical

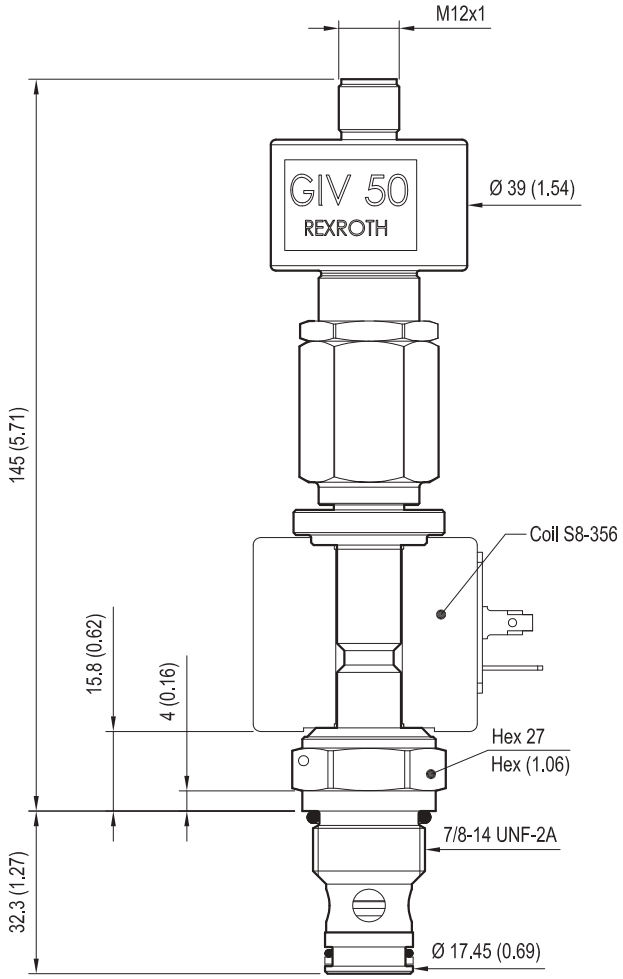
Type of voltage		DC voltage
Coil type		S8-356
Supply voltage		See data sheet RE 18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle	%	100 see RE 18325-90
Type of protection		See data sheet RE 18325-90

Please consider that a proper fuction of the valve is guaranteed only if the position of the monitor is not modified; each cartridge is provided of a torque confirmation mark, intended as anti-tampering device.

Dimensions

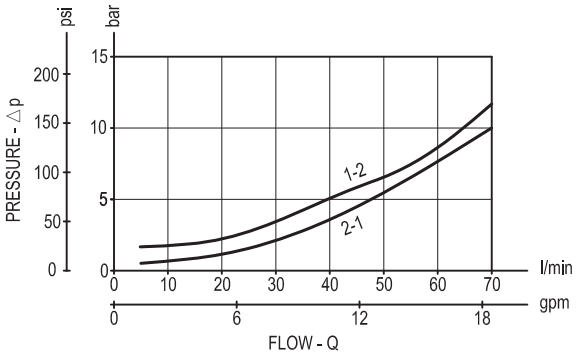
Solenoid operated valves poppet 2-way normally open proximity sensor

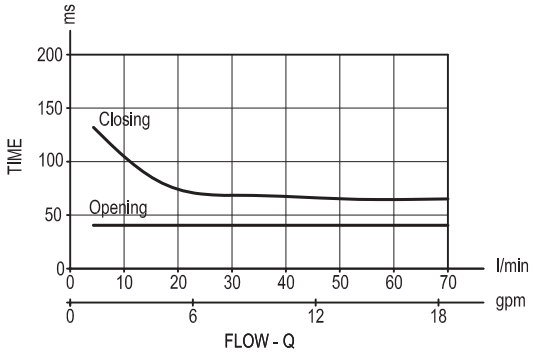




mm (Inches)

Performance graphs



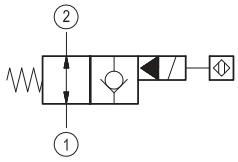


4

Ordering code

OD.15	06	76	1D.S2	Z

Solenoid operated valves poppet 2-way normally open proximity sensor



Special cavity: 076-E

AC = 26 V DC

Note: please consult factory for different voltages.

Type	Material number
OD1506761DS2AC	R934001233

Type	Material number

Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
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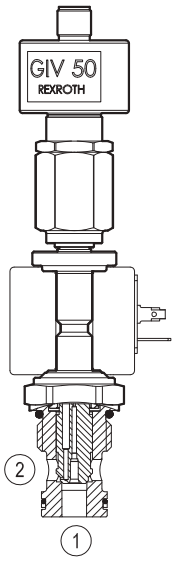
Fax +39 059 547 848
cartridges@oilcontrol.com
www.boschrexroth.com

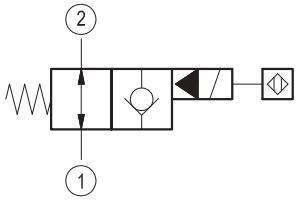
Solenoid operated valves pilot operated poppet 2-way normally open proximity sensor

Special cavity, 017-E

VEI-8A-2A-09-NA-S-M-NSS OD.15.06.17.1D.S0 - Z



Version 06



2A06

General

Weight	kg (lbs)	0.75 (1.7)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5075)
Flow range	l/min.(gpm)	3.5-70 (1-18)
Max. internal leakage	drops/min.	15
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 15 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	50-55 (37-41)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		017-E see RE 18325-75
Seal kit	code material no.	RG17E201052010 R934003562
Other technical data		See data sheet RE 18350-50

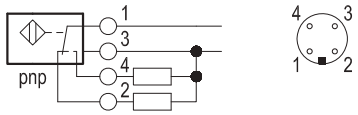
Electrical

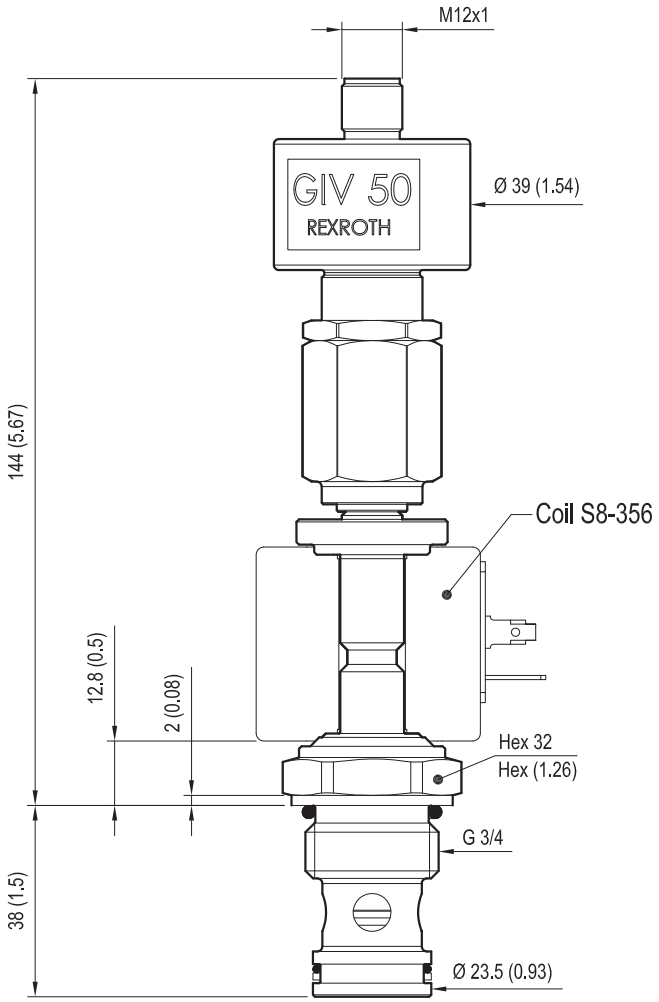
Type of voltage		DC voltage
Coil type		S8-356
Supply voltage		See data sheet RE18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle	%	100 see RE 18325-90
Type of protection		See data sheet RE 18325-90

Please consider that a proper fuction of the valve is guaranteed only if the position of the monitor is not modified; each cartridge is provided of a torque confirmation mark, intended as anti-tampering device.

Dimensions

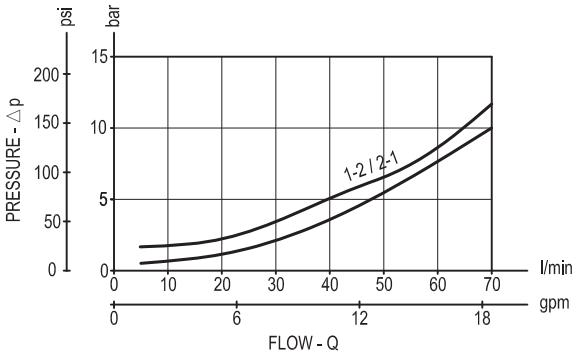
Solenoid operated valves poppet 2-way normally open proximity sensor

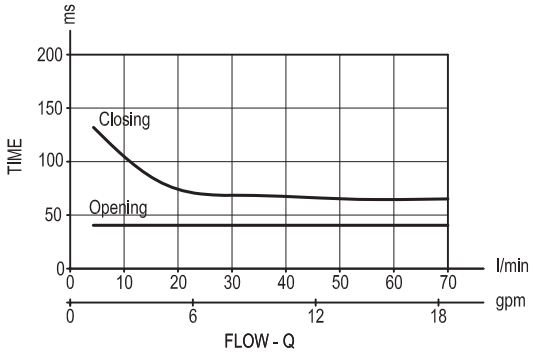




mm (Inches)

Performance graphs



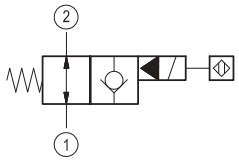


4

Ordering code

OD.15	06	17	1D.S0	*

Solenoid operated valves poppet 2-way normally open proximity sensor



OB = 12 V DC

OC = 24 V DC

Note: please consult factory for different voltages.

Special cavity: 017-E

Type	Material number
OD1506171DS2OB	R934001215
OD1506171DS2OC	R934001206

Type	Material number

Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
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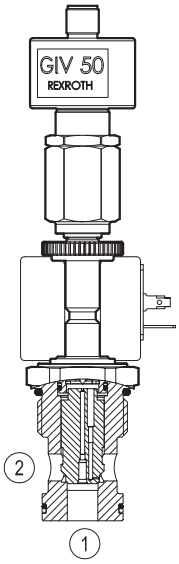
cartridges@oilcontrol.com
www.boschrexroth.com

RE 18325-10/06.11 1/4
Replaces: RE 18325-10/01.10

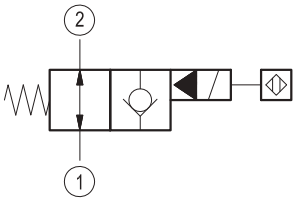
Solenoid operated valves pilot operated poppet 2-way normally open proximity sensor

Special cavity, 021-E

VEI-8A-2A-12-NA-S-M-NSS OD.15.06.21.1D.S2 - Z



Version 06



2A06

General

Weight	kg (lbs)	0.85 (1.9)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5075)
Flow range	l/min.(gpm)	3.5-150 (0.9-40)
Max. internal leakage	drops/min.	15
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 15 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	80-85 (59-63)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		021-E see RE 18325-75
Seal kit	code material no.	RG21E201052010 R934003566
Other technical data		See data sheet RE 18350-50

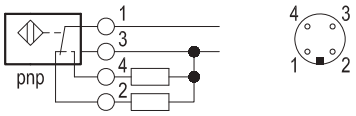
Electrical

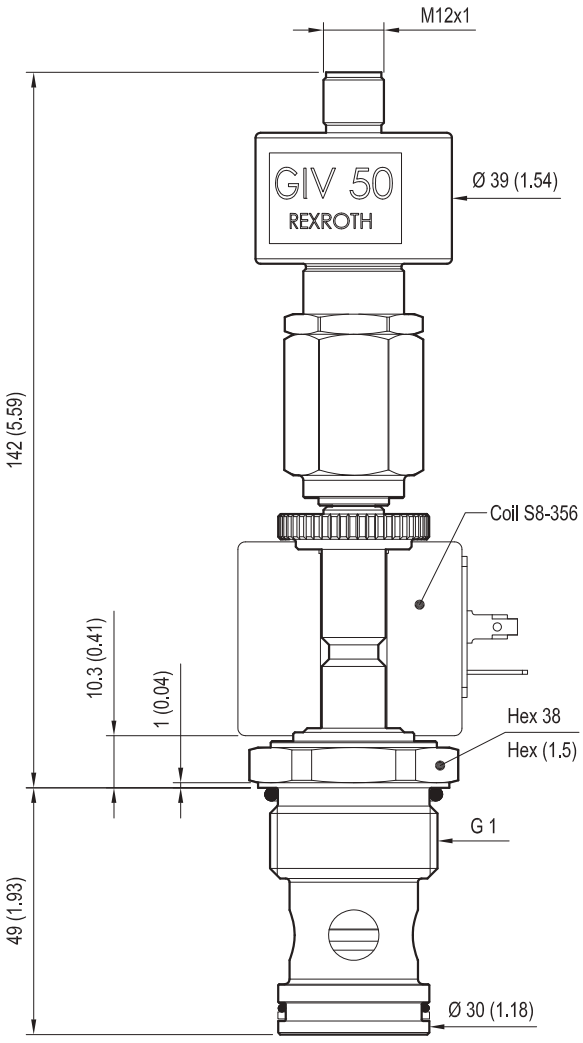
Type of voltage		DC voltage
Coil type		S8-356
Supply voltage		See data sheet RE18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle	%	100 see RE 18325-90
Type of protection		See data sheet RE 18325-90

Please consider that a proper fuction of the valve is guaranteed only if the position of the monitor is not modified; each cartridge is provided of a torque confirmation mark, intended as anti-tampering device.

Dimensions

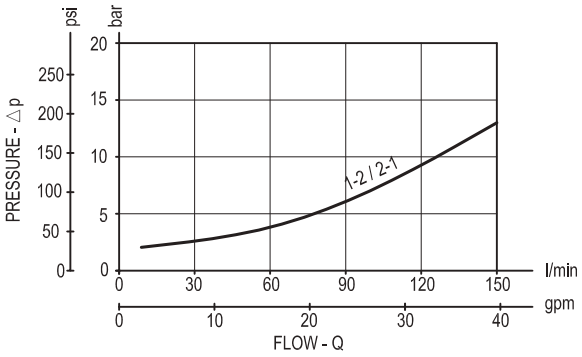
Solenoid operated valves poppet 2-way normally open proximity sensor

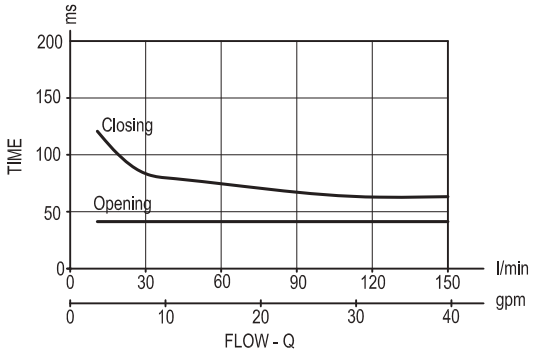




mm (Inches)

Performance graphs



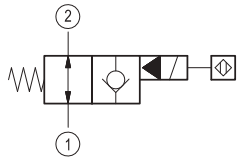


4

Ordering code

OD.15	06	21	1D	S2	Z

Solenoid operated valves poppet 2-way normally open proximity sensor



OB = 12 V DC

OC = 24 V DC

Note: please consult factory for different voltages.

Special cavity: 021E

Type	Material number
OD1506211DS2OB	R934001228
OD1506211DS2OC	R934001208

Type	Material number

Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
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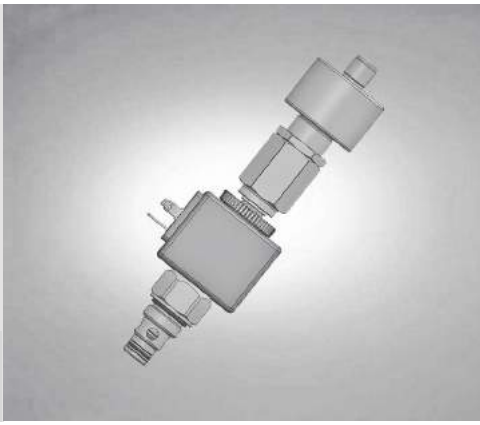
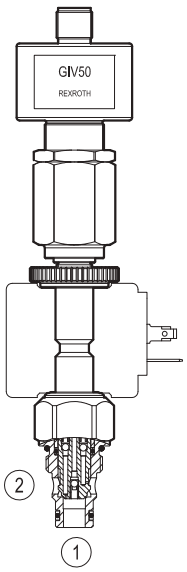
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
cartridges@oilcontrol.com
www.boschrexroth.com

Solenoid operated valves pilot operated poppet 2-way normally open proximity sensor

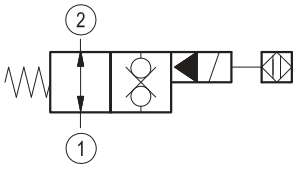
Common cavity, Size 08



VEI-8A-2T-06-NA-S-M-NSS OD.15.32.18.1D.S2 - Z



Version 32



General

Weight	kg (lbs)	0.75 (1.7)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5075)
Flow range	l/min.(gpm)	2.5-40 (0.66-11)
Max. internal leakage	drops/min.	15
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 15 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	30-35 (22-26)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-08A-2N see RE 18325-70
Seal kit	code material no.	RG08A2010530100 R901101544
Other technical data		See data sheet RE 18350-50

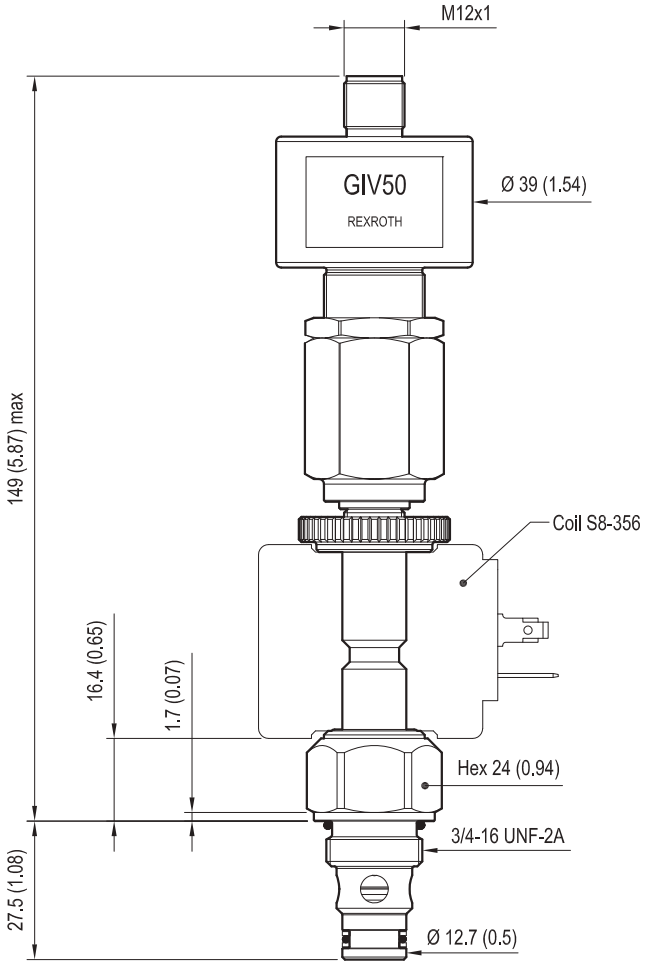
Electrical

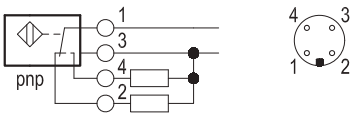
Type of voltage		DC voltage
Coil type		S8-356
Supply voltage		See data sheet RE18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle	%	100 see RE 18325-90
Type of protection		See data sheet RE 18325-90

Please consider that a proper fuction of the valve is guaranteed only if the position of the monitor is not modified; each cartridge is provided of a torque confirmation mark, intended as anti-tampering device.

Dimensions

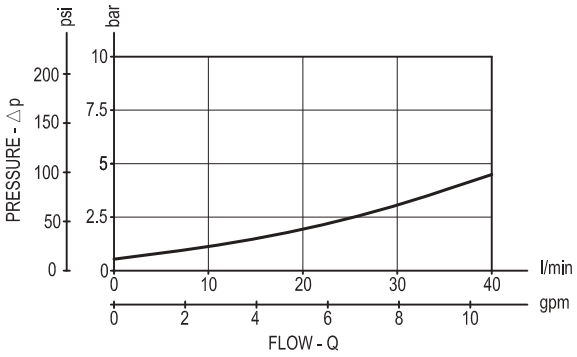
Solenoid operated valves poppet 2-way normally open proximity sensor

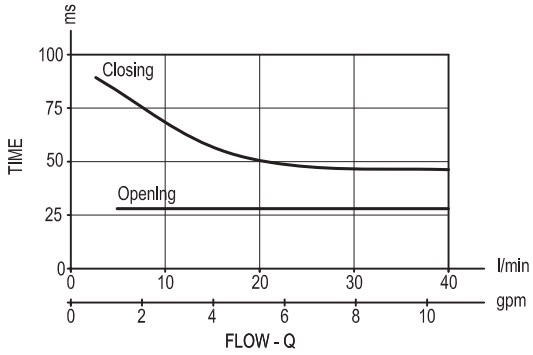




mm (Inches)

Performance graphs



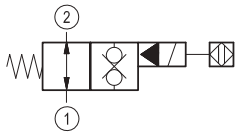


4

Ordering code

OD.15	32	18	1DS2	Z

Solenoid operated valves poppet 2-way normally open proximity sensor



OB = 12 V DC

Note: please consult factory for different voltages.

Common cavity: CA-08A-2N

Type	Material number
OD1532181DS2OB	R934004542

Type	Material number

Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
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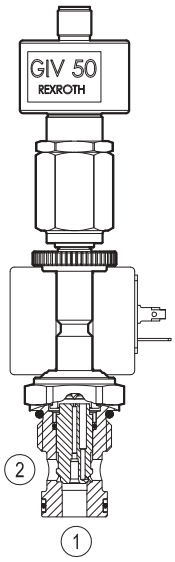
Fax +39 059 547 848
cartridges@oilcontrol.com
www.boschrexroth.com

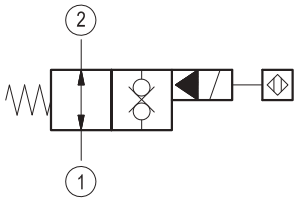
Solenoid operated valves pilot operated poppet 2-way normally open double lock proximity sensor

Special cavity, 017-E

VEI-8A-2T-09-NA-S-M-NSS OD.15.32.17.1D.S2 - Z



Version 32



2T32

4

General

Weight	kg (lbs)	0.75 (1.7)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5075)
Flow range	l/min.(gpm)	2.5-70 (0.66-18)
Max. internal leakage	drops/min.	15
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 15 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	50-55 (37-41)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		017-E see RE 18325-75
Seal kit	code material no.	RG17E201053010 R934003563
Other technical data		See data sheet RE 18350-50

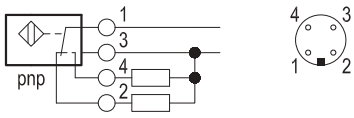
Electrical

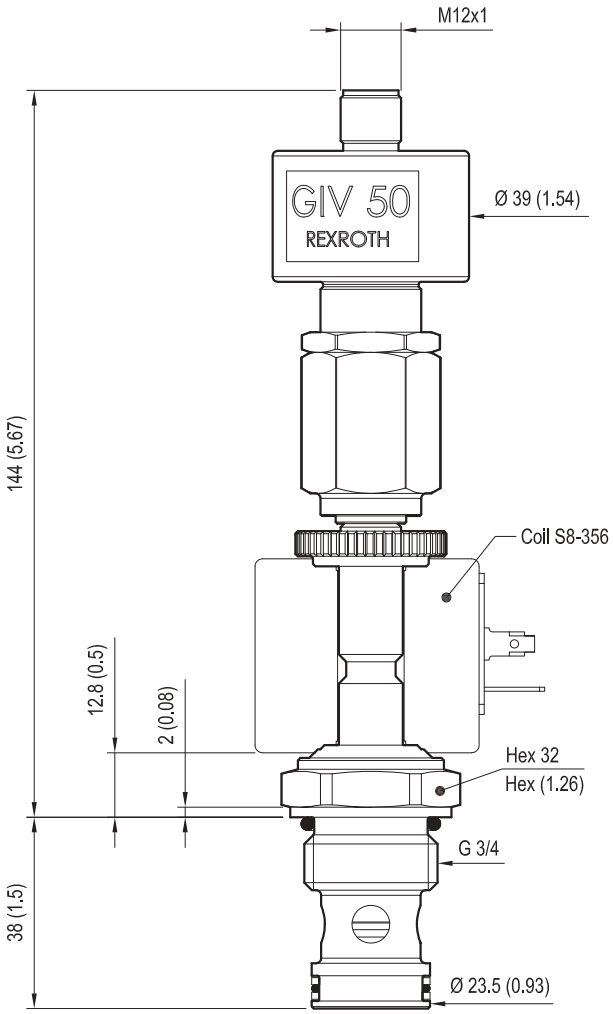
Type of voltage		DC voltage
Coil type		S8-356
Supply voltage		See data sheet RE18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle	%	100 see RE 18325-90
Type of protection		See data sheet RE 18325-90

Please consider that a proper fuction of the valve is guaranteed only if the position of the monitor is not modified; each cartridge is provided of a torque confirmation mark, intended as anti-tampering device.

Dimensions

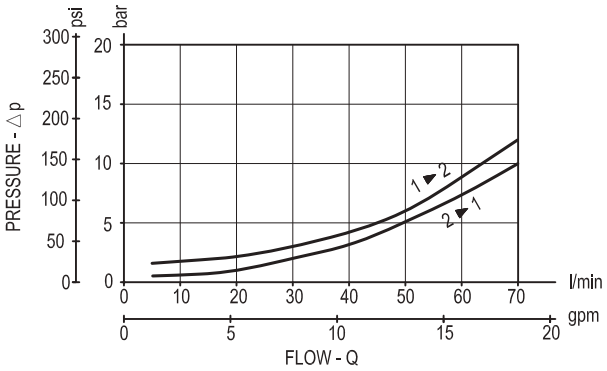
Solenoid operated valves poppet 2-way normally open double lock roximity sensor

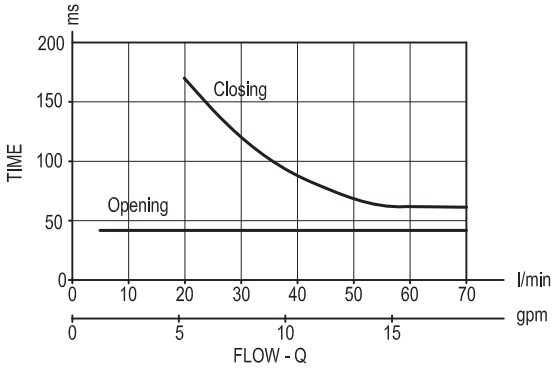




mm (Inches)

Performance graphs



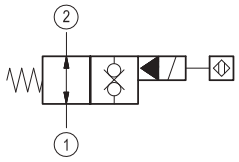


4

Ordering code

OD.15	32	17	1D.S2	Z

Solenoid operated valves poppet 2-way normally open proximity sensor



OC = 24 V DC

Note: please consult factory for different voltages.

Special cavity: 017-E

Type	Material number
OD1532171DS2OC	R934001235

Type	Material number

Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
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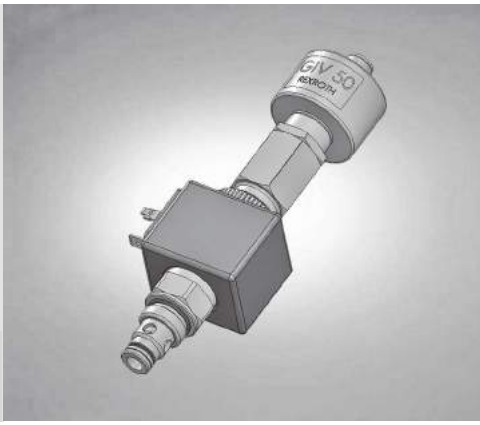
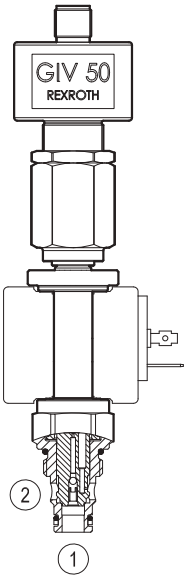
cartridges@oilcontrol.com
www.boschrexroth.com

Solenoid operated valves pilot operated poppet 2-way normally closed proximity sensor

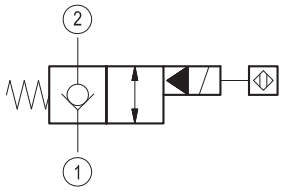
Common cavity, Size 08



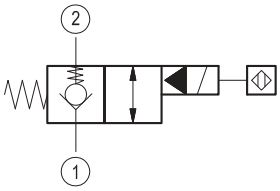
VESP-08A-12A/00-2A05-N7 OD.15.05.18.41 - Y - Z



Version 05



Version 85



4

General

Weight	kg (lbs)	0.13 (0.29)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5075)
Proof pressure	bar (psi)	420 (6000)
Flow range	l/min.(gpm)	1-40 (0.3-11)
Max. internal leakage (*)	drops/min.	15
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 15 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	30-35 (22-26)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-08A-2N see RE 18325-70
Seal kit	code material no.	RG08A201052010 R901101437
Other technical data		See data sheet RE 18350-50

(*) (cSt 46)

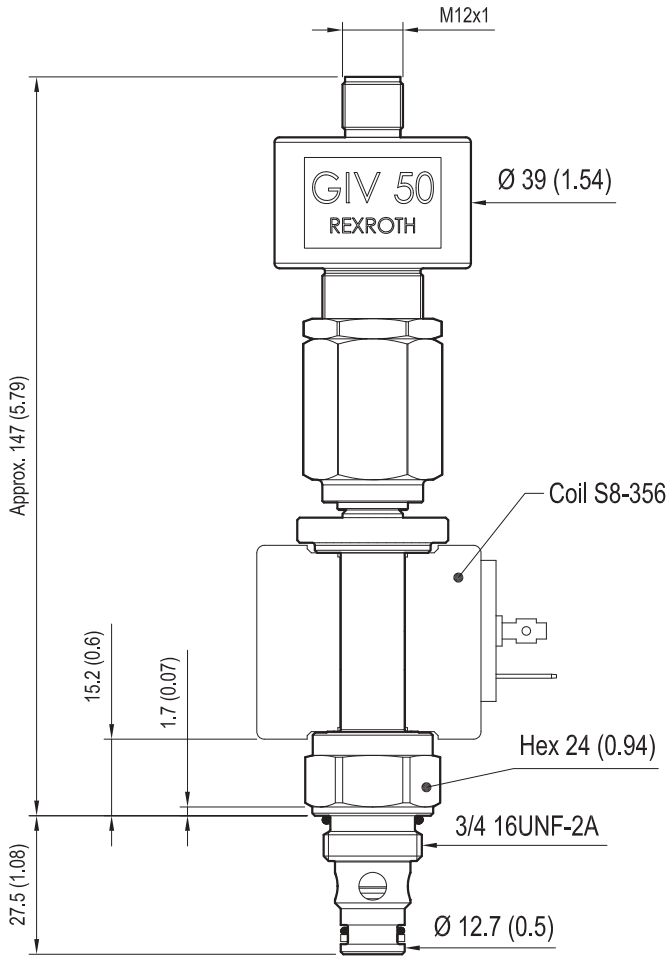
Electrical

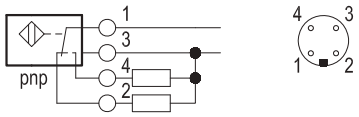
Type of voltage		DC voltage
Coil type		S8-356
Supply voltage		See data sheet RE18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle	%	100 see RE 18325-90
Type of protection		See data sheet RE 18325-90

Please consider that a proper fuction of the valve is guaranteed only if the position of the monitor is not modified; each cartridge is provided of a torque confirmation mark, intended as anti-tampering device.

Dimensions

Solenoid operated valves poppet 2-way normally closed proximity sensor

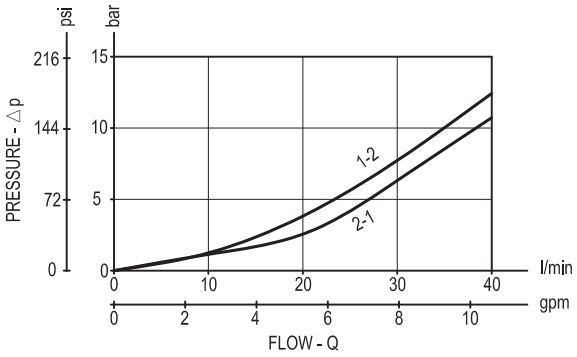


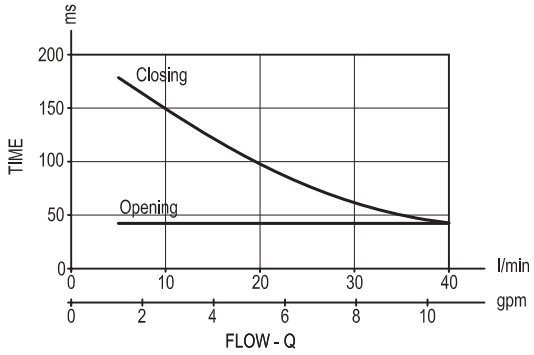


mm (Inches)

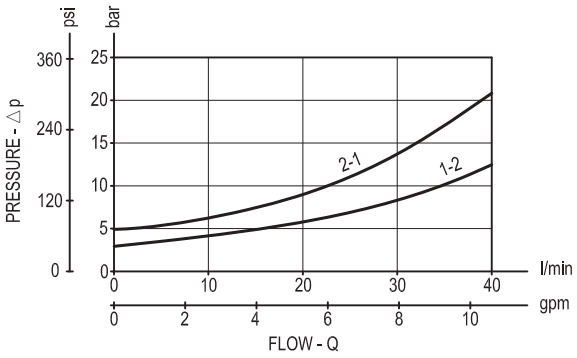
Performance graphs

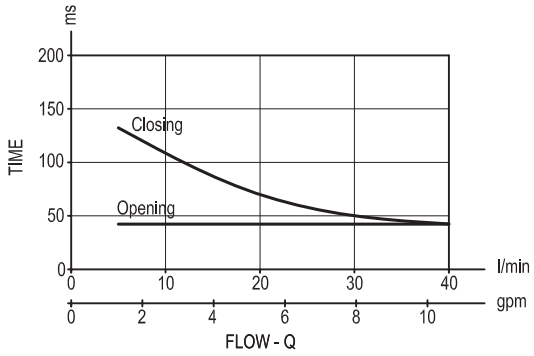
Version 05





Version 85





4

Ordering code

OD.15	05	18	41	Y	Z

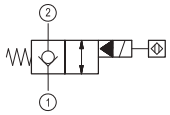
Solenoid operated valves poppet 2-way normally closed proximity sensor

Common cavity: CA-08A-2N

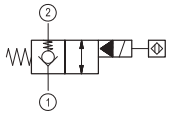
OC = 24 V DC

Note: please consult factory for different voltages.

05 =



85 =



Type	Material number
OD1505184105OC	R934004319
OD1505184185OC	R934004320

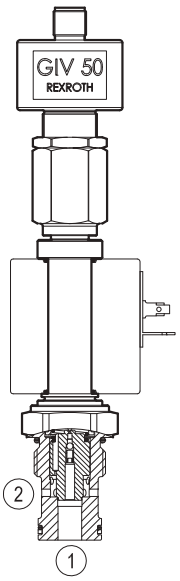
Type	Material number

Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
cartridges@oilcontrol.com
www.boschrexroth.com

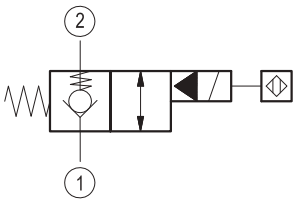
Solenoid operated valves pilot operated poppet 2-way normally closed proximity sensor - extra spring

Special cavity, 017-E

VESP-12G-16A/00-2A05-N7 **OD.15.05.17.65.04 - Z**



Version 05



4

General

Weight	kg (lbs)	0.75 (1.7)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

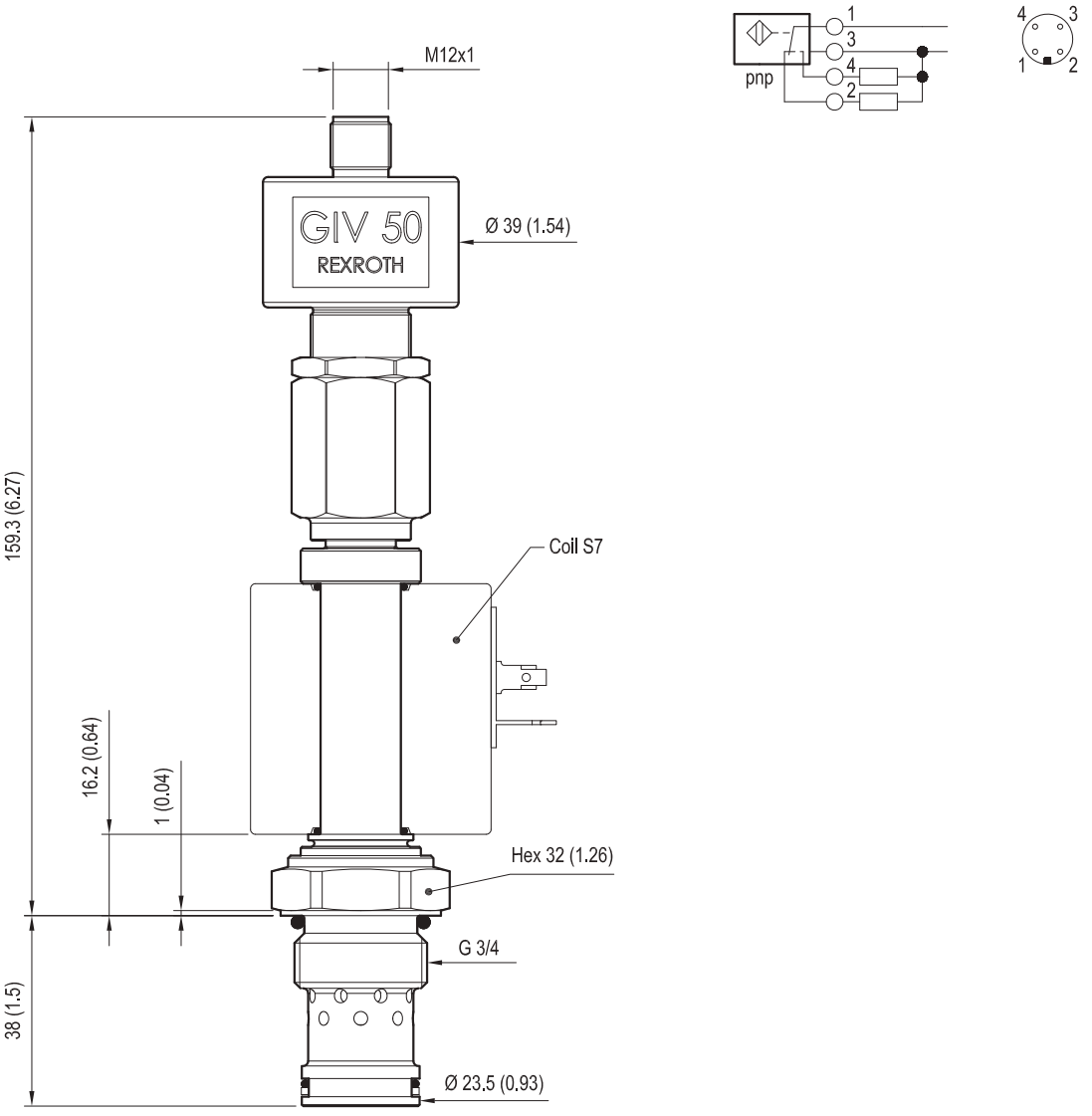
Max. operating pressure	bar (psi)	350 (5000)
Flow range	l/min.(gpm)	5-70 (1-18)
Max. internal leakage	drops/min.	15
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 15 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	50-55 (37-41)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		017-E see RE 18325-75
Seal kit	code material no.	RG17E201052010 R934003562
Other technical data		See data sheet RE 18350-50

Electrical

Type of voltage		DC voltage
Coil type		S7
Supply voltage		See data sheet RE18325-90
Nominal voltage		± 10%
Power consumption	W	30
Duty cycle	%	100 see RE 18325-90
Type of protection		See data sheet RE 18325-90

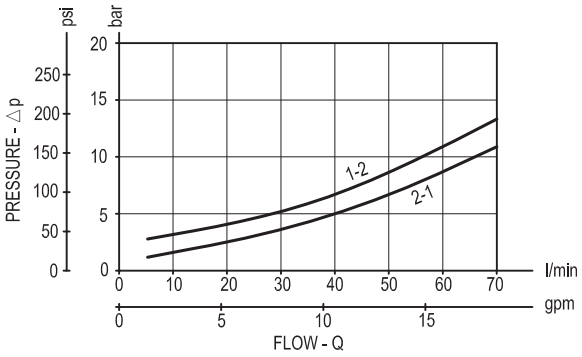
Dimensions

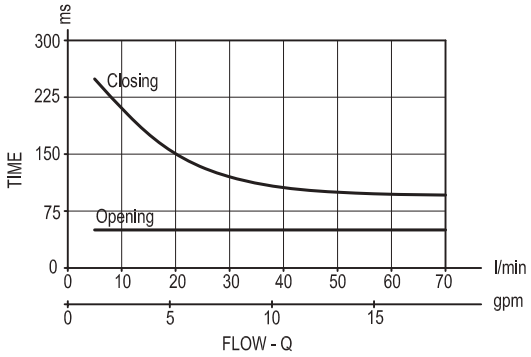
Solenoid operated valves poppet 2-way normally closed proximity sensor



mm (Inches)

Performance graphs



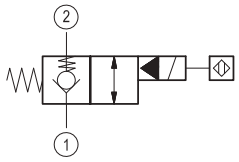


4

Ordering code

OD.15	05	17	6504	Z

Solenoid operated valves
poppet 2-way normally closed
proximity sensor - extra spring



OB = 12 V DC

OC = 24 V DC

Note: please consult factory for different voltages.

Special cavity: 017-E

Type	Material number
OD1505176504OB	R934004675
OD1505176504OC	R934004674

Type	Material number

Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
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41015 Nonantola – Modena, Italy
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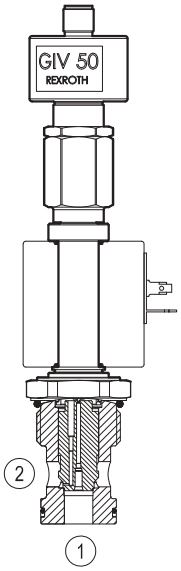
cartridges@oilcontrol.com
www.boschrexroth.com

RE 18325-05/02.12
Replaces: RE 00162-02/01.06

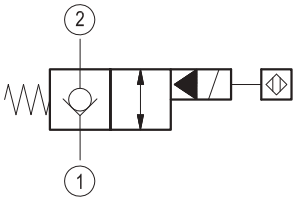
Solenoid operated valves pilot operated poppet 2-way normally closed proximity sensor

Special cavity, 021-E

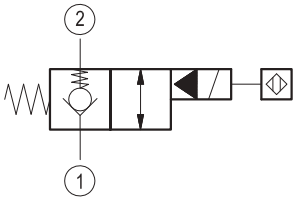
VESP-16G-16A/00-2A-N7 **OD.15.05.21.65 - Y - Z**



Version 04



Version 84



General

Weight	kg (lbs)	0.9 (2)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Flow range	l/min.(gpm)	5-150 (1-40)
Max. internal leakage (*)	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 15 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	80-85 (59-63)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		021-E see RE 18325-75
Seal kit	code material no.	RG21E201052010 R934003566
Other technical data		See data sheet RE 18350-50

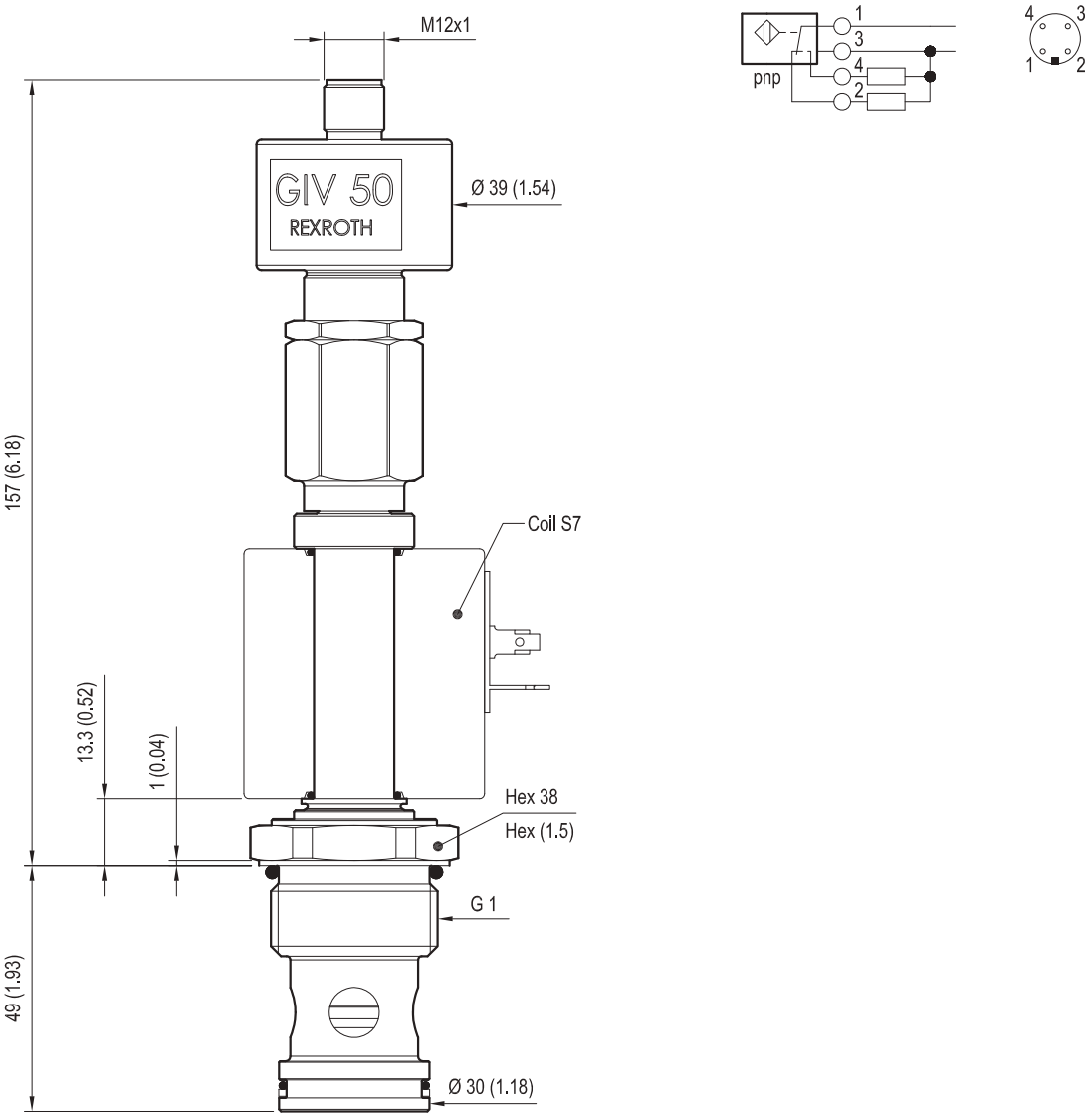
(*) (cSt 46)

Electrical

Type of voltage		DC voltage
Coil type		S7
Supply voltage		See data sheet RE18325-90
Nominal voltage		± 10%
Power consumption	W	30
Duty cycle	%	100 see RE 18325-90
Type of protection		See data sheet RE 18325-90

Dimensions

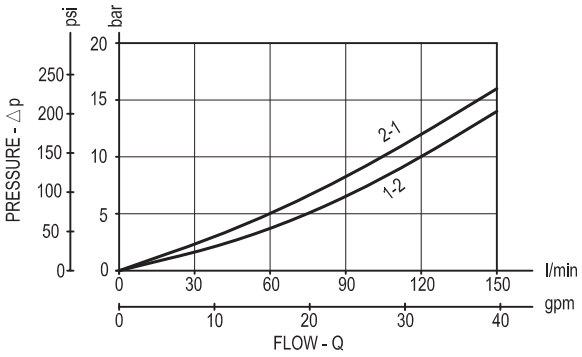
Solenoid operated valves poppet 2-way normally closed proximity sensor

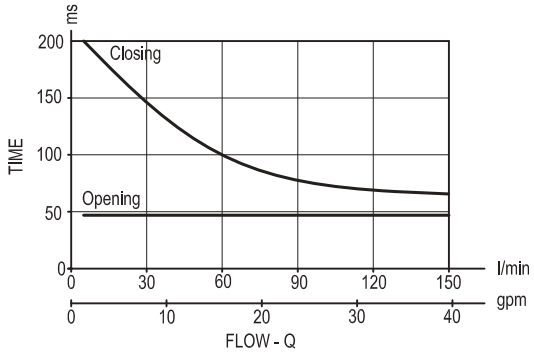


mm (Inches)

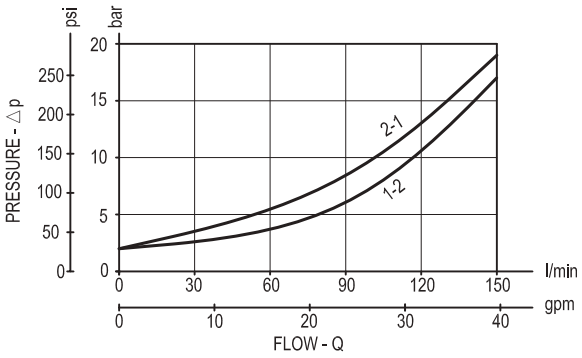
Performance graphs

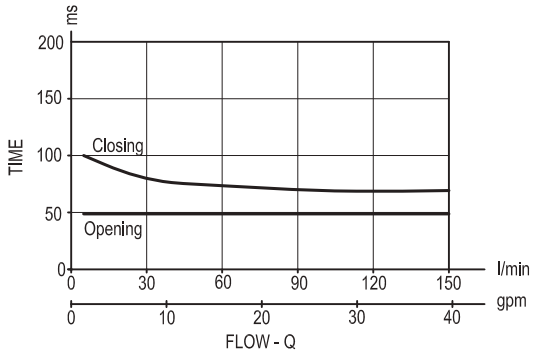
Version 04





Version 84





4

Ordering code

OD.15	05	21	65	Y	Z

Solenoid operated valves
poppet 2-way normally closed
proximity sensor

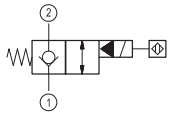
Special cavity: 021-E

OB = 12 V DC for Y= 84

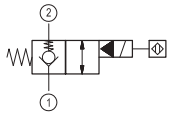
OC = 24 V DC for Y= 04 or 84

Note: please consult factory for different voltages.

04 =



84 =



Type	Material number
OD1505216504OC	R934004627
OD1505216584OB	R934004630
OD1505216584OC	R934004628

Type	Material number

Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
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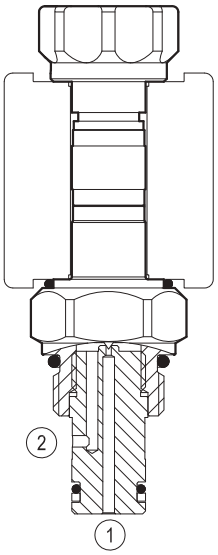
Fax +39 059 547 848
cartridges@oilcontrol.com
www.boschrexroth.com

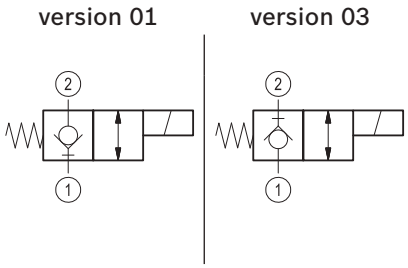
RE 18324-06/08.10 1/4
Replaces: 01.06

Solenoid operated valves direct acting poppet 2-way normally closed

Common cavity, Size 08

VED-8I-NC OD.11 - X - 18 - Y - 00





4

General

Weight	kg (lbs)	0.13 (0.29)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Rated flow	l/min. (gpm)	1.5 (0.4)
Max. internal leakage	drops/ min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	39-51 (29-38)
Filtration		Nominal value max. 25µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-08A-2N see RE 18325-70
Seal kit	code material no.	RG08A2010520100 R901101437
Seal kit coil	code material no.	RG12I1PNBR7010 R934003957
Other technical data		See data sheet RE 18350-50

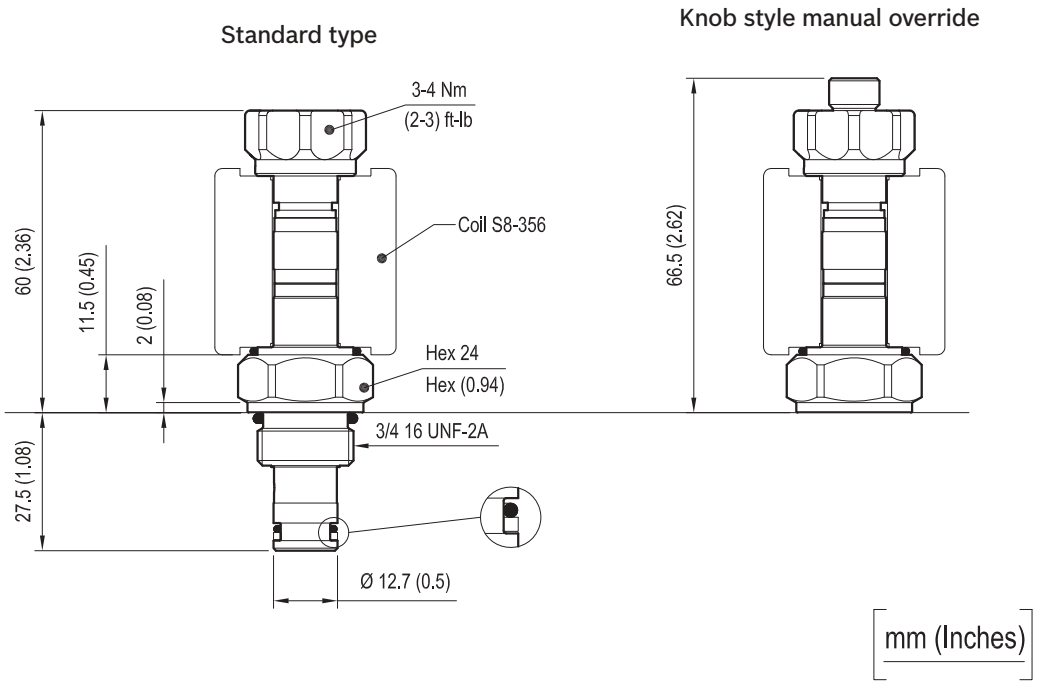
Electrical

Type of voltage		DC voltage
Coil type		S8-356 see RE 18325-90
Supply voltage		See data sheet RE 18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90

Note: Coils must be ordered separately.

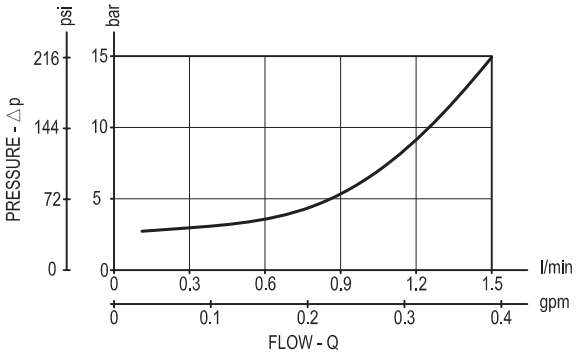
Dimensions

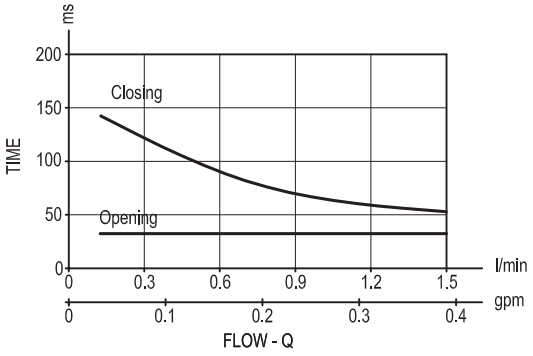
Solenoid operated valves poppet 2-way normally closed



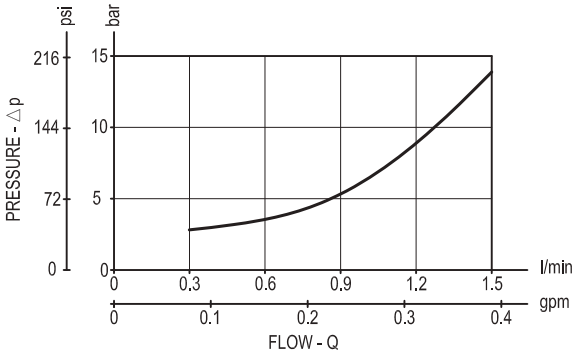
Performance graph

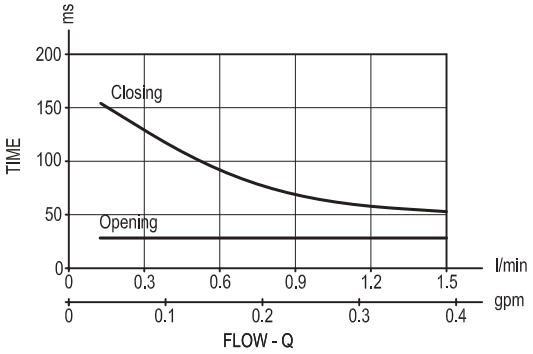
Version 01





Version 03



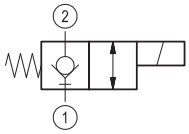


4

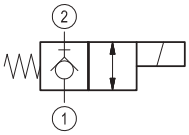
Ordering code

OD.11	*	18	*	00

Solenoid operated valves poppet 2-way normally closed

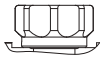


= 01



= 03

standard type



31 =

Knob style manual override

32 =

Common cavity: CA-08A-2N

Type	Material number
OD110118310000	R901090901
OD110118320000	R901090903
OD110318310000	R901090909
OD110318320000	R901090910

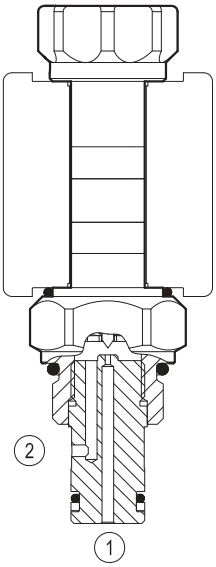
Type	Material number

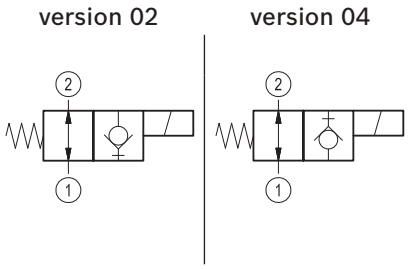
Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
cartridges@oilcontrol.com
www.boschrexroth.com

Solenoid operated valves direct acting poppet 2-way normally open

Common cavity, Size 08

VED-8I-NA OD.11 - X - 18 - Y - 00





General

Weight	kg (lbs)	0.13 (0.29)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Rated flow	l/min. (gpm)	1.5 (0.4)
Max. internal leakage	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	39-51 (29-38)
Filtration		Nominal value max. 25µm (NAS 8) ISO 4406 19/17/14
Common cavity		CA-08A-2N see RE 18325-70
Seal kit	code material no.	RG08A2010520100 R901101437
Seal kit coil	code material no.	RG12I1PNBR7010 R934003957
Other technical data		See data sheet RE 18350-50

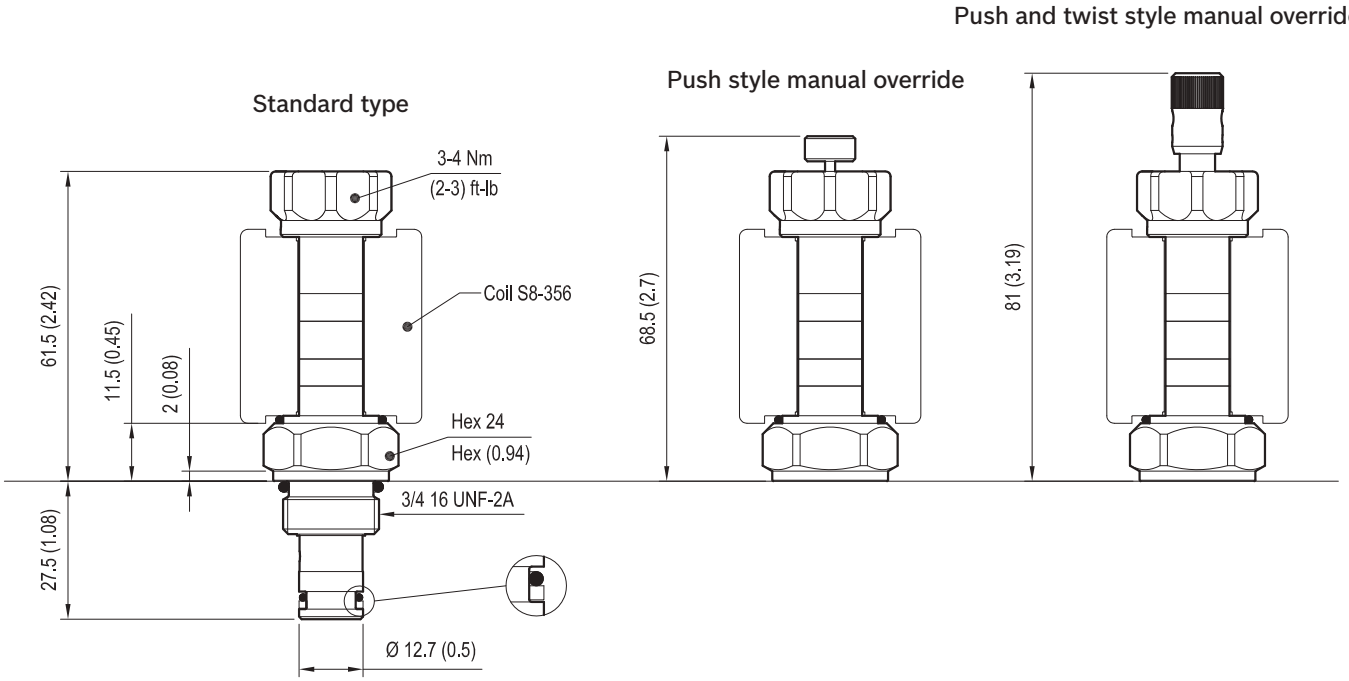
Electrical

Type of voltage		DC voltage
Coil type		S8-356 see RE 18325-90
Supply voltage		See data sheet RE 18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle coil	%	100 see RE 18325-90
Type of protection		See data sheet RE 18325-90

Note: Coils must be ordered separately.

Dimensions

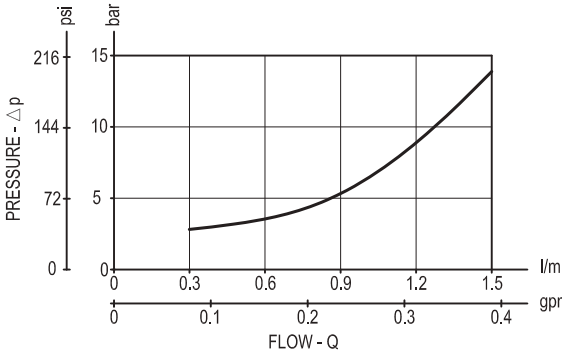
Solenoid operated valves poppet 2-way normally open

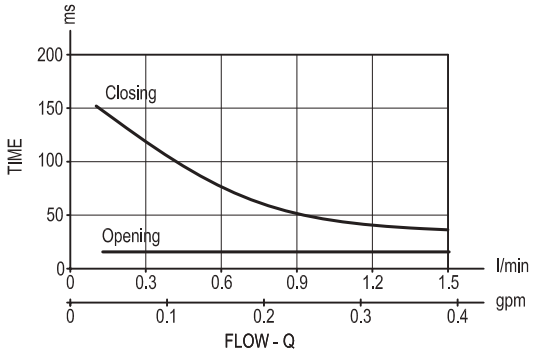


mm (Inches)

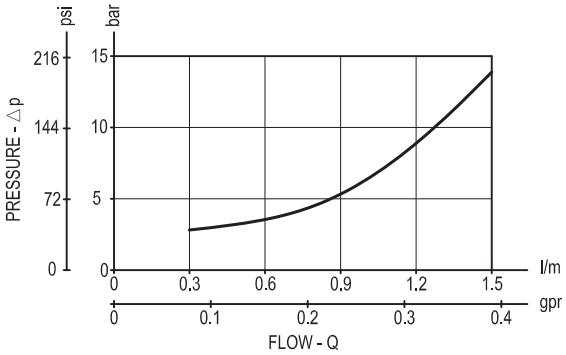
Performance graphs

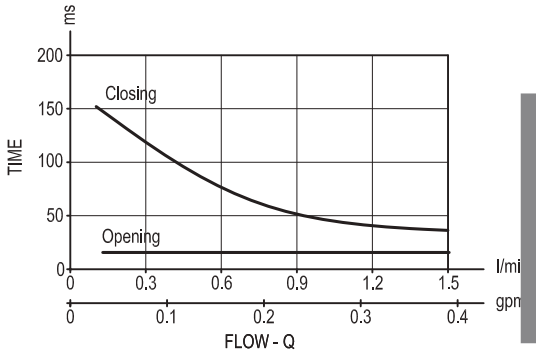
Version 02





Version 04



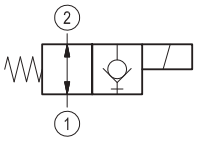


4

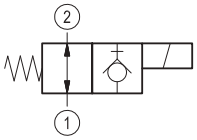
Ordering code

OD.11	*	18	*	00

Solenoid operated valves poppet type 2-way normally open



= 02

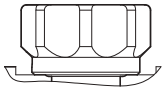


= 04

Common cavity: CA-08A-2N

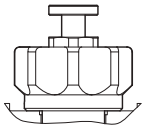
standard type

20 =



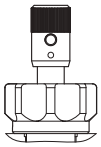
Push style manual override

21 =



Push and twist style manual override

22 =



Type	Material number
OD110218200000	R901090905
OD110218210000	R901090906
OD110218220000	R901090908
OD110418200000	R901090911
OD110418210000	R901090914
OD110418220000	R901090915

Type	Material number

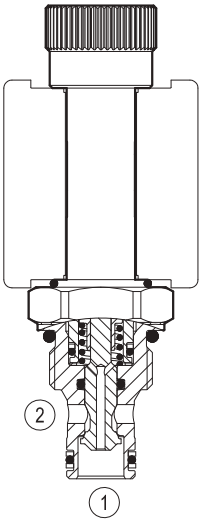
Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
cartridges@oilcontrol.com
www.boschrexroth.com

RE 18324-01/07.12
Replaces: RE 18324-01/08.10

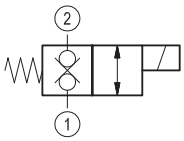
Solenoid operated valves direct acting poppet 2-way double lock normally closed

Common cavity, Size 08

VEDT-08A-A-12.7-NC OD.11.31.18 - Y - 00



Version 31



4

General

Weight	kg (lbs)	0.19 (0.42)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	250 (3600)
Max. flow	l/min.(gpm)	15 (4)
Max. internal leakage	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Response time	ms.	40-60 at nominal flow (oil at 46 cSt)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	34-41 (25-30)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-08A-2N see RE 18325-70
Seal kit	code material no.	RG08A2010530100 R901101544
Seal kit coil	code material no.	RG12A1PNBR7010 R934003958
Other technical data		See data sheet RE 18350-50

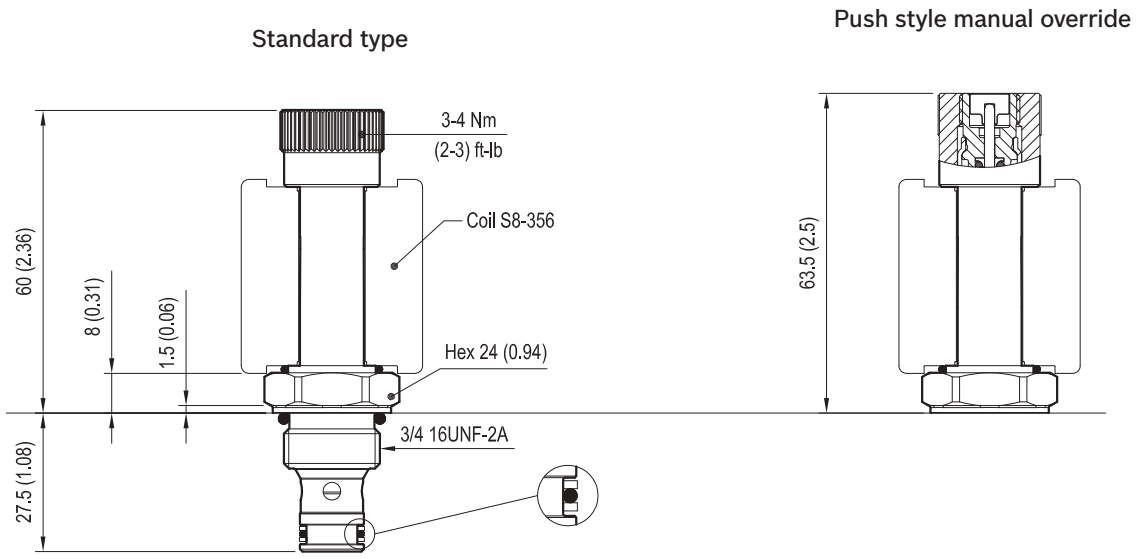
Electrical

Type of voltage		DC voltage
Coil type		S8-356
Supply voltage		See data sheet RE 18325-90
Nominal voltage		± 10%
Power consumption	W	20
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90

Note: Coils must be ordered separately.

Dimensions

Solenoid operated valves poppet 2-way double lock normally closed

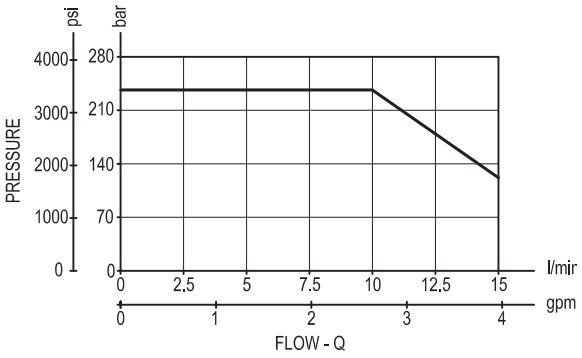


mm (Inches)

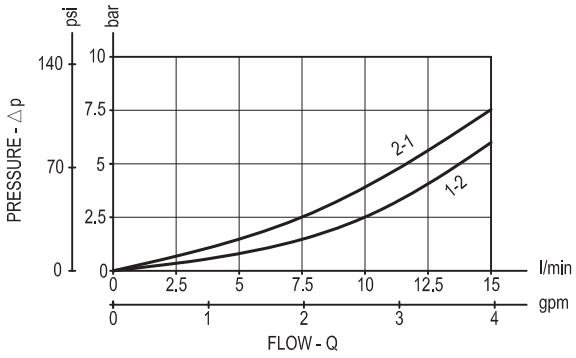
Performance graphs

Performance limits

version 31



Characteristic curves

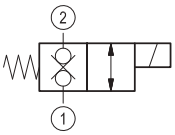


4

Ordering code

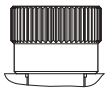
OD.11	*	18	*	00

Solenoid operated valves
poppet 2-way double lock
normally closed



= 31

standard type

2A = 

Push style manual override

2B = 

Common cavity: CA-08A-2N

Type	Material number
OD1131182A0000	R934003626
OD1131182B0000	R934003627

Type	Material number

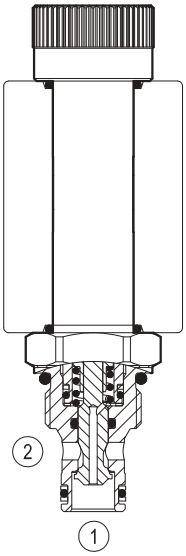
Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
cartridges@oilcontrol.com
www.boschrexroth.com

RE 18324-03/07.12
Replaces: RE 18324-03/08.10

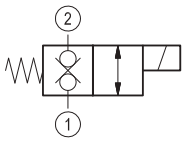
Solenoid operated valves direct acting poppet 2-way double lock normally closed

Common cavity, Size 08

VEDT-08A-A-16-NC **OD.11.31.18 - 6Y - 00**



Version 31



General

Weight	kg (lbs)	0.22 (0.48)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140) - coil 30W -30 to 80 (-22 to 176) - coil 26W

Hydraulic

Max. operating pressure	bar (psi)	250 (3600)
Max. flow	l/min. (gpm)	25 (7)
Max. internal leakage	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Response time	ms.	40-60 at nominal flow (oil at 46 cSt)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	34-41 (25-30)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-08A-2N see RE 18325-70
Seal kit	code material no.	RG08A2010530100 R901101544
Seal kit coil	code material no.	RG16A1PMVQ0010 R934003962
Other technical data		See data sheet RE 18350-50

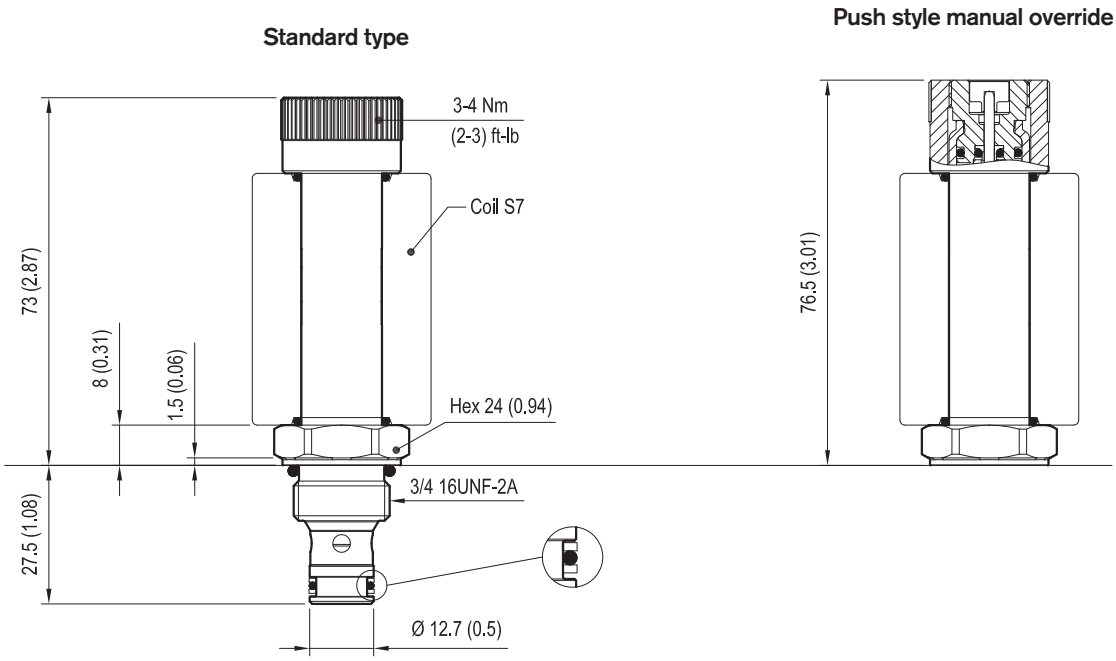
Electrical

Type of voltage		DC voltage
Coil type		S7
Supply voltage		See data sheet RE 18325-90
Power consumption	W	30 or 26
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90
Nominal voltage	coil 26W	-15% +10%
Nominal voltage	coil 30W	-10% +10%

Note: Coils must be ordered separately.

Dimensions

Solenoid operated valves poppet 2-way double lock normally closed

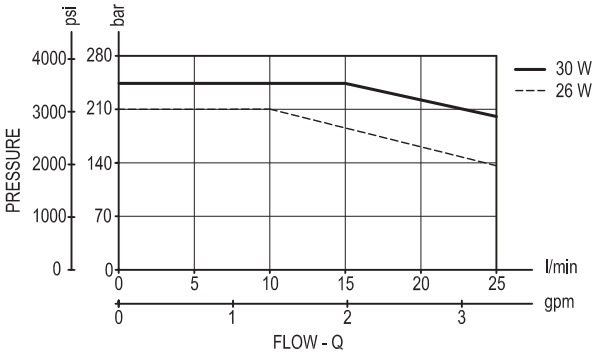


mm (Inches)

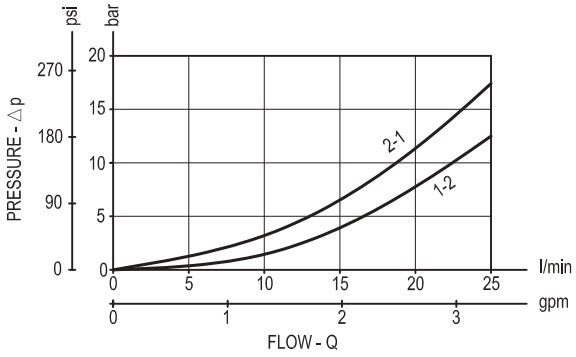
Performance graphs

Performance limits

version 31



Characteristic curves

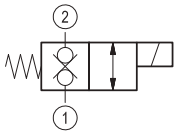


4

Ordering code

OD.11	*	18	*	00

Solenoid operated valves
poppet 2-way double lock
normally closed

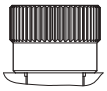


= 31

Common cavity: CA-08A-2N

standard type

6A =



Push style manual override

6B =

Type	Material number
OD1131186A0000	R934003624
OD1131186B0000	R934003625

Type	Material number

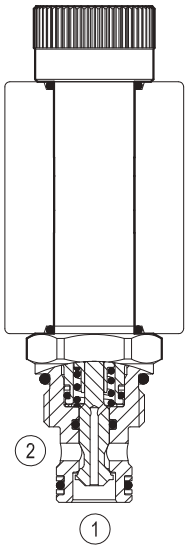
Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
cartridges@oilcontrol.com
www.boschrexroth.com

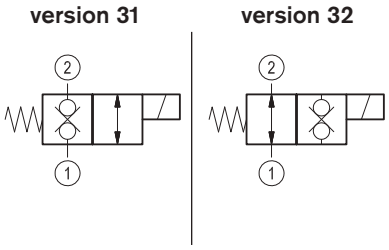
RE 18324-04/07.12
Replaces: RE 18324-04/08.10

Solenoid operated valves direct acting poppet 2-way double lock

Special cavity, CA-08F-2N

VEDT-08F-A-16 **OD.11 - X - 40 - Y - 00**





General

Weight	kg (lbs)	0.22 (0.48)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140) - coil 30W -30 to 80 (-22 to 176) - coil 26W

Hydraulic

Max. operating pressure	bar (psi)	250 (3600)
Max. flow	l/min. (gpm)	25 (7)
Max. internal leakage	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Response time	ms.	40-60 at nominal flow (oil at 46 cSt)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	34-41 (25-30)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Special cavity		CA-08F-2N
Seal kit	code material no.	RG40E201053010 R934003587
Seal kit coil	code material no.	RG16A1PMVQ0010 R934003962
Other technical data		See data sheet RE 18350-50

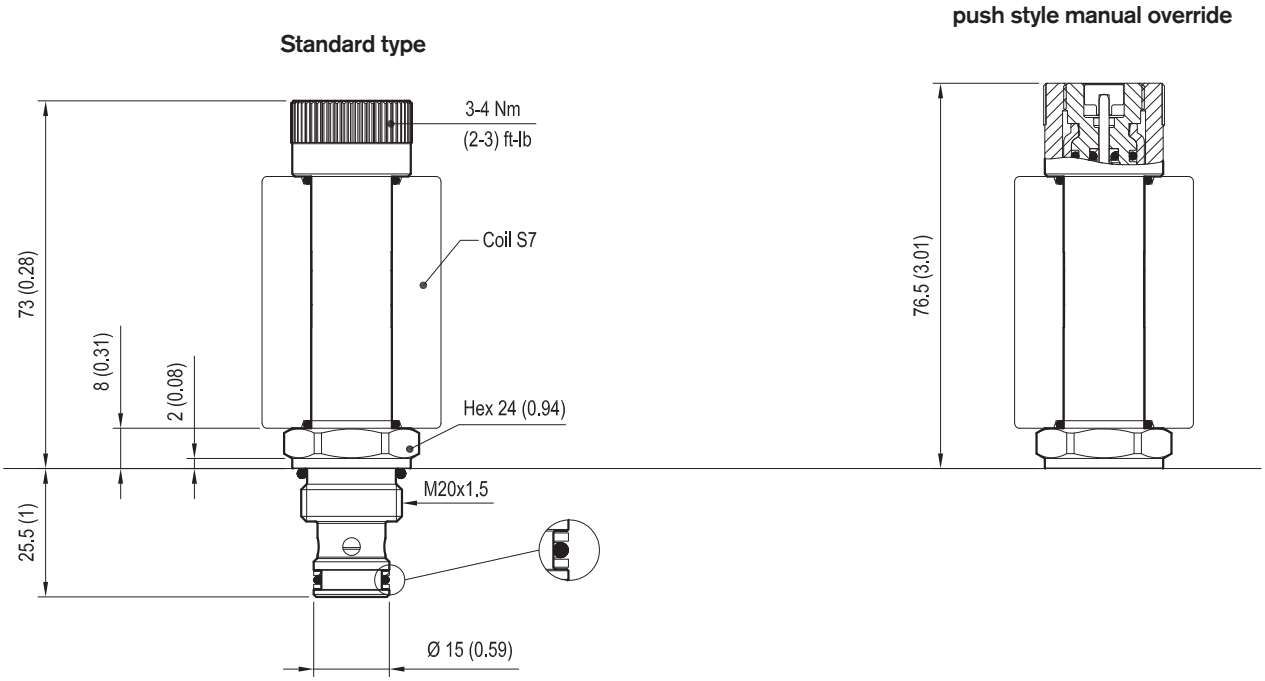
Electrical

Type of voltage		DC voltage
Coil type		S7
Supply voltage		See data sheet RE 18325-90
Power consumption	W	30 or 26
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90
Nominal voltage	coil 26W	-15% +10%
Nominal voltage	coil 30W	-10% +10%

Note: Coils must be ordered separately.

Dimensions

Solenoid operated valves poppet 2-way double lock - Special cavity

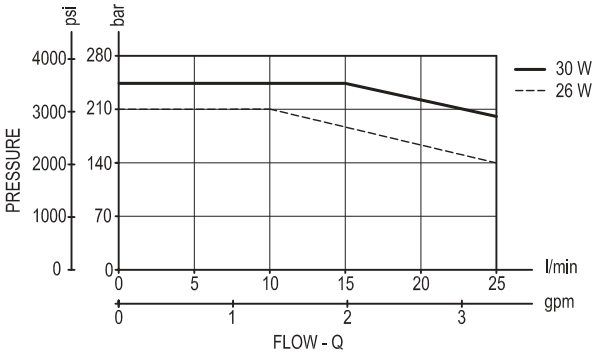


mm (Inches)

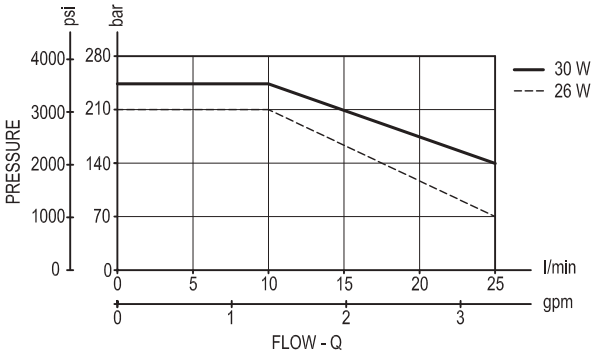
Performance graphs

Performance limits

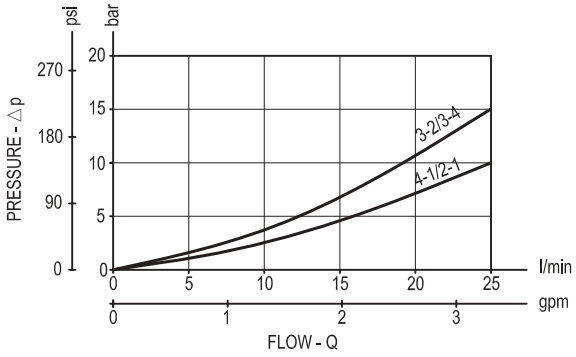
version 31 (NC)

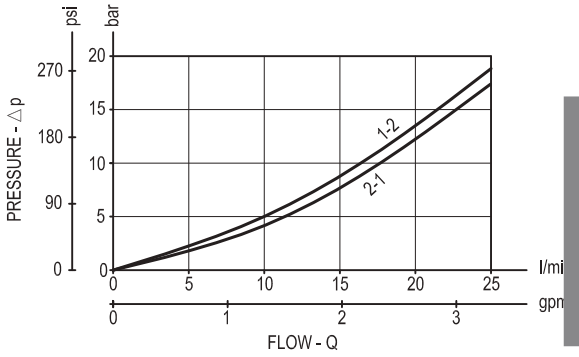


version 32 (NA)



Characteristic curves



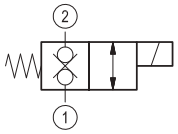


4

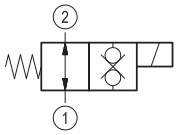
Ordering code

OD.11	*	40	*	00

Solenoid operated valves poppet 2-way double lock normally closed and normally open



= 31

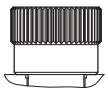


= 32

Special cavity: CA-08F-2N

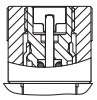
standard type

6A =



Push style manual override

6B =



Type	Material number
OD1131406A0000	R934003630
OD1131406B0000	R934003631
OD1132406A0000	R934003628
OD1132406B0000	R934003629

Type	Material number

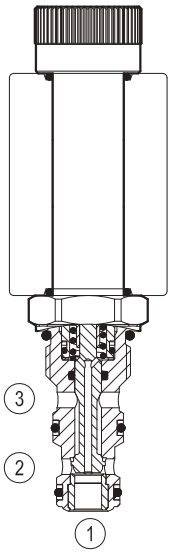
Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
cartridges@oilcontrol.com
www.boschrexroth.com

RE 18324-05/07.12
Replaces: RE 18324-05/08.10

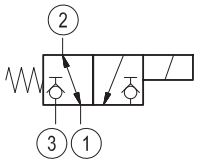
Solenoid operated valves direct acting poppet 3-way 2-position

Common cavity, Size 08

VEDT-08A-32 **OD.13.01.51 - Y - 00**



Version 01



General

Weight	kg (lbs)	0.24 (0.53)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140) - coil 30W -30 to 80 (-22 to 176) - coil 26W

Hydraulic

Max. operating pressure	bar (psi)	250 (3600)
Max. flow	l/min. (gpm)	15 (4)
Max. internal leakage (*)	drops/min.	20
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Response time	ms.	40-60 at nominal flow (oil at 46 cSt)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	34-41 (25-30)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-08A-3N see RE 18325-70
Seal kit	code material no.	RG08A3010530100 R901101723
Seal kit coil	code material no.	RG16A1PMVQ0010 R934003962
Other technical data		See data sheet RE 18350-50

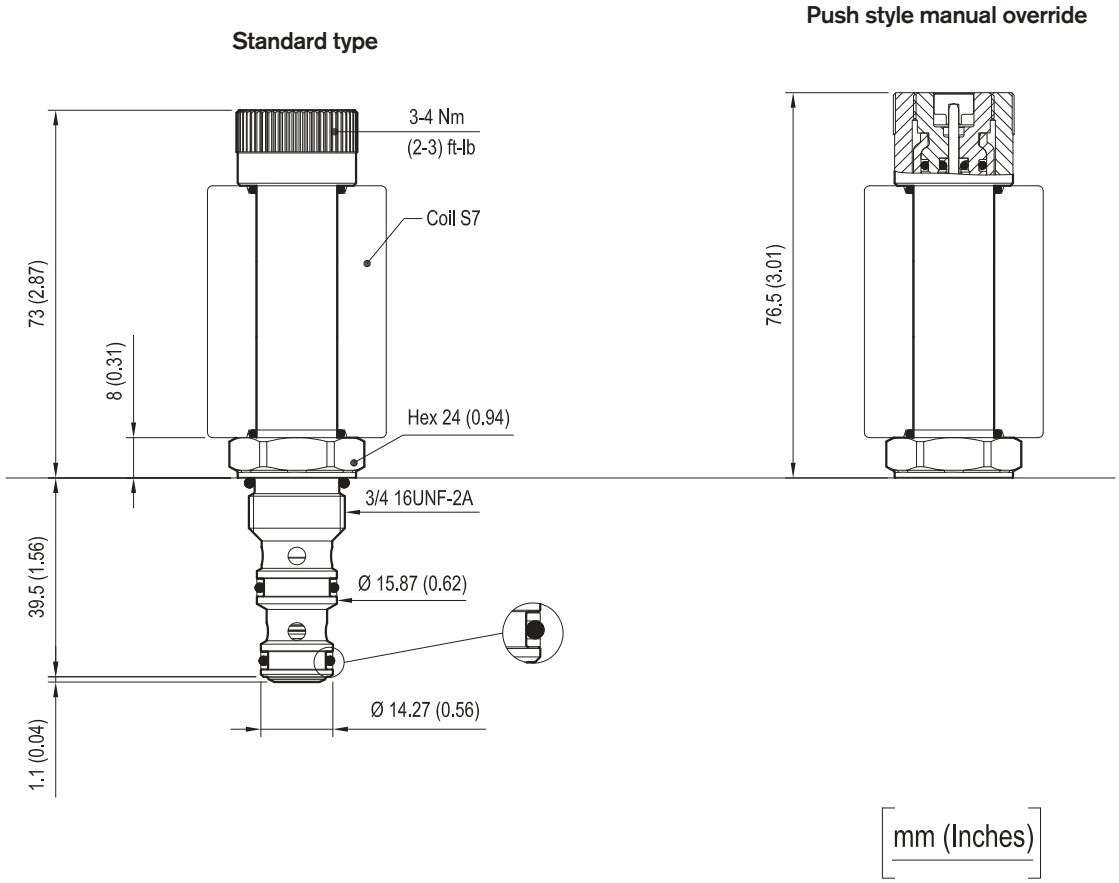
Electrical

Type of voltage		DC voltage
Coil type		S7
Supply voltage		See data sheet RE 18325-90
Power consumption	W	30 or 26
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90
Nominal voltage	coil 26W	-10% +15%
Nominal voltage	coil 30W	-10% +10%

Note: Coils must be ordered separately.

Dimensions

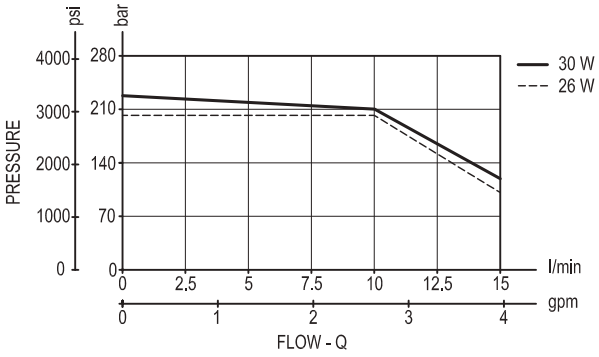
Solenoid operated valves poppet 3-way 2-position



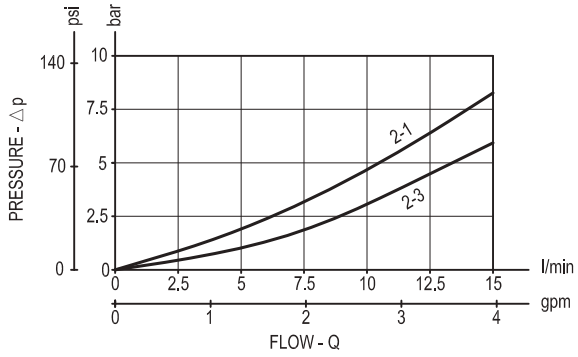
Performance graphs

Performance limits

version 01



Characteristic curves

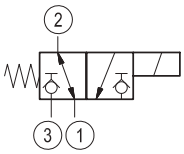


4

Ordering code

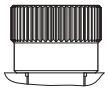
OD.13	01	51	*	00

Solenoid operated valves
poppet 3-way 2-position



Common cavity: CA-08A-3N

standard type

6A = 

Push style manual override

6B = 

Type	Material number
OD1301516A0000	R934003666
OD1301516B0000	R934003667

Type	Material number

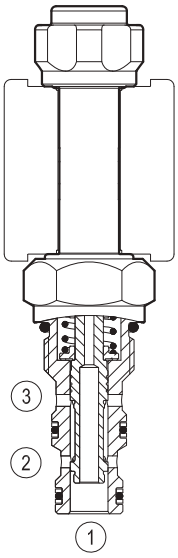
Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
cartridges@oilcontrol.com
www.boschrexroth.com

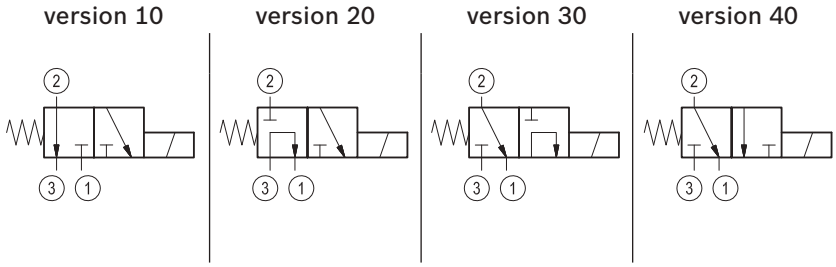
RE 18324-50/07.12
Replaces: RE 18324-50/05.11

Solenoid operated valves direct acting spool 3-way 2-position

Common cavity, Size 08

VEDS-08A-32 OD.13 - X - 51 - Y - 00





4

General

Weight	kg (lbs)	0.13 (0.29)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140) - coil 20W -30 to 80 (-22 to 176) - coil 17W

Hydraulic

Max. operating pressure port 2-3	bar (psi)	315 (4568)
Max. operating pressure port 1	bar (psi)	210 (3000)
Max. flow	l/min. (gpm)	20 (5)
Max. internal leakage (*)	cm^3/min. (cu.in/min.)	90 (5.5)
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	34-41 (25-30)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-08A-3N see RE 18325-70
Seal kit	code material no.	RG08A301053010 R901101723
Seal kit coil	code material no.	RG12A1PNBR7010 R934003958
Other technical data		See data sheet RE 18350-50

(*) Measured at 210 bar (3000 psi) (oil at 46 cSt)

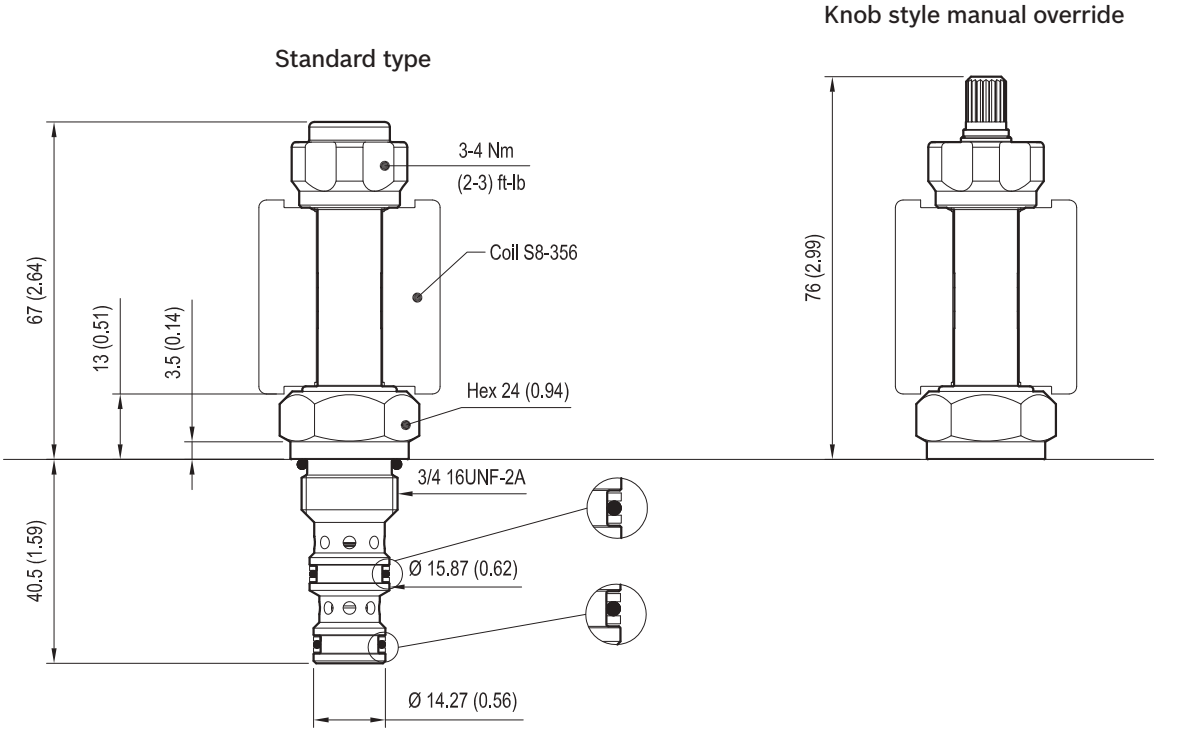
Electrical

Type of voltage		DC voltage
Coil type		S8-356
Supply voltage		See data sheet RE 18325-90
Power consumption	W	20 or 17
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90
Nominal voltage	coil 20W	-15% +10%
Nominal voltage	coil 17W	-15% +15%

Note: Coils must be ordered separately.

Dimensions

Solenoid operated valve, spool 3-way 2-position

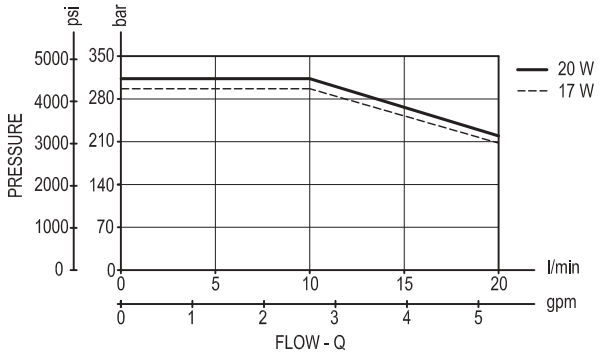


mm (Inches)

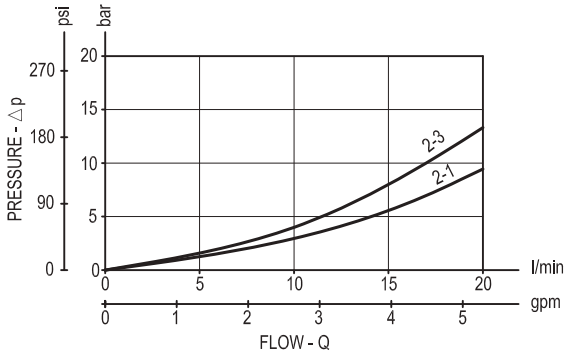
Performance graph

Version 10

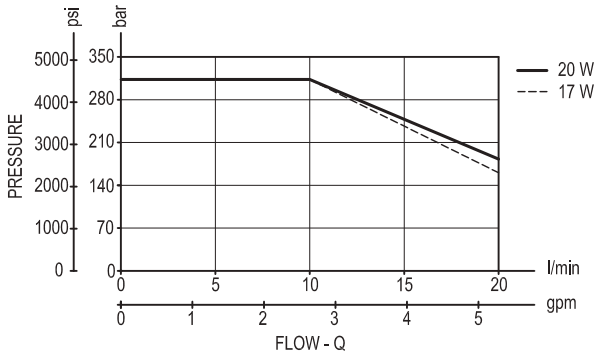
Performance limits

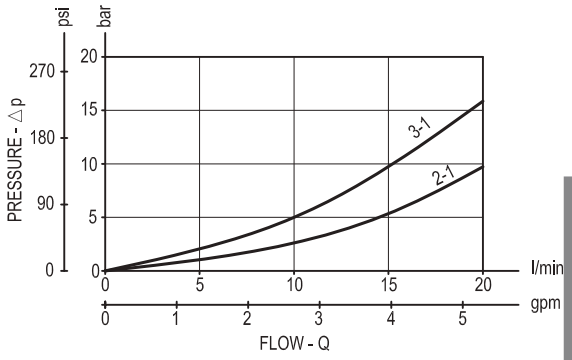


Characteristic curves

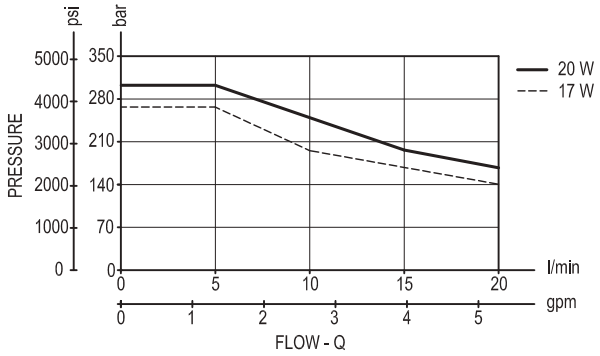


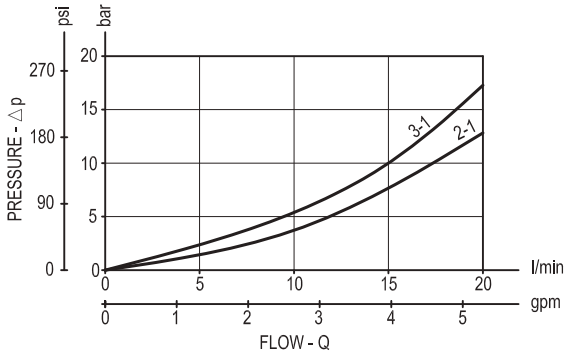
Version 20



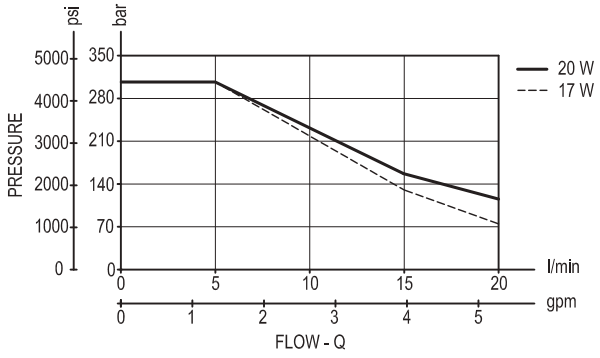


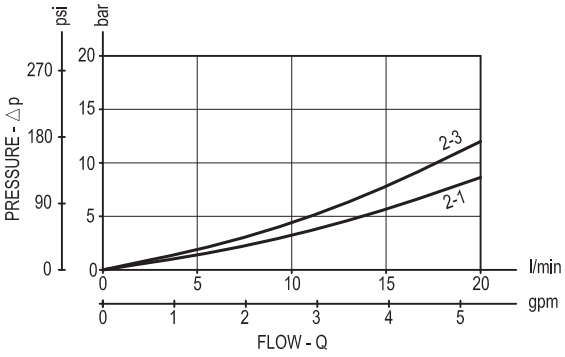
Version 30





Version 40

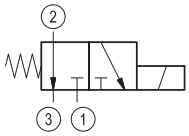




Ordering code

OD.13	*	51	*	00

Solenoid operated valves spool 3-way 2-position



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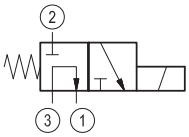

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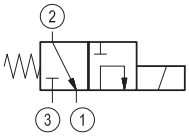

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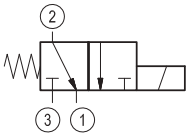

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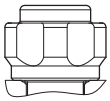
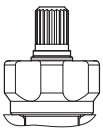
Common cavity: CA-08A-3N

standard type

1A = 

knob style manual override

1B = 

Type	Material number
OD1310511A0000	R934003541
OD1320511A0000	R934003542
OD1330511A0000	R934003543
OD1340511A0000	R934003544
OD1310511B0000	R934003545
OD1320511B0000	R934003546
OD1330511B0000	R934003547
OD1340511B0000	R934003548

Type	Material number

Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
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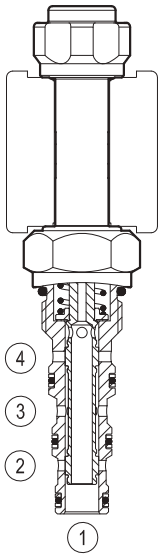
Fax +39 059 547 848
cartridges@oilcontrol.com
www.boschrexroth.com

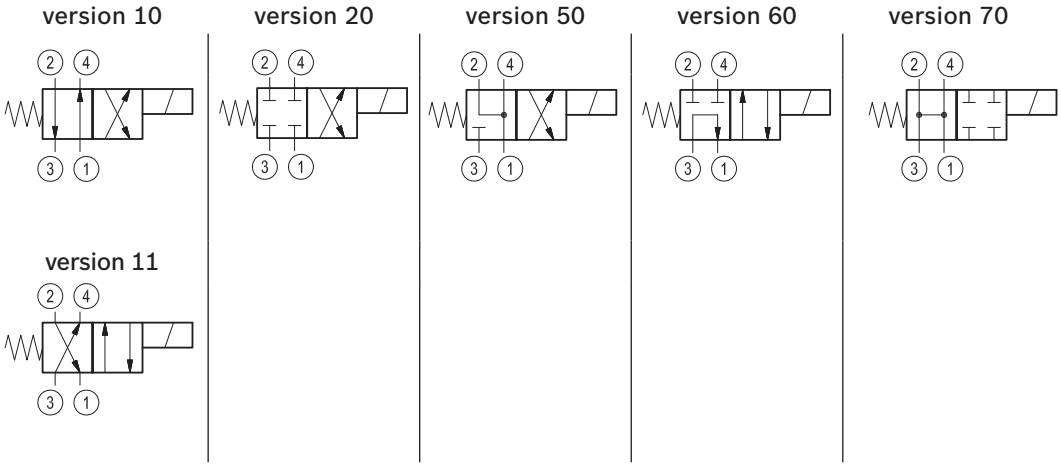
RE 18324-51/07.12
Replaces: RE 18324-51/05.11

Solenoid operated valves direct acting spool 4-way 2-position

Common cavity, Size 08

VEDS-08A-42 OD.14 - X - 58 - Y - 00





General

Weight	kg (lbs)	0.14 (0.31)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140) - coil 20W -30 to 80 (-22 to 176) - coil 17W

Hydraulic

Max. operating pressure port 2-3-4	bar (psi)	315 (4568)
Max. operating pressure port 1	bar (psi)	210 (3000)
Max. flow	l/min. (gpm)	16 (4)
Max. internal leakage (*)	cm^3/min. (cu.in/min.)	90 (5.5)
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	34-41 (25-30)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-08A-4N see RE 18325-70
Seal kit	code material no.	RG08A4010530100 R930005582
Seal kit coil	code material no.	RG12A1PNBR7010 R934003958
Other technical data		See data sheet RE 18350-50

(*) Measured at 210 bar (3000 psi) (oil at 46 cSt)

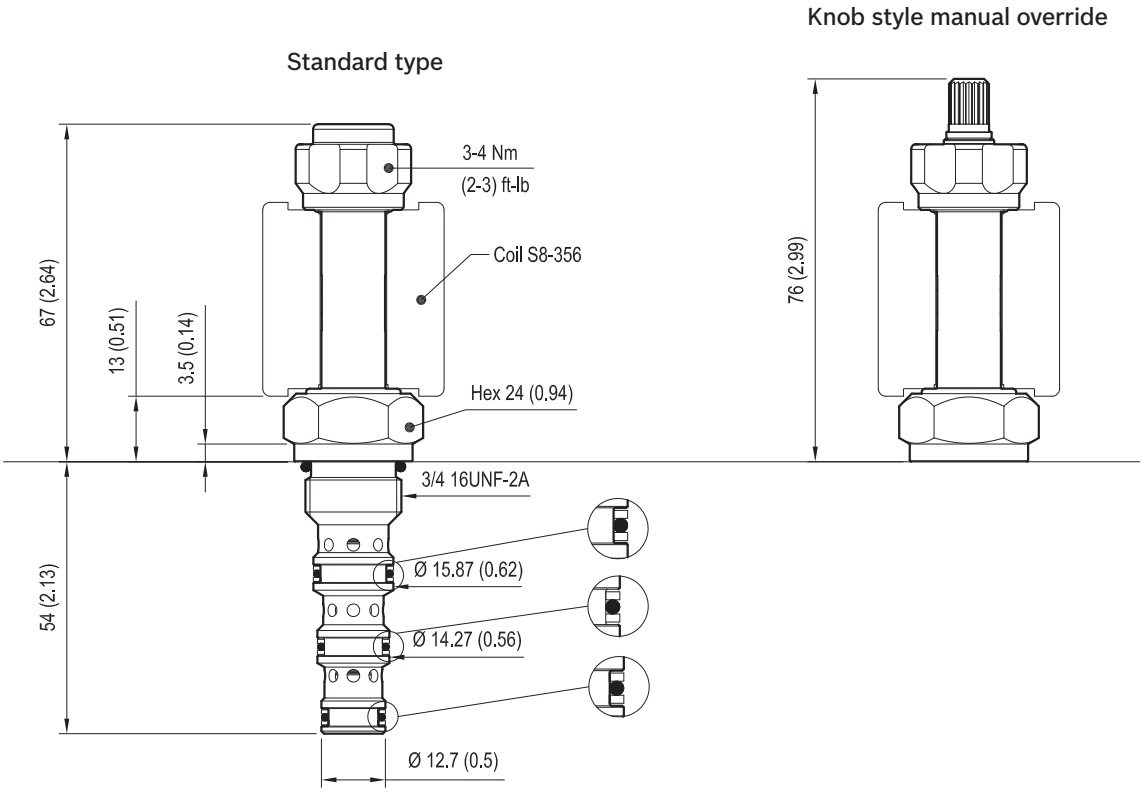
Electrical

Type of voltage		DC voltage
Coil type		S8-356
Supply voltage		See data sheet RE 18325-90
Power consumption	W	20 or 17
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90
Nominal voltage	coil 20W	-15% +10%
Nominal voltage	coil 17W	-15% +15%

Note: Coils must be ordered separately.

Dimensions

Solenoid operated valve, spool 4-way 2-position



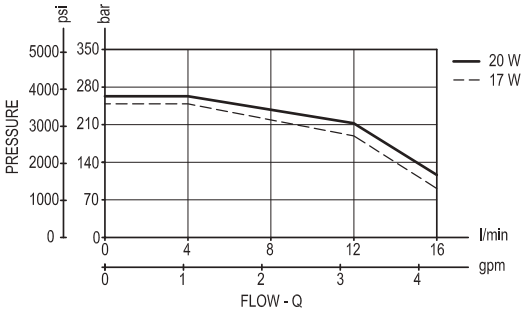
[mm (Inches)]

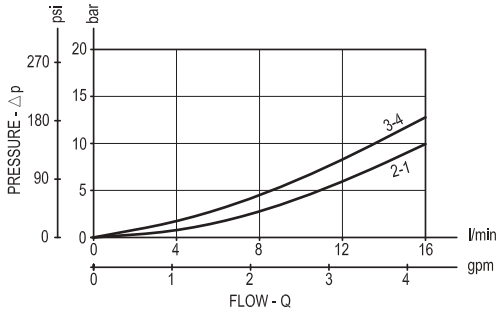
Performance graph

Performance limits

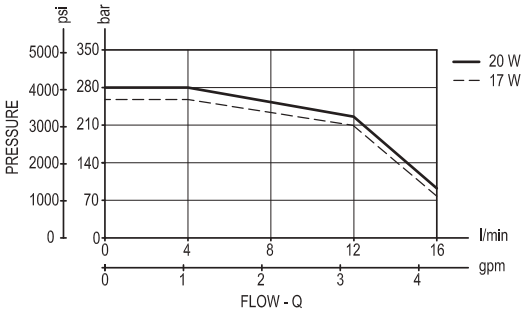
Characteristic curves

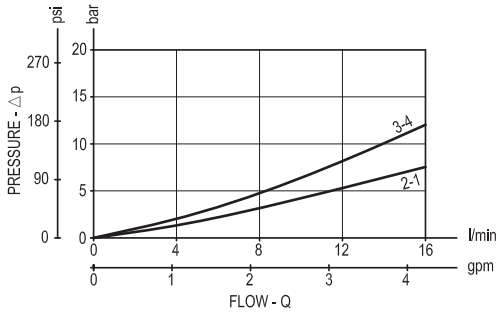
version 10



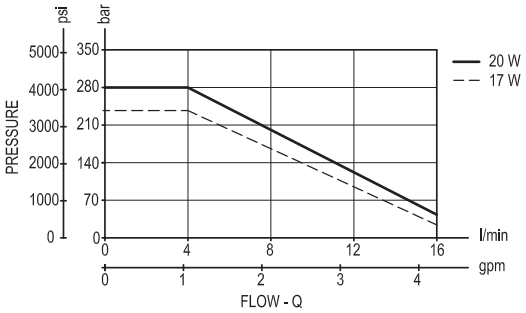


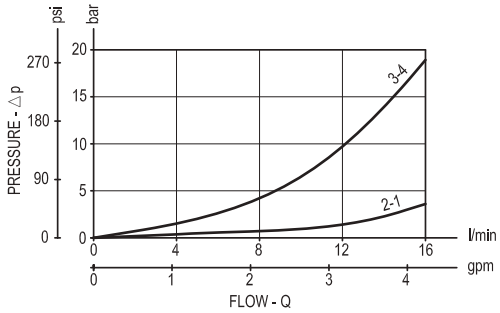
version 20



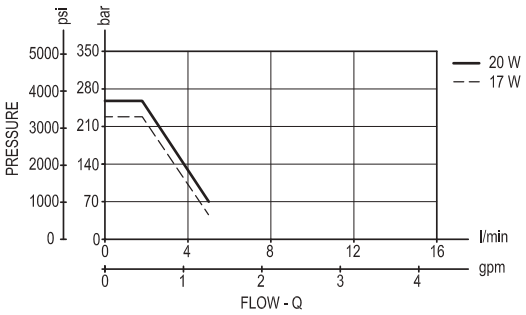


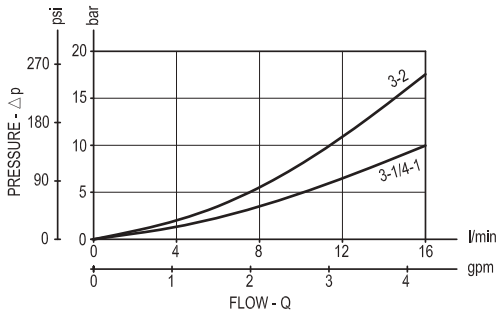
version 50



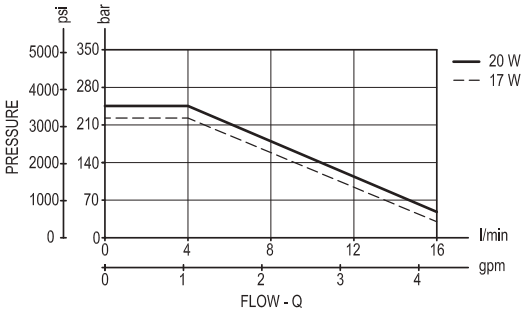


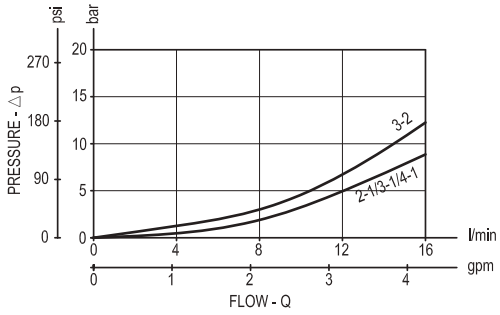
version 60



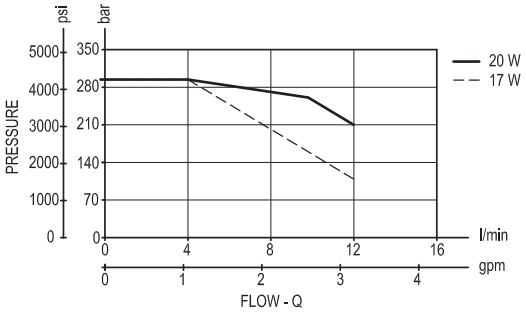


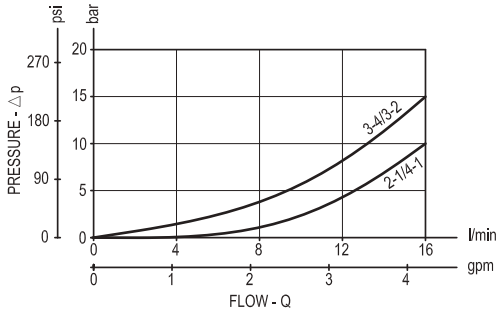
version 70





version 11



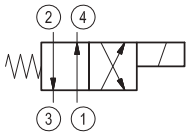


4

Ordering code

OD.14	*	58	*	00

Solenoid operated valves spool 4-way 2 position



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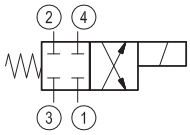

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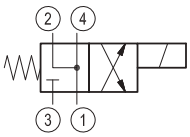

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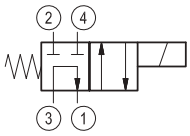

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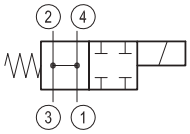

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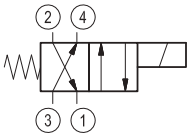
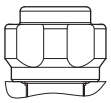


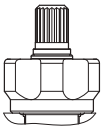
= 11

Common cavity: CA-08A-4N

standard type

1A = 

knob style manual override

1B = 

Type	Material number
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OD1420581A0000	R934003531
OD1450581A0000	R934003532
OD1460581A0000	R934003533
OD1470581A0000	R934003534
OD1410581B0000	R934003535
OD1420581B0000	R934003536
OD1450581B0000	R934003537
OD1460581B0000	R934003538

Type	Material number
OD1470581B0000	R934003539
OD1411581A0000	R934003638

Bosch Rexroth Oil Control S.p.A.
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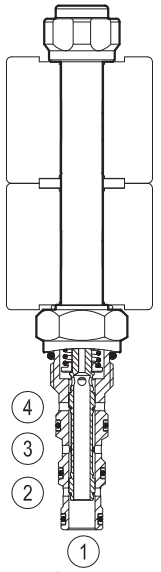
cartridges@oilcontrol.com
www.boschrexroth.com

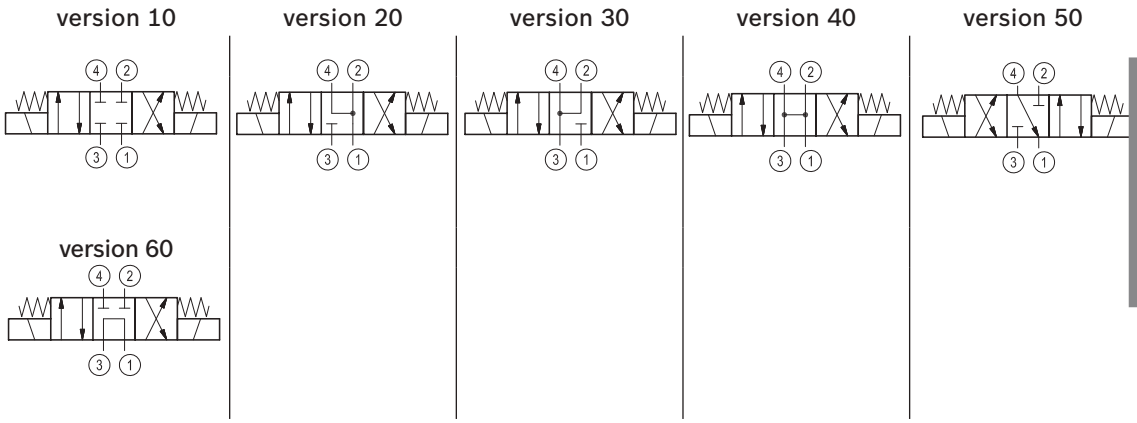
RE 18324-52/07.12 1/4
Replaces: RE 18324-52/05.11

Solenoid operated valves direct acting spool 4-way 3-position

Common cavity, Size 08

VEDS-08A-43 OD.14 - X - 58.2A.00





General

Weight	kg (lbs)	0.13 (0.29)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140) - coil 20W -30 to 80 (-22 to 176) - coil 17W

Hydraulic

Max. operating pressure port 2-3-4	bar (psi)	315 (4568) (see performance graph)
Max. operating pressure port 1	bar (psi)	140 (2000)
Flow range	l/min. (gpm)	20 (5)
Max. internal leakage (*)	cm^3/min. (cu.in/min.)	90 (5.5)
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	39-51 (29-38)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-08A-4N see RE 18325-70
Seal kit	code material no.	RG08A4010530100 R930005582
Seal kit coil	code material no.	RG12A2PNBR7010 R934003960
Other technical data		See data sheet RE 18350-50

(*) Measured at 210 bar (3000 psi) (oil at 46 cSt)

Electrical

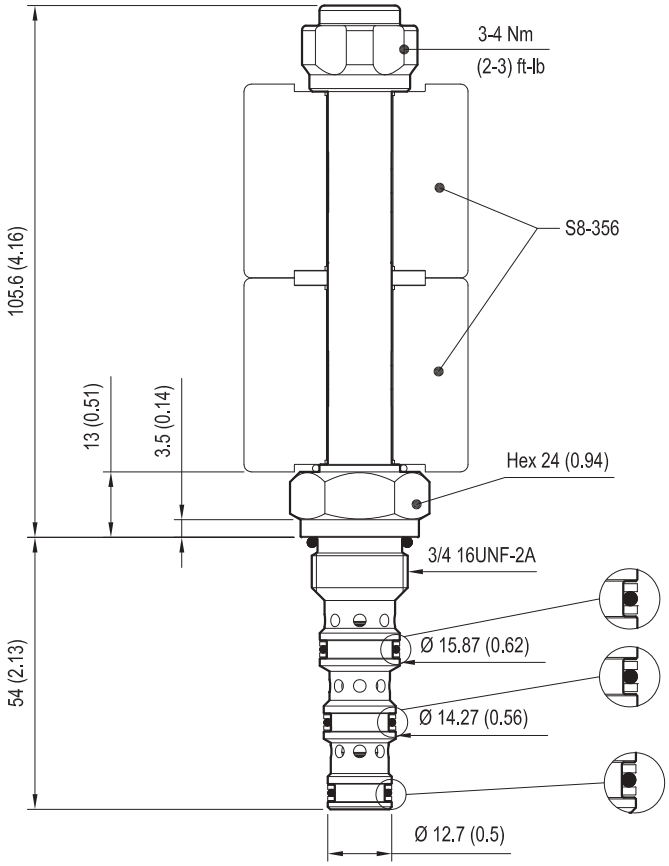
Type of voltage		DC voltage
Coil type		S8-356
Supply voltage		See data sheet RE 18325-90
Power consumption	W	20 or 17
Duty cycle coil	%	See performance graphs
Type of protection		See data sheet RE 18325-90
Nominal voltage	coil 20W	-15% +10%
Nominal voltage	coil 17W	-15% +15%

Note: Coils must be ordered separately.

Dimensions

Solenoid operated valve, spool 4-way 3-position

Standard type



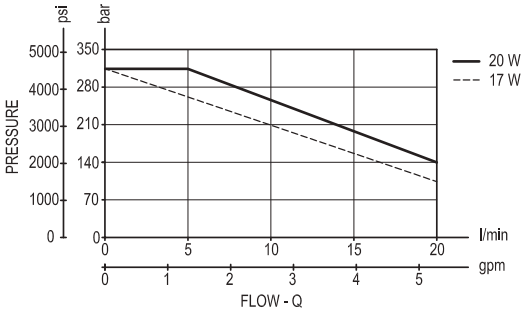
mm (Inches)

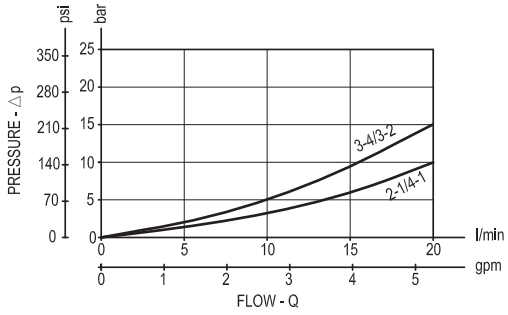
Performance graphs

Performance limits

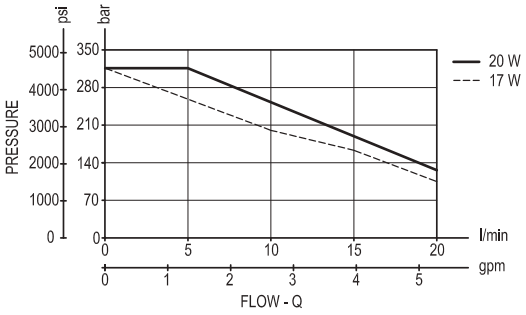
Characteristic curves

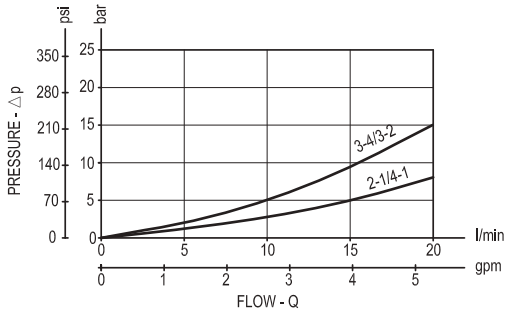
version 10





version 20





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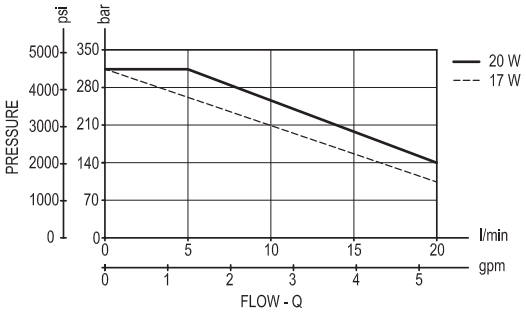
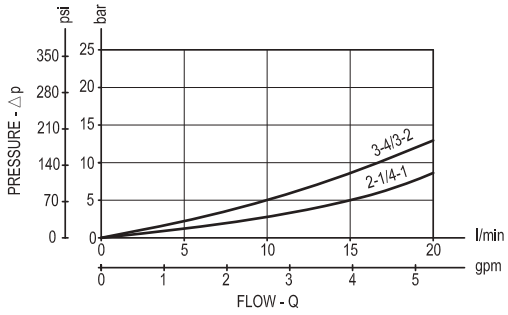
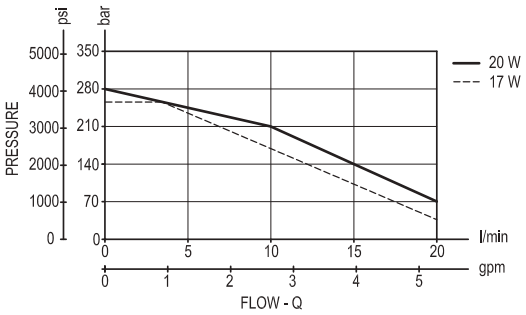
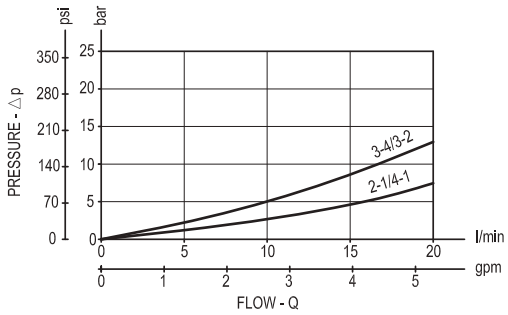




version 40





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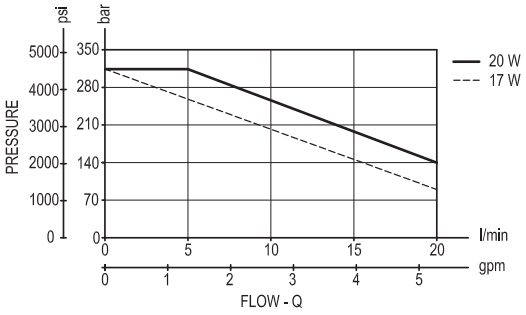
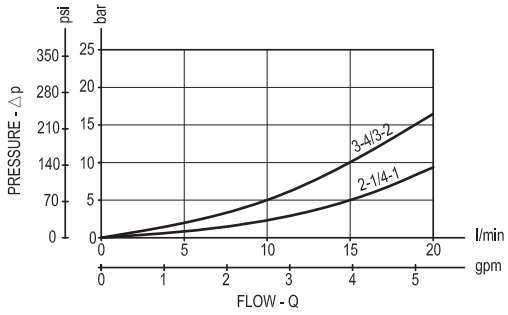
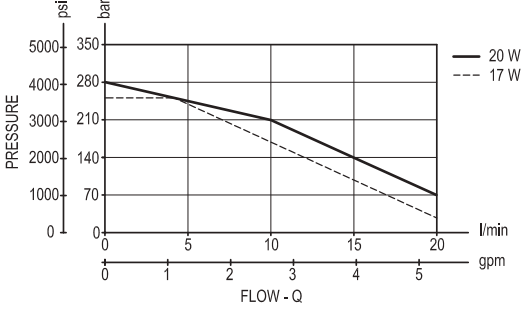
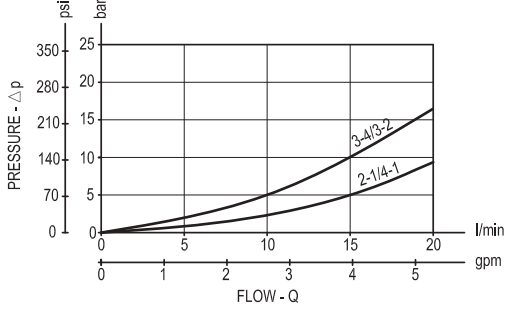




version 60

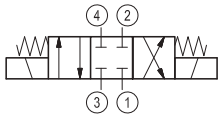




Ordering code

OD.14	*	58	2A	00

Solenoid operated valves
spool 4-way 3 position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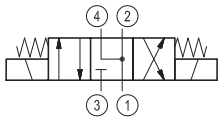
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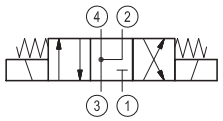
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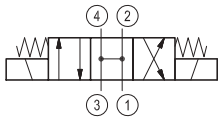
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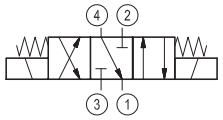
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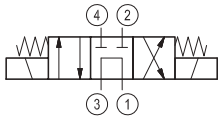
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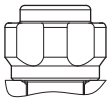
Common cavity: CA-08A-4N

standard type



Type	Material number
OD1410582A0000	R934003504
OD1420582A0000	R934003505
OD1430582A0000	R934003506
OD1440582A0000	R934003509
OD1450582A0000	R934003507
OD1460582A0000	R934003508

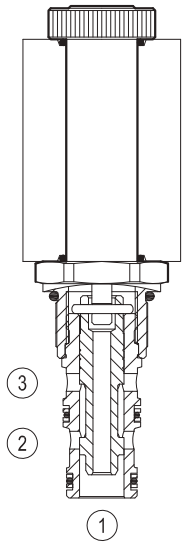
Type	Material number

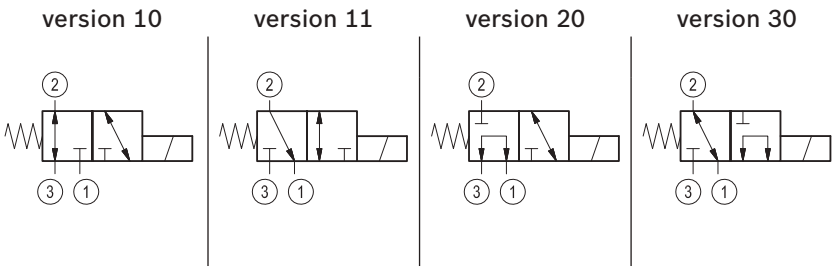
Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
cartridges@oilcontrol.com
www.boschrexroth.com

Solenoid operated valves direct acting spool 3-way 2-position

Common cavity, Size 10

VED-10A-32 OD.13 - X - 77 - Y - 00





General

Weight	kg (lbs)	0.22 (0.49)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140) - coil 30W

Hydraulic

Max. operating pressure port 2-3	bar (psi)	280 (4000)
Max. operating pressure port 1	bar (psi)	210 (3000)
Max. flow	l/min. (gpm)	20 (6)
Max. internal leakage (*)	cm^3/min. (cu.in./min.)	80 (5)
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	44-56 (33-41)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-10A-3N see RE 18325-70
Seal kit	code material no.	RG10A3010530100 R930000990
Seal kit coil	code material no.	RG16A1PMVQ0010 R934003962
Other technical data		See data sheet RE 18350-50

(*) Measured at 210 bar (3000 psi) (oil at 46 cSt)

Electrical

Type of voltage		DC voltage
Coil type		S7
Supply voltage		See data sheet RE 18325-90
Power consumption	W	30
Duty cycle coil	%	100 see RE 18325-90
Type of protection		See data sheet RE 18325-90
Nominal voltage coil 30W		-10% + 10%

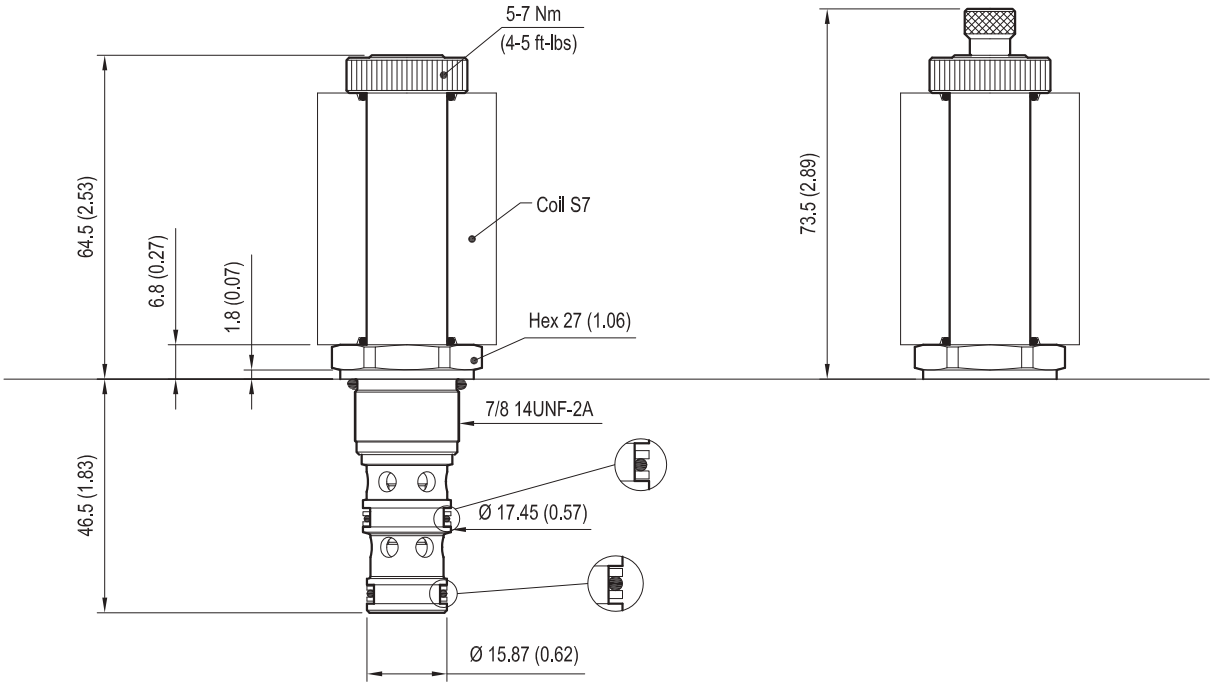
Note: Coils must be ordered separately.

Dimensions

Solenoid operated valve, spool 3-way 2-position

Standard type

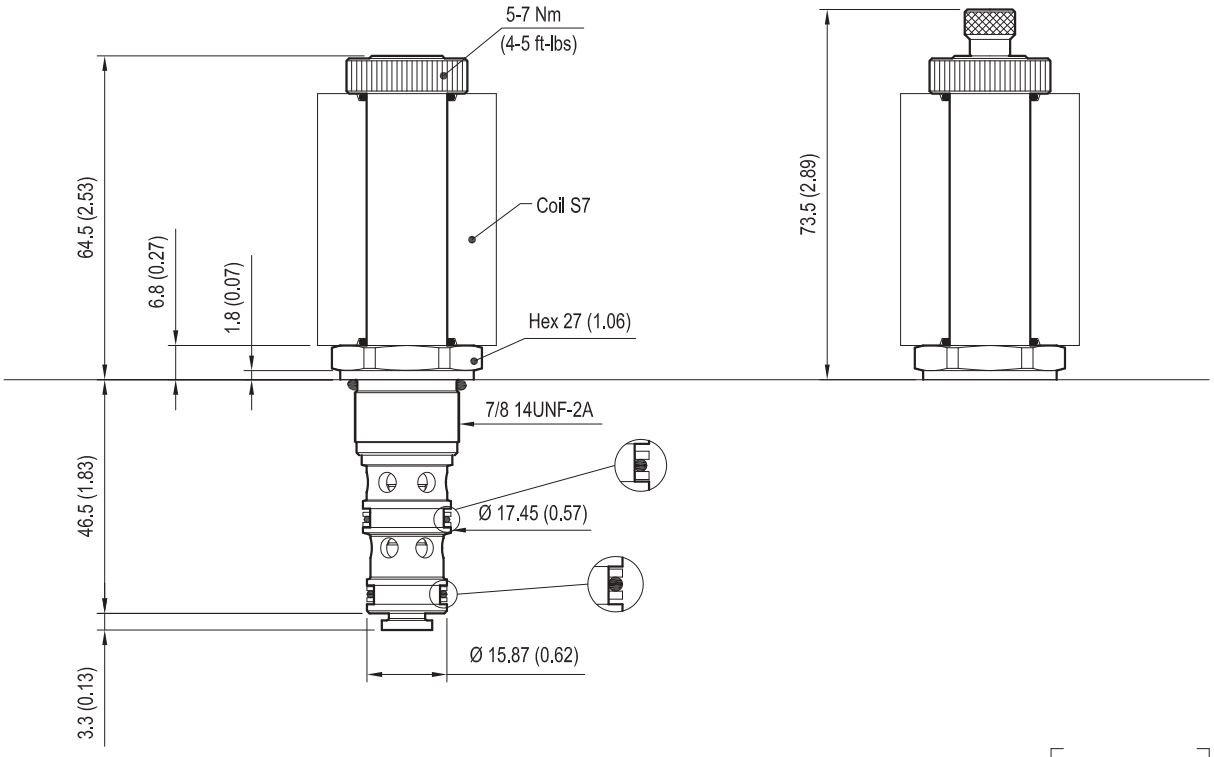
Knob style manual override



(only version 11)

Standard type

Knob style manual override

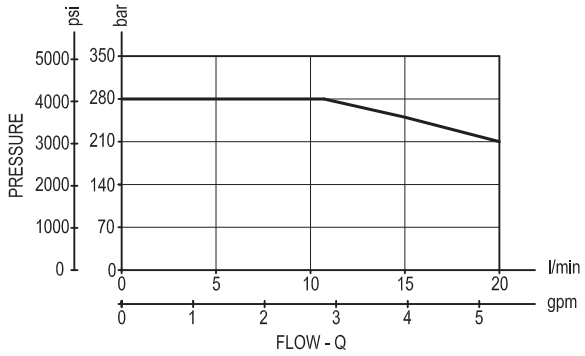


mm (Inches)

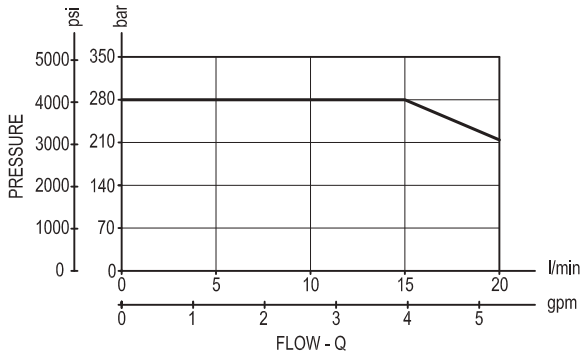
Performance graphs

Performance limits
(Hot coil at nominal voltage)

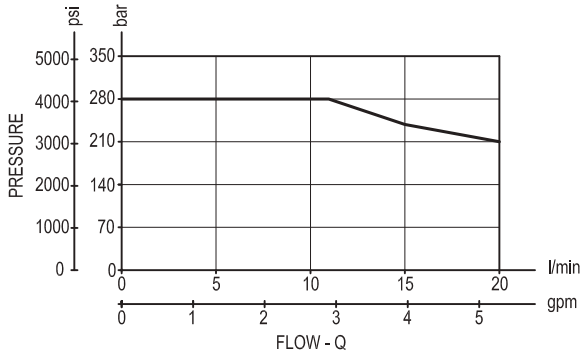
Version 10



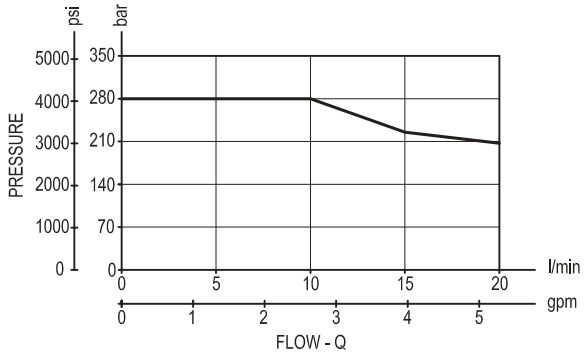
Version 11



Version 20

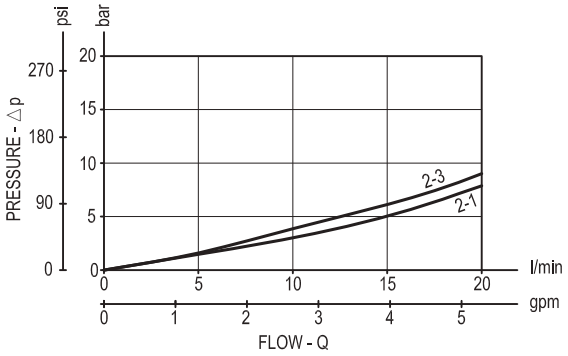


Version 30

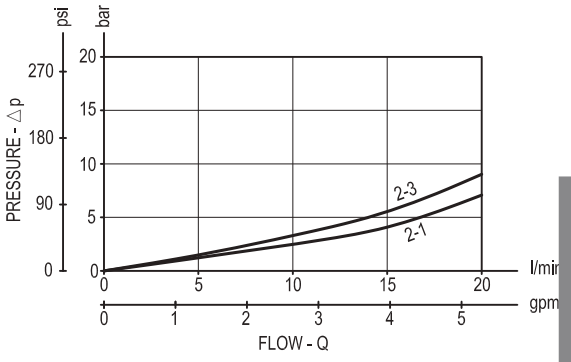


Characteristic curves

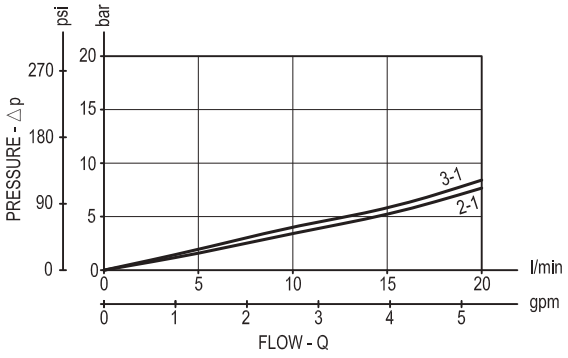
Version 10



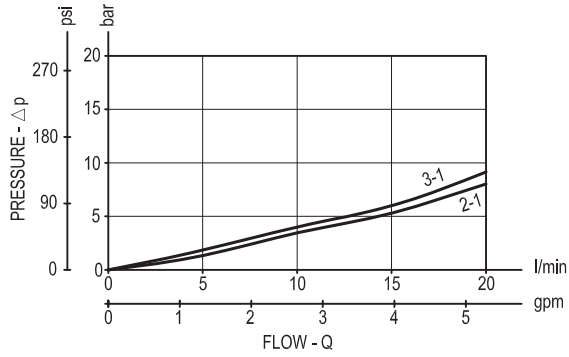
Version 11



Version 20



Version 30

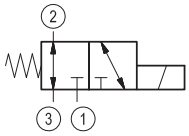


4

Ordering code

OD.13 | * | 77 | * | 00

Solenoid operated valves spool 4-way 2 position



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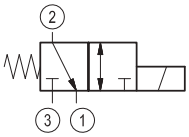

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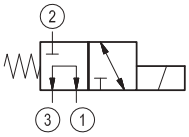

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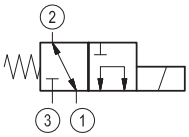

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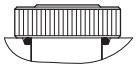
Common cavity: CA-10A-3N

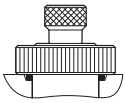
standard type

70 =



Knob style manual override

71 =



Type	Material number
OD131077700000	R901113689
OD131077710000	R901113687
OD131177700000	R901125116
OD131177710000	R901126890
OD132077700000	R901113690
OD132077710000	R901113692
OD133077700000	R901115704
OD133077710000	R901126898

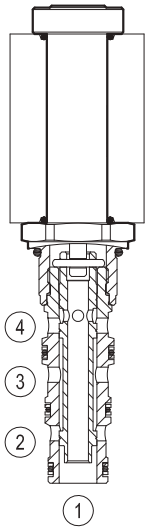
Type	Material number

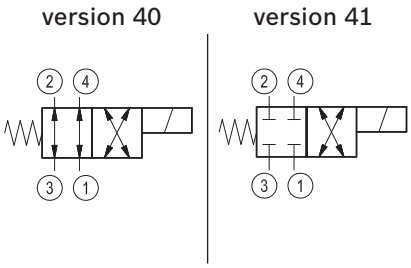
Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
cartridges@oilcontrol.com
www.boschrexroth.com

Solenoid operated valves direct acting spool 4-way 2-position

Common cavity, Size 10

VED-10A-42 OD.14 - 4W - 78 - Y - 00





General

Weight	kg (lbs)	0.22 (0.48)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140) - coil 30W

Hydraulic

Max. operating pressure port 2-3-4	bar (psi)	280 (4000)
Max. operating pressure port 1		210 (3000)
Max. flow	l/min. (gpm)	20 (6)
Max. internal leakage (*)	cm^3/min. (cu.in./min.)	80 (5)
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	44-56 (33-41)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-10A-4N see RE 18325-70
Seal kit	code material no.	RG10A4010530100 R901111373
Seal kit coil	code material no.	RG16A1PMVQ0010 R934003962
Other technical data		See data sheet RE 18350-50

(*) Measured at 210 bar (3000 psi) (oil at 46 cSt)

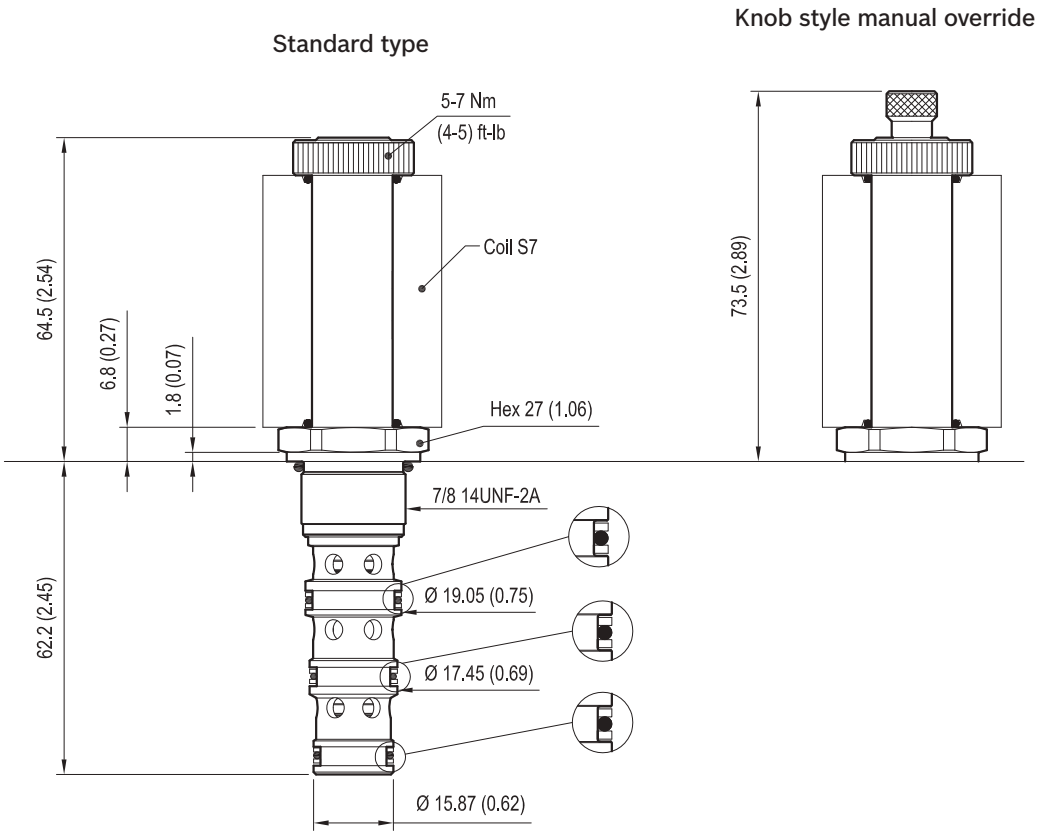
Electrical

Type of voltage		DC voltage
Coil type		S7
Supply voltage		See data sheet RE 18325-90
Power consumption	W	30
Duty cycle coil	%	100 see RE 18325-90
Type of protection		See data sheet RE 18325-90
Nominal voltage	coil 30W	-10% + 10%

Note: Coils must be ordered separately.

Dimensions

Solenoid operated valve, spool 4-way 2-position

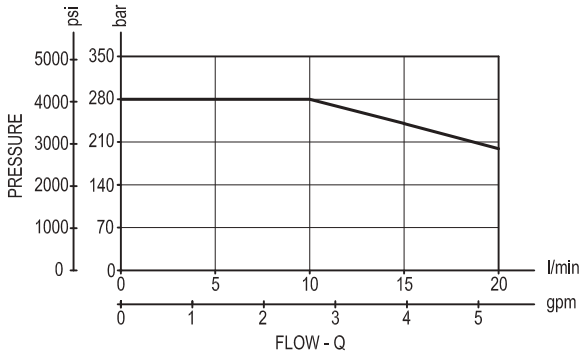


mm (Inches)

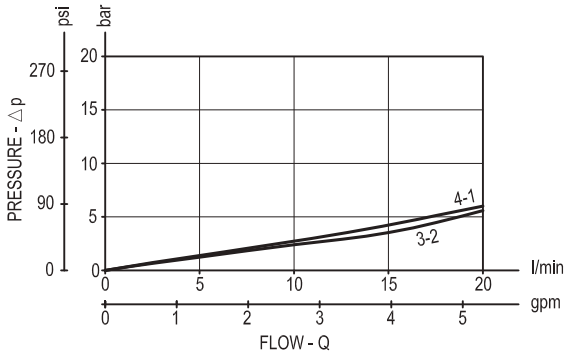
Performance graphs

Performance limits
(Hot coil at nominal voltage)

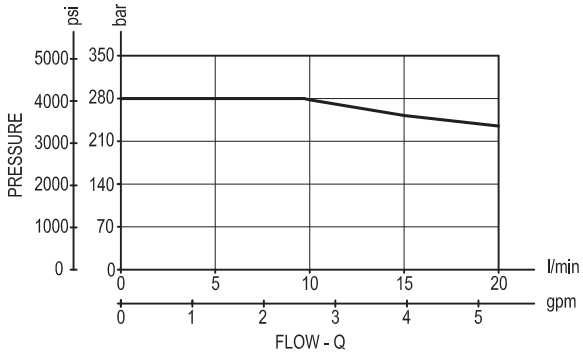
Version 40

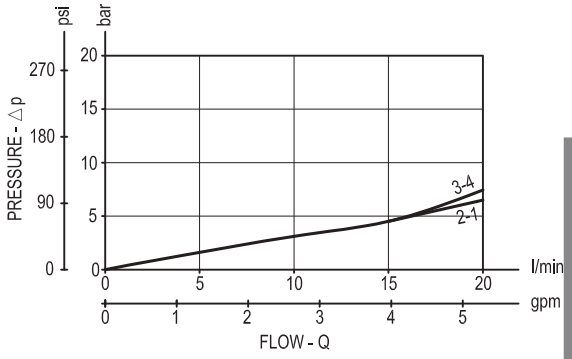


Characteristic curves



Version 41



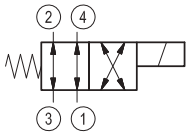


4

Ordering code

OD.14	*	78	*	00

Solenoid operated valves spool 4-way 2 position



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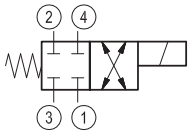

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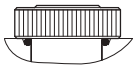
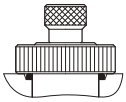
standard type

70 = 

Knob style manual override

71 = 

Common cavity: CA-10A-4N

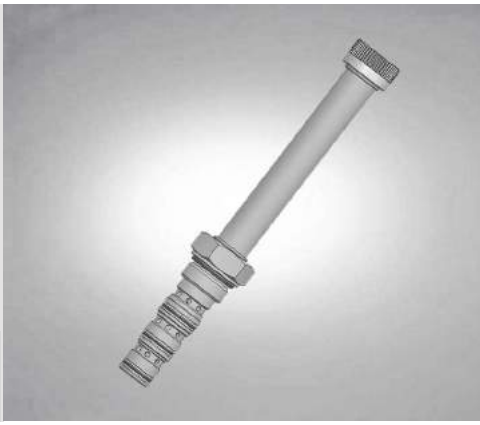
Type	Material number
OD144078700000	R901113695
OD144078710000	R901113699
OD144178700000	R901126906

Type	Material number

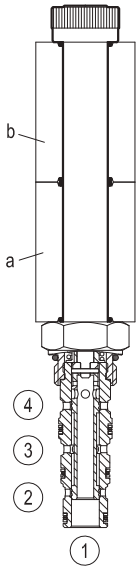
Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
cartridges@oilcontrol.com
www.boschrexroth.com

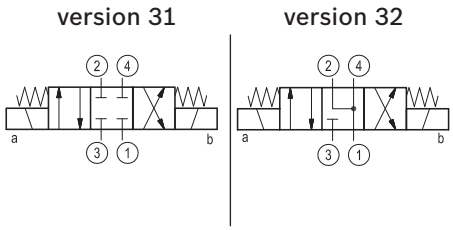
Solenoid operated valves direct acting spool 4-way 3-position

Common cavity, Size 10



VED-10A-43 OD.14 - 3W - 78 - Y - 00





General

Weight	kg (lbs)	0.27 (0.6)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140) - coil 30W

Hydraulic

Max. operating pressure port 2-3-4	bar (psi)	280 (4000)
Max. operating pressure port 1		210 (3000)
Max. flow	l/min. (gpm)	20 (6)
Max. internal leakage (*)	cm^3/min. (cu.in./min.)	120 (7)
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	44-56 (33-41)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-10A-4N see RE 18325-70
Seal kit	code material no.	RG10A4010530100 R901111373
Seal kit coil	code material no.	RG16A2PMVQ0010 R934003963
Other technical data		See data sheet RE 18350-50

(*) Measured at 210 bar (3000 psi) (oil at 46 cSt)

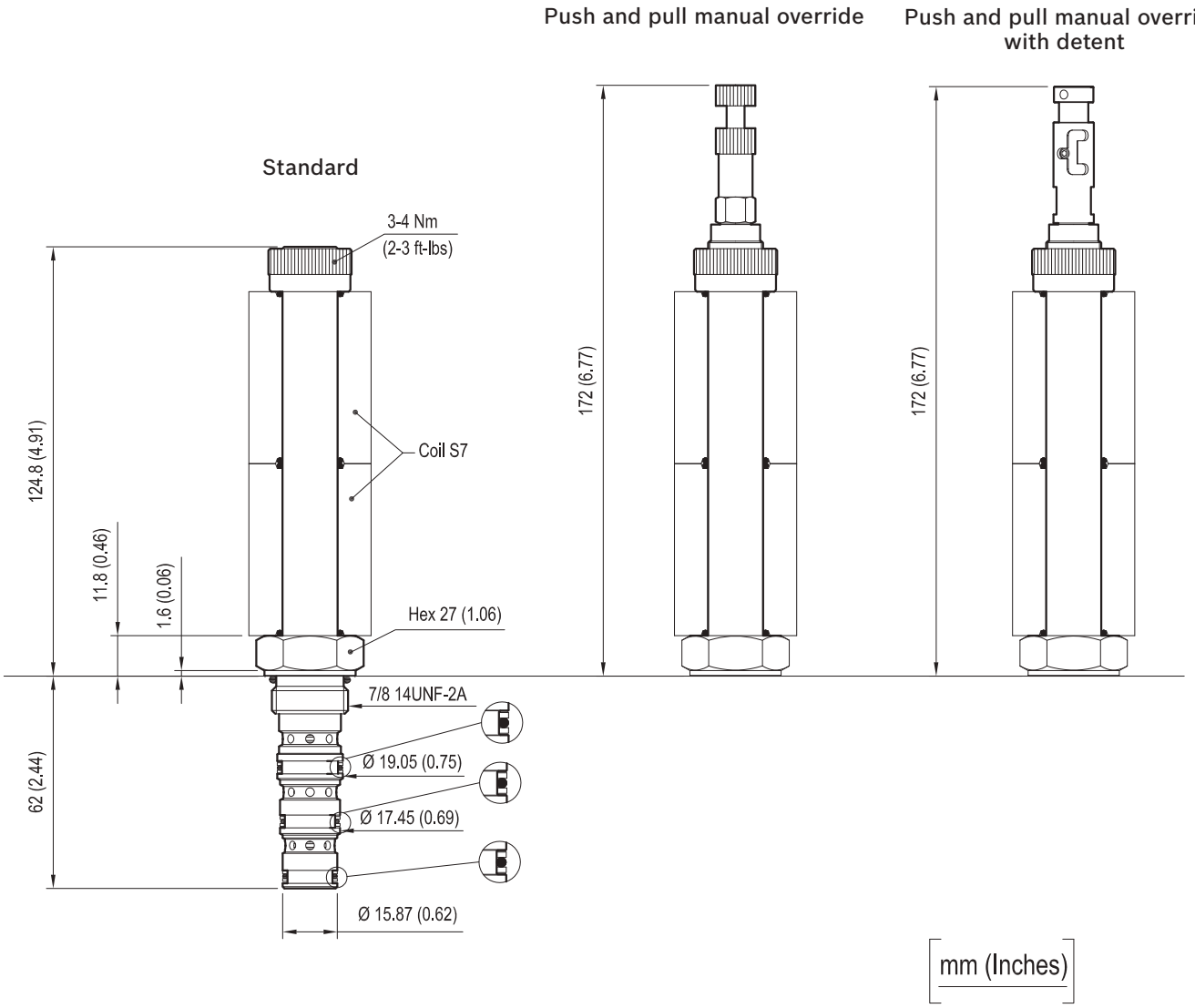
Electrical

Type of voltage		DC voltage
Coil type		S7
Supply voltage		See data sheet RE 18325-90
Power consumption	W	30
Duty cycle coil	%	100 see RE 18325-90
Type of protection		See data sheet RE 18325-90
Nominal voltage	coil 30W	-10% + 10%

Note: Coils must be ordered separately.

Dimensions

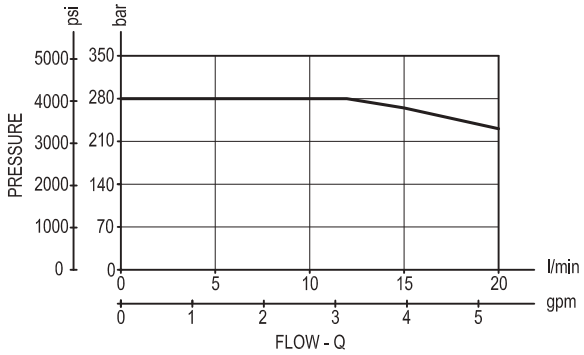
Solenoid operated valves spool 4-way 3-position



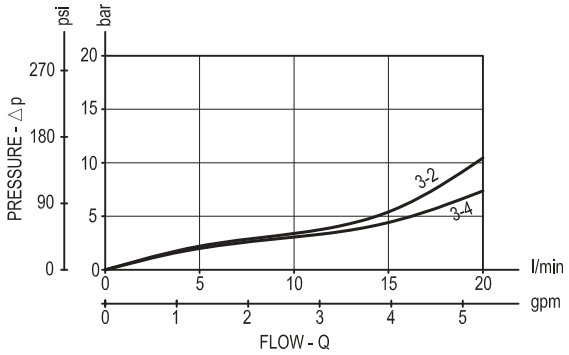
Performance graphs

Performance limits
(Hot coil at nominal voltage)

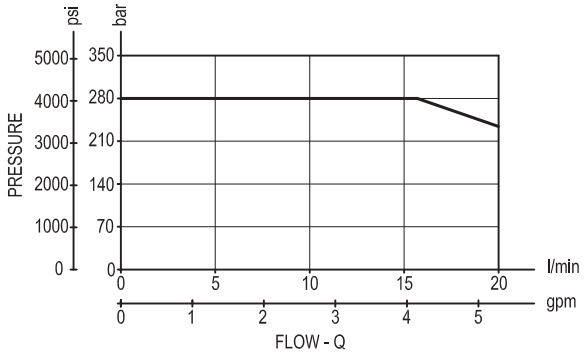
Version 31

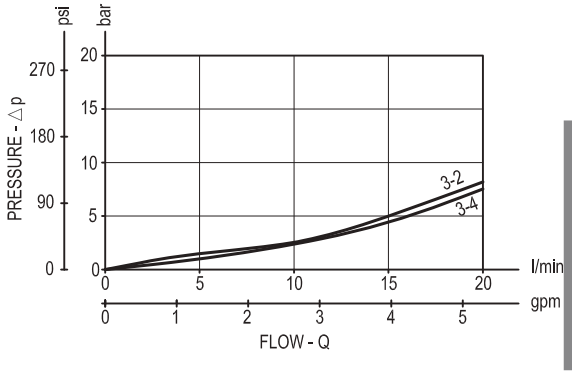


Characteristic curves



Version 32



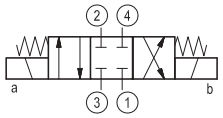


4

Ordering code

OD.14	*	78	*	00

Solenoid operated valves spool 4-way 3 position



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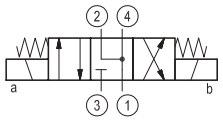
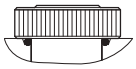


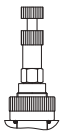
= 32

Common cavity: CA-10A-4N

80 = standard type



81 = push and pull manual override



82 = push and pull manual override with detent

Type	Material number
OD143178800000	R901113701
OD143178810000	R901113703
OD143178820000	R934000642
OD143278800000	R901113706
OD143278810000	R901126908
OD143278820000	R934000651

Type	Material number

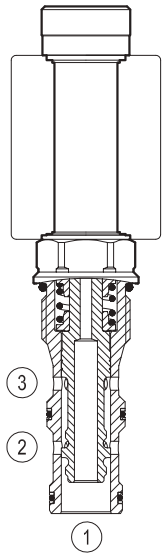
Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
cartridges@oilcontrol.com
www.boschrexroth.com

RE 18324-56/07.12
Replaces: RE 18324-56/06.11

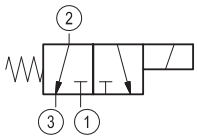
Solenoid operated valves direct acting spool 3-way 2-position

Common cavity, Size 12

VEDS-12A-32 OD.13 - X - 12 - Y - 00



version 10



General

Weight	kg (lbs)	0.39 (0.86)
Installation orientation		Optional
Ambient temperature range	°C (°F)	-30 to 60 (-22 to 140)

Hydraulic

Max. operating pressure	bar (psi)	315 (4500)
Max. operating pressure port 1	bar (psi)	210 (3000)
Max. flow	l/min.(gpm)	60 (16)
Max. internal leakage (*)	cm^3/min. (cu.in/min.)	180 (11)
Fluid temperature range	°C (°F)	-20 to 80 (-4 to 176)
Fluids		Mineral-based or synthetics with lubricating properties at viscosities of 20 to 380 mm^2/s (cSt)
Installation torque	Nm (ft-lbs)	81-87 (60-64)
Filtration		Nominal value max. 10µm (NAS 8) ISO 4406 19/17/14
Cavity		CA-12A-3N see RE 18325-70
Seal kit	code material no.	RG12A3010520100 R930000941
Seal kit coil	code material no.	RG19A1PNBR7010 R934003964
Other technical data		See data sheet RE 18350-50

(*) Measured at 210 bar (3000 psi) (oil at 46 cSt)

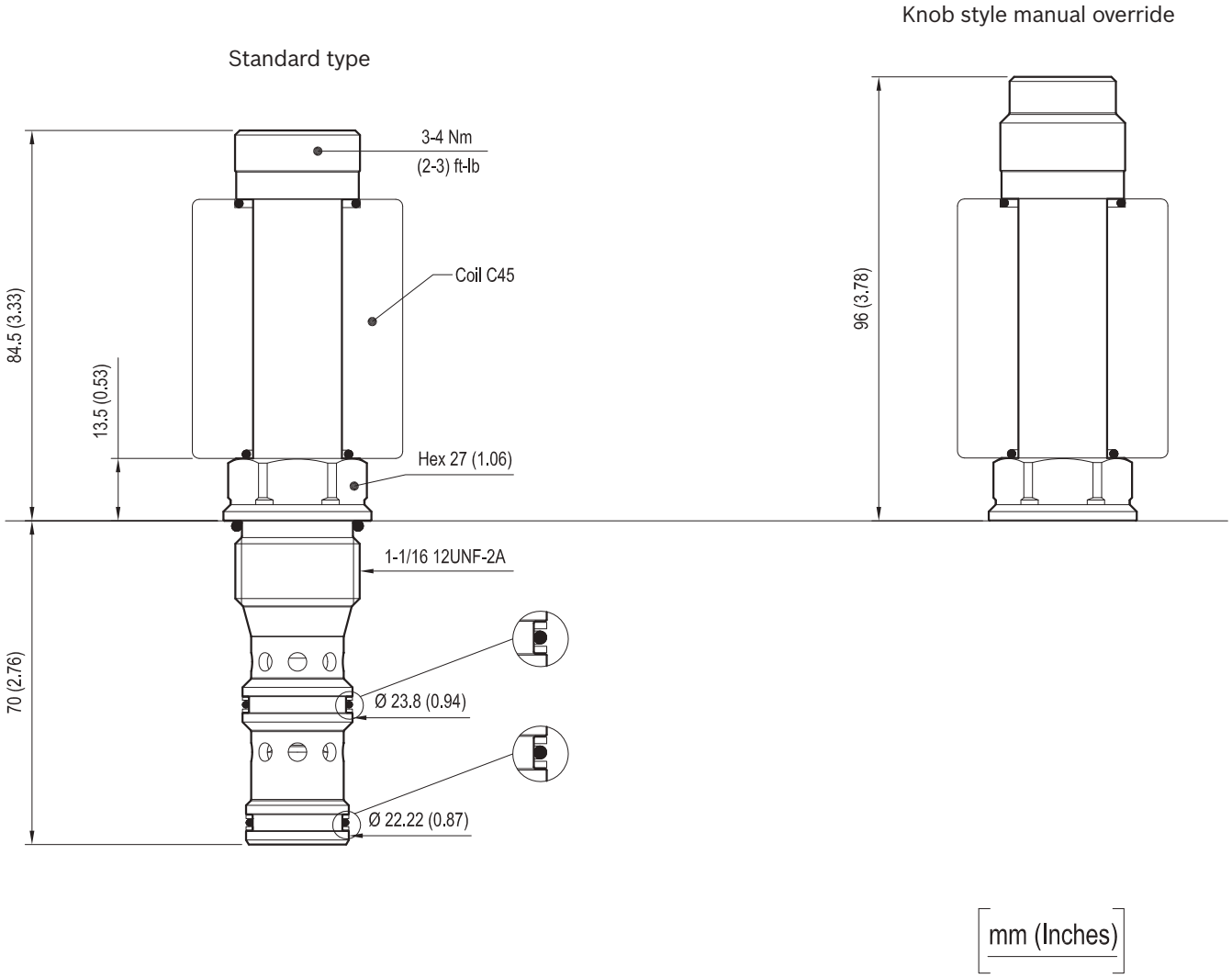
Electrical

Type of voltage		DC voltage
Coil type		C45
Supply voltage		See data sheet RE 18325-90
Power consumption	W	33
Duty cycle coil	%	100 see RE 18325-90
Type of protection		See data sheet RE 18325-90
Nominal voltage	coil 33W	-10%+10%

Note: Coils must be ordered separately.

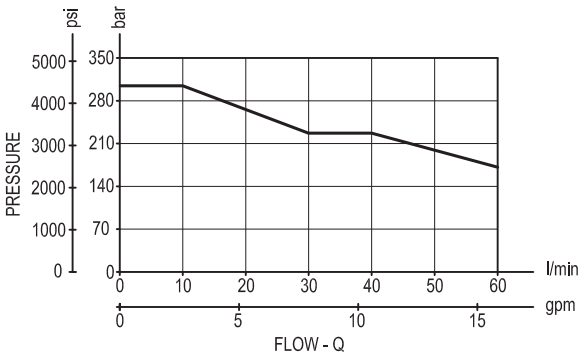
Dimensions

Solenoid operated valves direct acting spool 3-way 2-position

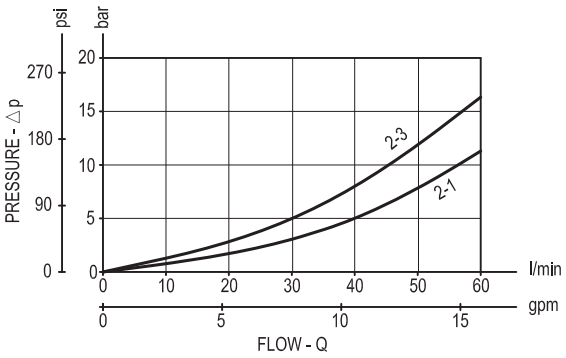


Performance graphs

Performance limits



Characteristic curves

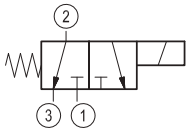


4

Ordering code

OD.13	*	12	*	00

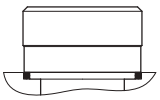
Solenoid operated valves spool 3-way 2-position



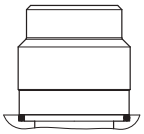
= 10

Common cavity: CA-12A-3N

Standard type

1A = 

Knob style manual override

1B = 

Type	Material number
OD1310121A0000	R934003616
OD1310121B0000	R934003620

Type	Material number

Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
cartridges@oilcontrol.com
www.boschrexroth.com

Rexroth
Bosch Group

Coils - Connectors

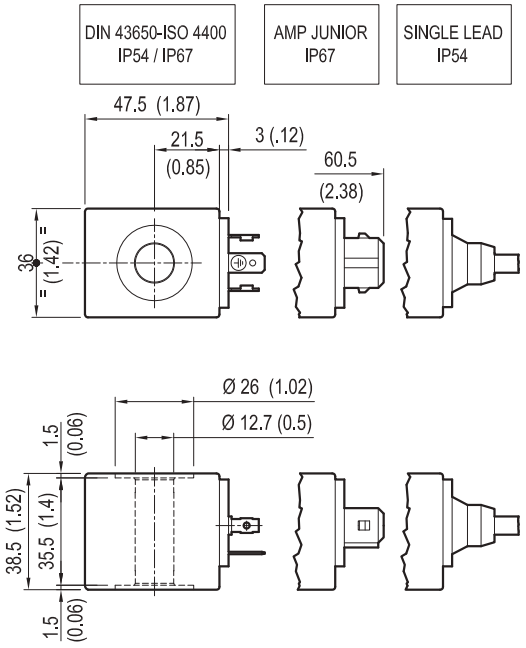
RE 18325-90/07.12
Replaces: RE 18325-90/09.11

Coils
Connectors

Summary

Coils - Connectors

COIL S8-356 - CLASS H - 20 W OD.02.17 - X - Y - Z



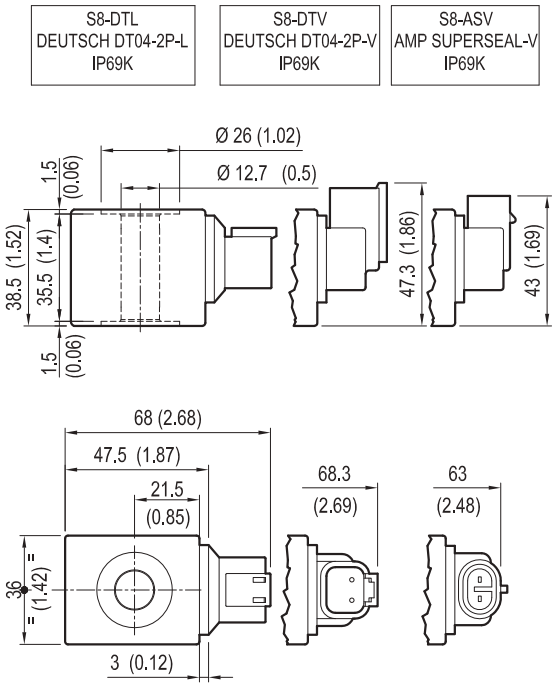
[mm / Inches]

TECHNICAL DATA
Weight: 0.18 kg (0.40 lbs)
Heat insulation Class H: 180°C (356°F)
Ambient temperature range: -30/+60°C (-22/+140°F)
Inlet voltage fluctuations must not exceed ±10% of nominal voltage to obtain correct operation and long life coils.

X	Y	Connections	Circuit	Voltage
01	30	DIN 43650 - ISO 4400	Standard	DC-RAC
07	30	AMP JUNIOR	Standard	DC
0G	03	SINGLE LEAD	Standard	DC *
14	30	DIN 43650 - ISO 4400	Bidirectionl Diode	DC
15	30	AMP JUNIOR	Bidirectional Diode	DC
0H	03	SINGLE LEAD	Bidirectional Diode	DC *

* Length 300mm (11.8 inches). Ext. diameter 6.3mm (0.25 inches). External and internal Shealth Silicone rubber.

Z	Voltage V	Resistance Ohm (±7%)	Power W	Current A		ΔT °C (°F)
	Nominal	Ta = 20-25°C (68-77°F)	Cold coil	Cold coil	Hot coil	1 hour energized at Ta=20-25°C (68-77°F) Nominal voltage
OB	12 DC	7.2	20	1.7	1.2	105-110 (221-230)
OG	14 DC	9.0	20	1.6	1.1	
OC	24 DC	28.2	20	0.9	0.6	
AC	26 DC	33.6	20	0.8	0.5	
OV	24 RAC	23.1	20	0.9	-	110-125 (230-257)
OW	110 RAC	478.3	20	0.2	-	
OZ	220 RAC	1919.9	20	0.1	-	



[mm / Inches]

X	Y	Connections	Circuit	Voltage
20	30	DEUTSCH DT04-2P-L	Standard	DC
20	3P	DEUTSCH DT04-2P-V	Standard	DC
30	3P	AMP SUPERSEAL-V	Standard	DC
22	30	DEUTSCH DT04-2P-L	Bidirectionl Diode	DC
22	3P	DEUTSCH DT04-2P-V	Bidirectional Diode	DC
32	3P	AMP SUPERSEAL-V	Bidirectional Diode	DC

Z	Voltage V	Resistance Ohm (±7%)	Power W	Current A		ΔT °C (°F)
	Nominal	Ta = 20-25°C (68-77°F)	Cold coil	Cold coil	Hot coil	1 hour energized at Ta=20-25°C (68-77°F) Nominal voltage
OB	12 DC	7.2	20	1.7	1.2	105-110 (221-230)
OC	24 DC	28.2	20	0.9	0.6	
AC	26 DC	33.6	20	0.8	0.5	

These coils have passed the THERMAL SHOCK DUNK TEST

Coils - Connectors

Preferred types (readily available)

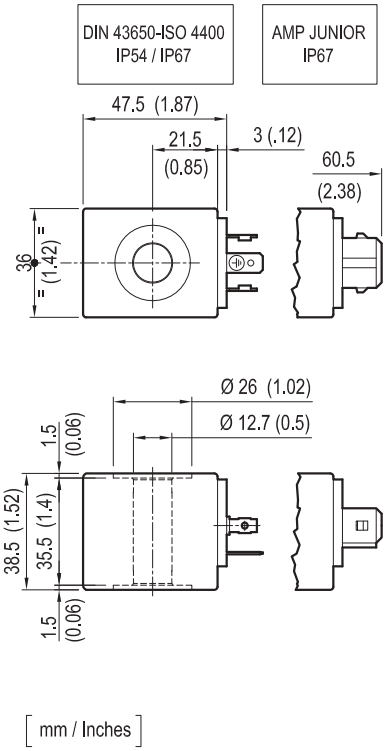
Type	Material number
OD02170130AC00	R901058832
OD02170130OB00	R901090821
OD02170130OC00	R901083065
OD02170130OG00	R901144215
OD02170130OV00	R901090820
OD02170130OW00	R901087981
OD02170130OZ00	R901085466
OD02170730AC00	R934000494
OD02170730OB00	R901094604
OD02170730OC00	R901094607
OD02170730OG00	R934000498
OD02170G03OB00	R901100773
OD02170G03OC00	R901100775
OD02171430OB00	R901131889
OD02171430OC00	R901121821
OD02171530AC00	R901133139

Type	Material number
OD02171530OB00	R901111032
OD02171530OC00	R901125292
OD02172030OB00	R901094609
OD02172030OC00	R901094611
OD0217203PAC00	R934000509
OD0217203POB00	R901110014
OD0217203POC00	R901110015
OD02172230OB00	R901130433
OD02172230OC00	R901130401
OD02172230OG00	R934003033
OD0217223POB00	R901120671
OD0217223POC00	R901114602
OD0217303PAC00	R934000516
OD0217303POB00	R901110016
OD0217323POB00	R934000519
OD02170H03OG00	R934004360

Further types available by request

Coils - Connectors

COIL S8-356 - CLASS H - 17 W OD.02.27 - X - Y - Z



TECHNICAL DATA

Weight: 0.18 kg (0.40 lbs)

Heat insulation Class H: 180°C (356°F)

Ambient temperature range: -30/+80°C (-22/+176°F)

Inlet voltage fluctuations must not exceed ±10% (not welded solenoid type) ±15% (other welded solenoid type) of nominal voltage to obtain correct operation and long life coils.

X	Y	Connections	Circuit	Voltage
01	30	DIN 43650 - ISO 4400	Standard	DC
07	30	AMP JUNIOR	Standard	DC
15	30	AMP JUNIOR	Bidirectionl Diode	DC

Z	Voltage V	Resistance Ohm (±7%)	Power W	Current A		ΔT °C (°F)
	Nominal	Ta = 20-25°C (68-77°F)	Cold coil	Cold coil	Hot coil	1 hour energized at Ta=20-25°C (68-77°F) Nominal voltage
OB	12 DC	8.4	17	1.4	1.0	85-90 (185-194)
OG	14 DC	11.4	17	1.2	0.8	
OC	24 DC	33.7	17	0.7	0.5	

Preferred types (readily available)

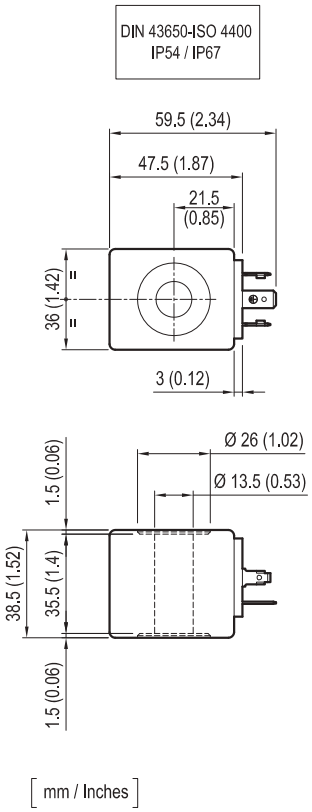
Type	Material number
OD02270730OG00	R934003645
OD02271530OG00	R934003888

Type	Material number

Further types available by request

Coils - Connectors

COIL S8-356 - CLASS H - 17 W - APPROVED UL OD.02.25 - X - Y - Z



LABEL EXAMPLE

TECHNICAL DATA
Weight: 0.18 kg (0.4 lbs)
Heat insulation Class H: 180°C (356°F)
Ambient temperature range: -20/+55°C (-4/+131°F)
Inlet voltage fluctuations must not exceed ±10% of nominal voltage to obtain correct operation and long life coils.

UL file number: **E247526**

X	Y	Connections	Circuit	Voltage
01	30	DIN 43650 - ISO 4400	Standard	DC

Z	Voltage V	Resistance Ohm (±7%)	Power W	Current A		ΔT °C (°F)
	Nominal	Ta = 20-25°C (68-77°F)	Cold coil	Cold coil	Hot coil	1 hour energized at Ta=20-25°C (68-77°F) Nominal voltage
OC	24 DC	33.7	17	0.7	0.5	105-110 (221-230)

Note: UL S8-356 coil is not function interchangeable with standard 20W S8-356 coil; performance on datasheets of Bosch Rexroth cartridge valves are not valid if assembled with UL S8-356 coils.
Please consult factory before any installation of UL coils in existing Bosch Rexroth solenoid cartridges.

4

Preferred types (readily available)

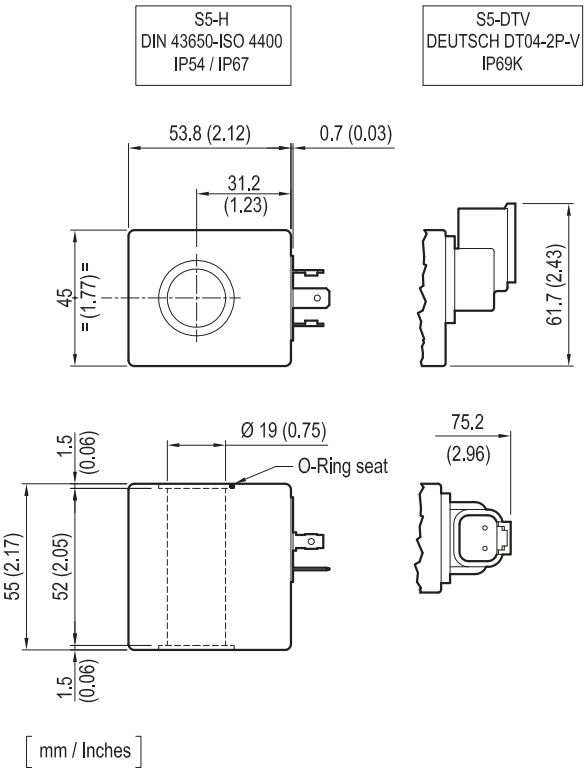
Type	Material number
OD02250130OC00	R934004281

Type	Material number

Coils - Connectors

COIL S5 - CLASS H - 20 W

OD.02.09 - X - Y - Z - 01



TECHNICAL DATA
Weight: 0.47 kg (1.04 lbs)
Heat insulation Class H: 180°C (356°F)
Ambient temperature range: -30/+70°C (-22/+158°F)
Inlet voltage fluctuations must not exceed ±10% of nominal voltage to obtain correct operation and long life coils.

X	Y	Connections	Circuit	Voltage
01	30	DIN 43650 - ISO 4400	Standard	DC
20	3P	DEUTSCH DT-04-2P-V	Standard	DC
22	3P	DEUTSCH DT-04-2P-V	Bidirectional Diode	DC

Z	Voltage V	Resistance Ohm (±7%)	Power W	Current A		ΔT °C (°F)
	Nominal	Ta = 20-25°C (68-77°F)	Cold coil	Cold coil	Hot coil	1 hour energized at Ta=20-25°C (68-77°F) Nominal voltage
OB	12 DC	6.2	23	1.9	1.4	92-96 (198-205)
OC	24 DC	24.9	23	1.0	0.7	

Preferred types (readily available)

Type	Material number
OD02090130OB01	R901090827
OD02090130OC01	R901090828
OD0209203POB01	R901110011

Type	Material number
OD0209203POC01	R901110012
OD0209223POB01	R901090829
OD0209223POC01	R901110013

Further types available by request

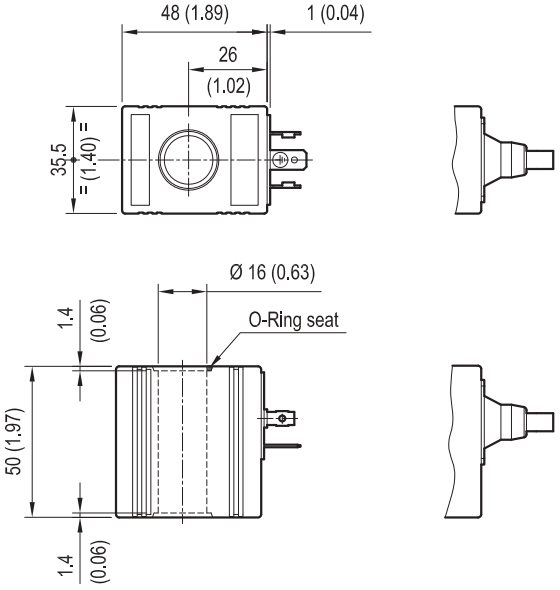
Coils - Connectors

COIL S7 - CLASS H - 30 W

OD.02.07 - X - Y - Z - 02

S7-H
DIN 43650-ISO 4400
IP54 / IP67

SINGLE LEAD
IP54



[mm / Inches]

TECHNICAL DATA

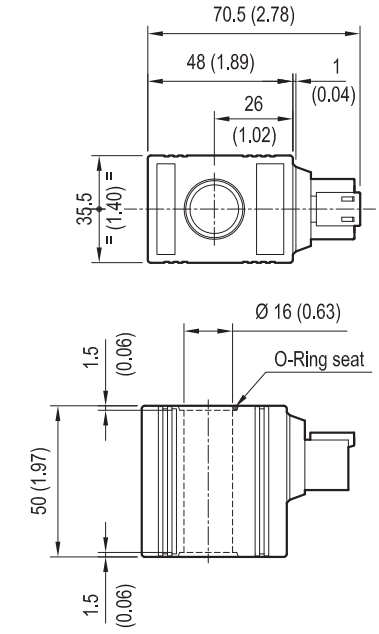
Weight: 0.33 kg (0.73 lbs)
Heat insulation Class H: 180°C (356°F)
Ambient temperature range: -30/+60°C (-22/+140°F)
Inlet voltage fluctuations must not exceed ±10% of nominal voltage to obtain correct operation and long life coils.

X	Y	Connections	Circuit	Voltage
01	30	DIN 43650 - ISO 4400	Standard	DC
0H	02	SINGLE LEAD	Bidirectional Diode	DC *

* Length 200 mm (7.87 inches). Ext. diameter 0.53 mm (0.02). External and internal Shealth Silicone rubber.

Z	Voltage V	Resistance Ohm (±7%)	Power W	Current A		ΔT °C (°F)
	Nominal	Ta = 20-25°C (68-77°F)	Cold coil	Cold coil	Hot coil	1 hour energized at Ta=20-25°C (68-77°F) Nominal voltage
OB	12 DC	4.8	30	2.5	1.8	120-140 (248-284)
OC	24 DC	18.8	30	1.2	0.9	

S7-D
DEUTSCH DT04-2P
IP69K



[mm / Inches]

X	Y	Connections	Circuit	Voltage
20	30	DEUTSCH DT04-2P	Standard	DC
22	30	DEUTSCH DT04-2P	Bidirectionl Diode	DC

Z	Voltage V	Resistance Ohm (±7%)	Power W	Current A		ΔT °C (°F)
	Nominal	Ta = 20-25°C (68-77°F)	Cold coil	Cold coil	Hot coil	1 hour energized at Ta=20-25°C (68-77°F) Nominal voltage
OB	12 DC	4.8	30	2.5	1.8	120-140 (248-284)
OG	14 DC	6.5	30	2.1	1.4	
OC	24 DC	18.8	30	1.2	0.9	

Available on request: different voltages, working duty Ed 50 %

These coils have passed the THERMAL SHOCK DUNK TEST

Note: for general information see “Section 7 - Techinal Data”

Preferred types (readily available)

Type	Material number
OD02070130OB02	R901090824
OD02070130OC02	R901090825
OD02072030OB02	R901094589
OD02072030OG02	R934000349
OD02072230OG02	R934000355

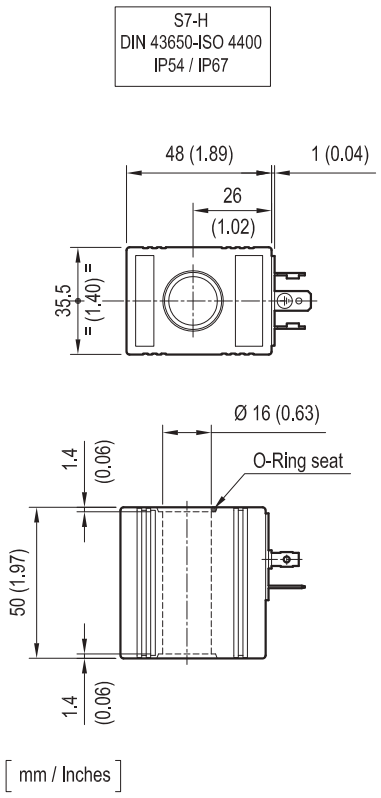
Type	Material number
OD02072030OC02	R901094594
OD02072230OB02	R901094595
OD02072230OC02	R901094597
OD02070H02OB02	R934004373

Further types available by request

Coils - Connectors

COIL S7 - CLASS H - 26 W

OD.02.37 - X - Y - Z - 02



TECHNICAL DATA

Weight: 0.33 kg (0.73 lbs)
Encapsulating material: IXEF
Heat insulation Class H: 180°C (356°F)
Ambient temperature range: -30/+80°C (-22/+176°F)
Inlet voltage fluctuations must not exceed ±15% of nominal voltage to obtain correct operation and long life coils.

X	Y	Connections	Circuit	Voltage
01	30	DIN 43650 - ISO 4400	Standard	DC

Z	Voltage V	Resistance Ohm (±7%)	Power W	Current A		ΔT °C (°F)
	Nominal	Ta = 20-25°C (68-77°F)	Cold coil	Cold coil	Hot coil	1 hour energized at Ta=20-25°C (68-77°F) Nominal voltage
OB	12 DC	5.5	26	2.2	1.6	100-120 (212-248)
OC	24 DC	2.9	26	1.1	0.8	

Preferred types

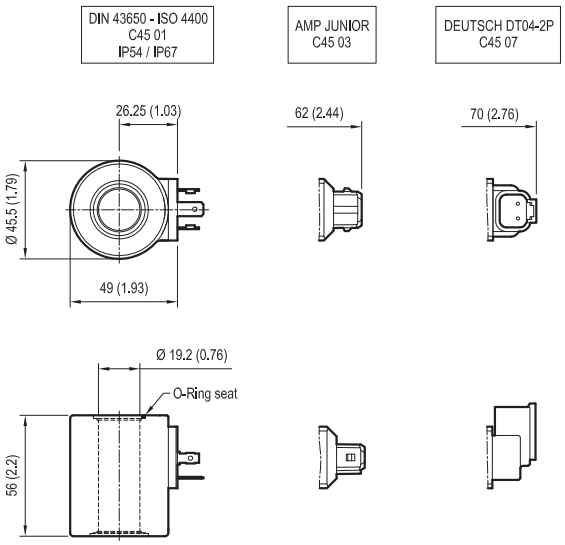
Type	Material number
OD02370130OC02	R934003700

Type	Material number

Further types available by request

Coils - Connectors

COIL C45 - CLASS H



[mm / Inches]

TECHNICAL DATA

Weight: 0.34 kg (0.75 lbs)
Heat insulation Class H: 180°C (356°F)
Ambient temperature range: -30/+60°C (-22/+140°F)
Inlet voltage fluctuations must not exceed ±10% of nominal voltage to obtain correct operation and long life coils.

Connection

DIN 43650 - ISO 4400

Description	Voltage V	Power W	Current A to 20°C	Resistance Ω ±7% to 20°C	Code	Material Number
C45 01 12DC	12 DC	33	2.8	4.2	271-0417	R933000026
C45 01 24DC	24 DC	33	1.4	17.1	271-0418	R933000034

Connection

AMP JUNIOR

Description	Voltage V	Power W	Current A to 20°C	Resistance Ω ±7% to 20°C	Code	Material Number
C45 03 12DC	12 DC	33	2.8	4.2	271-041710	R933000027
C45 03 24DC	24 DC	33	1.4	17.1	271-041725	R933003630

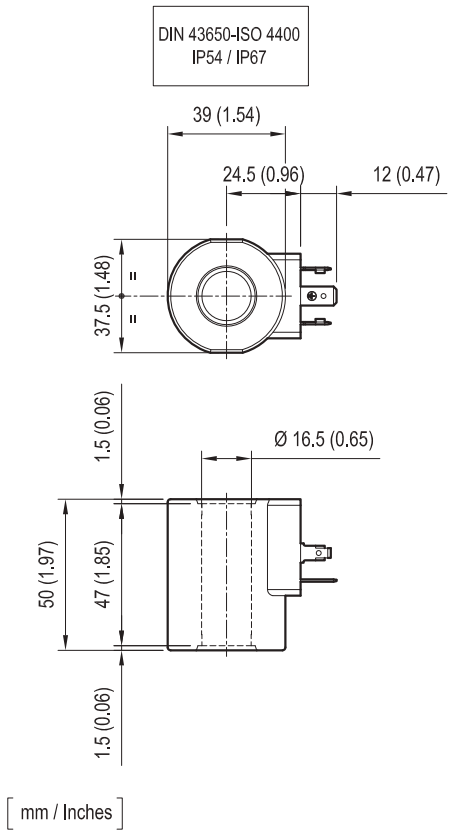
Connection

DEUTSCH DT04-2P

Description	Voltage V	Power W	Current A to 20°C	Resistance Ω ±7% to 20°C	Code	Material Number
C45 07 12DC	12 DC	33	2.8	4.2	271-041717	R933000030
C45 07 24DC	24 DC	33	1.4	17.1	271-041719	R933000032

Coils - Connectors

COIL R7 - CLASS H - 18 W OD.02.21 - X - Y - Z - 00



TECHNICAL DATA

Weight: 0.31 kg (0.71 lbs)
Heat insulation Class H: 180°C (356°F)
Ambient temperature range: -30/+80°C (-22/+284°F)
Inlet voltage fluctuations must not exceed ±15% of nominal voltage to obtain correct operation and long life coils.

X	Y	Connections	Circuit	Voltage
01	30	DIN 43650 - ISO 4400	Standard	DC

Z	Voltage V	Resistance Ohm (±7%)	Power W	Current A		ΔT °C (°F)
	Nominal	Ta = 20-25°C (68-77°F)	Cold coil	Cold coil	Hot coil	1 hour energized at Ta=20-25°C (68-77°F) Nominal voltage
OB	12 DC	7.9	18	1.5	1.1	90-105 (194-221)

Preferred types (readily available)

Type	Material number
OD02210130OB00	R934001302

Type	Material number

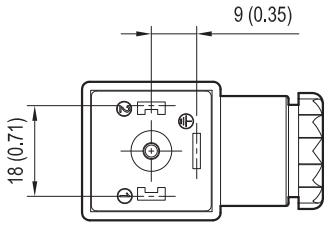
Further types available by request

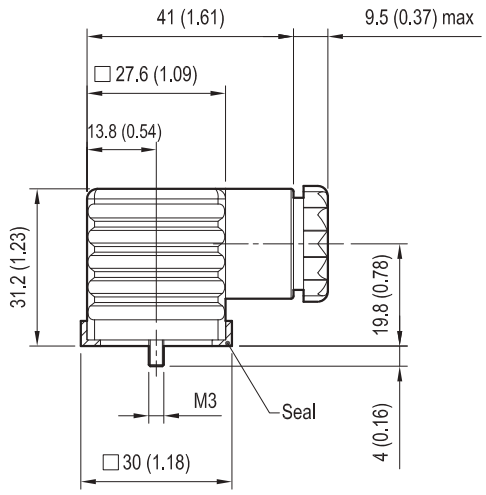
Coils - Connectors

CONNECTOR IP67 - EN 175000 (DIN 4350-A) / ISO 4400

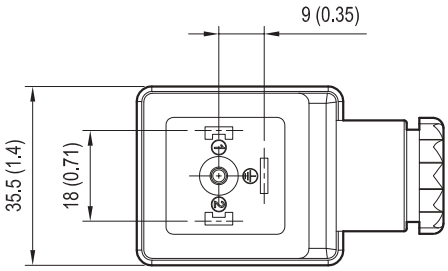
Ambient temperature	- Standard	°C	- 20 to + 100
	-With indicator lamp/rectifier	°C	-20 to + 60
Type of protection according to DIN 40050			IP67 with cable socket mounted and locked
Operating voltage		V	Choose the proper ordering code according to the circuit
Maximum operating current	- Standard	A	16
	- With rectifier	A	1 or 3
Current consumption of LED		mA	approx. 10
LED			Red
Number of pins			2 + PE
Clamping range for cables having an outer diameter of		mm	5, up to 10
Cable entry			Pg9 / Pg11 (unified)
Maximum cable cross-section		mm^2	1.5

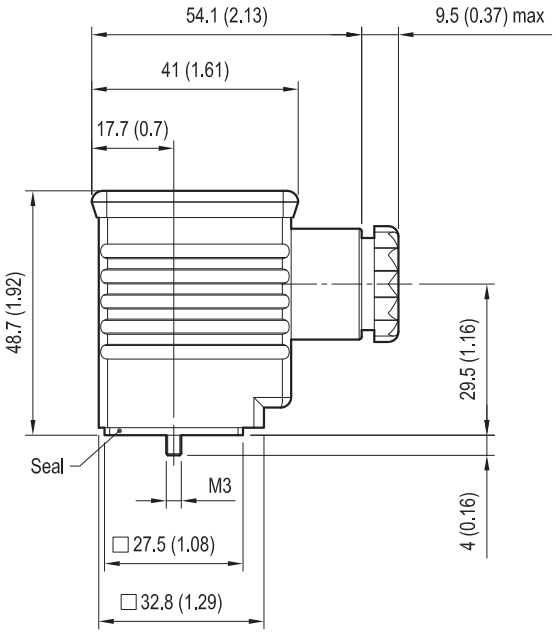
Type 1





Type 2



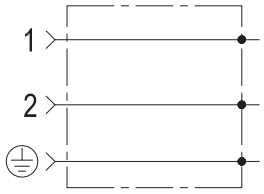


mm / Inches

Coils - Connectors

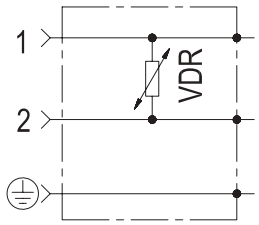
CONNECTOR IP67 - EN 175000 (DIN 4350-A) / ISO 4400

STANDARD CIRCUIT



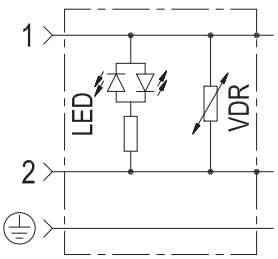
Colour	Valve side	Cable entry	Type connector	Code	Material number
black	B	Pg9 / Pg11	type 1	OD016901000000	R934004344
grey	A	Pg9 / Pg11	type 1	OD016901000003	R934004346

CIRCUIT WITH VDR



Voltage V AC | DC	Colour	Valve side	Cable entry	Type connector	Code	Material number
12	black	A/B	Pg9 / Pg11	type 1	OD01690700OB00	R934004361
24	black	A/B	Pg9 / Pg11	type 1	OD01690700OC00	R934004362
115	black	A/B	Pg9 / Pg11	type 1	OD01690700OE00	R934004363
230	black	A/B	Pg9 / Pg11	type 1	OD01690700OF00	R934004364

CIRCUIT WITH VDR + LED

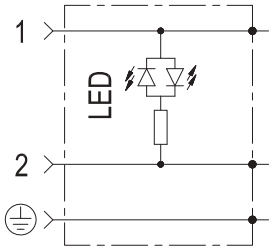


Voltage V AC | DC	Colour	Valve side	Cable entry	Led colour	Type connector	Code	Material number
12	transparent	A/B	Pg9 / Pg11	red	type 1	OD01692100OB00	R934004370
24	transparent	A/B	Pg9 / Pg11	red	type 1	OD01692100OC00	R934004371

Coils - Connectors

CONNECTOR IP67 - EN 175000 (DIN 4350-A) / ISO 4400

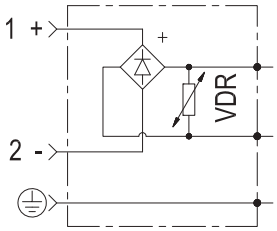
CIRCUIT WITH LED



Voltage V AC	Voltage V DC	Colour	Valve side	Cable entry	Led colour	Type connector	Code	Material number
12		transparent	A/B	Pg9 / Pg11	red	type 1	OD01690300OB00	R934004354
24		transparent	A/B	Pg9 / Pg11	red	type 1	OD01690300OC00	R934004355
230		transparent	A/B	Pg9 / Pg11	red	type 1	OD01690300OF00	R934004356

CIRCUIT WITH VDR + WAVE RECTIFIER

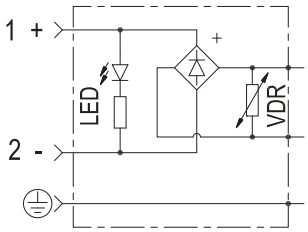
Note: for diode with capacity max 1 Amp, suitable only for **S8-356** coils.



Voltage V AC	Voltage V DC	Diode Capacity I max	Colour	Valve side	Cable entry	Type connector	Code	Material number
115	/	1 A	black	A/B	Pg9 / Pg11	type 1	OD01690201OW00	R934004352
230	/	1 A	black	A/B	Pg9 / Pg11	type 1	OD01690201OZ00	R934004353
24	/	3 A	black	A/B	Pg9 / Pg11	type 2	OD01690200OV00	R934004349
115	/	3 A	black	A/B	Pg9 / Pg11	type 2	OD01690200OW00	R934004350
230	/	3 A	black	A/B	Pg9 / Pg11	type 2	OD01690200OZ00	R934004351

CIRCUIT WITH VDR + WAVE RECTIFIER + LED

Note: for diode with capacity max 1 Amp, suitable only for **S8-356** coils.

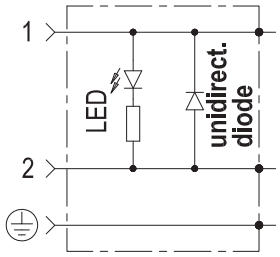


Voltage V AC	Voltage V DC	Diode Capacity I max	Colour	Valve side	Cable entry	Led colour	Type connector	Code	Material number
115	/	1 A	trasparent	A/B	Pg9 / Pg11	red	type 1	OD01691901OW00	R934004369
230	/	3 A	trasparent	A/B	Pg9 / Pg11	red	type 2	OD01691900OZ00	R934004367

Coils - Connectors

CONNECTOR IP67 - EN 175000 (DIN 4350-A) / ISO 4400

CIRCUIT WITH UNIDIRECTIONAL DIODE +LED



Voltage V		Colour	Valve side	Cable entry	Led colour	Type connector	Code	Material number
AC	DC							
/	12	transparent	A/B	Pg9 / Pg11	red	type 1	OD01691000OB00	R934004365
/	24	transparent	A/B	Pg9 / Pg11	red	type 1	OD01691000OC00	R934004366

Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
integrated-circuits@oilcontrol.com
www.boschrexroth.com

Rexroth
Bosch Group

2/2 directional seat valve, direct operated with solenoid actuation

RE 18136-12/10.11 1/10
Replaces: 06.08

Type KSDE (High Performance)

Component size 8
Component series B
Maximum operating pressure 500 bar
Maximum flow 5 l/min

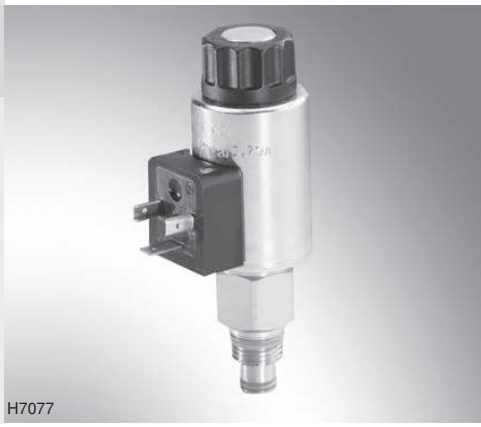

H7077

Table of contents

Information on available spare parts:
www.boschrexroth.com/spc

Features

- Direct operated directional seat valve with solenoid actuation, tight on both sides
- Mounting cavity R/T-8A
- Blocked connection tight in a leak-free form
- Safe switching also with longer standstill periods
- Wet-pin DC solenoids
- Rotatable solenoid coil

Ordering code (valve without coil) [1)]

KSDE		8		B / H		V	*

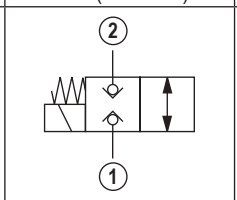
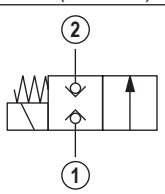
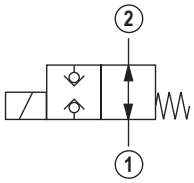
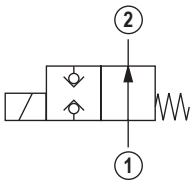
Directional seat valve, direct operated, electrically operated

Maximum operating pressure 500 bar **= U**

Maximum operating pressure 350 bar **= R**

Component size **= 8**

2 main ports

Symbols	**"R"** (350 bar)	**"U"** (500 bar)	
			**= N**
			**= P**

Further details in the plain text

Seal material

V = FKM seals (other seals upon request)

Attention! Observe compatibility of the seal with the hydraulic fluid used!

N0 = **Without** manual override

N9 = **With** concealed manual override

N11 = **With** screwable manual override (operation by knurled screw)

Version	Symbol N			Symbol P	
	N0	**N9**	**N11**	**N0**	**N9**
R (350 bar)	X	–	X	X	X [2)]
U (500 bar)	X	–	–	X	–

H = High-performance and mounting cavity R/T-8A (see page 8)

B = Component series

Valve types (without coil) [1)]

Operating pressure 350 bar		
Spool symbol	**Type**	**Material no.**
N	KSDER8NB/HN0V	R901085000
	KSDER8NB/HN11V	R901207100
P	KSDER8PB/HN0V	R901085005
	KSDER8PB/HN9V	R901207098

Operating pressure 500 bar		
Spool symbol	**Type**	**Material no.**
N	KSDEU8NB/HN0V	R901085007
P	KSDEU8PB/HN0V	R901085009

Available coils (separate order) [1)]

Direct voltage DC [4)]	**Material no. for coil with connector** [3)]		
	"K4" 03pol (2+PE) DIN EN 175301-803	**"K40"** 02pol K40 DT 04-2PA, company Deutsch	**"C4"** 02pol C4/Z30 AMP Junior-Timer
12 V	R900991678	R900729189	R900315818
24 V	R900991121	R900729190	R900315819

[1)] Complete valves with mounted coil on request

[2)] Screwable manual override "N10" (actuation by means of internal hexagon with lock nut), possible as separate order, Material no. **R901051231**; ordering code **"N9"**!

[3)] Mating connectors (separate order), see data sheet 08006

[4)] Other voltages upon request

Function, section, symbols

General

The 2/2 directional seat valves are direct operated, pressure-compensated cartridge valves. They basically comprises of screw-in section (1), solenoid (4) as well as closing element (3) and compression spring (2).

Function

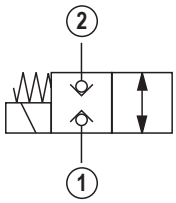
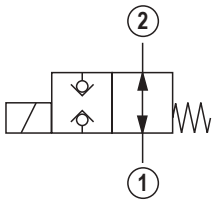
The initial position of the valve (normally open "P" or normally closed "N") is determined by the position of the closing element (3) and the arrangement of the compression spring (2). Due to the structural design, the 2/2 directional seat valves are always pressure-compensated in relation to the actuating forces. The main ports ① and ② can be loaded with an operating pressure of 350/500 bar (see page 4).

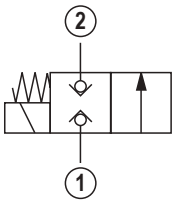
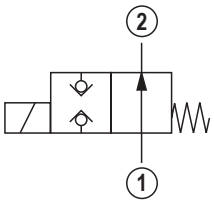
Attention!

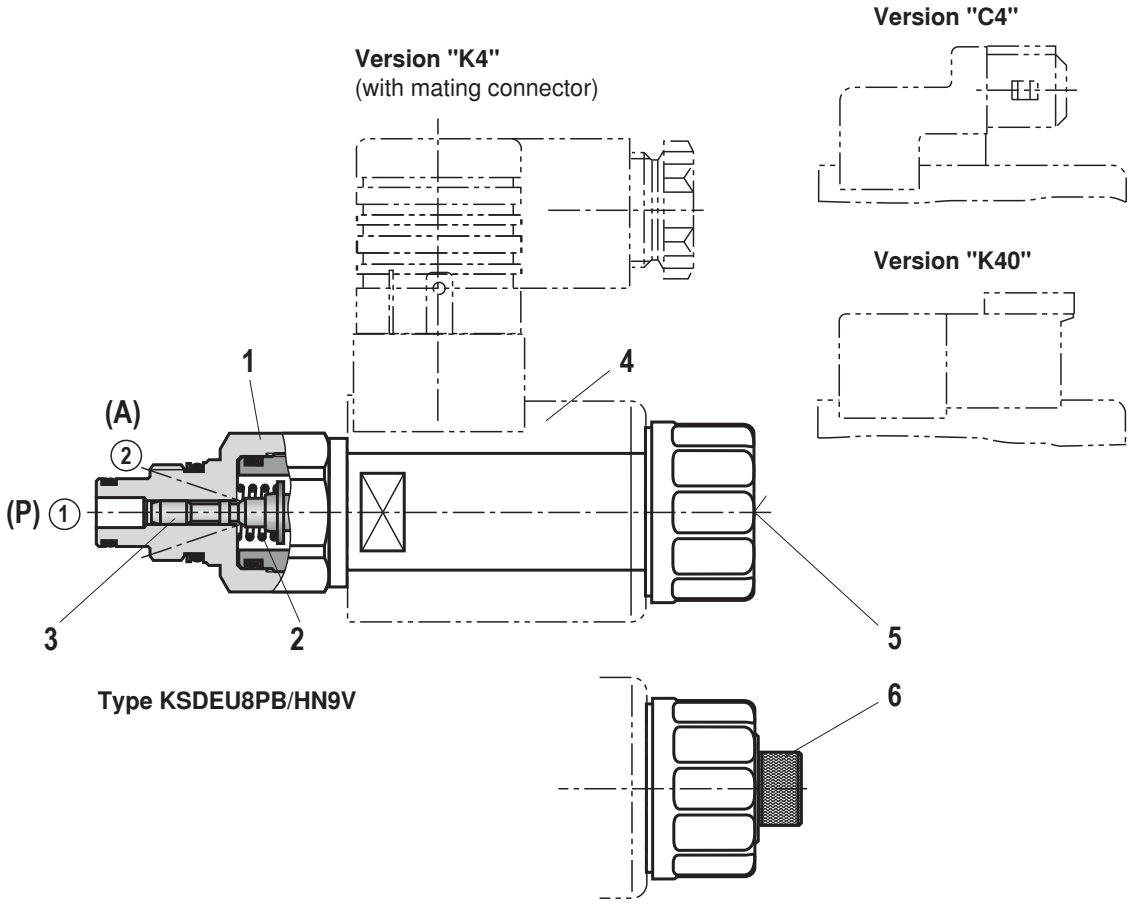
Flow is only admissible in the direction of the arrow (see symbols)! With version "U" (operating pressure 500 bar), main port ① must be connected with pump connection P!

With symbol "P", the closing element (3) is pressed onto the seat by the solenoid (4), with symbol "N" by the compression spring (2). The flow is blocked in a leak-free form.

The manual override allows for the the switching of the valve without solenoid energization. It is available in concealed version "N9" (5) or in screwable version "N11" (6) (see page 2).

Version **"R"** (350 bar)	
Symbol "N" Normally closed	**Symbol "P"** Normally open
	

Version **"U"** (500 bar)	
Symbol "N" Normally closed	**Symbol "P"** Normally open
	



Type KSDEU8PB/HN9V

Technical data (For applications outside these parameters, please consult us!)

general

Weight	– Valve	kg	0.30
	– Coil	kg	0.25
Installation position			Any
Ambient temperature range		°C	–40 to +110

hydraulic

Maximum operating pressure	– Version "U"	bar	500 (at all ports if P ≥ A; for design reasons)
	– Version "R"	bar	350 (at all ports)
Maximum flow	– Version "U"	l/min	3 (see limits of performance page 6)
	– Version "R"	l/min	5 (see limits of performance page 6)
Hydraulic fluid			See table below
Hydraulic fluid temperature range		°C	–40 to +80
Viscosity range		mm^2/s	4 to 500
Maximum permitted degree of contamination of the hydraulic fluid - cleanliness class according to ISO 4406 (c)			Class 20/18/15 [1)]
Load cycles	– Version "R" (350 bar)		10 million
	– Version "U" (500 bar)		5 million

Hydraulic fluid		**Classification**	**Suitable sealing materials**	**Standards**
Mineral oils and related hydrocarbons		HL, HLP, HLPD, HVLP, HVLPD	FKM	DIN 51524
Environmentally compatible	– Insoluble in water	HETG	FKM	ISO 15380
		HEES	FKM	
	– Soluble in water	HEPG	FKM	ISO 15380
Flame-resistant	– Water-free	HFDU, HFDR	FKM	ISO 12922
	– Water-containing	HFAS	FKM	ISO 12922

☞ **Important information on hydraulic fluids!**

- For more information and data on the use of other hydraulic fluids refer to data sheet 90220 or contact us!
- There may be limitations regarding the technical valve data (temperature, pressure range, service life, maintenance intervals, etc.)!
- The flash point of the process and operating medium used must be 40 K higher than the maximum solenoid surface temperature.
- **Flame-resistant – water-containing**: Maximum pressure differential per control edge 175 bar, otherwise, increased cavitation erosion!
  Tank pre-loading < 1 bar or > 20 % of the pressure differential. The pressure peaks should not exceed the maximum operating pressures!
- **Environmentally compatible:** When using environmentally compatible hydraulic fluids that are simultaneously zinc-solving, zinc may accumulate in the medium (700 mg zinc per pole tube).

[1)] The cleanliness classes specified for the components must be adhered to in hydraulic systems. Effective filtration prevents faults and at the same time increases the service life of the components.

For the selection of the filters see www.boschrexroth.com/filter.

Technical data (For applications outside these parameters, please consult us!)

electric

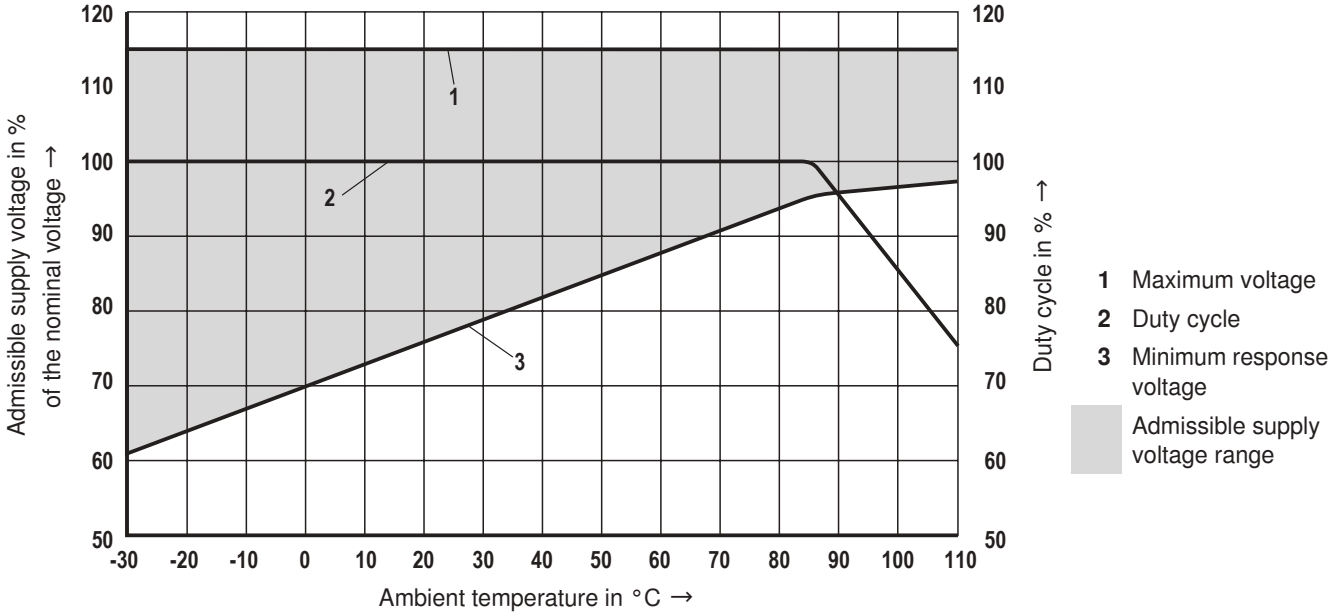
Voltage type			Direct voltage
Supply voltage [2]		V	12 DC; 24 DC
Voltage tolerance against ambient temperature			See characteristic curves page 6
Power consumption		W	22
Duty cycle		%	See characteristic curves page 6
Maximum coil temperature [3]		°C	150
Switching time according to ISO 6403 (solenoid horizontal)	– ON (1 → 2)	ms	≤ 80
	– OFF (2 → 1)	ms	≤ 80
Maximum switching frequency	– Version "R"	1/h	9000
	– Version "U"	1/h	3600
Type of protection according to VDE 0470-1 (DIN EN 60529) DIN 40050-9	– Version "K4"		IP 65 with mating connector mounted and locked
	– Version "C4"		IP 66 with mating connector mounted and locked
			IP 69K with Rexroth mating connector (Material no. R901022127)
	– Version "K40"		IP 69K with mating connector mounted and locked

[2] Other voltages upon request

[3] Due to the temperatures occurring at the surfaces of the solenoid coils, the standards ISO 13732-1 and EN 982 need to be adhered to!

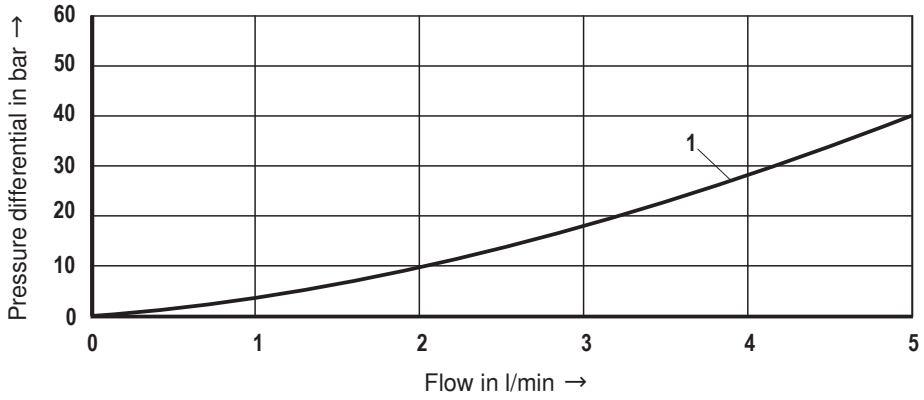
With the electrical connection "K4", the protective earthing conductor (PE ⏚) must be connected correctly.

Voltage tolerance against ambient temperature; duty cycle



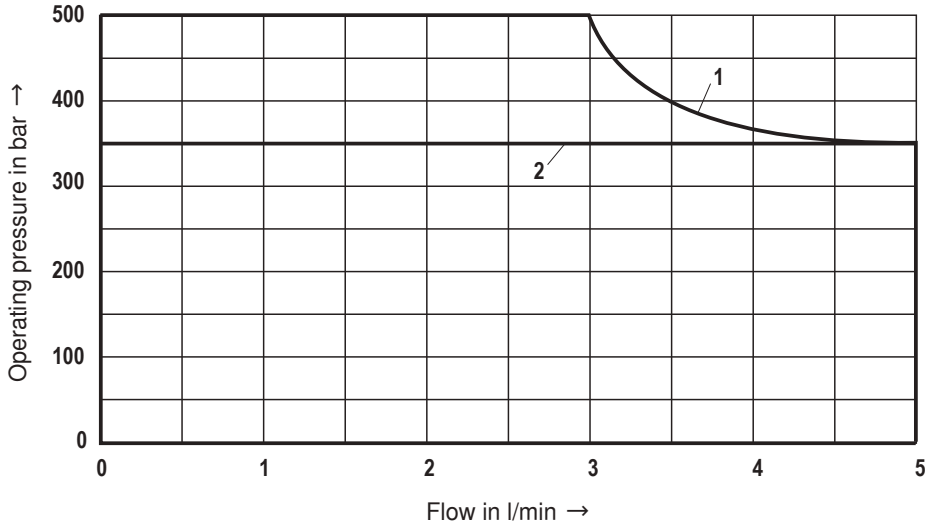
Characteristic curves (measured with HLP46, ϑ_{oil} = 40 °C ± 5 °C and 24 V coil)

Δp-q_V-Characteristic curves



1 Version "R" and "U"	1 → 2 2 → 1

Limits of performance (measured with HLP46, ϑ_{oil} = 40 °C ± 5 °C and 24 V coil)

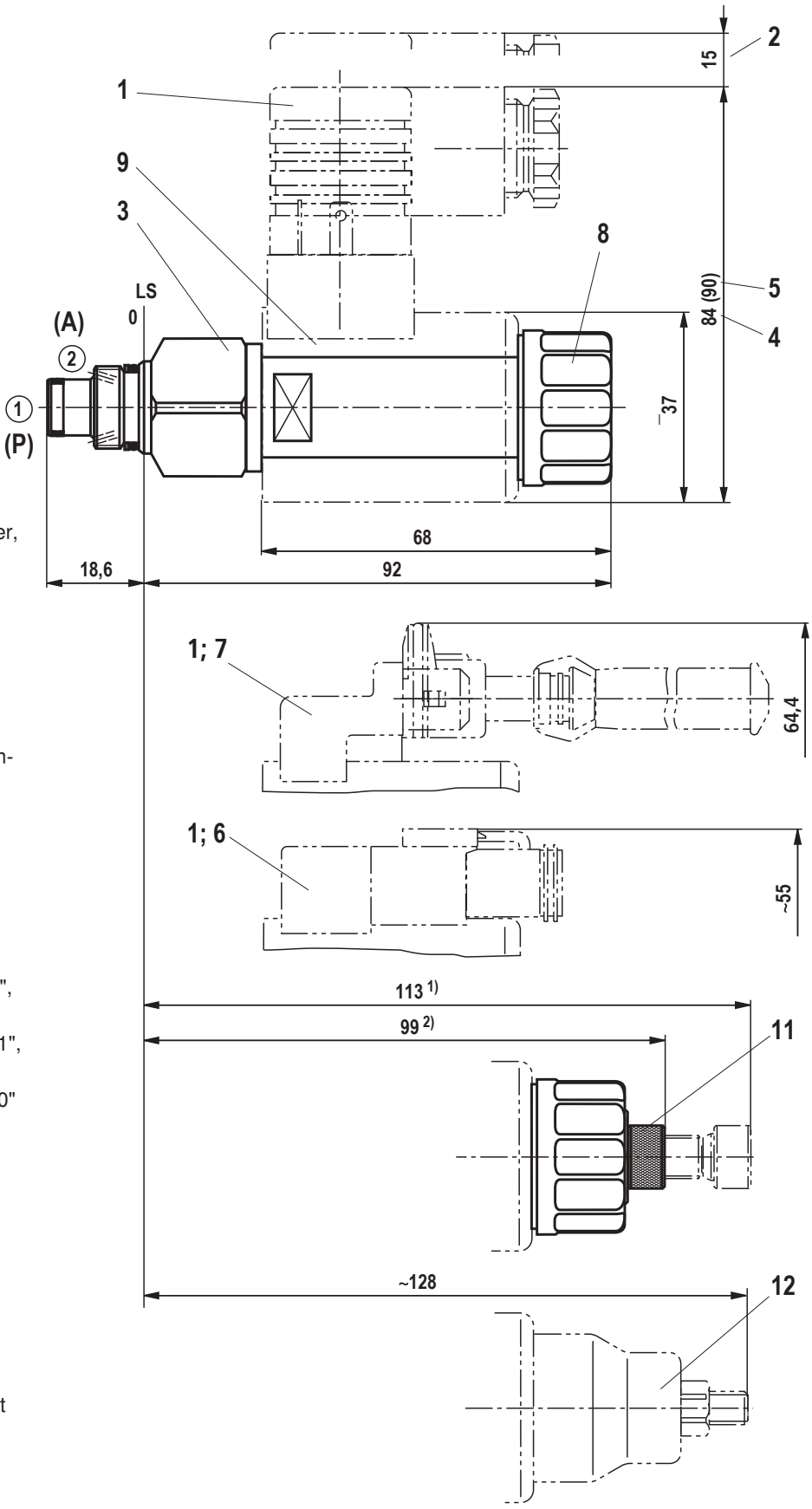


Attention!

The limits of performance were determined when the solenoids were at operating temperature and at 10 % undervoltage.

1 Version "U"	1 → 2
2 Version "R"	1 → 2 2 → 1

Unit dimensions (dimensions in mm)

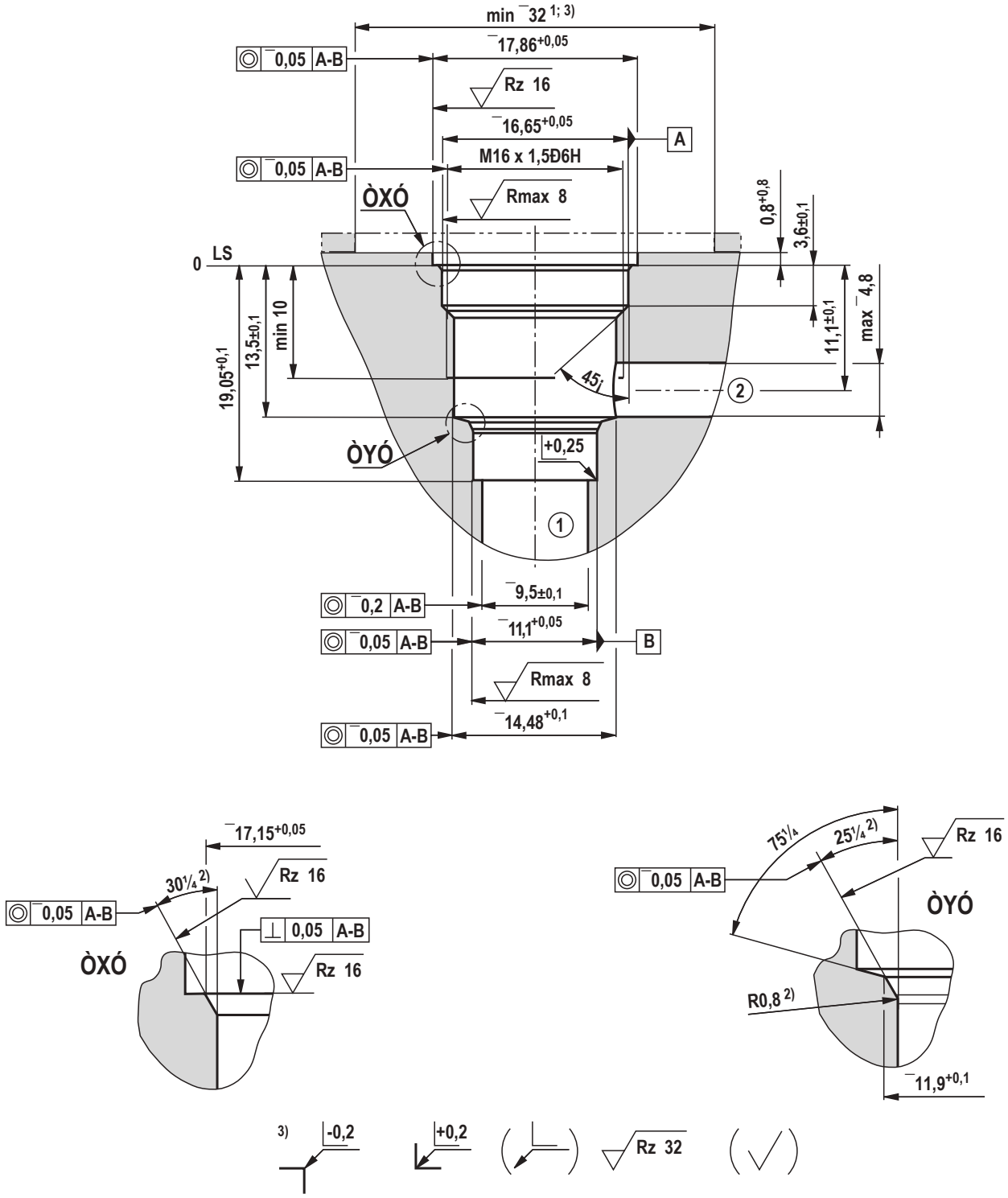


1 Mating connector (separate order, see data sheet 08006)
2 Space required to remove the mating connector
3 SW24, tightening torque $M_A = 45^{+5}$ Nm
4 Dimension for "K4" mating connector, without circuitry
5 Dimension () for "K4" mating connector, with circuitry
6 Version "K40"
7 Version "C4"
8 Nut, tightening torque $M_A = 5^{+1}$ Nm
9 Coil (separate order, see page 2)
10 Concealed manual override "N9", optional
11 Screwable manual override "N11", optional
12 Screwable manual override "N10" (separate order, see page 2)

① = main port 1, pump P 3)
② = main port 2, actuator A 3)
LS = location shoulder

1) Operated
2) Screwed in
3) **Attention!**
Unambiguous pinout. P and A must not be exchanged or closed!

Mounting cavity R/T-8A; 2 main ports; thread M16 x 1.5 (dimensions in mm)



1) Deviating from T-8A

2) All seal ring insertion faces are rounded and free of burrs

3) With counterbore

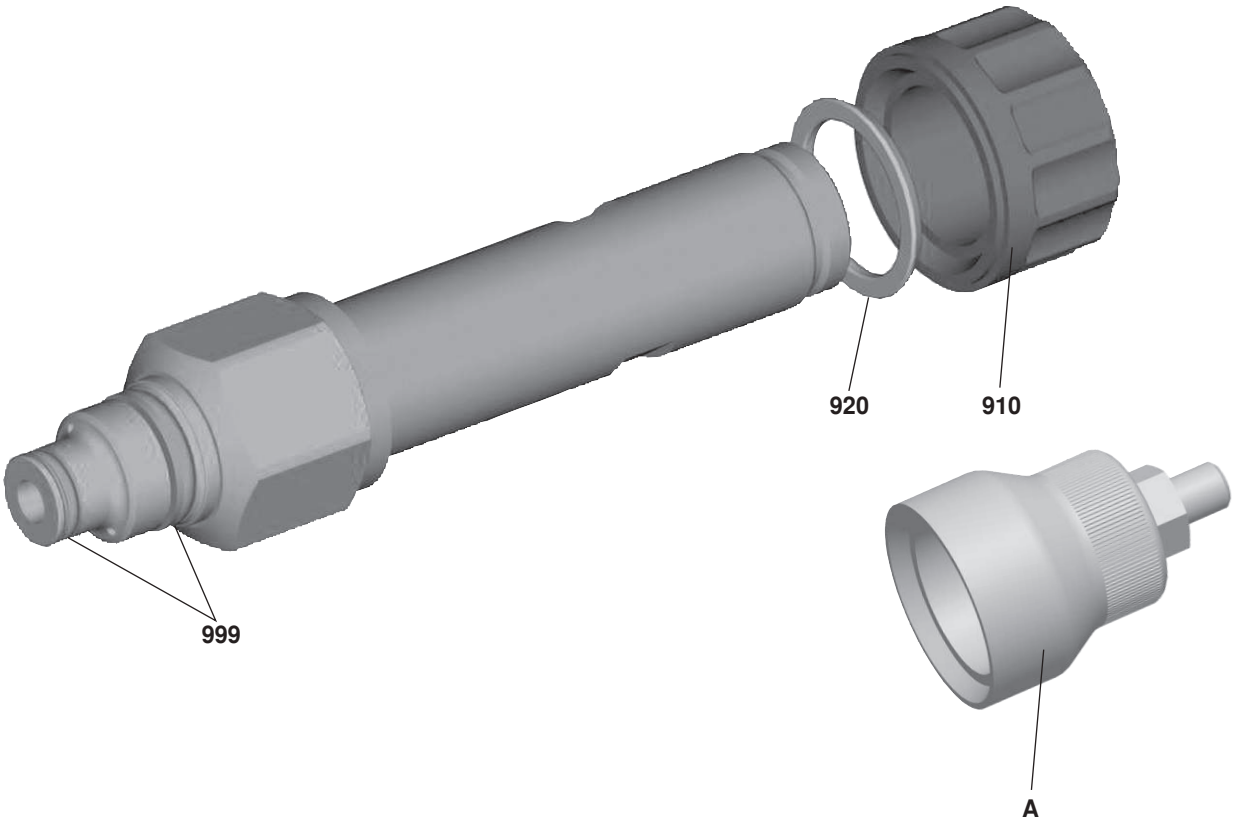
① = main port 1

② = main port 2

LS = location shoulder

Tolerance for all angles ±0.5°

Available individual components



Item	Denomination	Material no.
910	Nut	R900991453
920	O-ring for pole tube	R900004280
999	Seal kit of the valve	R961003237
A	Manual override "N10" [1)]	R901051231

Coils, separate order, see page 2

[1)] Only with ordering code "N9", see page 2

Notes

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Rexroth
Bosch Group

2/2 directional poppet valve, direct operated with solenoid actuation

RE 18136-23/06.12 1/8
Replaces: 07.10

Type KSDE (High Performance)

Component size 0
Component series A
Maximum operating pressure 350 bar
Maximum flow 20 l/min


H7739

Table of contents

Information on available spare parts:
www.boschrexroth.com/spc

Features

- Two different mounting cavities R/B or R/C
- Direct operated directional poppet valve with solenoid actuation, tight on both sides
- Blocked connection tight in a leak-free form
- Safe switching also with longer standstill periods
- Wet-pin DC solenoids
- Rotatable solenoid coil

Ordering code (Valve without coil) [1)]

KSDE	R	0		A	/		V	*

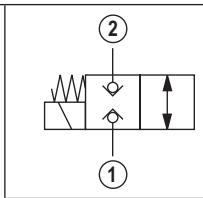
Directional poppet valve, direct operated, electrically operated

Maximum operating pressure 350 bar **= R**

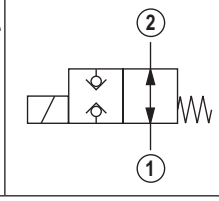
Component size **= 0**

2 main ports

Symbols



Normally closed **= N**



Normally open **= P**

Further details in the plain text

Seal material

V = FKM seals (other seals upon request)

Attention! Observe compatibility of seals with hydraulic fluid used!

N0 = **Without** manual override

N9 = **With** concealed manual override

N11 = **With** screwable manual override

Symbol N			Symbol P		
N0	**N9**	**N11**	**N0**	**N9**	**N11**
X	–	X	X	X [2)]	–

B = High Performance and mounting cavity R/B (see page 7)

C = High Performance and mounting cavity R/C (see page 7)

A = Component series

Valve types (without coil) [1)]

Operating pressure 350 bar		
Spool symbol	**Type**	**Material no.**
N	KSDER0NA/BN0V	R901252718
	KSDER0NA/CN0V	R901252717
P	KSDER0PA/BN0V	R901252713
	KSDER0PA/CN0V	R901252712

Available coils (separate order) [1)]

Direct voltage DC [4)]	Material no. for coil with connector [3)]		
	"K4" 03pol (2+PE) DIN EN 175301-803	**"K40"** 02pol K40 DT 04-2PA, make: Deutsch	**"C4"** 02pol C4/Z30 AMP Junior-Timer
12 V	R900991678	R900729189	R900315818
24 V	R900991121	R900729190	R900315819

[1)] Complete valves with mounted coil upon request

[2)] Screwable manual override "N10" (actuation by means of internal hexagon with lock nut), possible as separate order, Material no. **R901051231**; ordering code "**N9**"!

[3)] Mating connectors (order separately), see data sheet 08006

[4)] Other voltages upon request

Function, section, symbols

General

The 2/2 directional poppet valves are direct operated, pressure compensated cartridge valves. They basically comprises of screw-in section (4) with valve seat (1), solenoid (5), as well as closing element (3) and compression spring (2).

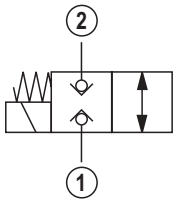
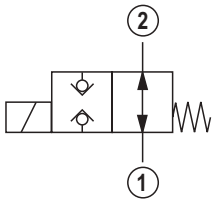
Function

The initial position of the valve (normally open "P" or normally closed "N") is determined by the position of the closing element (3) and the arrangement of the compression spring (2). Due to the structural design, the 2/2 directional poppet valves are always pressure-compensated in relation to the actuating forces. The main ports ① and ② can be loaded with an operating pressure of 350 bar (see Technical Data, page 4).

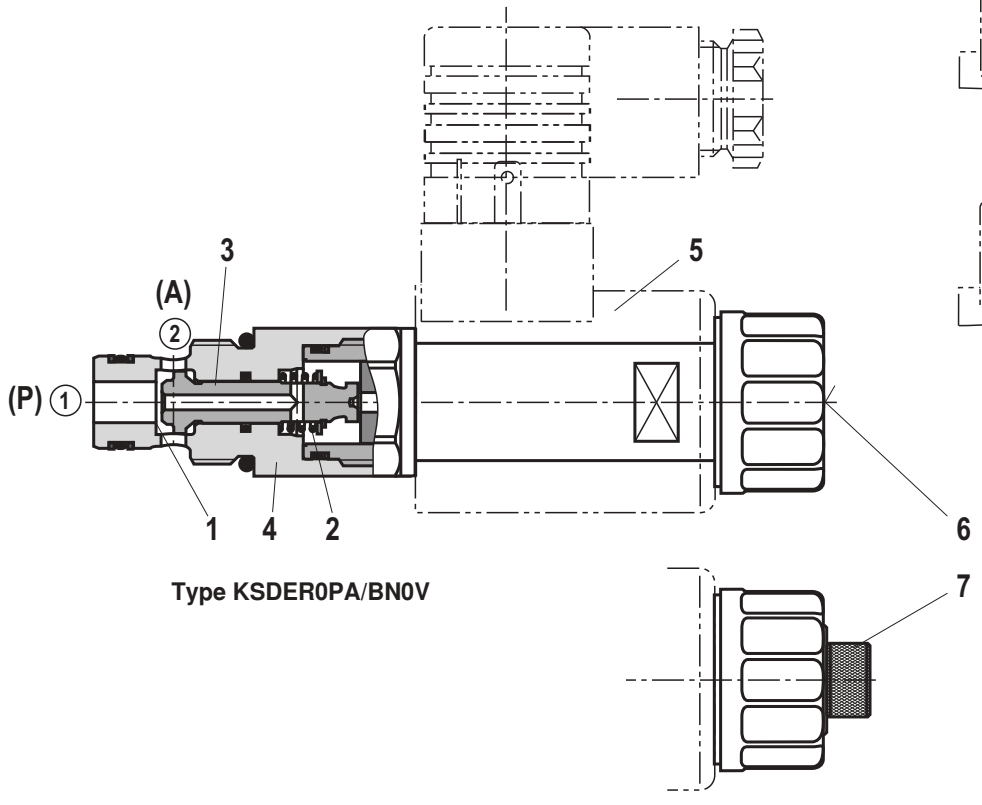
With symbol "P", the closing element (3) is pressed onto the seat by the solenoid (5), with symbol "N" by the compression spring (2). The flow is blocked in a leak-free form.

The manual override allows for the the switching of the valve without solenoid energization. It is available in concealed version "N9" (6) or in screwable version "N11" (7) (see page 2).

The screwable manual override (7) must be screwed back into the initial position after actuation.

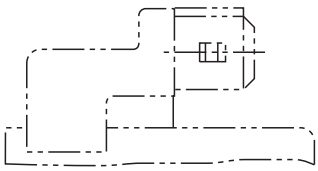
Symbol "N" Normally closed	**Symbol "P"** Normally open
	

Version "K4"
(with mating connector)

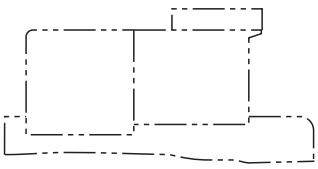


Type KSDER0PA/BN0V

Version "C4"



Version "K40"



5

Technical data (For applications outside these parameters, please consult us!)

general

Weight	– Valve	kg	0.30
	– Coil	kg	0.25
Installation position			Any
Ambient temperature range		°C	–40 to +110

hydraulic

Maximum operating pressure		bar	350
Maximum flow		l/min	20 (see performance limits page 5)
Hydraulic fluid			Mineral oil (HL, HLP) according to DIN 51524; fast biodegradable hydraulic fluids according to VDMA 24568 (see also RE 90221); HETG (rape seed oil); HEPG (polyglycols); HEES (synthetic esters); other hydraulic fluids upon request
Hydraulic fluid temperature range		°C	–40 to +80
Viscosity range	– Minimum	mm^2/s	5
	– Optimum		10 to 100
	– Mmaximum		1000
Maximum permitted degree of contamination of the hydraulic fluid - cleanliness class according to ISO 4406 (c)			Class 20/18/15 [1]
Load cycles			10 million

electrical

Voltage type			Direct voltage
Supply voltage [2]		V	12 DC; 24 DC
Voltage tolerance against ambient temperature			See characteristic curve page 5
Power consumption		W	22
Duty cycle		%	See characteristic curve page 5
Maximum coil temperature [3]		°C	150
Switching time according to ISO 6403 (solenoid horizontal)	– ON (① → ②)	ms	≤ 95
	– OFF (② → ①)	ms	≤ 95
Maximum switching frequency		1/h	9000
Protection class according to VDE 0470-1 (DIN EN 60529) DIN 40050-9	– Version "K4"		IP 65 with mating connector mounted and locked
	– Version "C4"		IP 66 with mating connector mounted and locked
			IP 69K with Rexroth mating connector (Material no. R901022127)
	– Version "K40"		IP 69K with mating connector mounted and locked

[1] The cleanliness classes specified for the components must be adhered to in hydraulic systems. Effective filtration prevents faults and at the same time increases the service life of the components.

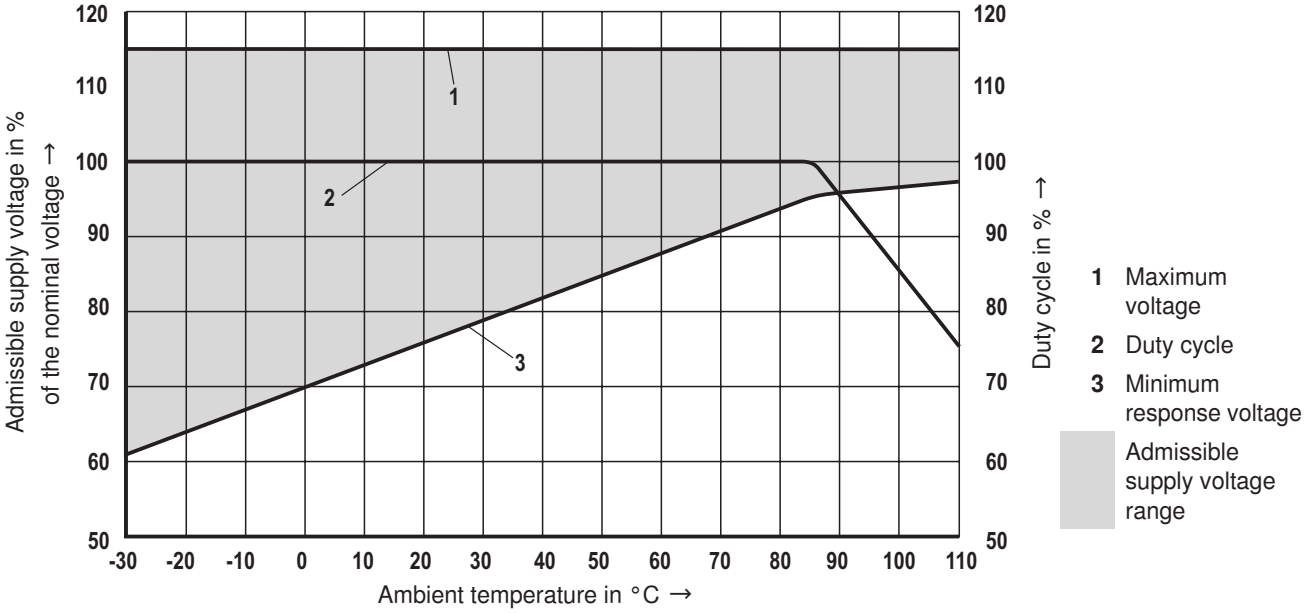
For the selection of the filters see www.boschrexroth.com/filter.

[2] Other voltages upon request

[3] Due to the temperatures occurring at the surfaces of the solenoid coils, the standards ISO 13732-1 and EN 982 need to be adhered to!

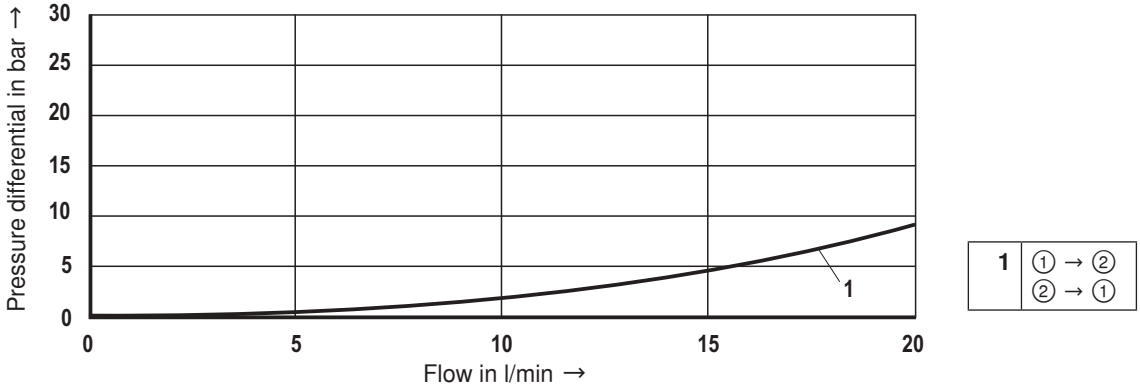
At the electrical connection "K4", the protective earthing conductor (PE ⏚) has to be connected properly.

Voltage tolerance against ambient temperature; duty cycle

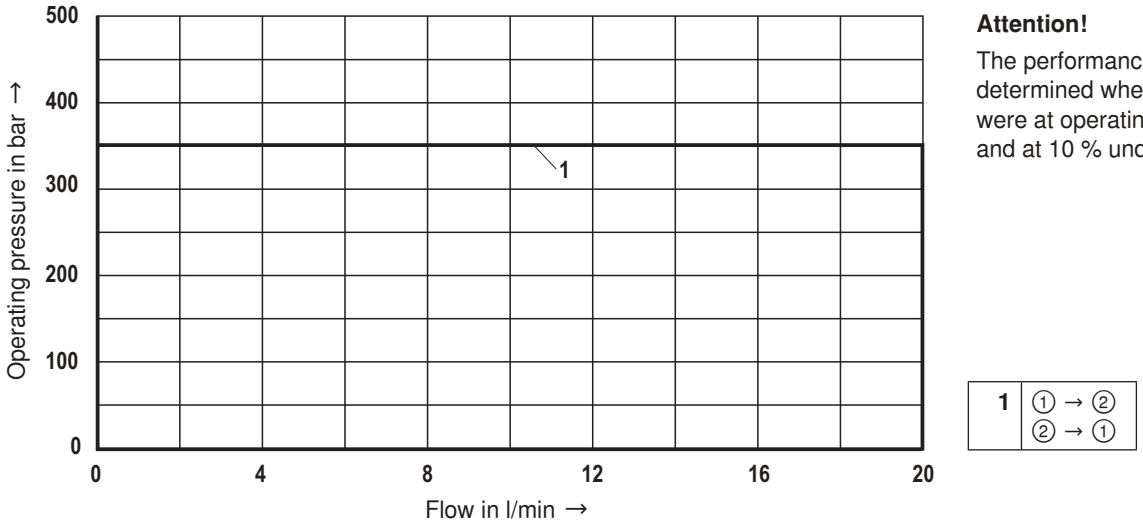


Characteristic curves (measured with HLP46, ϑ_{oil} = 40 °C ± 5 °C and 24 V coil)

Δp-q_V characteristic curves



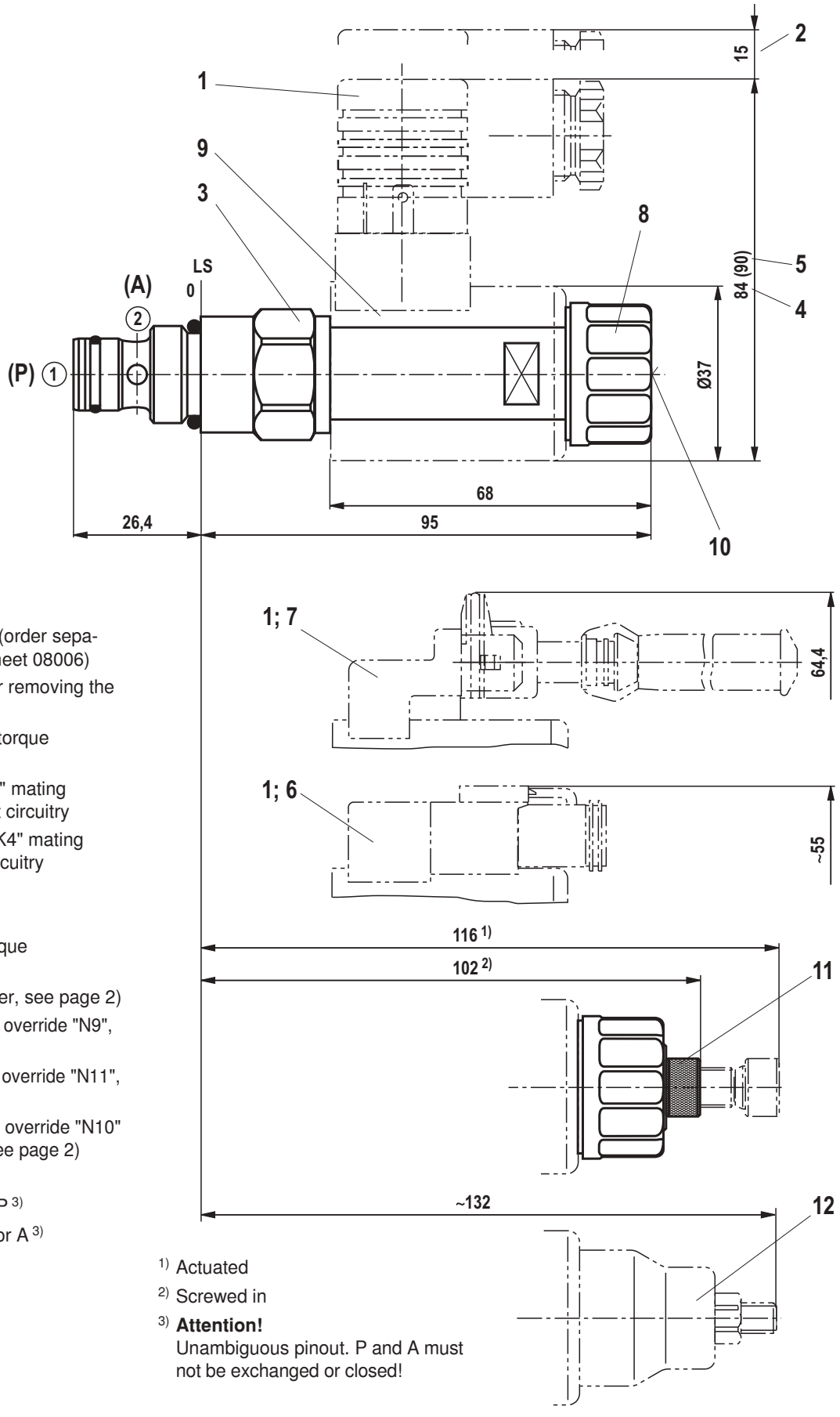
Performance limits (measured with HLP46, ϑ_{oil} = 40 °C ± 5 °C and 24 V coil)



Attention!

The performance limits were determined when the solenoids were at operating temperature and at 10 % undervoltage.

Unit dimensions (dimensions in mm)

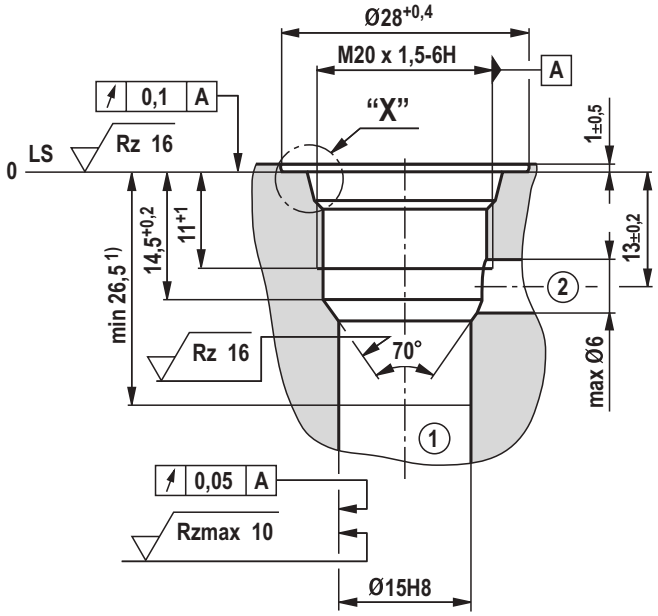


1 Mating connector (order separately, see data sheet 08006)
2 Space required for removing the mating connector
3 SW24, tightening torque $M_A = 25^{+5}$ Nm
4 Dimension for "K4" mating connector, without circuitry
5 Dimension () for "K4" mating connector, with circuitry
6 Version "K40"
7 Version "C4"
8 Nut, tightening torque $M_A = 5^{+1}$ Nm
9 Coil (separate order, see page 2)
10 Concealed manual override "N9", optional
11 Screwable manual override "N11", optional
12 Screwable manual override "N10" (separate order, see page 2)

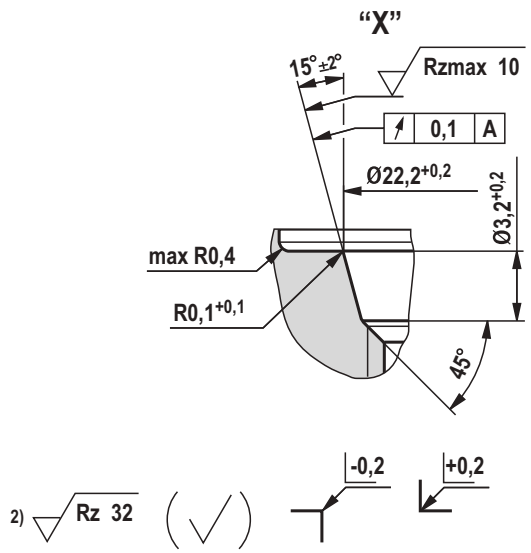
① = Main port 1, pump P [3)]
② = Main port 2, actuator A [3)]
LS = Location shoulder

[1)] Actuated
[2)] Screwed in
[3)] **Attention!**
Unambiguous pinout. P and A must not be exchanged or closed!

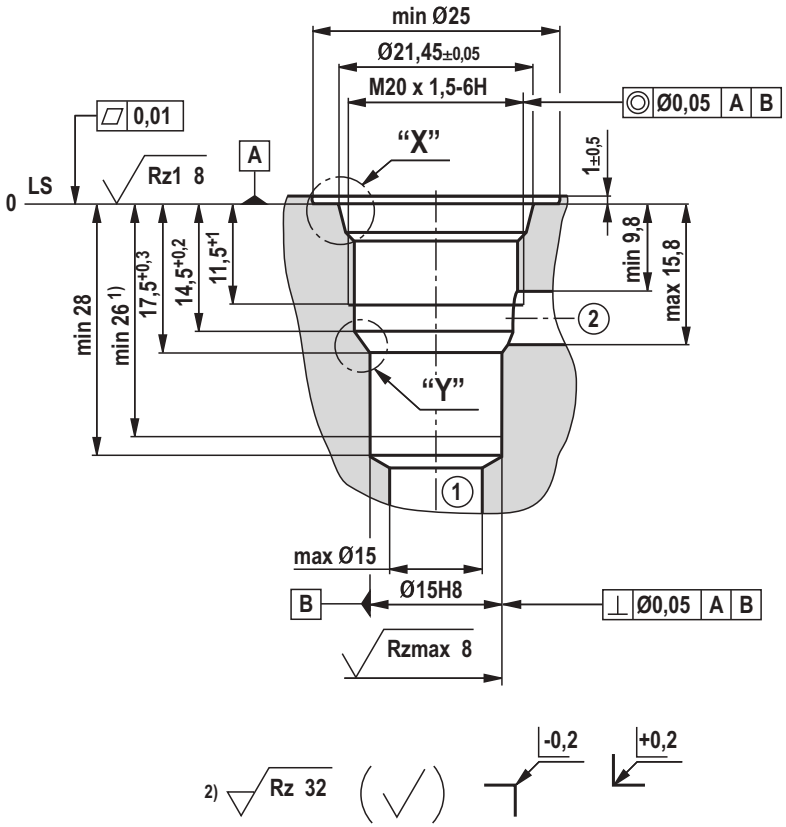
Mounting cavity, 2 main ports; thread M20 x 1.5 (dimensions in mm)

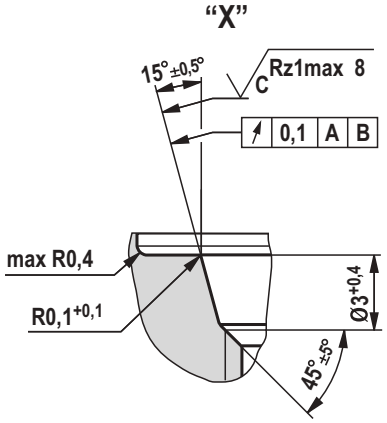


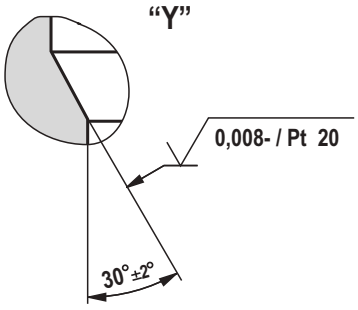
Version "B"



Version "C"







1) Depth of fit

2) Visual inspection

① = Main port 1

② = Main port 2

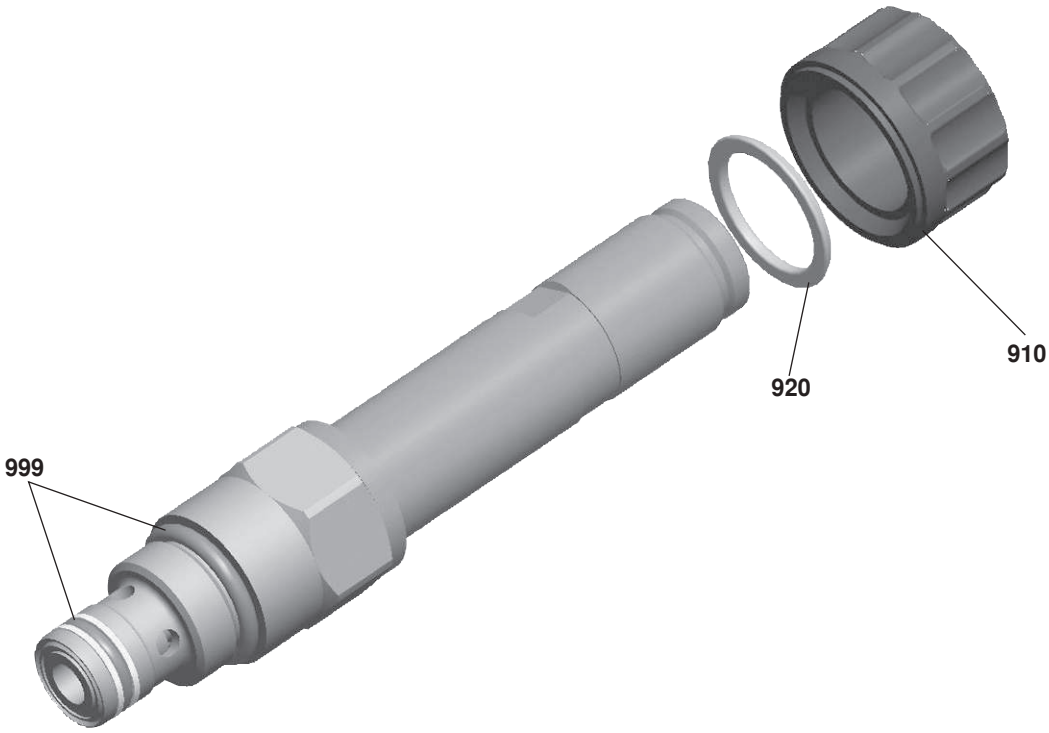
LS = Location Shoulder

All seal ring insertion faces are rounded and free of burrs

Tolerance for all angles ±0.5°

5

Available individual components



Item	Denomination	Material no.
910	Nut	R900991453
920	O-ring for pole tube	R900007769
999	Seal kit of the valve (version "B")	R961005311
	Seal kit of the valve (version "C")	R961005312

Coils, separate order, see page 2

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www.boschrexroth.de

Rexroth
Bosch Group

2/2 directional seat valve, direct operated with solenoid actuation

RE 18136-20/06.12 1/8
Replaces: 08.09

Type KSDE (high-performance)

Component size 1
Component series B
Maximum operating pressure 500 bar
Maximum flow 20 l/min


H6804

Table of contents

Information on available spare parts:
www.boschrexroth.com/spc

Features

- Mounting cavity R/T-13A
- Direct operated directional seat valve with solenoid actuation, tight on both sides
- Blocked connection tight in a leak-free form
- Safe switching also with longer standstill periods
- Wet-pin DC solenoids
- Rotatable solenoid coil

Ordering code (Valve without coil) [1]

KSDE		1		B / H		V		*

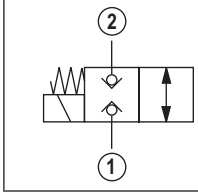
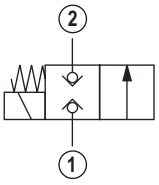
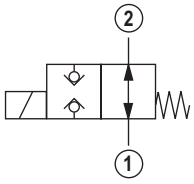
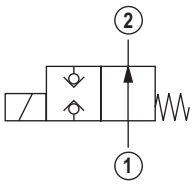
Directional seat valve, direct operated, electrically operated

Maximum operating pressure 500 bar **= U**

Maximum operating pressure 350 bar **= R**

Component size **= 1**

2 main ports

	"R" (350 bar)	**"U"** (500 bar) **"R… -17"** (350 bar)	
Symbols			**= N**
			**= P**

Further details in the plain text

no code = Standard

–17 = Flow-optimized [3]

Seal material

V = FKM seals (other seals upon request)

Attention! Observe compatibility of seals with hydraulic fluid used!

N0 = **without** manual override

N9 = **with** concealed manual override

N11 = **with** screwable manual override

	Symbol N			Symbol P		
Version	**N0**	**N9**	**N11**	**N0**	**N9**	**N11**
R (350 bar)	X	–	X	X	X [2]	–
U (500 bar)	X	–	–	X	–	–

H = High-performance and mounting cavity R/T-13A (see page 7)

B = Component series

Valve types (without coil) [1]

Operating pressure 350 bar		
Spool symbol	**Type**	**Material no.**
N	KSDER1NB/HN0V	R901083194
	KSDER1NB/HN0V-17	R901176259
	KSDER1NB/HN11V	R901151293
	KSDER1NB/HN11V-17	R901206914
P	KSDER1PB/HN0V	R901083196
	KSDER1PB/HN0V-17	R901176247
	KSDER1PB/HN9V	R901151294
	KSDER1PB/HN9V-17	R901206911

Operating pressure 500 bar		
Spool symbol	**Type**	**Material no.**
N	KSDEU1NB/HN0V	R901083202
P	KSDEU1PB/HN0V	R901083203

Available coils (separate order) [1]

	Material no. for coil with connector [4]		
Direct voltage DC [5]	**"K4"** 03pol (2+PE) DIN EN 175301-803	**"K40"** 02pol K40 DT 04-2PA, make: Deutsch	**"C4"** 02pol C4/Z30 AMP Junior Timer
12 V	R900991678	R900729189	R900315818
24 V	R900991121	R900729190	R900315819

[1] Complete valves with mounted coil upon request

[2] Screwable manual override "N10" (actuation by means of internal hexagon with lock nut), possible as separate order, material no. **R901051231**; ordering code **"N9"**!

[3] Only version "R" (free-flowing on one side!)

[4] Mating connectors (separate order), see RE 08006

[5] Other voltages upon request

Function, section, symbols

General

The 2/2 directional seat valves are direct operated, pressure compensated cartridge valves. They basically comprises of screw-in section (4) with valve seat (1), solenoid (5), as well as closing element (3) and compression spring (2).

Function

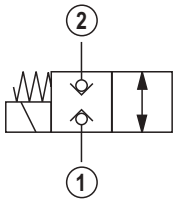
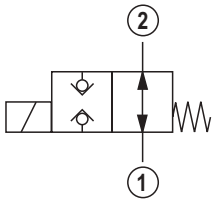
The initial position of the valve (normally open “P” or normally closed “N”) is determined by the position of the closing element (3) and the arrangement of the compression spring (2). Due to the structural design, the 2/2 directional seat valves are always pressure-compensated in relation to the actuating forces. The main ports ① and ② can be loaded with an operating pressure of 350 bar/500 bar (see Technical Data, page 4).

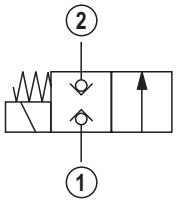
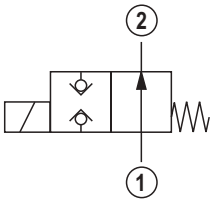
Attention!

The flow is only permitted in the direction of arrow (see symbols)! With version “U” (operating pressure 500 bar) as well as with version “R…-17”, main port ① must be connected with pump connection P! Valves with version “R…-17” are flow-optimized and thus achieve a higher pressure differential.

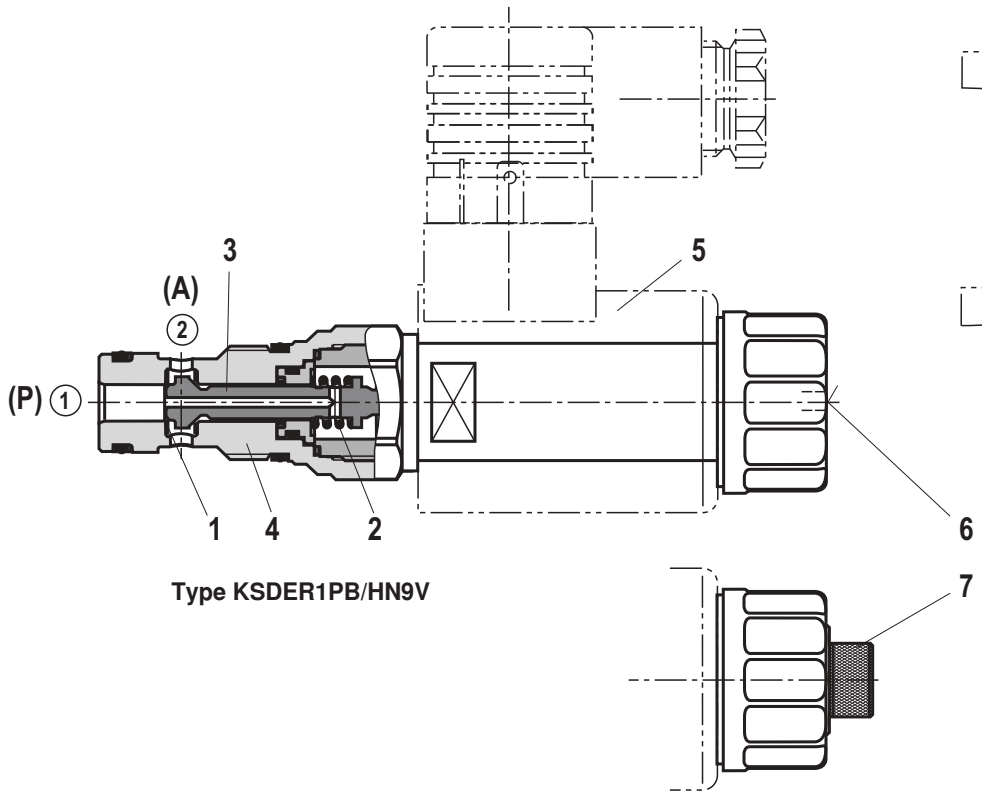
With symbol “P”, the closing element (3) is pressed onto the seat by the solenoid (5), with symbol “N” by the compression spring (2). The flow is blocked in a leak-free form.

The manual override allows for the the switching of the valve without solenoid energization. It is available in concealed version “N9” (6) or in screwable version “N11” (7) (see page 2).

Version **“R”** (350 bar)	
Symbol “N” normally closed	**Symbol “P”** normally open
	

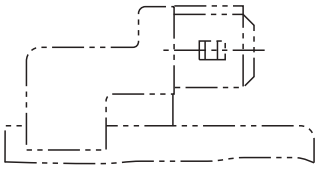
Version **“U”** (500 bar) and **“R…-17”** (350 bar)	
Symbol “N” normally closed	**Symbol “P”** normally open
	

Version “K4”
(with mating connector)

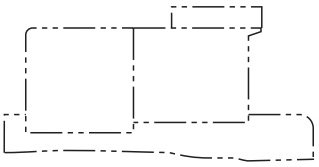


Type KSDER1PB/HN9V

Version “C4”



Version “K40”



Technical data (For applications outside these parameters, please consult us!)

general

Weight	– Valve	kg	0.30
	– Coil	kg	0.25
Installation position			Any
Ambient temperature range		°C	–40 to +110

hydraulic

Maximum operating pressure	– Version “U”	bar	500 (at all ports if P ≥ A; for design reasons)
	– Version “R”	bar	350 (at all ports)
	– Version “R…-17”	bar	350 (at all ports if P ≥ A; for design reasons)
Maximum flow	– Version “U”	l/min	12 (see performance limits page 5)
	– Version “R”	l/min	20 (see performance limits page 5)
Hydraulic fluid			Mineral oil (HL, HLP) according to DIN 51524; quickly biodegradable hydraulic fluids according to VDMA 24568 (see also RE 90221); HETG (rape seed oil); HEPG (polyglycols); HEES (synthetic esters); other hydraulic fluids upon request
Hydraulic fluid temperature range		°C	–40 to +80
Viscosity range		mm^2/s	4 to 500
Maximum permitted degree of contamination of the hydraulic fluid – cleanliness class according to ISO 4406 (c)			Class 20/18/15 [1]
Load cycles	– Version “R” (350 bar)		10 million
	– Version “U” (500 bar)		5 million

electrical

Type of voltage			Direct voltage
Supply voltage [2]		V	12 DC; 24 DC
Voltage tolerance against ambient temperature			See characteristic curve page 5
Power consumption		W	22
Duty cycle		%	See characteristic curve page 5
Maximum coil temperature [3]		°C	150
Switching time according to ISO 6403 (solenoid horizontal)	– ON (① → ②)	ms	≤ 60 (≤ 95 with version “R…-17”)
	– OFF (② → ①)	ms	≤ 60 (≤ 95 with version “R…-17”)
Maximum switching frequency	– Version “R”	1/h	9000
	– Version “U”	1/h	3600
Protection class according to VDE 0470-1 (DIN EN 60529) DIN 40050-9	– Version “K4”		IP 65 with mating connector mounted and locked
	– Version “C4”		IP 66 with mating connector mounted and locked
			IP 69K with Rexroth mating connector (Material no. R901022127)
	– Version “K40”		IP 69K with mating connector mounted and locked

[1] The cleanliness classes specified for the components must be adhered to in hydraulic systems. Effective filtration prevents faults and at the same time increases the service life of the components.

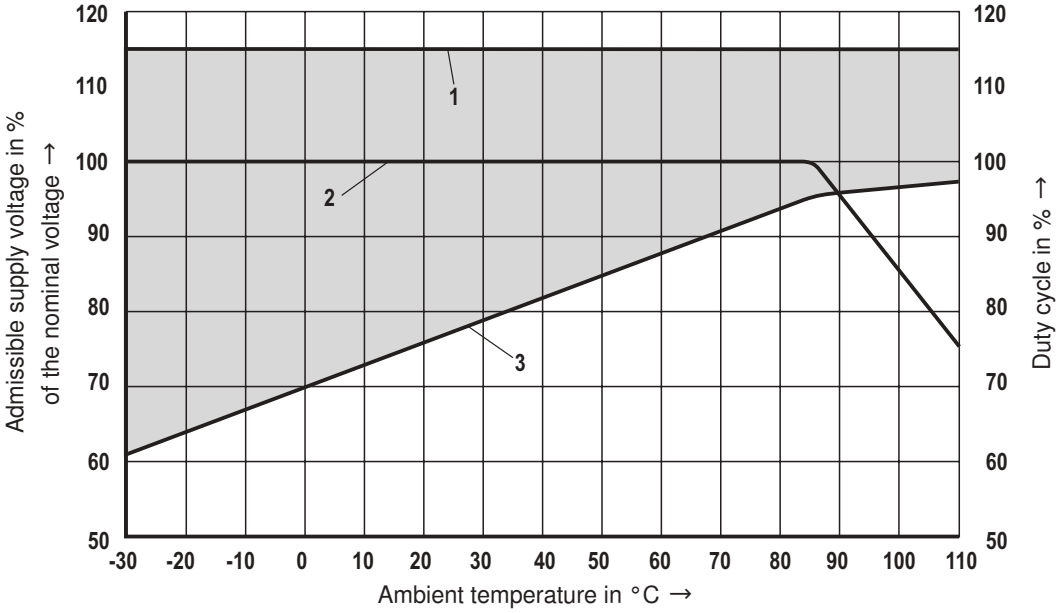
For the selection of filters, see data sheets RE 50070, RE 50076, RE 50081, RE 50086, RE 50087 and RE 50088.

[2] Other voltages upon request

[3] Due to the temperatures occurring at the surfaces of the solenoid coils, the standards ISO 13732-1 and EN 982 need to be adhered to!

At the electrical connection “K4”, the protective earthing conductor (PE ⏚) has to be connected properly.

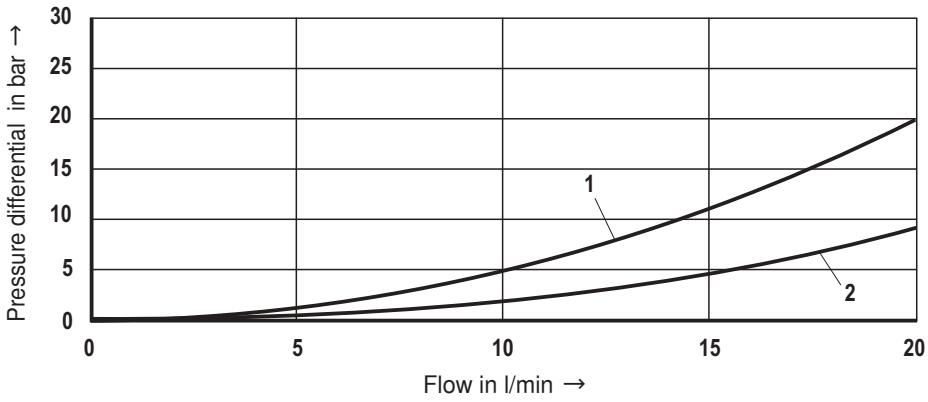
Voltage tolerance against ambient temperature; duty cycle



1 Maximum voltage
2 Duty cycle
3 Minimum response voltage
Admissible supply voltage range

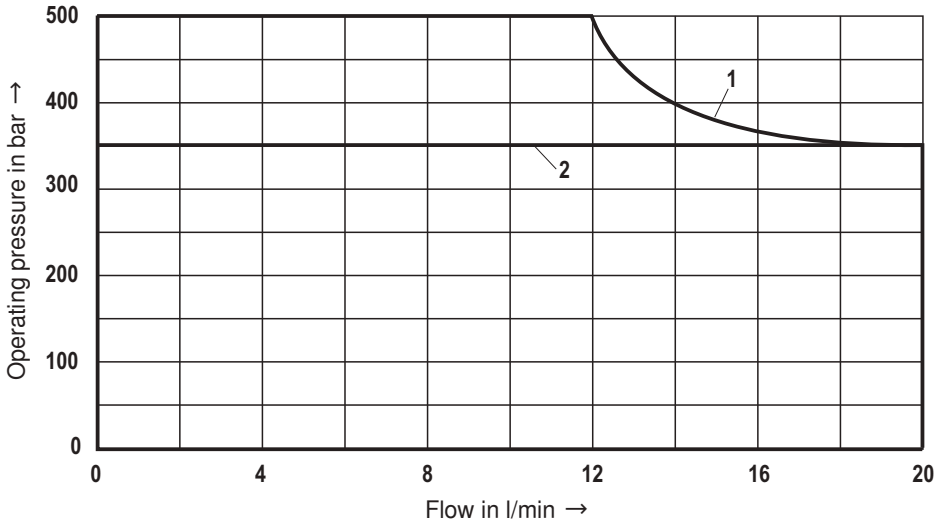
Characteristic curves (measured with HLP46, ϑ_{oil} = 40 °C ± 5 °C and 24 V coil)

***Δp-q*$_V$ characteristic curves**



1 Version “R” and “U”	① → ② ② → ①
2 Version “R…-17”	① → ② ② → ①

Performance limits (measured with HLP46, ϑ_{oil} = 40 °C ± 5 °C and 24 V coil)



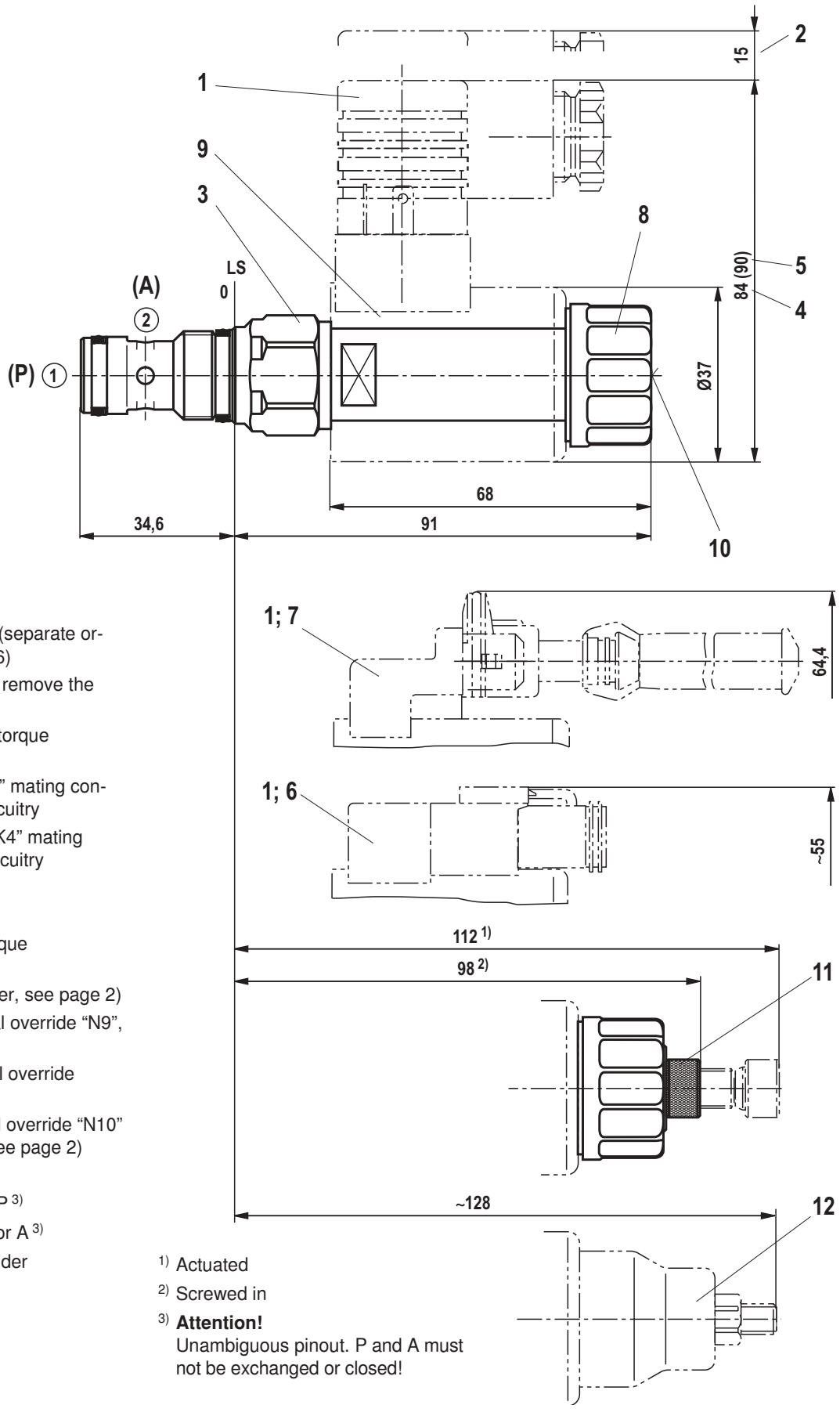
Attention!

The performance limits were determined when the solenoids were at operating temperature and at 10% undervoltage.

1 Version “U”	① → ②
2 Version “R”	① → ② ② → ①
2 Version “R…-17”	① → ②

5

Unit dimensions (dimensions in mm)



1 Mating connector (separate order, see RE 08006)

2 Space required to remove the mating connector

3 SW24, tightening torque $M_A = 60^{+5}$ Nm

4 Dimension for “K4” mating connector, without circuitry

5 Dimension () for “K4” mating connector, with circuitry

6 Version “K40”

7 Version “C4”

8 Nut, tightening torque $M_A = 5^{+1}$ Nm

9 Coil (separate order, see page 2)

10 Concealed manual override “N9”, optional

11 Screwable manual override “N11”, optional

12 Screwable manual override “N10” (separate order, see page 2)

① = Main port 1, pump P [3)]

② = Main port 2, actuator A [3)]

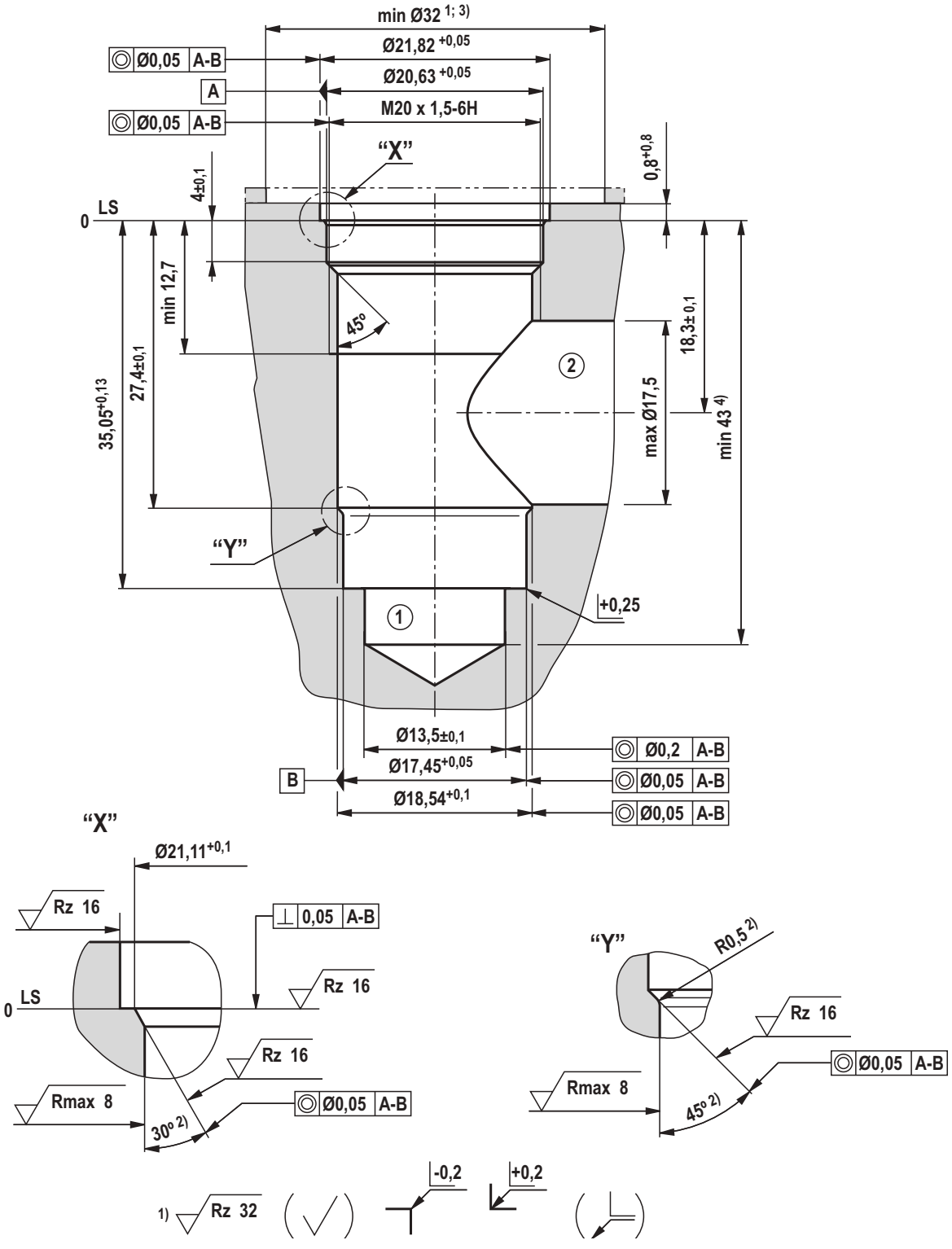
LS = Positive stop shoulder (location shoulder)

[1)] Actuated

[2)] Screwed in

[3)] **Attention!**
Unambiguous pinout. P and A must not be exchanged or closed!

Mounting cavity R/T-13A; 2 main ports; thread M20 x 1.5 (dimensions in mm)



1) Differing from T-13A

2) All seal ring insertion chamfers are rounded and free of burrs

3) with counterbore

4) Depth for moving parts

① = Main port 1

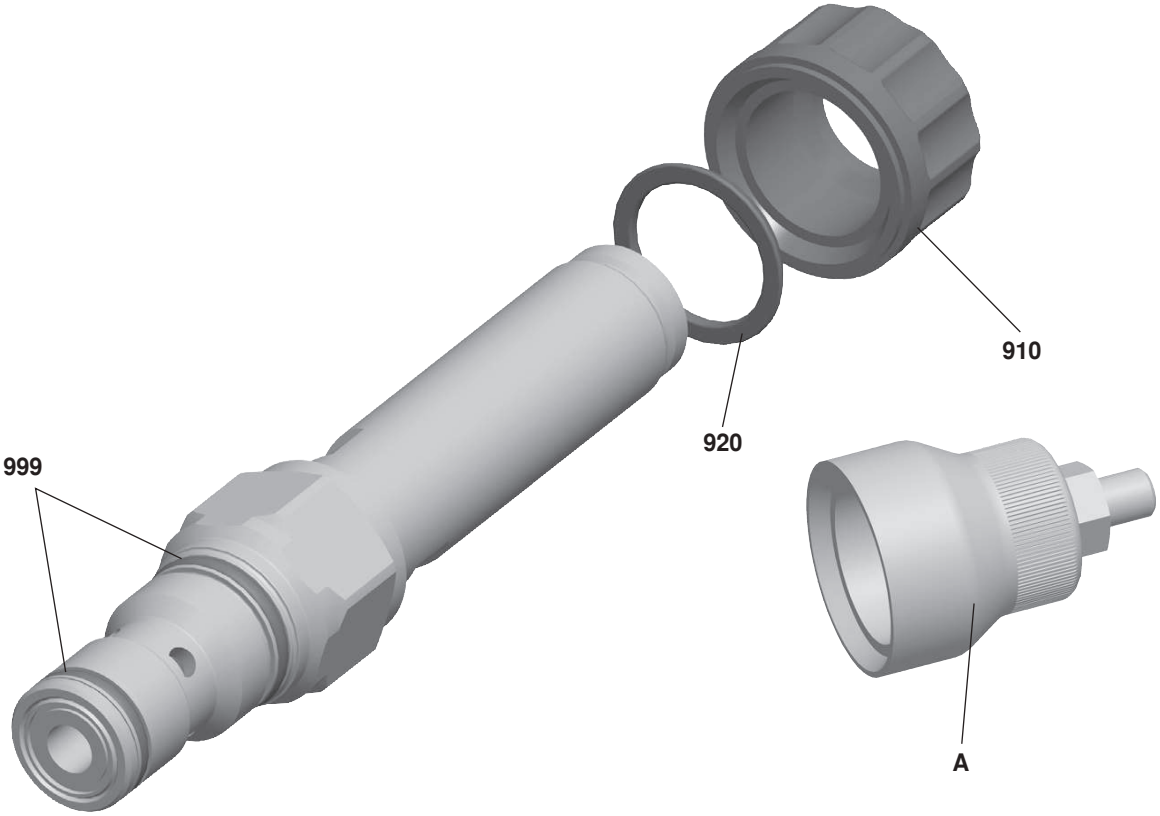
② = Main port 2

LS = Positive stop shoulder (location shoulder)

Tolerance for all angles ±0.5°

5

Available individual components



Item	Description	Material no.
910	Nut	R900991453
920	O-ring for pole tube	R900004280
999	Seal kit of the valve	R961003236
A	Manual override “N10” [1)]	R901051231

Coils, separate order, see page 2

[1)] Only with ordering code “N9”, see page 2

Bosch Rexroth AG
Hydraulics
Zum Eisengießer 1
97816 Lohr am Main, Germany
Phone +49 (0) 93 52 / 18-0
documentation@boschrexroth.de
www.boschrexroth.de

Rexroth
Bosch Group

3/2 directional seat valve, direct operated with solenoid actuation

RE 18136-21/06.12 1/8
Replaces: 08.09

Type KSDE (high-performance)


H6805

Component size 1
Component series B
Maximum operating pressure 500 bar
Maximum flow 20 l/min

Table of contents

Information on available spare parts:
www.boschrexroth.com/spc

Features

- Mounting cavity R/T-11A
- Direct operated directional seat valve with solenoid actuation, tight on both sides
- Blocked connection tight in a leak-free form
- Safe switching also with longer standstill periods
- Wet-pin DC solenoids
- Rotatable solenoid coil

Ordering code (Valve without coil) [1]

KSDE		1		B / H		V		*

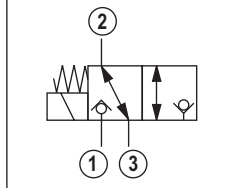
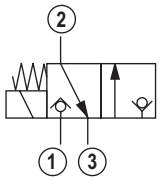
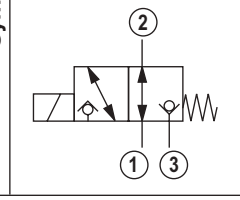
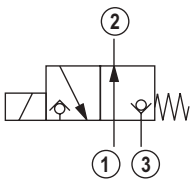
Directional seat valve, direct operated, electrically operated

Maximum operating pressure 500 bar **= U**

Maximum operating pressure 350 bar **= R**

Component size **= 1**

3 main ports

	"R" (350 bar)	**"U"** (500 bar) **"R…-17"** (350 bar)	
Symbols			**= C**
			**= U**

Further details in the plain text

no code = Standard

–17 = Flow-optimized [3]

Seal material

V = FKM seals (other seals upon request)

Attention! Observe compatibility of seals with hydraulic fluid used!

N0 = **without** manual override

N9 = **with** concealed manual override

N11 = **with** screwable manual override (operation by means of knurled screw)

	Symbol C			Symbol U		
Version	**N0**	**N9**	**N11**	**N0**	**N9**	**N11**
R (350 bar)	X	–	X	X	X [2]	–
U (500 bar)	X	–	–	X	–	–

H = High-performance and mounting cavity R/T-11A (see page 7)

B = Component series

Valve types (without coil) [1]

Operating pressure 350 bar		
Spool symbol	**Type**	**Material no.**
C	KSDER1CB/HN0V	R901083205
	KSDER1CB/HN0V-17	R901176263
	KSDER1CB/HN11V	R901151279
	KSDER1CB/HN11V-17	R901206917
U	KSDER1UB/HN0V	R901083191
	KSDER1UB/HN0V-17	R901176251
	KSDER1UB/HN9V	R901151288
	KSDER1UB/HN9V-17	R901206909

Operating pressure 500 bar		
Spool symbol	**Type**	**Material no.**
C	KSDEU1CB/HN0V	R901083198
U	KSDEU1UB/HN0V	R901083200

Available coils (separate order) [1]

Direct voltage DC [5]	Material no. for coil with connector [4]		
	"K4" 03pol (2+PE) DIN EN 175301-803	**"K40"** 02pol K40 DT 04-2PA, make: Deutsch	**"C4"** 02pol C4/Z30 AMP Junior Timer
12 V	R900991678	R900729189	R900315818
24 V	R900991121	R900729190	R900315819

[1] Complete valves with mounted coil upon request

[2] Screwable manual override "N10" (actuation by means of internal hexagon with lock nut), possible as separate order, material no. R901051231; ordering code "N9"!

[3] Only version "R" (free-flowing on one side!)

[4] Mating connectors (separate order), see RE 08006

[5] Other voltages upon request

Function, section, symbols

General

The 3/2 directional seat valves are direct operated, pressure compensated cartridge valves. They basically comprises of screw-in section (4) with valve seat (1), solenoid (5), as well as closing element (3) and compression spring (2).

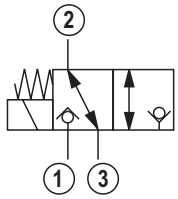
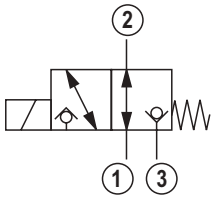
Function

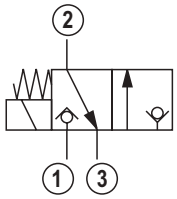
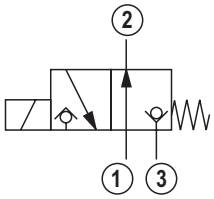
The initial position of the valve (normally open “U” or normally closed “C”) is determined by the position of the closing element (3) and the arrangement of the compression spring (2). Due to the structural design, the 3/2 directional seat valves are always pressure-compensated in relation to the actuating forces. The main ports ① and ② can be loaded with an operating pressure of 350 bar/500 bar (see Technical Data, page 4) and are blocked in a leak-free form in the respective end position. During switching, the main ports are shortly connected (negative overlap).

Attention!

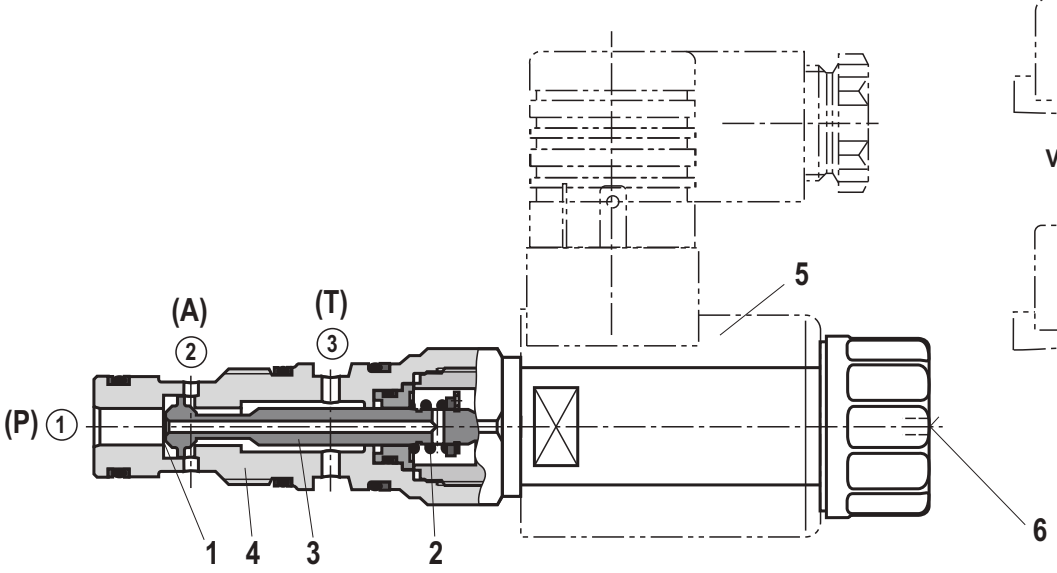
The flow is only permitted in the direction of arrow (see symbols)! With version “U” (operating pressure 500 bar) as well as with version “R…-17”, main port ① must be connected with pump connection P! Valves with version “R…-17” are flow-optimized and thus achieve a higher switching power.

The manual override allows for the the switching of the valve without solenoid energization. It is available in concealed version “N9” (6) or in screwable version “N11” (7) (see page 2).

Version **“R”** (350 bar)	
Symbol “C” normally closed	**Symbol “U”** normally open
	

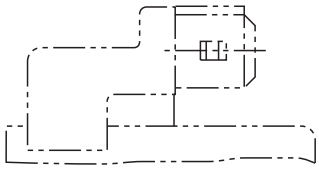
Version **“U”** (500 bar) and **“R…-17”** (350 bar)	
Symbol “C” normally closed	**Symbol “U”** normally open
	

Version “K4”
(with mating connector)

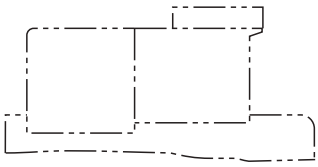


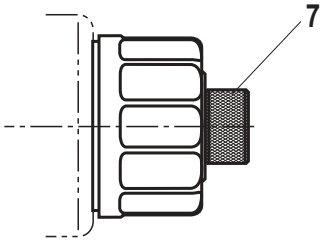
Type KSDER1UB/HN9V

Version “C4”



Version “K40”





5

Technical data (For applications outside these parameters, please consult us!)

general

Weight	– Valve	kg	0.30
	– Coil	kg	0.25
Installation position			Any
Ambient temperature range		°C	–40 to +110

hydraulic

Maximum operating pressure	– Version “U”	bar	500 (at main port ① and ②, if P ≥ A ≥ T; for design reasons)
	– Version “R”	bar	350 (at main port ① and ②)
	– Version “R…-17”		350 (at main port ① and ②, if P ≥ A ≥ T; for design reasons)
Maximum tank pressure		bar	≤ 50 (at main port ③)
Maximum flow	– Version “U”	l/min	6 (see performance limits page 5)
	– Version “R”	l/min	12 (see performance limits page 5)
	– Version “R…-17”	l/min	20 (see performance limits page 5)
Hydraulic fluid			Mineral oil (HL, HLP) according to DIN 51524; quickly biodegradable hydraulic fluids according to VDMA 24568 (see also RE 90221); HETG (rape seed oil); HEPG (polyglycols); HEES (synthetic esters); other hydraulic fluids upon request
Hydraulic fluid temperature range		°C	–40 to +80
Viscosity range		mm^2/s	4 to 500
Maximum permitted degree of contamination of the hydraulic fluid - cleanliness class according to ISO 4406 (c)			Class 20/18/15 [1]
Load cycles	– Version “R”(350 bar)		10 million
	– Version “U” (500 bar)		5 million

electrical

Type of voltage			Direct voltage
Supply voltage [2]		V	12 DC; 24 DC
Voltage tolerance against ambient temperature			See characteristic curve page 5
Power consumption		W	22
Duty cycle		%	See characteristic curve page 5
Maximum coil temperature [3]		°C	150
Switching time according to ISO 6403 (solenoid horizontal)	– ON	ms	≤ 60 (≤ 95 with version “R…-17”)
	– OFF	ms	≤ 60 (≤ 95 with version “R…-17”)
Maximum switching frequency	– Version “R”	1/h	9000
	– Version “U”	1/h	3600
Protection class according to VDE 0470-1 (DIN EN 60529) DIN 40050-9	– Version “K4”		IP 65 with mating connector mounted and locked
	– Version “C4”		IP 66 with mating connector mounted and locked
			IP 69K with Rexroth mating connector (Material no. R901022127)
	– Version “K40”		IP 69K with mating connector mounted and locked

[1] The cleanliness classes specified for the components must be adhered to in hydraulic systems. Effective filtration prevents faults and at the same time increases the service life of the components.

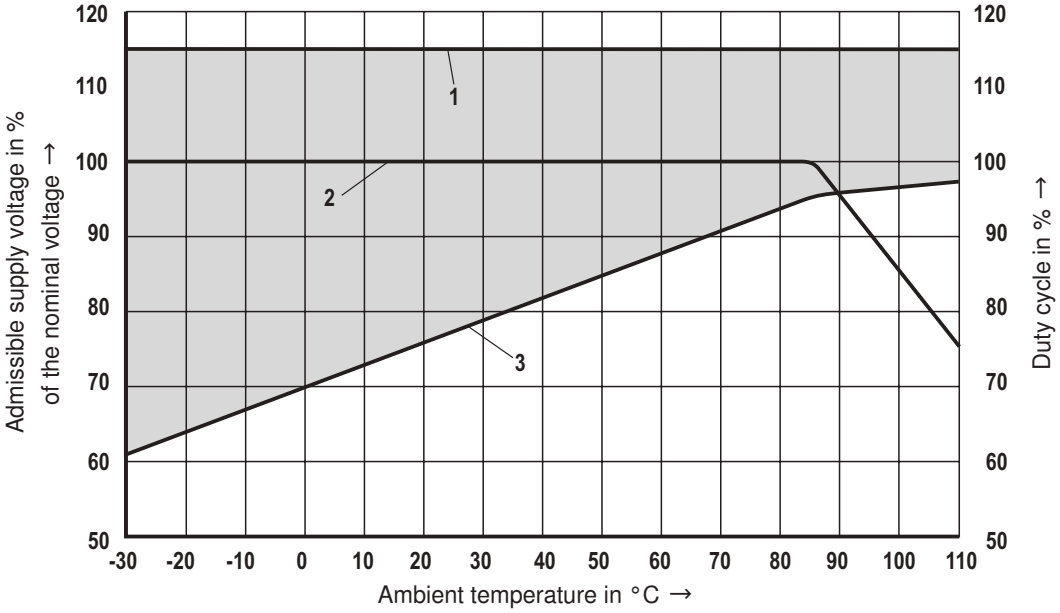
For the selection of filters, see data sheets RE 50070, RE 50076, RE 50081, RE 50086, RE 50087 and RE 50088.

[2] Other voltages upon request

[3] Due to the temperatures occurring at the surfaces of the solenoid coils, the standards ISO 13732-1 and EN 982 need to be adhered to!

At the electrical connection “K4”, the protective earthing conductor (PE ⏚) has to be connected properly.

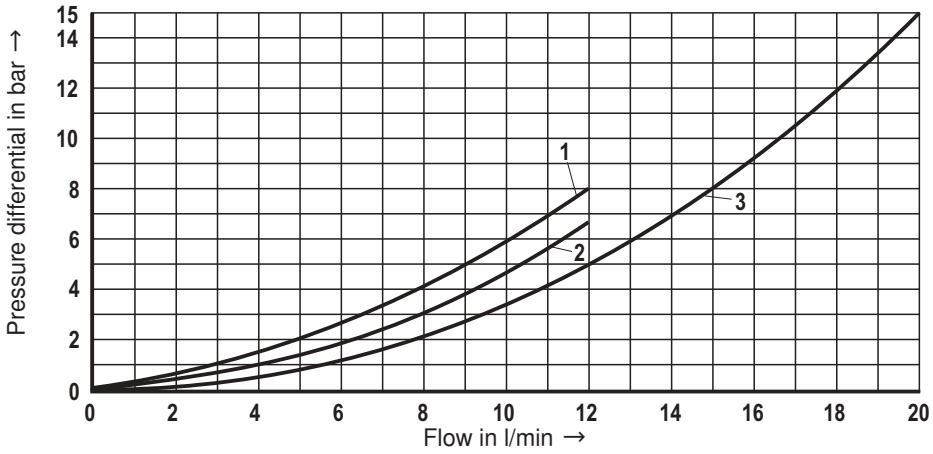
Voltage tolerance against ambient temperature; duty cycle



1 Maximum voltage
2 Duty cycle
3 Minimum response voltage
Admissible supply voltage range

Characteristic curves (measured with HLP46, ϑ_{oil} = 40 °C ± 5 °C and 24 V coil)

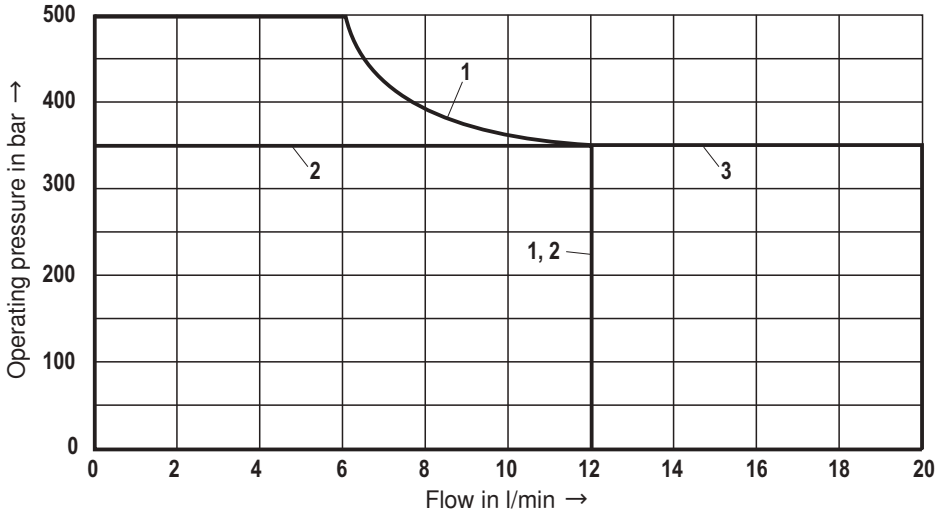
***Δp-q*$_V$ characteristic curves**



1 Standard	② → ③
2 Standard	① → ② ② → ①
3 Version “R…-17”	① → ② ② → ③

5

Performance limits (measured with HLP46, ϑ_{oil} = 40 °C ± 5 °C and 24 V coil)

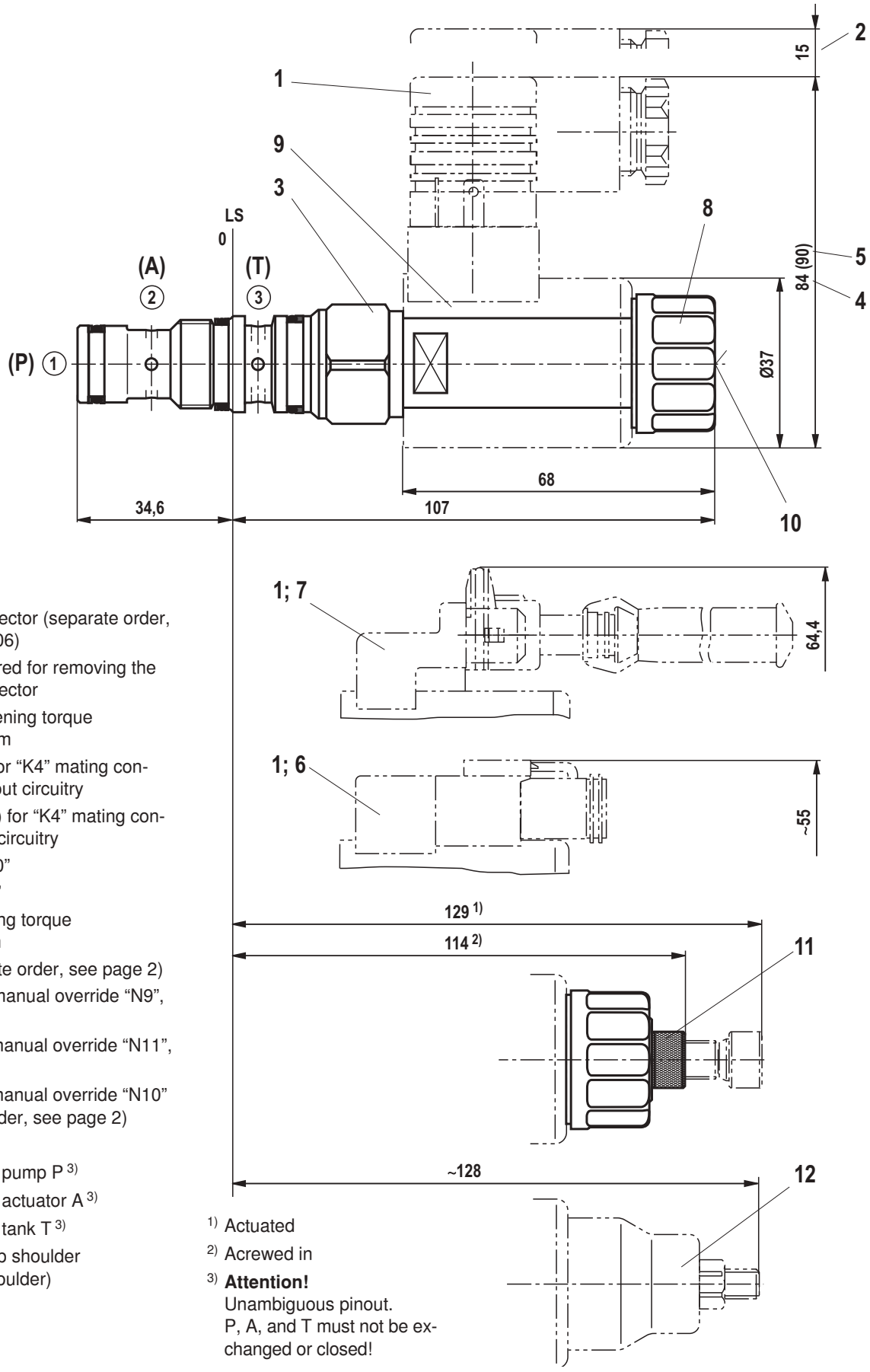


Attention!

The performance limits were determined when the solenoids were at operating temperature and at 10% undervoltage.

1 Version “U”	① → ②
2 Version “R”	① ↔ ② ② → ①
3 Version “R…-17”	① → ②

Unit dimensions (dimensions in mm)



1 Mating connector (separate order, see RE 08006)

2 Space required for removing the mating connector

3 SW24, tightening torque $M_A = 60^{+5}$ Nm

4 Dimension for “K4” mating connector, without circuitry

5 Dimension () for “K4” mating connector, with circuitry

6 Version “K40”

7 Version “C4”

8 Nut, tightening torque $M_A = 5^{+1}$ Nm

9 Coil (separate order, see page 2)

10 Concealed manual override “N9”, optional

11 Screwable manual override “N11”, optional

12 Screwable manual override “N10” (separate order, see page 2)

① = Main port 1, pump P [3)]

② = Main port 2, actuator A [3)]

③ = Main port 3, tank T [3)]

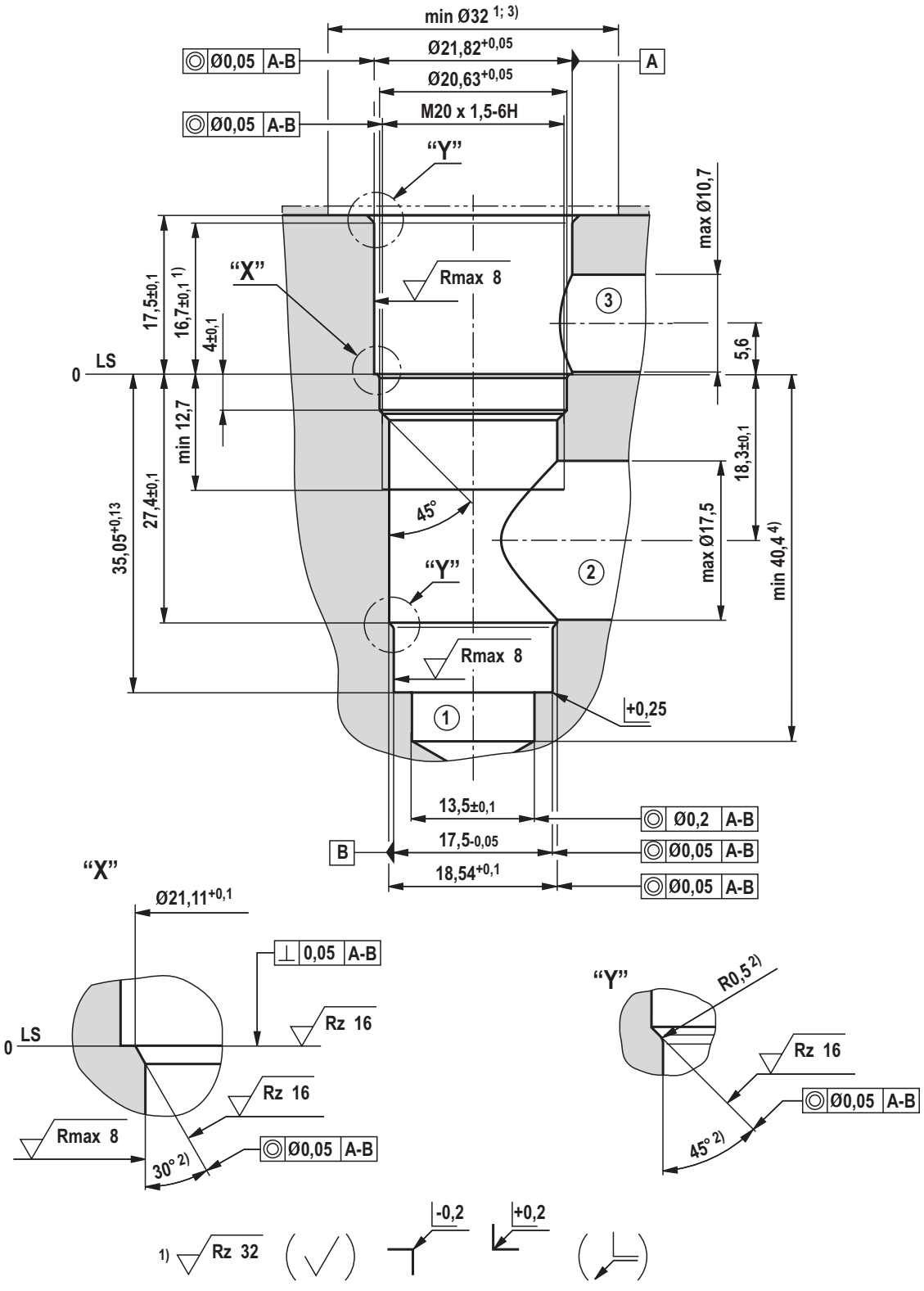
LS = Positive stop shoulder (location shoulder)

[1)] Actuated

[2)] Acrewed in

[3)] **Attention!**
Unambiguous pinout.
P, A, and T must not be exchanged or closed!

Mounting cavity R/T-11A; 3 main ports; thread M20 x 1.5 (dimensions in mm)

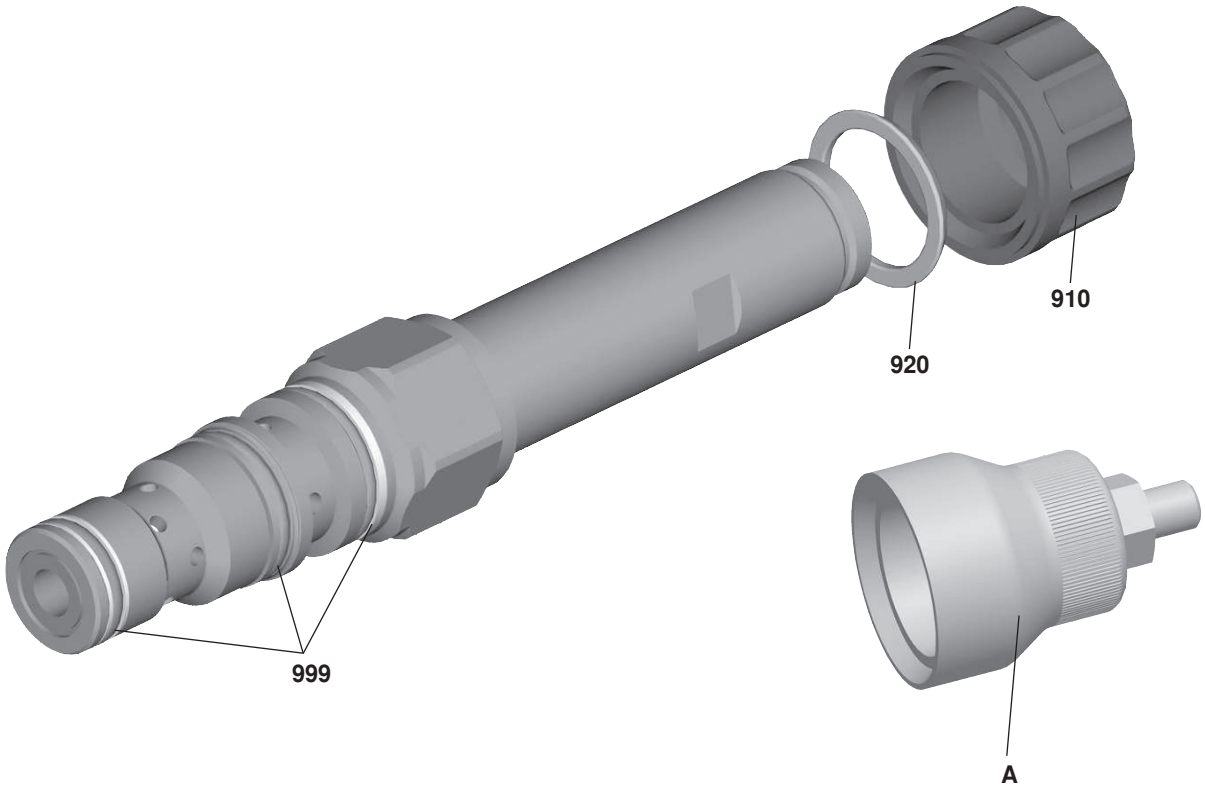


1) Differing from T-11A
2) All seal ring insertion chamfers are rounded and free of burrs
3) with counterbore
4) Depth for moving parts

① = Main port 1
② = Main port 2
③ = Main port 3
LS = Positive stop shoulder (location shoulder)
Tolerance for all angles ±0.5°

5

Available individual components



Item	Description	Material no.
910	Nut	R900991453
920	O-ring for pole tube	R900004280
999	Seal kit of the valve	R961003235
A	Manual override “N10” 1)	R901051231

Coils, separate order, see page 2

1) Only with ordering code “N9”, see page 2

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Rexroth
Bosch Group

2/2 directional spool valve direct operated with solenoid actuation

RE 18136-08/06.12 1/10
Replaces: 10.09

Type KKDE (high-performance)


H7010

Component size 8
Component series A
Maximum operating pressure 350 bar
Maximum flow 45 l/min

Table of contents

Information on available spare parts:
www.boschrexroth.com/spc

Features

- Pilot valve
- Mounting cavity R/T-8A
- Direct operated directional spool valve with solenoid actuation
- Free-flowing in both directions
- Positive overlap helps to avoid switching shocks
- Wet-pin DC solenoids
- Rotatable solenoid coil
- With concealed manual override

Ordering code (Valve without coil) [1)]

KKDE	R	8		A / H		V	*

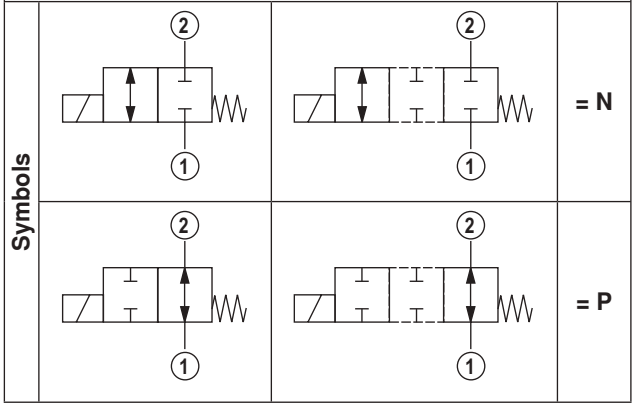
Directional spool valve, direct operated, electrically operated (pilot valve)

Maximum operating pressure 350 bar **= R**

Component size **= 8**

2 main ports

Symbols



Further details in the plain text

Seal material

V = FKM seals (other seals upon request)

Attention! Observe compatibility of seals with hydraulic fluid used!

N0 = **without** manual override

N9 = **with** concealed manual override [4)]

H = High-performance and mounting cavity R/T-8A (see page 9)

A = Component series

Valve types (without coil) [1)]

	without manual override "**N0**"		with concealed manual override "**N9**"	
Spool variant	**Type**	**Material no.**	**Type**	**Material no.**
N	KKDER8NA/HN0V	R901069969	KKDER8NA/HN9V	R901069975
P	KKDER8PA/HN0V	R901069973	KKDER8PA/HN9V	R901069978

Available coils (separate order) [1)]

	Material no. for coil with connector [2)]		
	"K4" 03pol (2+PE) DIN EN 175301-803	**"K40"** 02pol K40 DT 04-2PA, make. Deutsch	**"C4"** 02pol C4/Z30 AMP Junior Timer
Direct voltage DC [3)]			
12 V	R900991678	R900729189	R900315818
24 V	R900991121	R900729190	R900315819

1) Complete valves with mounted coil upon request

2) Mating connectors (separate order), see RE 08006

3) Other voltages upon request

4) Screwable manual override "N10" (actuation by means of internal hexagon with lock nut), possible as separate order, Material no. **R901051231**; ordering code **"N9"**!

Function, section, symbols

General

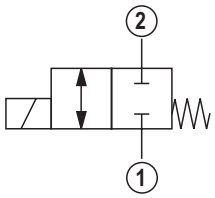
The 2/2 directional spool valves are direct operated, pressure compensated cartridge valves. They control the start, stop and direction of a flow and basically comprise a housing (1), the control spool (4) and a return spring (2).

Function

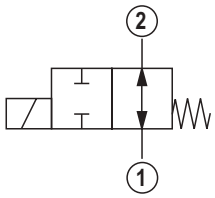
In the de-energized condition, control spool (4) is held in the initial position by the return spring (2). Control spool (4) is actuated by wet-pin DC solenoids (3). The various symbols are realized by corresponding spools (N and P). The main ports ① and ② are suitable for a continuous load with an operating pressure of 350 bar and the flow can be directed into both directions (see symbols).

The manual override (5) allows for the switching of the valve without solenoid energization. It is also available in screwable version “N10” (6) (see page 2).

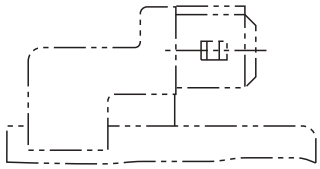
Symbol “N”



Symbol “P”

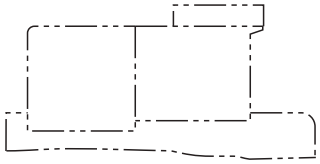


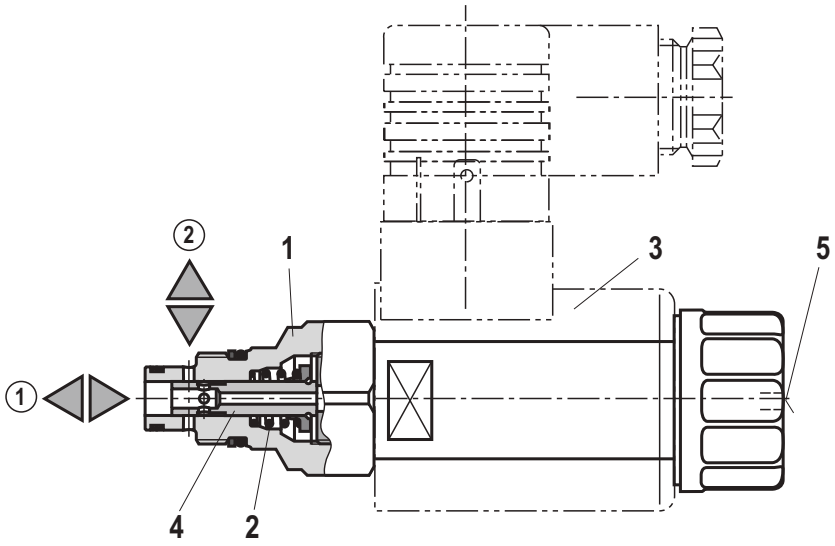
Version “C4”



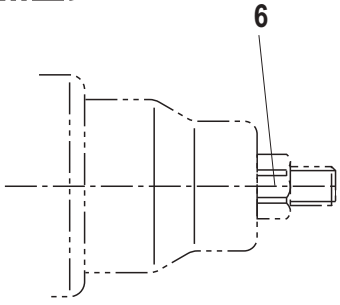
Version “K4”
(with mating connector)

Version “K40”





Type KKDER8NA/HN9V



5

Technical data (For applications outside these parameters, please consult us!)

general

Weight	– Valve	kg	0.30
	– Coil	kg	0.25
Installation position			Any
Ambient temperature range		°C	–40 to +110

hydraulic

Maximum operating pressure	bar	350 (at all ports)
Maximum flow	l/min	45
Hydraulic fluid		Mineral oil (HL, HLP) according to DIN 51524; quickly biodegradable hydraulic fluids according to VDMA 24568 (see also RE 90221); HETG (rape seed oil); HEPG (polyglycols); HEES (synthetic esters); other hydraulic fluids upon request
Hydraulic fluid temperature range	°C	–40 to +80
Viscosity range	mm^2/s	4 to 500
Maximum permitted degree of contamination of the hydraulic fluid - cleanliness class according to ISO 4406 (c)		Class 20/18/15 [1]
Load cycles		10 million (at 350 bar)

electrical

Voltage type			Direct voltage
Supply voltage [2]		V	12 DC; 24 DC
Voltage tolerance against ambient temperature			See characteristic curve page 5
Power consumption		W	22
Duty cycle		%	See characteristic curve page 5
Maximum coil temperature [3]		°C	150
Switching time according to ISO 6403 (solenoid horizontal)	– ON	ms	≤ 80
	– OFF	ms	≤ 50
Maximum switching frequency		cy/h	15000
Protection class according to VDE 0470-1 (DIN EN 60529) DIN 40050-9	– Version “K4”		IP 65 with mating connector mounted and locked
	– Version “C4”		IP 66 with mating connector mounted and locked
			IP 69K with Rexroth mating connector (Material no. R901022127)
	– Version “K40”		IP 69K with mating connector mounted and locked

[1] The cleanliness classes specified for the components must be adhered to in hydraulic systems. Effective filtration prevents faults and at the same time increases the service life of the components.

For the selection of filters, see data sheets RE 50070, RE 50076, RE 50081, RE 50086, RE 50087 and RE 50088.

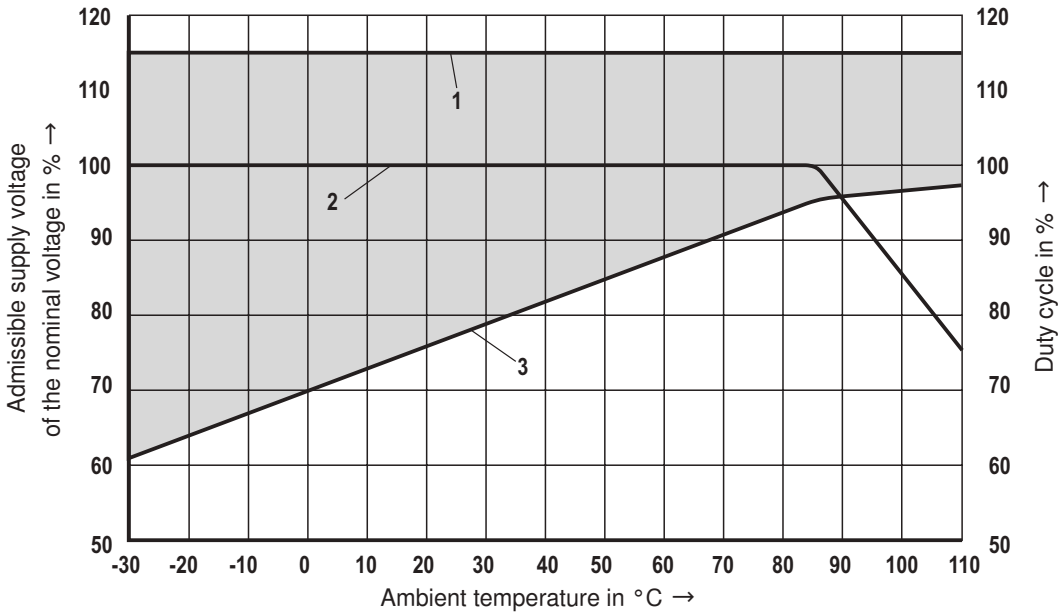
[2] Other voltages upon request

[3] Due to the temperatures occurring at the surfaces of the solenoid coils, the standards ISO 13732-1 and EN 982 need to be adhered to!

At the electrical connection “K4”, the protective earthing conductor (PE ⏚) has to be connected properly.

Voltage tolerance against ambient temperature; duty cycle

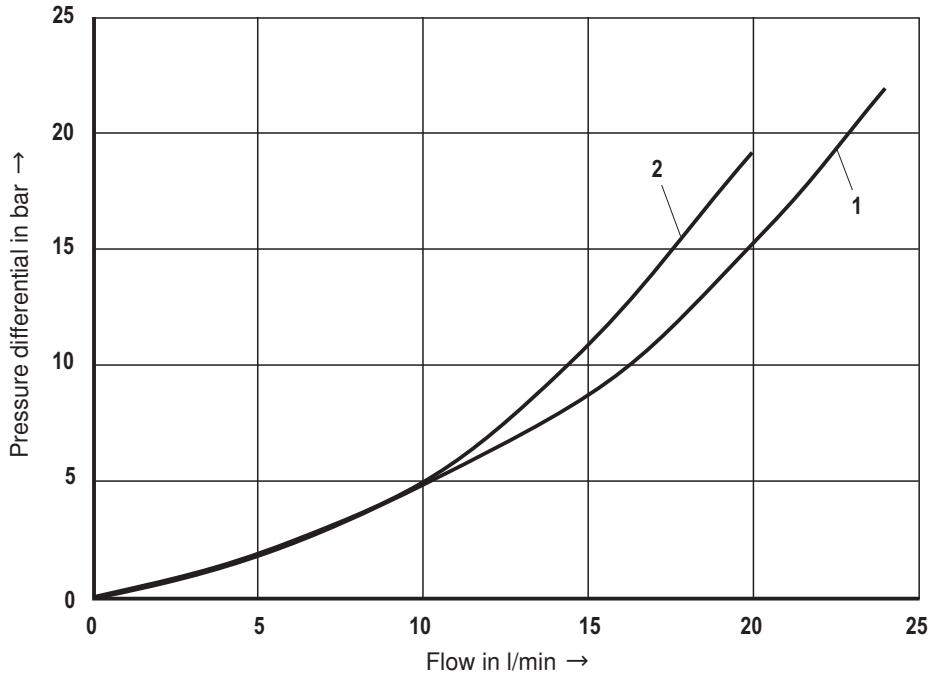
Voltage range and duty cycle depending on the ambient temperature



1 Maximum voltage
2 Duty cycle
3 Minimum response voltage
Admissible supply voltage range

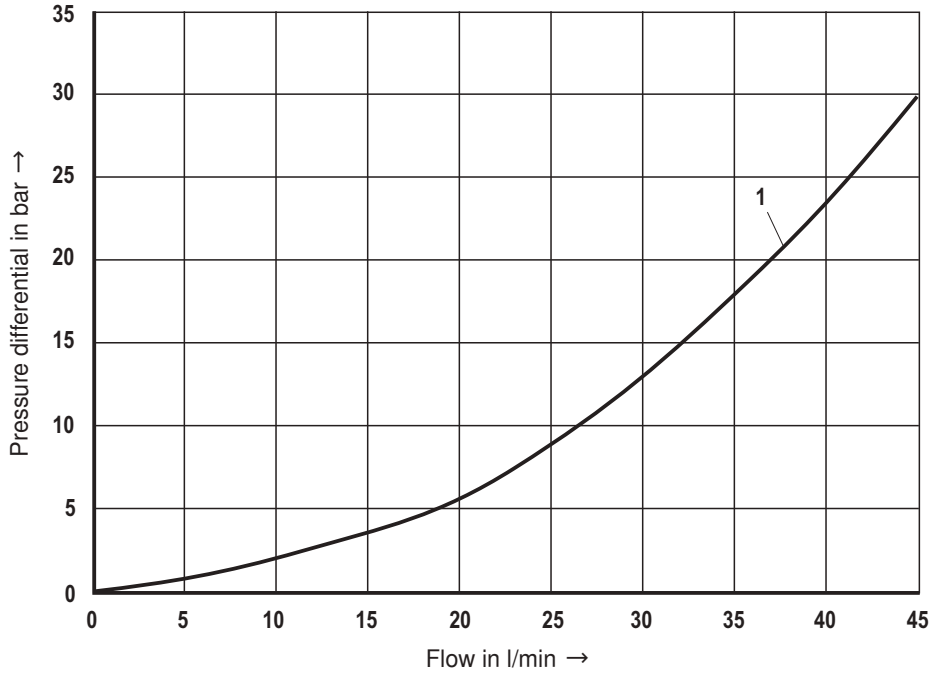
Characteristic curves (measured with HLP46, ϑ_{oil} = 40 °C ± 5 °C and 24 V coil)

***Δp-q*$_V$ characteristic curves – symbol N**



1	1 → 2
2	2 → 1

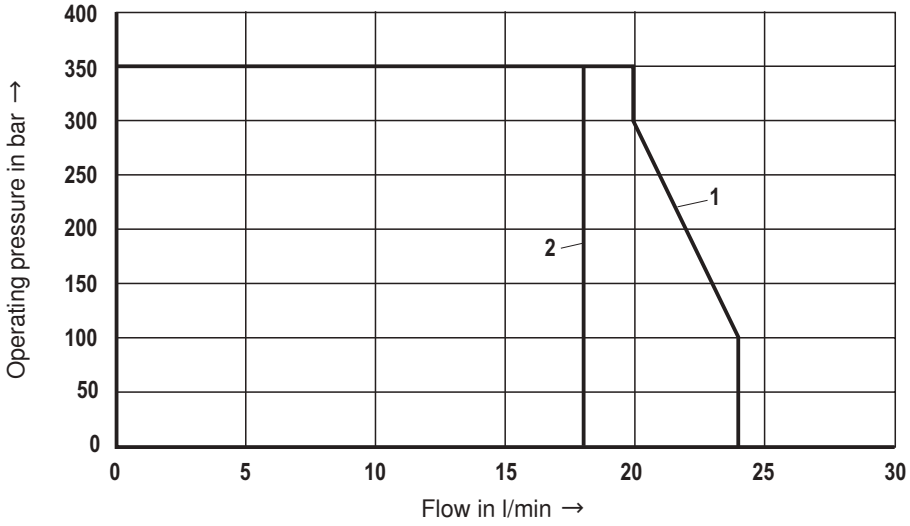
***Δp-q*$_V$ characteristic curves – symbol P**



1	1 ↔ 2

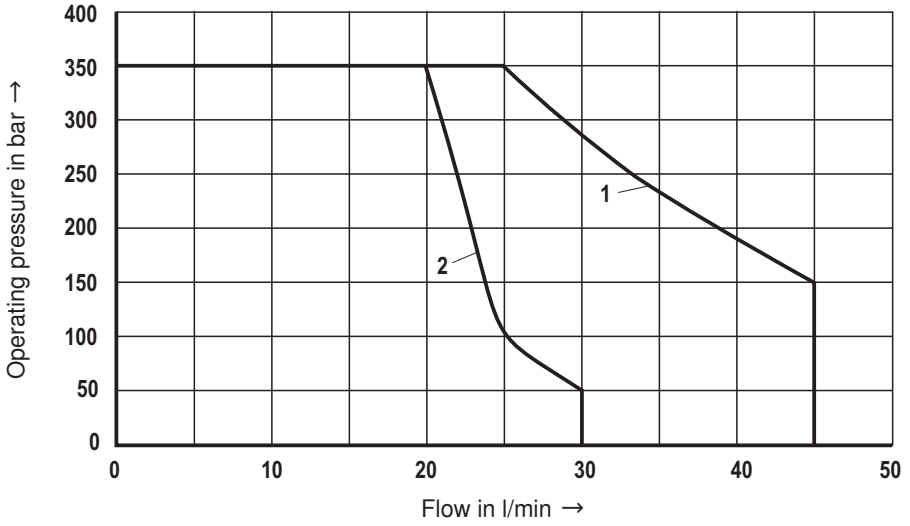
Performance limits (measured with HLP46, ϑ_{oil} = 40 °C ± 5 °C and 24 V coil)

Symbol N



1	1 → 2
2	2 → 1

Symbol P

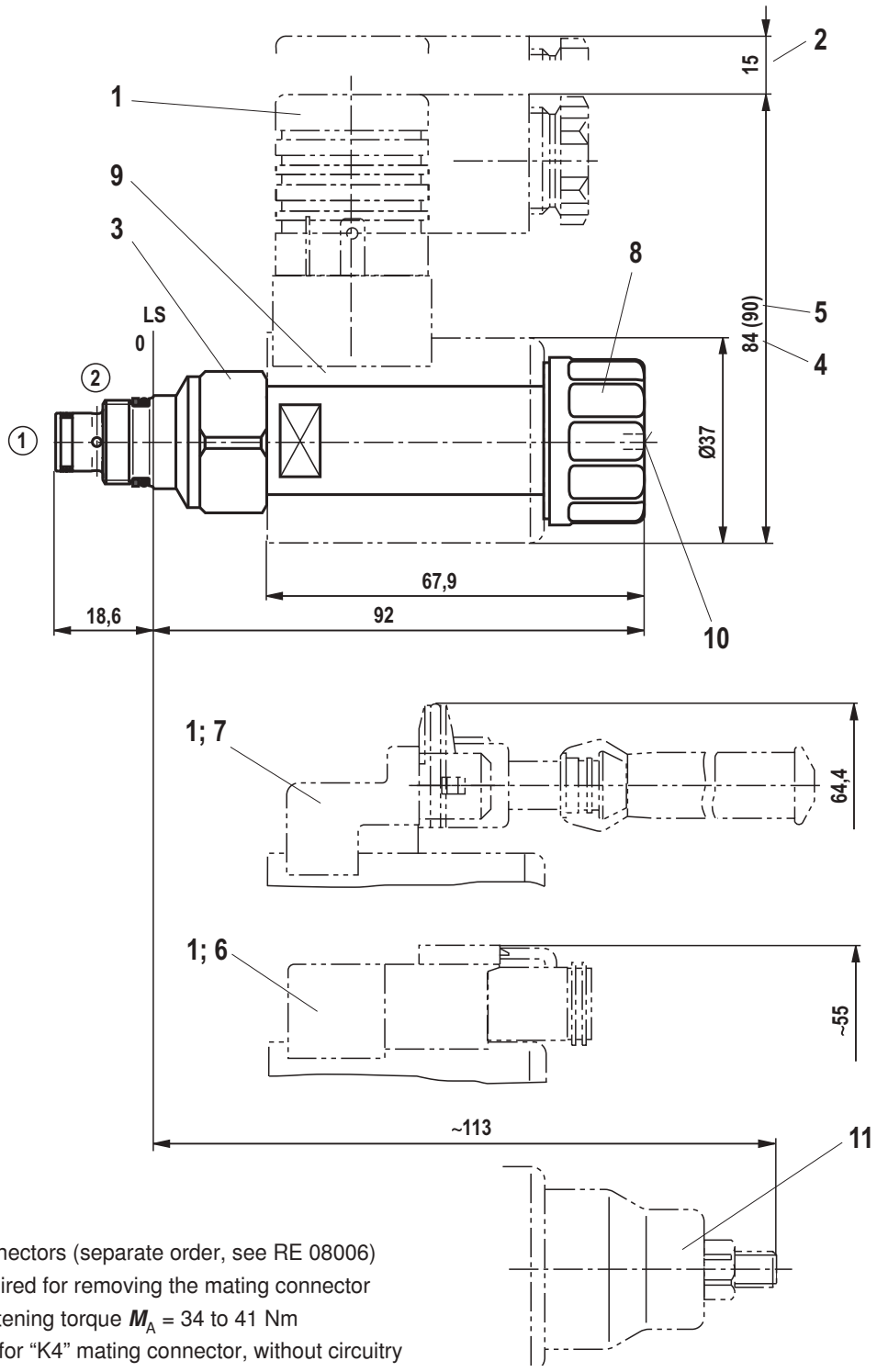


1	1 → 2
2	2 → 1

Attention!

The performance limits were determined when the solenoids were at operating temperature and at 10% undervoltage.

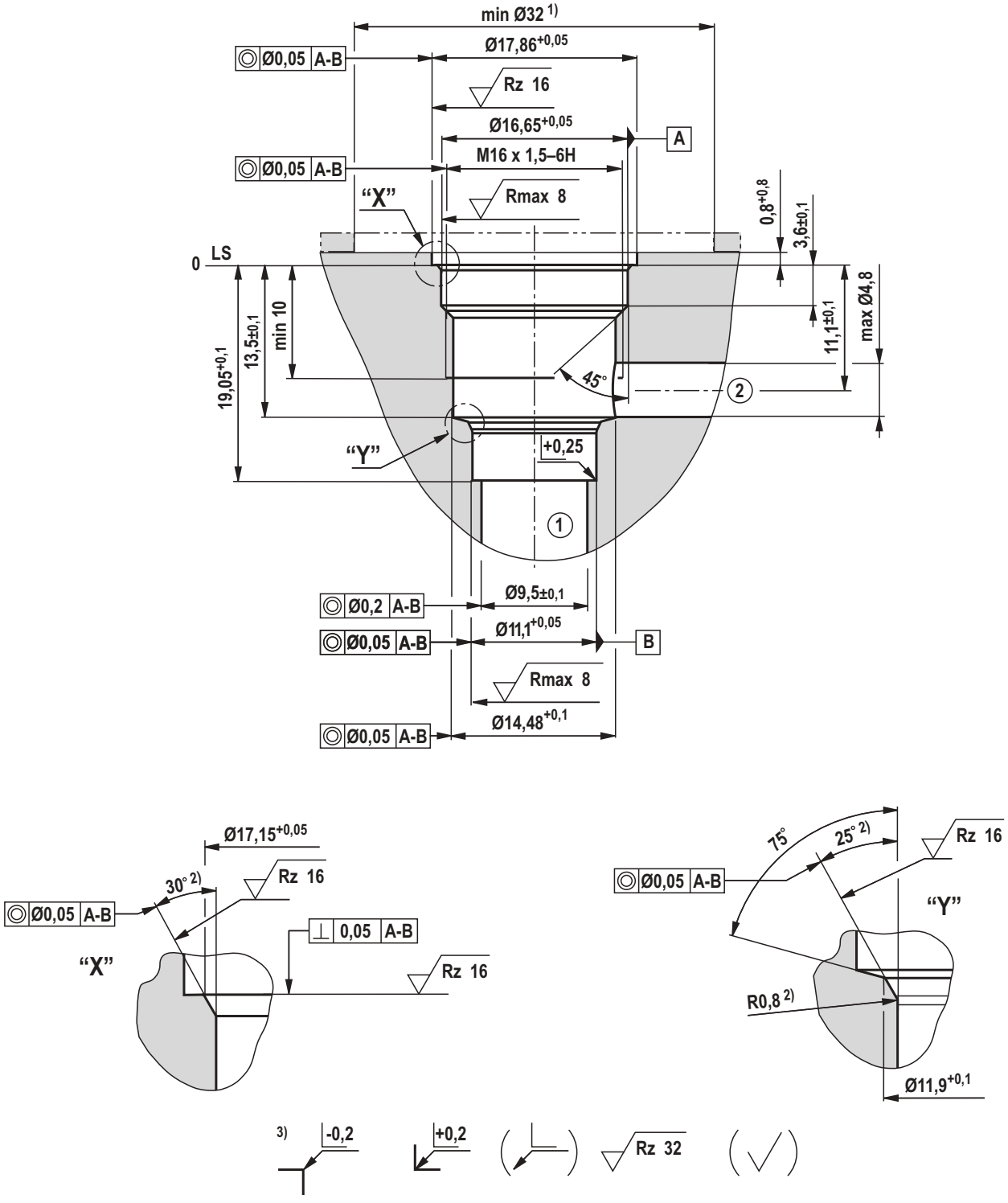
Unit dimensions (dimensions in mm)



1 Mating connectors (separate order, see RE 08006)
2 Space required for removing the mating connector
3 SW24, tightening torque M_A = 34 to 41 Nm
4 Dimension for “K4” mating connector, without circuitry
5 Dimension () for “K4” mating connector, with circuitry
6 Version “K40”
7 Version “C4”
8 Nut, tightening torque $M_A = 5^{+1}$ Nm
9 Coil (separate order, see page 2)
10 Concealed manual override “N9”, optional
11 Screwable manual override “N10” (separate order, see page 2)

① = Main port 1
② = Main port 2
LS = Location shoulder

Mounting cavity R/T-8A; 2 main ports; thread M16 x 1.5 (dimensions in mm)



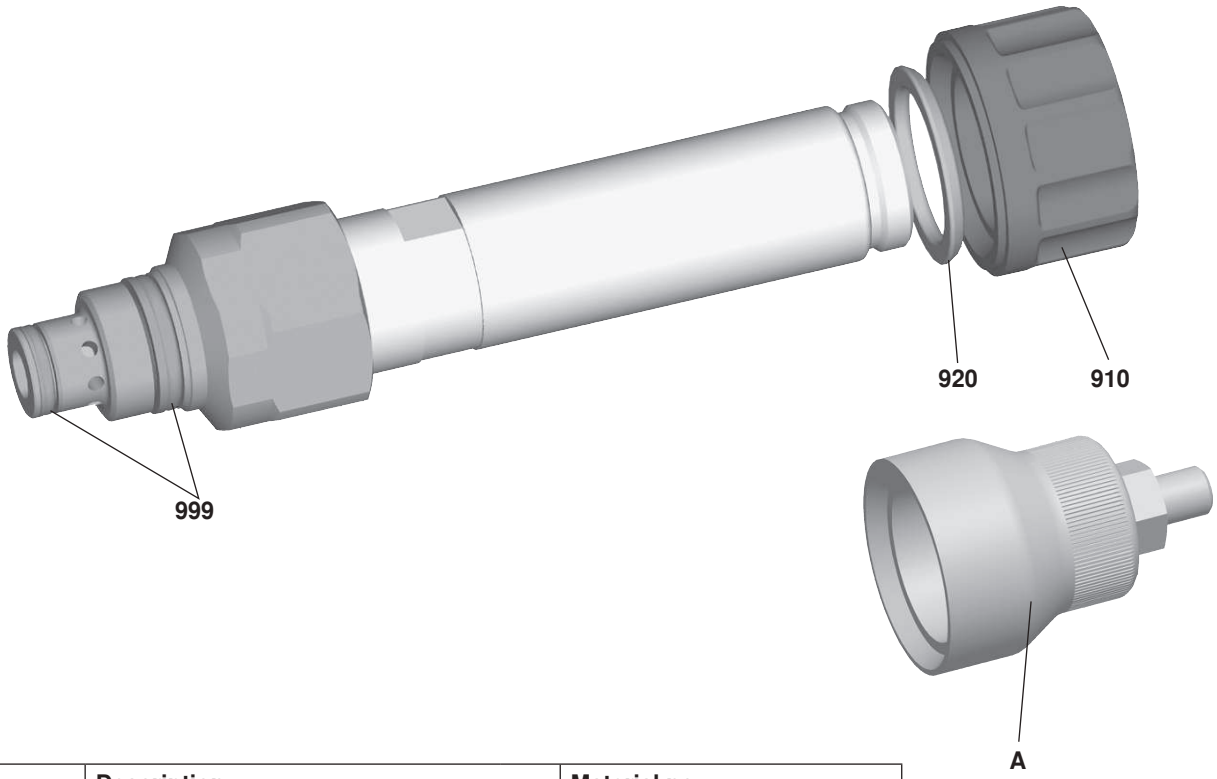
1) with counterbore, deviating from T-8A
2) All seal ring in sertion faces are rounded and free of burrs
3) Differing from T-8A

① = Main port 1
② = Main port 2
LS = Location shoulder

Tolerance for all angles ±0.5°

5

Available individual components



Item	Description	Material no.
910	Nut	R900991453
920	O-ring for pole tube	R900007769
999	Seal kit of the valve	R961003237
A	Manual override “N10” [1)]	R901051231

Coils, separate order, see page 2

[1)] Only with ordering code “N9”, see page 2

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Rexroth
Bosch Group

3/2 directional spool valve direct operated with solenoid actuation

RE 18136-09/06.12 1/10
Replaces: 10.09

Type KKDE (high-performance)

Component size 8
Component series A
Maximum operating pressure 350 bar
Maximum flow 30 l/min

Table of contents

Information on available spare parts:
www.boschrexroth.com/spc

Features

- Pilot valve
- Mounting cavity R/T-9A
- Direct operated directional spool valve with solenoid actuation
- Free-flowing in both directions
- Wet-pin DC solenoids
- Rotatable solenoid coil
- With concealed manual override

Ordering code (Valve without coil) [1)]

KKDE	R	8		A / H		V	*

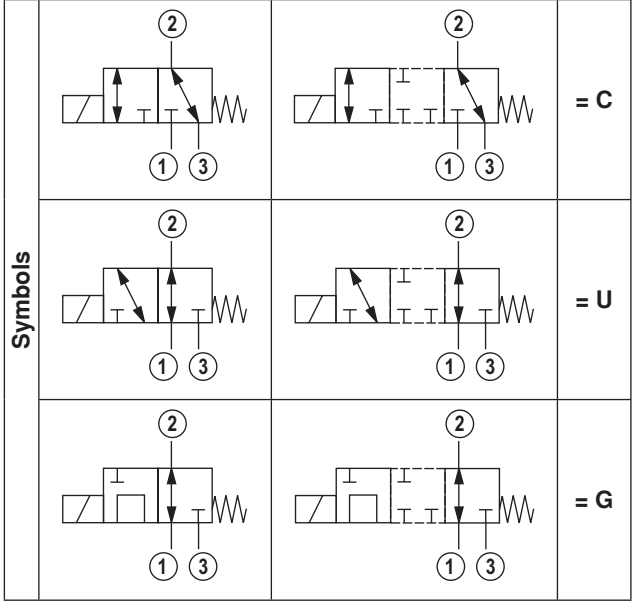
Directional spool valve, direct operated, electrically operated (pilot valve)

Maximum operating pressure 350 bar **= R**

Component size **= 8**

3 main ports

Symbols



Further details in the plain text

Seal material

V = FKM seals (other seals upon request)
Attention! Observe compatibility of seals with hydraulic fluid used!

N0 = **without** manual override

N9 = **with** concealed manual override [4)]

H = High-performance and mounting cavity R/T-9A (see page 9)

A = Component series

Valve types (without coil) [1)]

Spool variant	without manual override "**N0**"		with concealed manual override "**N9**"	
	Type	**Material no.**	**Type**	**Material no.**
C	KKDER8CA/HN0V	R901070049	KKDER8CA/HN9V	R901070055
U	KKDER8UA/HN0V	R901070050	KKDER8UA/HN9V	R901070068
G	KKDER8GA/HN0V	R901070051	KKDER8GA/HN9V	R901070072

Available coils (separate order) [1)]

Direct voltage DC [3)]	**Material no. for coil with connector** [2)]		
	"K4" 03pol (2+PE) DIN EN 175301-803	**"K40"** 02pol K40 DT 04-2PA, make. Deutsch	**"C4"** 02pol C4/Z30 AMP Junior Timer
12 V	R900991678	R900729189	R900315818
24 V	R900991121	R900729190	R900315819

[1)] Complete valves with mounted coil upon request

[2)] Mating connectors (separate order), see RE 08006

[3)] Other voltages upon request

[4)] Screwable manual override **"N10"** possible (Material no. **R901051231**, separate order)

Function, section, symbols

General

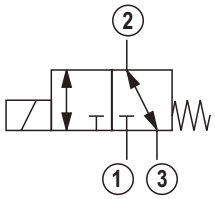
The 3/2 directional spool valves are direct operated, pressure compensated cartridge valves. They control the start, stop and direction of a flow and basically comprise a housing (1), the control spool (2) and a return spring (4).

Function

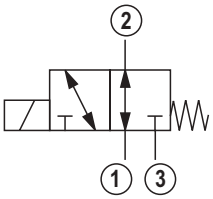
In the de-energized condition, control spool (2) is held in the initial position by the return spring (4). Control spool (2) is actuated by wet-pin DC solenoids (3). The various symbols are realized by corresponding spools (C, U, and G). The main ports ①, ②, and ③ are suitable for a continuous load with an operating pressure of 350 bar and the flow can be directed into both directions (see symbols).

The manual override (5) allows for the switching of the valve without solenoid energiaztion. It is also available in screwable version “N10” (6) (see page 2).

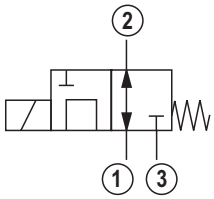
Symbol “C”



Symbol “U”



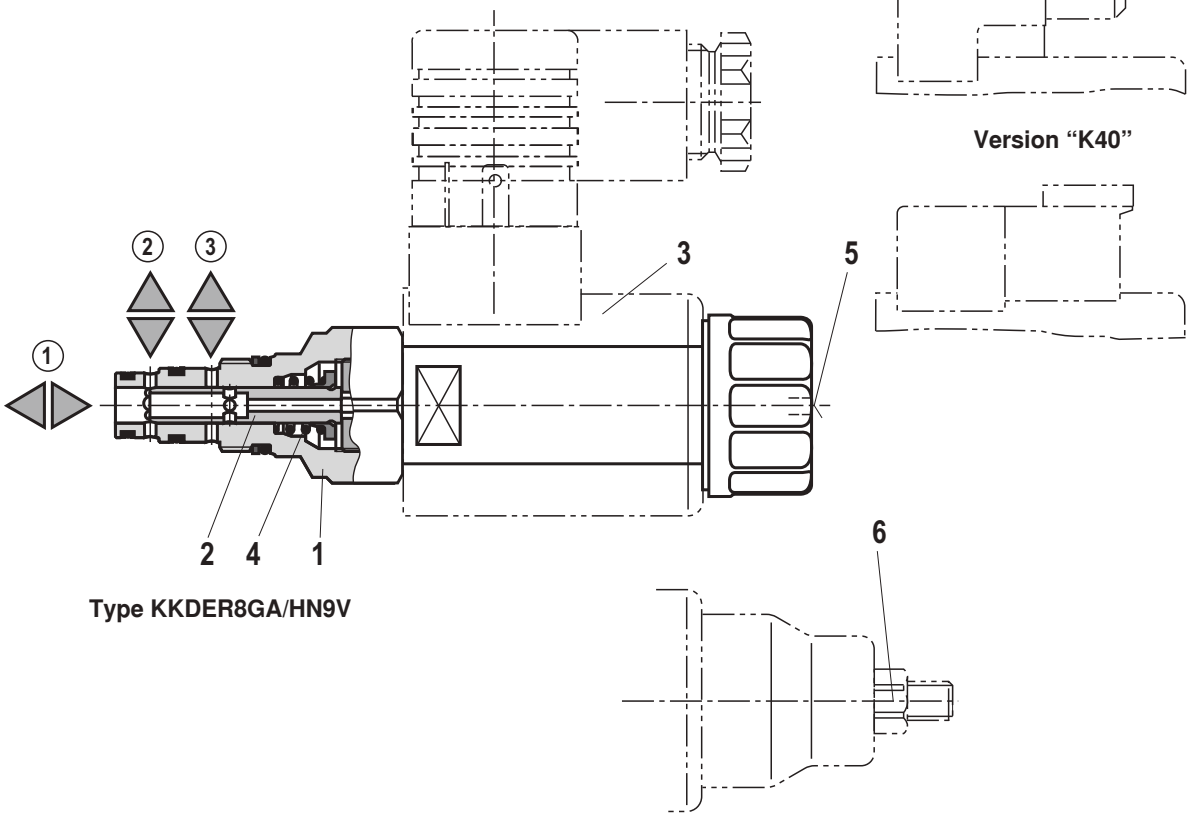
Symbol “G”



Version “K4”
(with mating connector)

Version “C4”

Version “K40”



Type KKDER8GA/HN9V

Technical data (For applications outside these parameters, please consult us!)

general

Weight	– Valve	kg	0.3
	– Coil	kg	0.25
Installation position			Any
Ambient temperature range		°C	–40 to +110

hydraulic

Maximum operating pressure		bar	350 (at all ports)
Maximum flow		l/min	30
Hydraulic fluid			Mineral oil (HL, HLP) according to DIN 51524; quickly biodegradable hydraulic fluids according to VDMA 24568 (see also RE 90221); HETG (rape seed oil); HEPG (polyglycols); HEES (synthetic esters); other hydraulic fluids upon request
Hydraulic fluid temperature range		°C	–40 to +80
Viscosity range		mm^2/s	4 to 500
Maximum permitted degree of contamination of the hydraulic fluid - cleanliness class according to ISO 4406 (c)			Class 20/18/15 [1]
Load cycles			10 million (at 350 bar)

electrical

Voltage type			Direct voltage
Supply voltage [2]		V	12 DC; 24 DC
Voltage tolerance against ambient temperature			See characteristic curve page 5
Power consumption		W	22
Duty cycle		%	See characteristic curve page 5
Maximum coil temperature [3]		°C	150
Switching time according to ISO 6403 (solenoid horizontal)	– ON	ms	≤ 80
	– OFF	ms	≤ 50
Maximum switching frequency		cy/h	15000
Protection class according to VDE 0470-1 (DIN EN 60529) DIN 40050-9	– Version “K4”		IP 65 with mating connector mounted and locked
	– Version “C4”		IP 66 with mating connector mounted and locked
			IP 69K with Rexroth mating connector (Material no. R901022127)
	– Version “K40”		IP 69K with mating connector mounted and locked

[1] The cleanliness classes specified for the components must be adhered to in hydraulic systems. Effective filtration prevents faults and at the same time increases the service life of the components.

For the selection of filters, see data sheets RE 50070, RE 50076, RE 50081, RE 50086, RE 50087 and RE 50088.

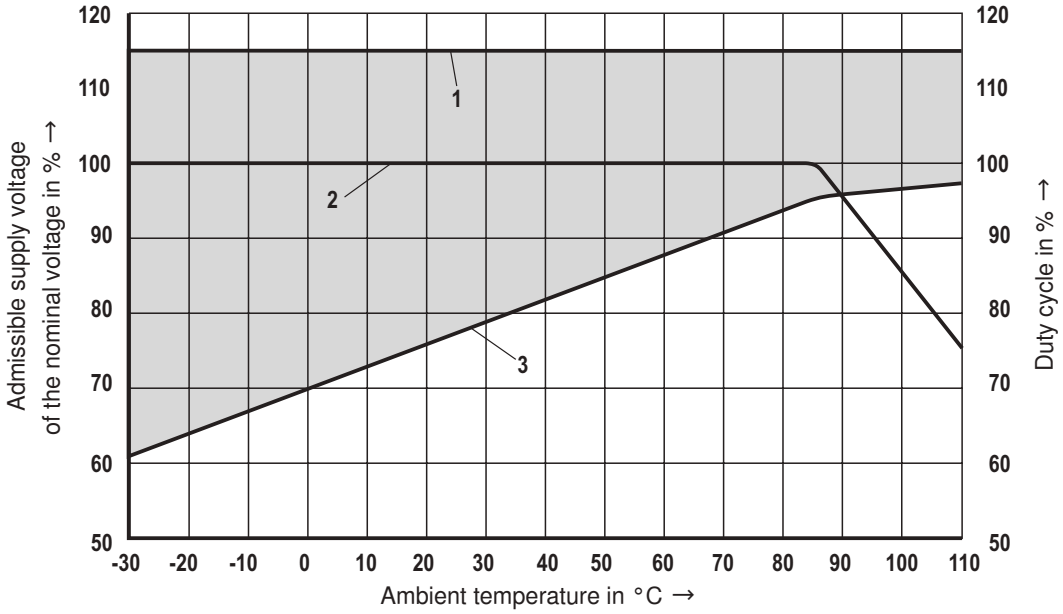
[2] Other voltages upon request

[3] Due to the temperatures occurring at the surfaces of the solenoid coils, the standards ISO 13732-1 and EN 982 need to be adhered to!

At the electrical connection “K4”, the protective earthing conductor (PE ⏚) has to be connected properly.

Voltage tolerance against ambient temperature; duty cycle

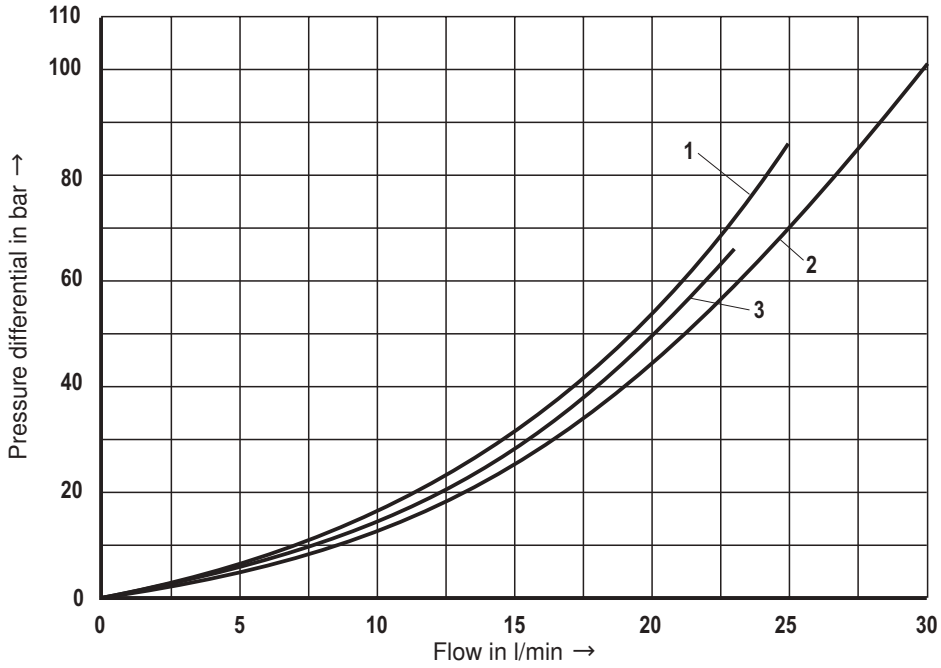
Voltage range and duty cycle depending on the ambient temperature



1 Maximum voltage
2 Duty cycle
3 Minimum response voltage
Admissible supply voltage range

Characteristic curves (measured with HLP46, ϑ_{oil} = 40 °C ± 5 °C and 24 V coil)

***Δp-q*$_V$ characteristic curves – symbol C**

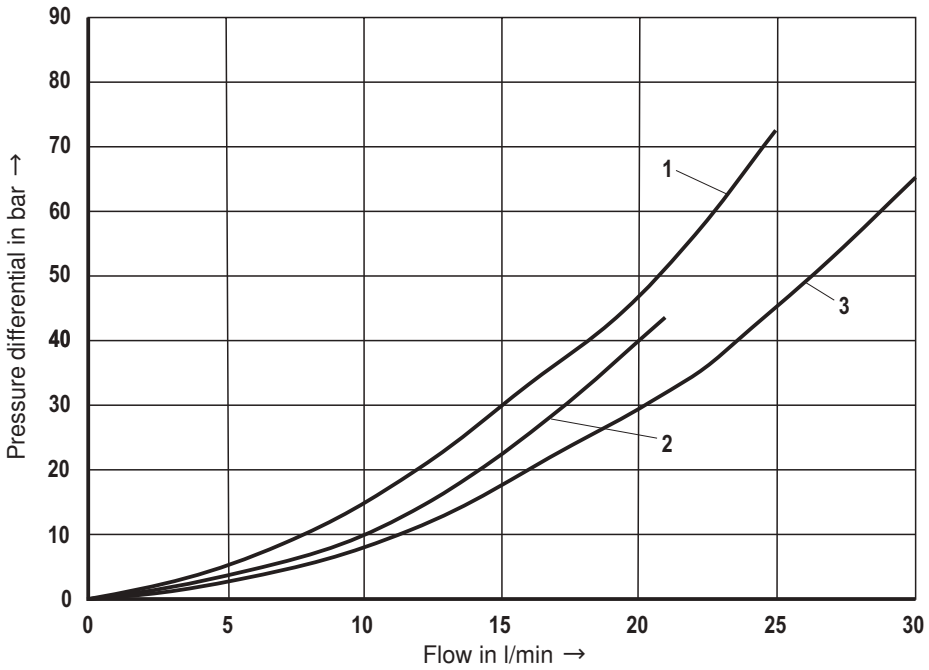


1	1 → 2 2 → 1
2	2 → 3
3	3 → 2

5

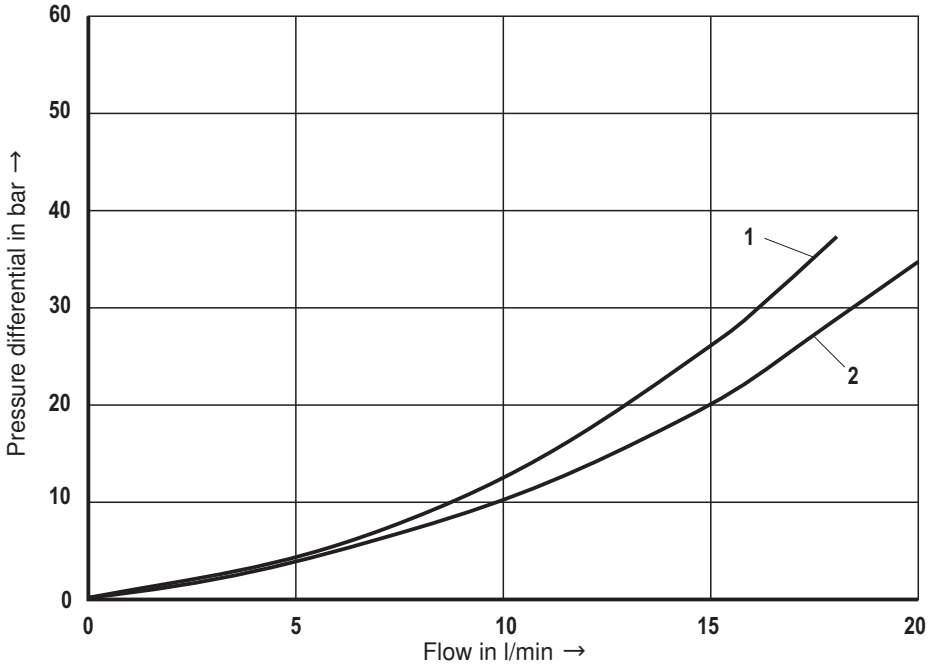
Characteristic curves (measured with HLP46, ϑ_{oil} = 40 °C ± 5 °C and 24 V coil)

***Δp-q*$_V$ characteristic curves – symbol U**



1	3 → 2
2	1 → 2
3	2 → 1 2 → 3

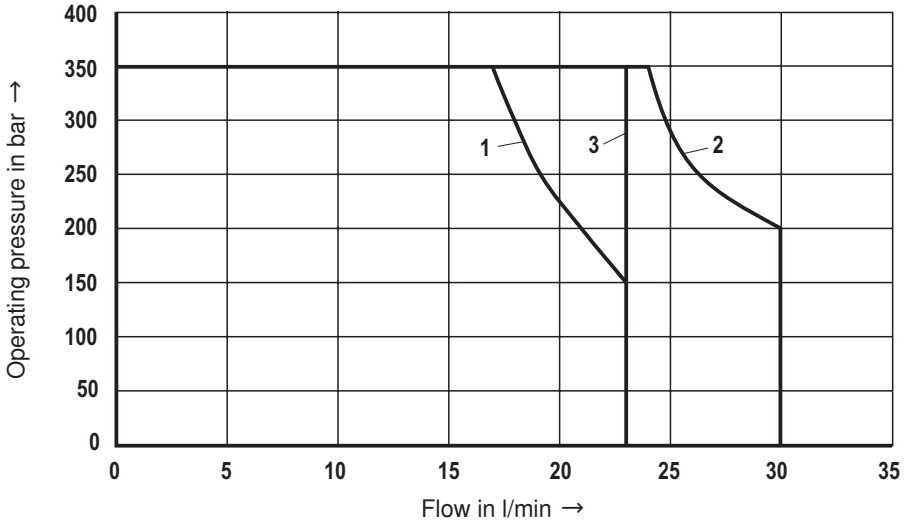
***Δp-q*$_V$ characteristic curves – symbol G**



1	1 → 2 3 → 1
2	1 → 3 2 → 1

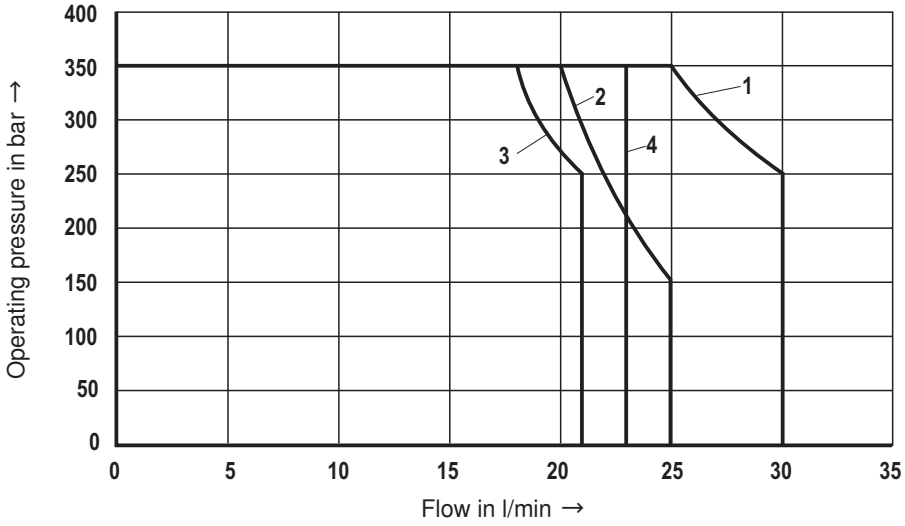
Performance limits (measured with HLP46, ϑ_{oil} = 40 °C ± 5 °C and 24 V coil)

Symbol C



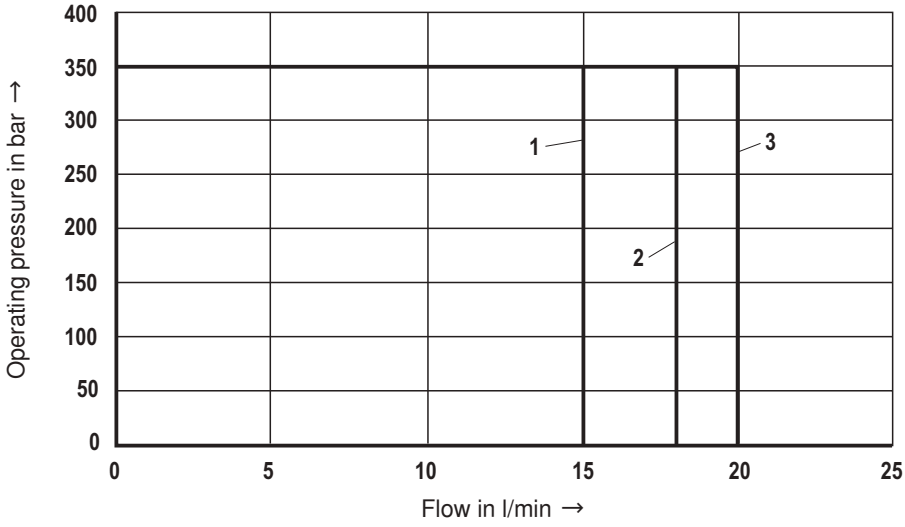
1	1 → 2 2 → 1
2	2 → 3
3	3 → 2

Symbol U



1	2 → 3
2	3 → 2
3	1 → 2
4	2 → 1

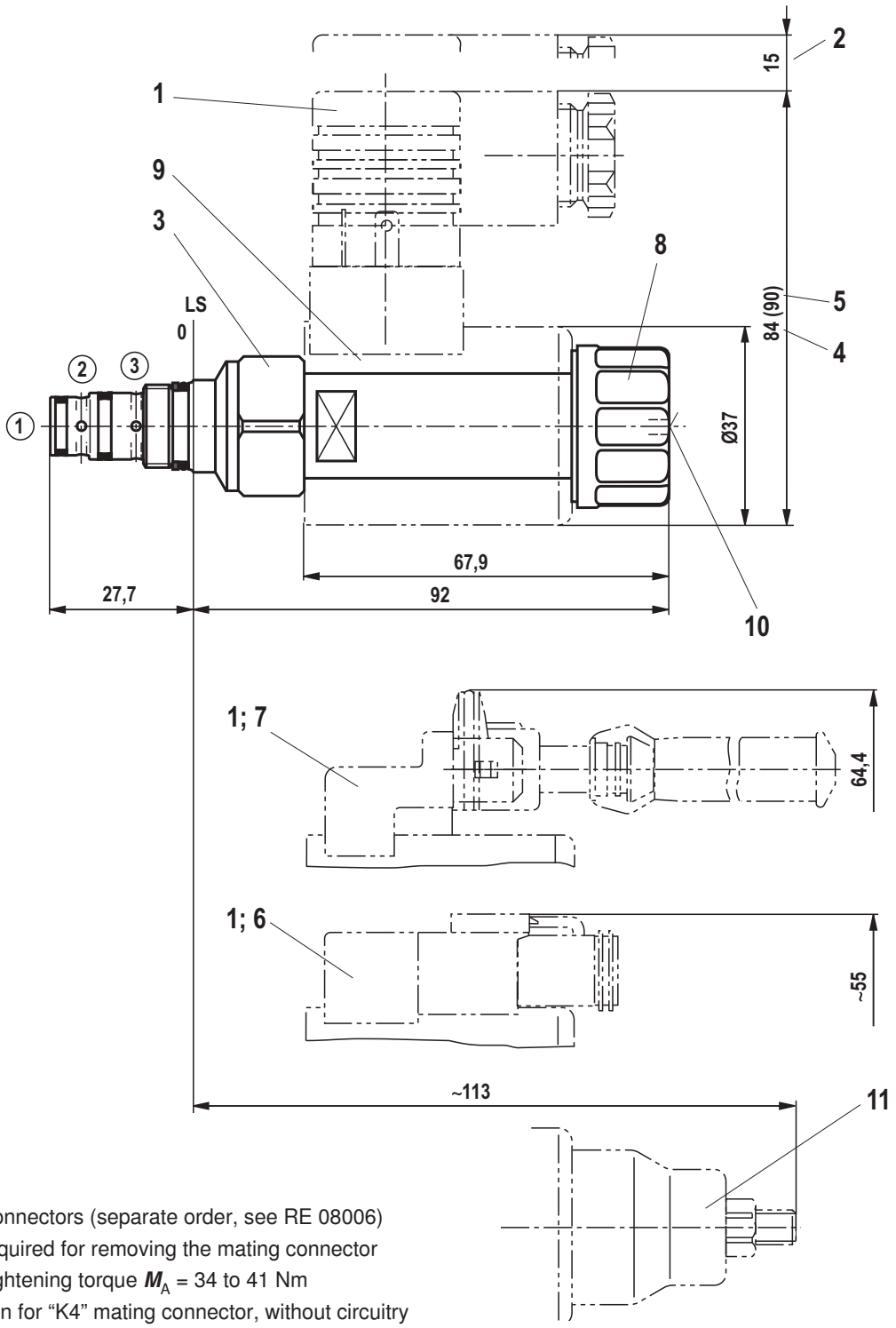
Symbol G



1	1 → 2
2	1 → 3 3 → 1
3	2 → 1

5

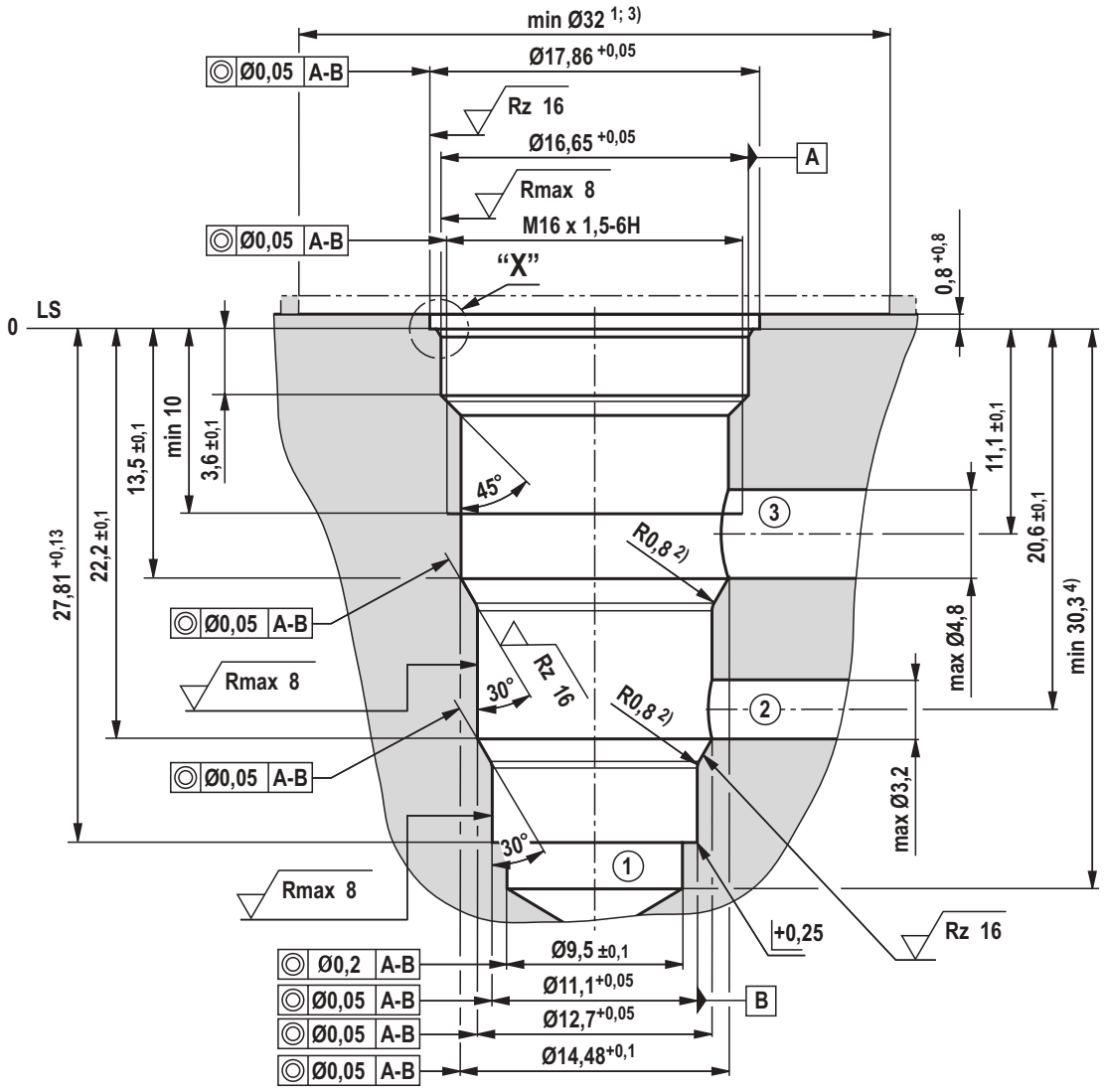
Unit dimensions (dimensions in mm)

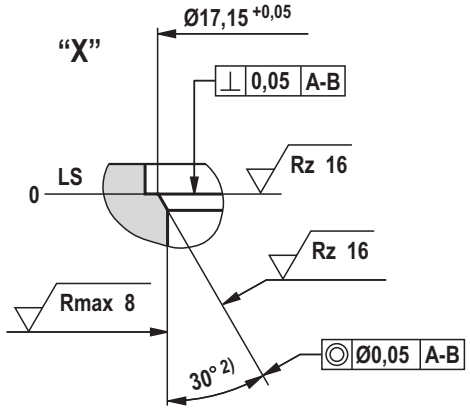


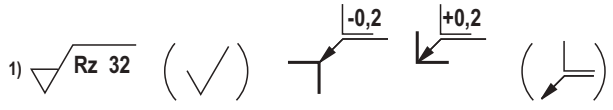
1 Mating connectors (separate order, see RE 08006)
2 Space required for removing the mating connector
3 SW24, tightening torque M_A = 34 to 41 Nm
4 Dimension for “K4” mating connector, without circuitry
5 Dimension () for “K4” mating connector, with circuitry
6 Version “K40”
7 Version “C4”
8 Nut, tightening torque $M_A = 5^{+1}$ Nm
9 Coil (separate order, see page 2)
10 Concealed manual override “N9”, optional
11 Screwable manual override “N10” (separate order, see page 2)

① = Main port 1
② = Main port 2
③ = Main port 3
LS = Location shoulder

Mounting cavity R/T-9A; 3 main ports; thread M1 x 1.5 (dimensions in mm)





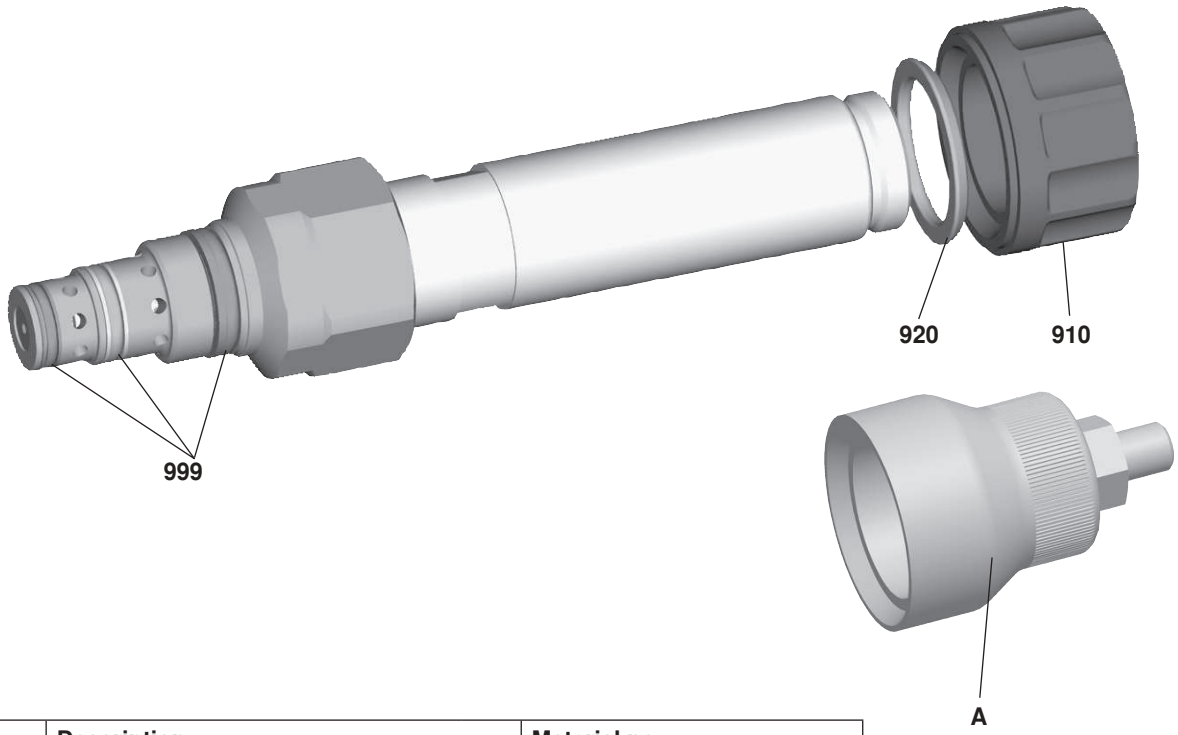


1) Differing from T-9A
2) All seal ring in sertion faces are rounded and free of burrs
3) with counterbore
4) Depth for moving parts

① = Main port 1
② = Main port 2
③ = Main port 3
LS = Location shoulder
Tolerance for all angles ±0.5°

5

Available individual components



Item	Description	Material no.
910	Nut	R900991453
920	O-ring for pole tube	R900007769
999	Seal kit of the valve	R961003414
A	Manual override “N10” [1)]	R901051231

Coils, separate order, see page 2

[1)] Only with ordering code “N9”, see page 2

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Rexroth
Bosch Group

2/2 directional spool valve direct operated with solenoid actuation

RE 18136-06/06.12 1/10
Replaces: 10.09

Type KKDE (high-performance)


H6851

Component size 1
Component series A
Maximum operating pressure 350 bar
Maximum flow 55 l/min

Table of contents

Features

- Mounting cavity R/T-13A
- Direct operated directional spool valve with solenoid actuation
- Free-flowing in both directions
- Very low flow resistance values
- Positive overlap helps to avoid switching shocks
- Wet-pin DC solenoids
- Rotatable solenoid coil
- With concealed manual override

Information on available spare parts:
www.boschrexroth.com/spc

Ordering code (Valve without coil) [1)]

KKDE	R	1		A / H		V	*

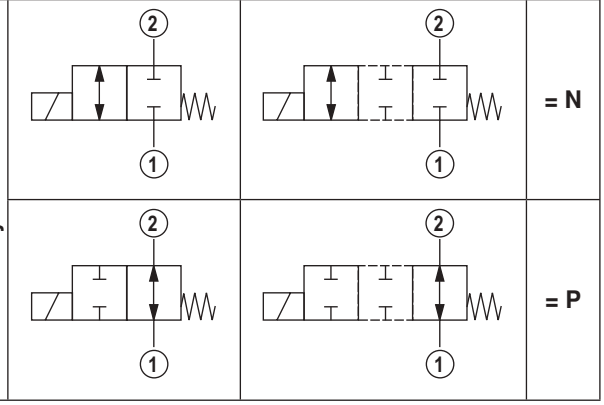
Directional spool valve, direct operated, electrically operated

Maximum operating pressure 350 bar **= R**

Component size **= 1**

2 main ports

Symbols



Further details in the plain text

Seal material

V = FKM seals (other seals upon request)
Attention! Observe compatibility of seals with hydraulic fluid used!

N0 = **without** manual override

N9 = **with** concealed manual override [4)]

H = High-performance and mounting cavity R/T-13A (see page 9)

A = Component series

Valve types (without coil) [1)]

Spool variant	without manual override **"N0"**		with concealed manual override **"N9"**	
	Type	**Material no.**	**Type**	**Material no.**
N	KKDER1NA/HN0V	R901069995	KKDER1NA/HN9V	R901069997
P	KKDER1PA/HN0V	R901069996	KKDER1PA/HN9V	R901070000

Available coils (separate order) [1)]

Direct voltage DC [3)]	**Material no. for coil with connector** [2)]		
	"K4" 03pol (2+PE) DIN EN 175301-803	**"K40"** 02pol K40 DT 04-2PA, make. Deutsch	**"C4"** 02pol C4/Z30 AMP Junior Timer
12 V	R900991678	R900729189	R900315818
24 V	R900991121	R900729190	R900315819

1) Complete valves with mounted coil upon request

2) Mating connectors (separate order), see RE 08006

3) Other voltages upon request

4) Screwable manual override "**N10**" possible (Material no. **R901051231**, separate order)

Function, section, symbols

General

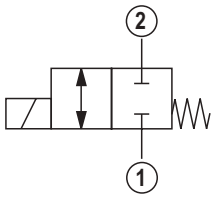
The 2/2 directional spool valves are direct operated, pressure compensated cartridge valves. They control the start, stop and direction of a flow and basically comprise a housing (1) with a movably mounted socket (2), the control spool (5) and a return spring (4).

Function

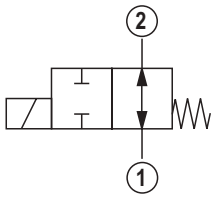
In the de-energized condition, control spool (5) is held in the initial position by the return spring (4). Control spool (5) is actuated by wet-pin DC solenoids (3). The various symbols are realized by corresponding spools (N and P). The main ports ① and ② are suitable for a continuous load with an operating pressure of 350 bar and the flow can be directed into both directions (see symbols).

The manual override (6) allows for the switching of the valve without solenoid energization. It is also available in screwable version “N10” (7) (see page 2).

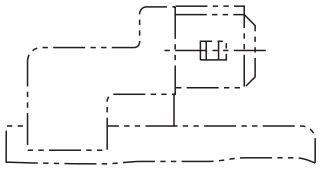
Symbol “N”



Symbol “P”

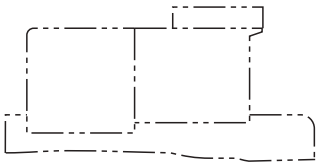


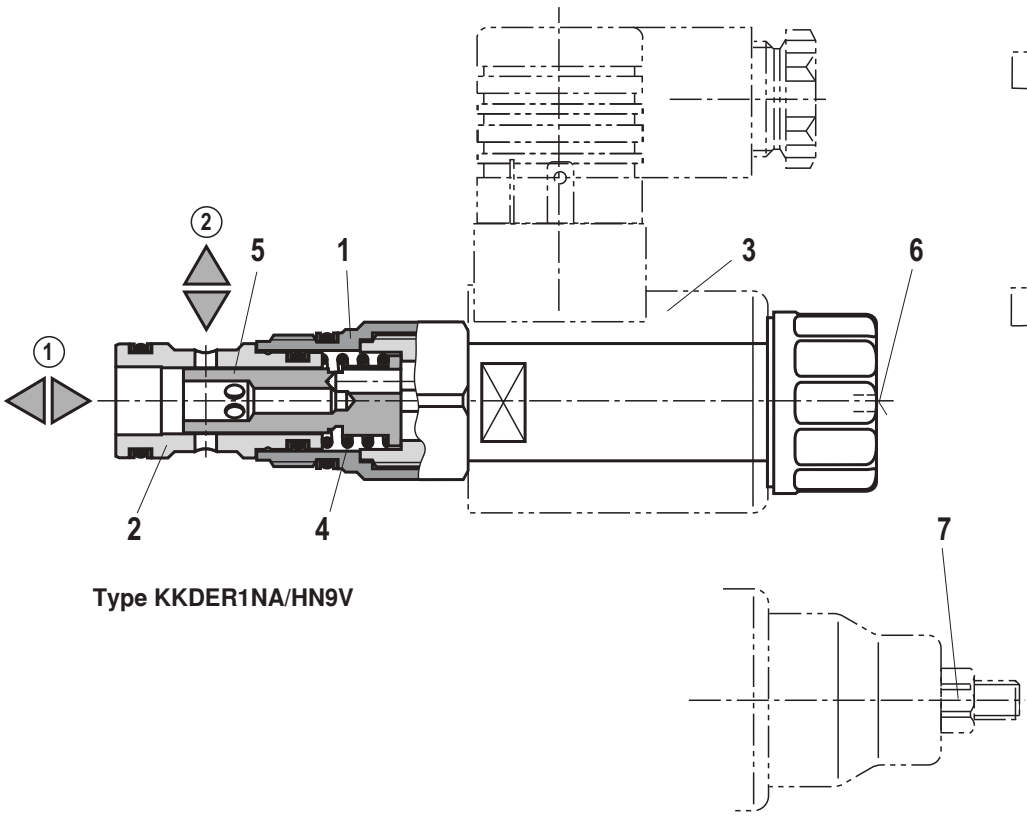
Version “C4”



Version “K4”
(with mating connector)

Version “K40”





Type KKDER1NA/HN9V

5

Technical data (For applications outside these parameters, please consult us!)

general

Weight	– Valve	kg	0.30
	– Coil	kg	0.25
Installation position			Any
Ambient temperature range		°C	–40 to +110

hydraulic

Maximum operating pressure		bar	350 (at all ports)
Maximum flow		l/min	55
Hydraulic fluid			Mineral oil (HL, HLP) according to DIN 51524; quickly biodegradable hydraulic fluids according to VDMA 24568 (see also RE 90221); HETG (rape seed oil); HEPG (polyglycols); HEES (synthetic esters); other hydraulic fluids upon request
Hydraulic fluid temperature range		°C	–40 to +80
Viscosity range		mm^2/s	4 to 500
Maximum permitted degree of contamination of the hydraulic fluid - cleanliness class according to ISO 4406 (c)			Class 20/18/15 [1]
Load cycles			10 million (at 350 bar)

electrical

Voltage type			Direct voltage
Supply voltage [2]		V	12 DC; 24 DC
Voltage tolerance against ambient temperature			See characteristic curve page 5
Power consumption		W	22
Duty cycle		%	See characteristic curve page 5
Maximum coil temperature [3]		°C	150
Switching time according to ISO 6403 (solenoid horizontal)	– ON	ms	≤ 80
	– OFF	ms	≤ 50
Maximum switching frequency		cy/h	15000
Protection class according to VDE 0470-1 (DIN EN 60529) DIN 40050-9	– Version “K4”		IP 65 with mating connector mounted and locked
	– Version “C4”		IP 66 with mating connector mounted and locked
			IP 69K with Rexroth mating connector (Material no. R901022127)
	– Version “K40”		IP 69K with mating connector mounted and locked

[1] The cleanliness classes specified for the components must be adhered to in hydraulic systems. Effective filtration prevents faults and at the same time increases the service life of the components.

For the selection of filters, see data sheets RE 50070, RE 50076, RE 50081, RE 50086, RE 50087 and RE 50088.

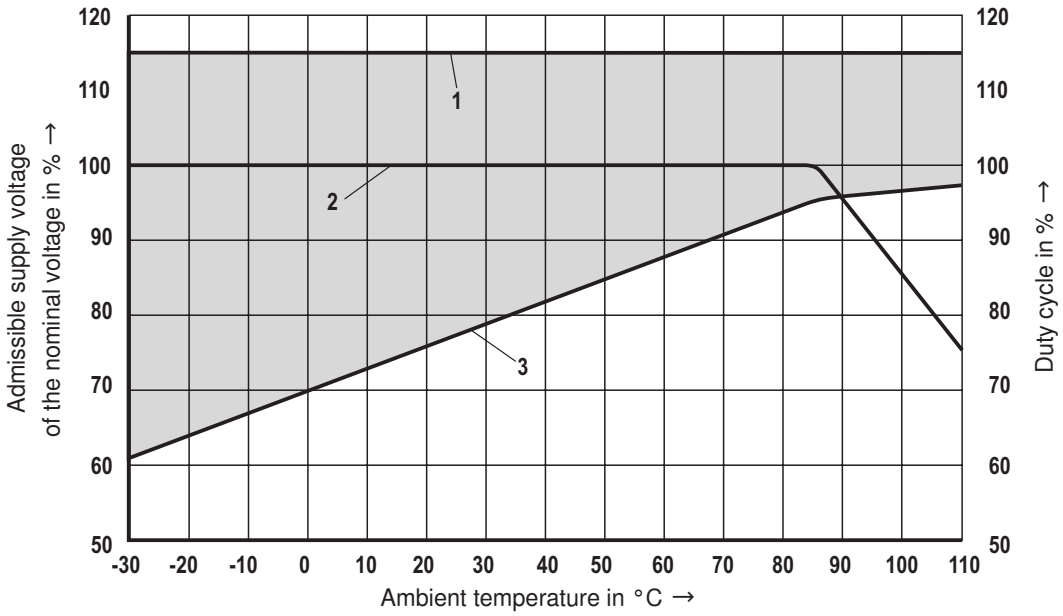
[2] Other voltages upon request

[3] Due to the temperatures occurring at the surfaces of the solenoid coils, the standards ISO 13732-1 and EN 982 need to be adhered to!

At the electrical connection “K4”, the protective earthing conductor (PE ⏚) has to be connected properly.

Voltage tolerance against ambient temperature; duty cycle

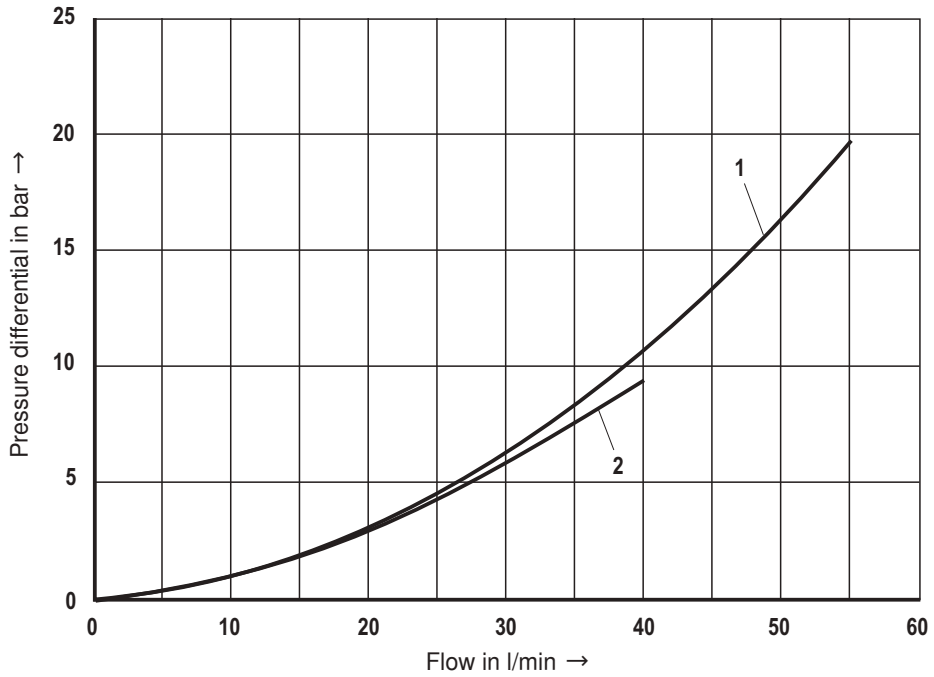
Voltage range and duty cycle depending on the ambient temperature



1 Maximum voltage
2 Duty cycle
3 Minimum response voltage
Admissible supply voltage range

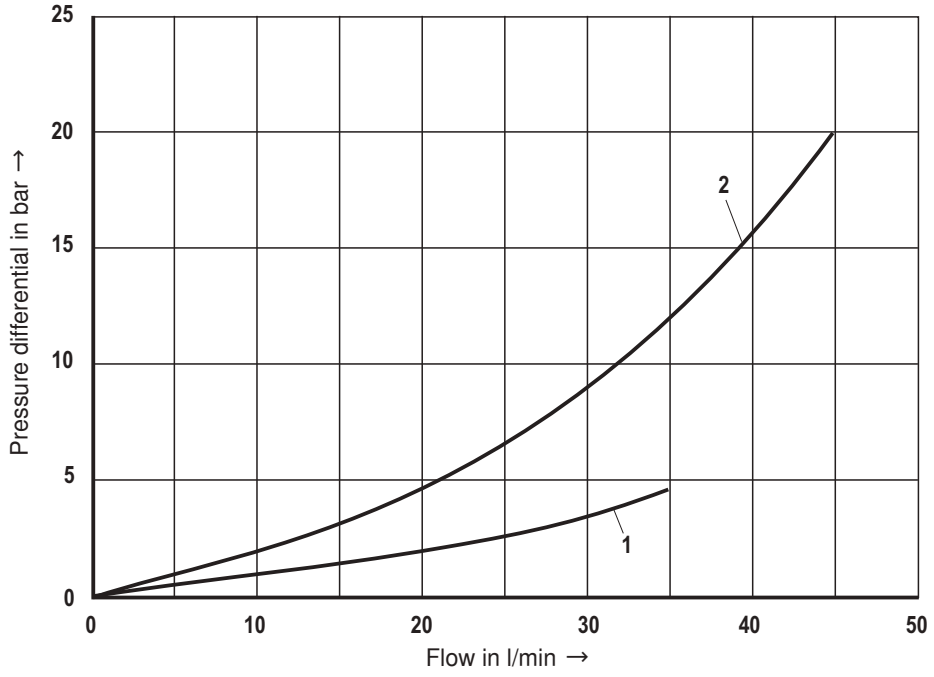
Characteristic curves (measured with HLP46, ϑ_{oil} = 40 °C ± 5 °C and 24 V coil)

***Δp-q*$_V$ characteristic curves – symbol N**



1	2 → 1
2	1 → 2

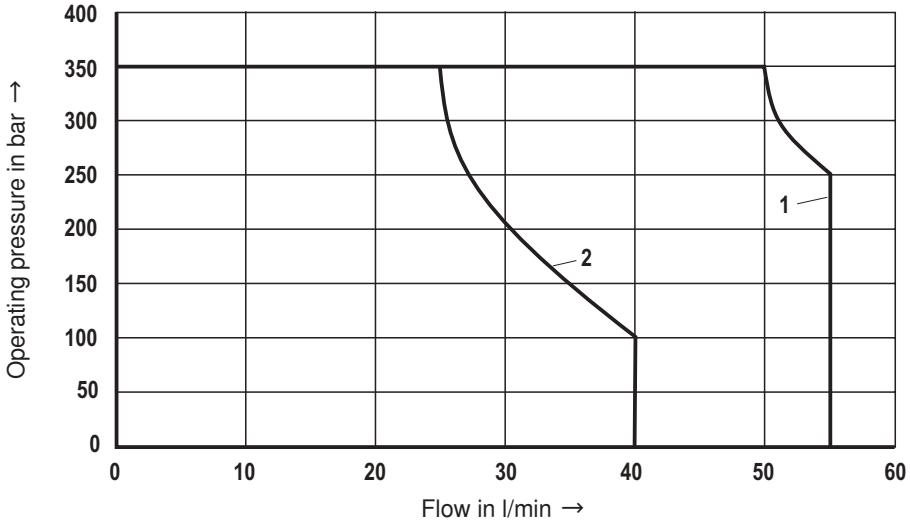
***Δp-q*$_V$ characteristic curves – symbol P**



1	2 → 1
2	1 → 2

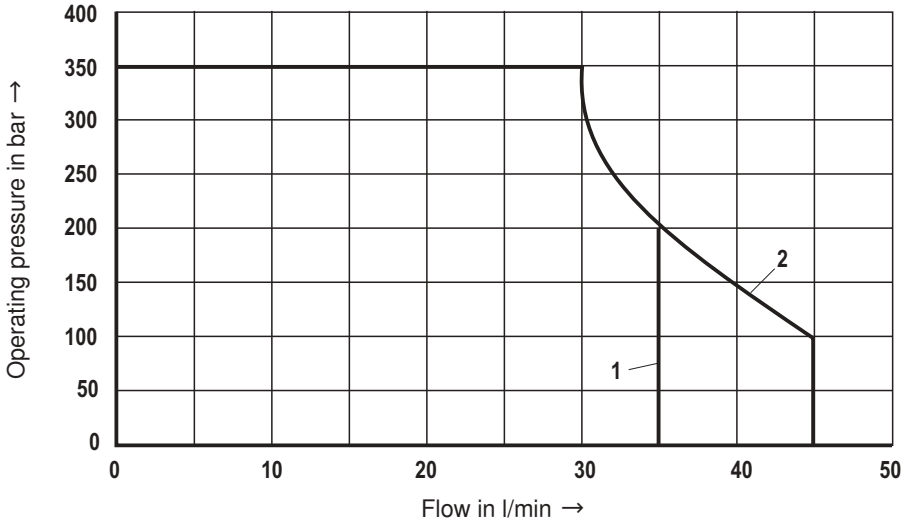
Performance limits (measured with HLP46, ϑ_{oil} = 40 °C ± 5 °C and 24 V coil)

Symbol N



1	2 → 1
2	1 → 2

Symbol P



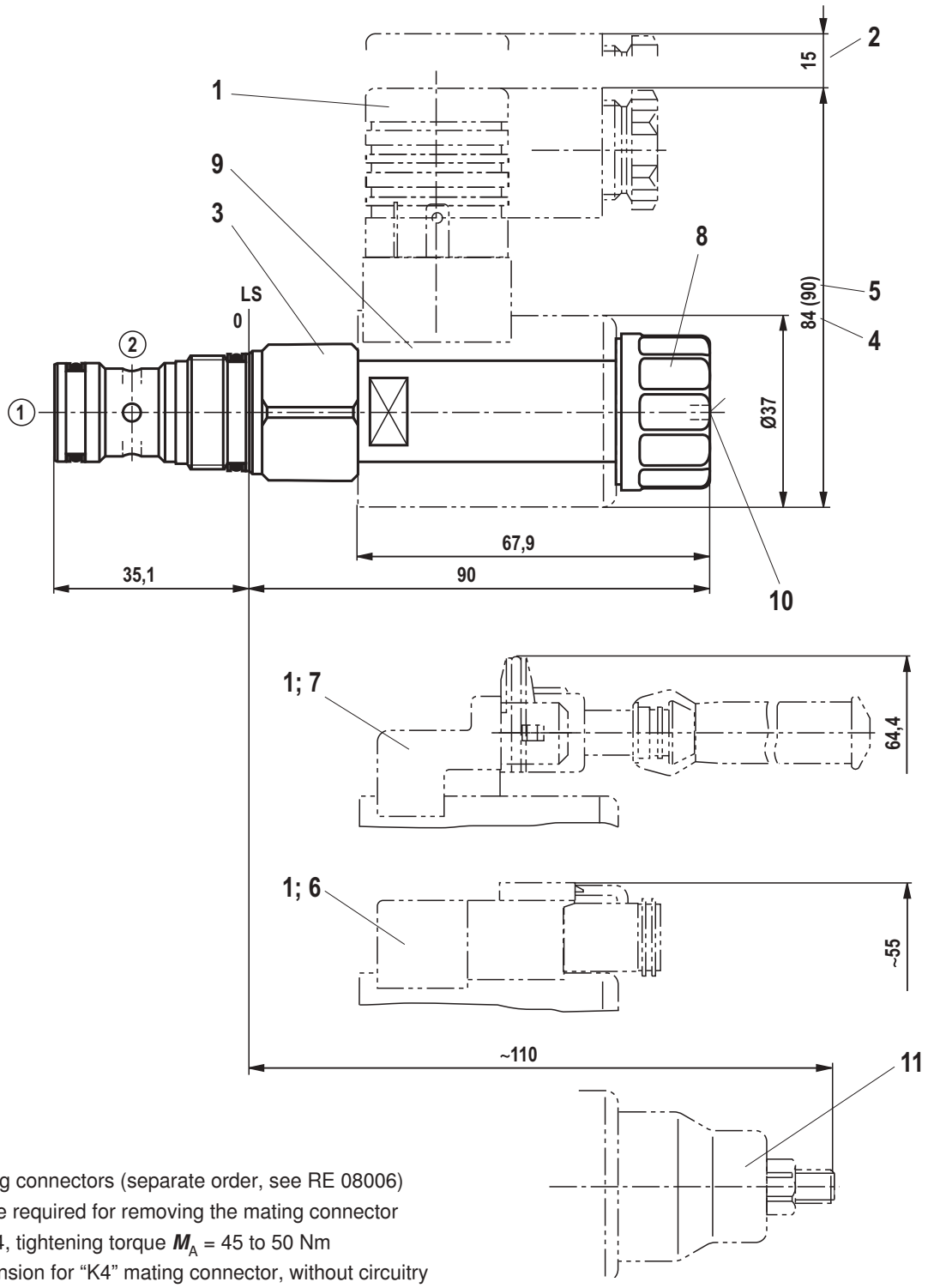
1	2 → 1
2	1 → 2

5

Attention!

The performance limits were determined when the solenoids were at operating temperature and at 10% undervoltage.

Unit dimensions (dimensions in mm)

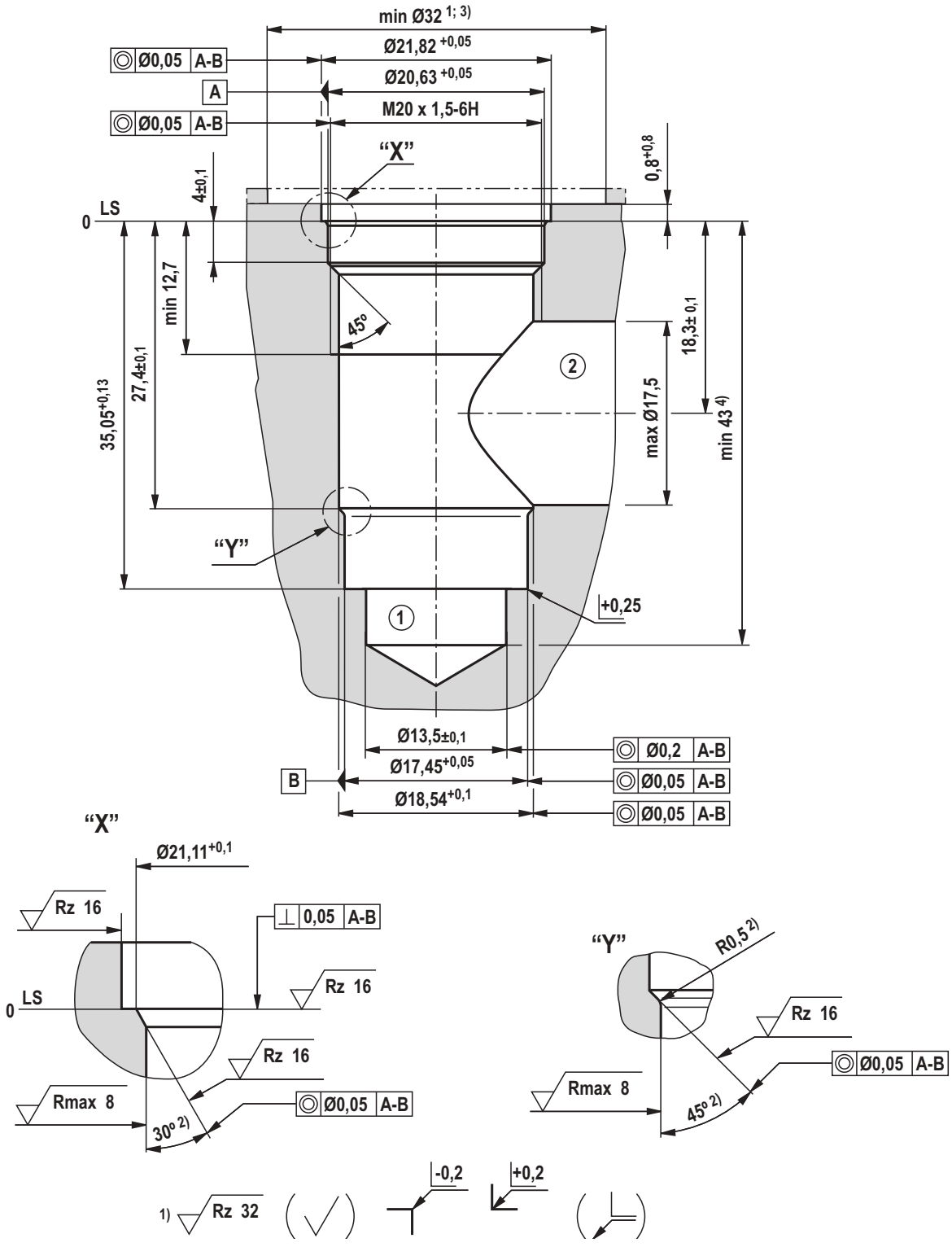


1 Mating connectors (separate order, see RE 08006)
2 Space required for removing the mating connector
3 SW24, tightening torque M_A = 45 to 50 Nm
4 Dimension for “K4” mating connector, without circuitry
5 Dimension () for “K4” mating connector, with circuitry
6 Version “K40”
7 Version “C4”
8 Nut, tightening torque $M_A = 5^{+1}$ Nm
9 Coil (separate order, see page 2)
10 Concealed manual override “N9”, optional
11 Screwable manual override “N10” (separate order, see page 2)

① = Main port 1
② = Main port 2
LS = Location shoulder

Mounting cavity R/T-13A; 2 main ports; thread M20 x 1.5

(dimensions in mm)



1) Differing from T-13A

2) All seal ring in sertion faces are rounded and free of burrs

3) with counterbore

4) Depth for moving parts

① = Main port 1

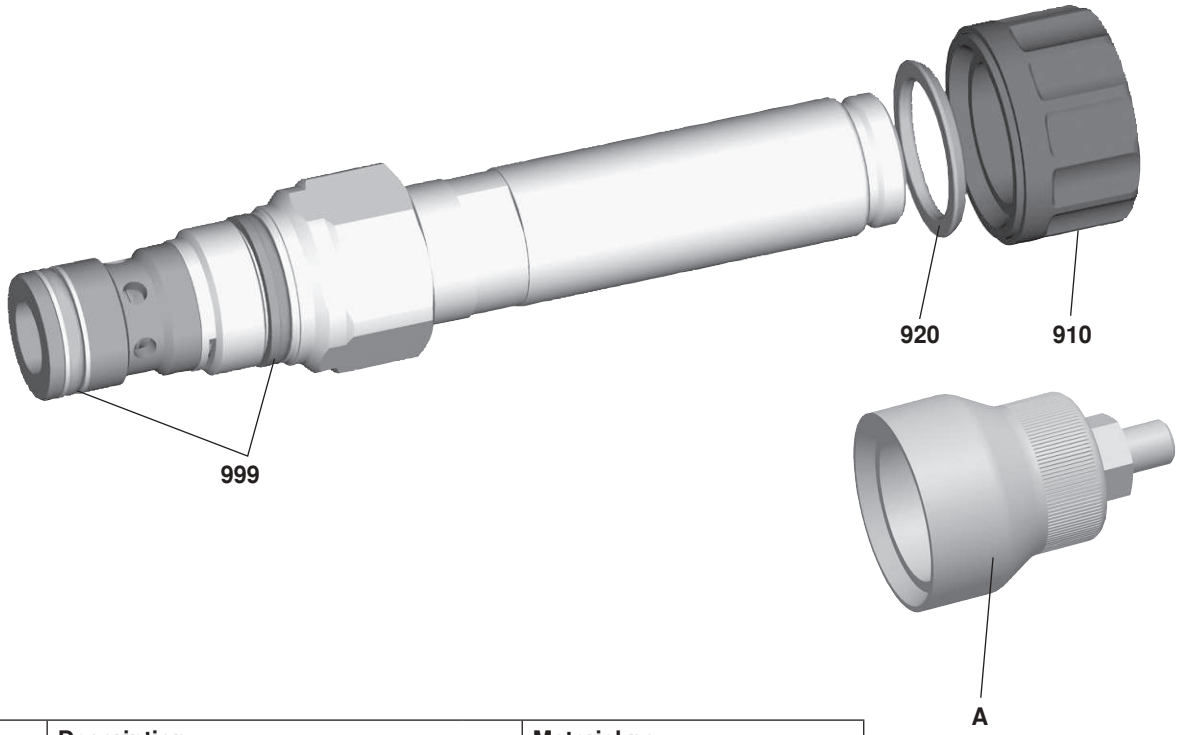
① = Main port 2

LS = Location Shoulder

Tolerance for all angles ±0.5°

5

Available individual components



Item	Description	Material no.
910	Nut	R900991453
920	O-ring for pole tube	R900007769
999	Seal kit of the valve	R961003236
A	Manual override “N10” [1)]	R901051231

Coils, separate order, see page 2

[1)] Only with ordering code “N9”, see page 2

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Rexroth
Bosch Group

3/2 directional spool valve, direct operated with solenoid actuation

RE 18136-04/06.11 1/10
Replaces: 10.09

Type KKDE (high-performance)


H6810

Size 1
Component series A
Maximum operating pressure 350 bar
Maximum flow 60 l/min

Table of contents

Information on available spare parts:
www.boschrexroth.com/spc

Features

- Direct operated directional spool valve with solenoid actuation
- Mounting cavity R/T-11A
- Free-flowing in both directions
- Wet-pin DC solenoids
- Rotatable solenoid coil
- with concealed manual override

Ordering code (valve without coil) [1)]

KKDE	R	1		A / H		V	*

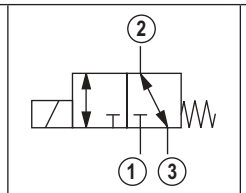
Directional spool valve, direct operated, electrically operated

Maximum operating pressure 350 bar **= R**

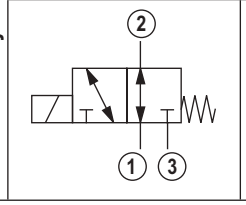
Size **= 1**

3 main ports

Symbols [2)]



= C



= U

Further details in the plain text

Seal material

V = FKM seals
(Other seals upon request)
Attention!
Observe compatibility of seals with hydraulic fluid used!

N0 = **Without** manual override

N9 = **With** concealed manual override [5)]

H = High-performance and mounting cavity R/T-11A (see page 9)

A = Component series

Valve types (without coil) [1)]

	without manual override "**N0**"		with concealed manual override "**N9**"	
Spool symbol	**Type**	**Material no.**	**Type**	**Material no.**
C	KKDER1CA/HN0V	R901070094	KKDER1CA/HN9V	R901070103
U	KKDER1UA/HN0V	R901070099	KKDER1UA/HN9V	R901070105

Available coils (separate order) [1)]

	Material no. for coil with connector [3)]		
	"K4" 03pol (2+PE) DIN EN 175301-803	**"K40"** 02pol K40 DT 04-2PA, make Deutsch	**"C4"** 02pol C4/Z30 AMP Junior Timer
Direct voltage DC [4)]			
12 V	R900991678	R900729189	R900315818
24 V	R900991121	R900729190	R900315819

[1)] Complete valves with mounted coil upon request

[2)] With transition function during the switching process

[3)] Mating connectors, separate order, see data sheet 08006

[4)] Other voltages upon request

[5)] Screwable manual override "**N10**" possible (Material no. **R901051231**, separate order)

Function, section, symbols

General

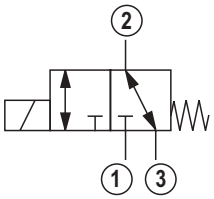
The 3/2 directional spool valves are direct operated, pressure-compensated cartridge valves. They control the start, stop and direction of a flow and basically comprise a housing (1) with a movably mounted socket (2), the control spool (5)and a return spring (4).

Function

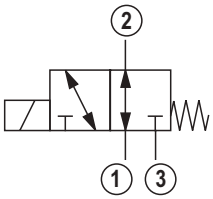
In the de-energized condition, the control spool (5) is held in the initial position by the return spring (4). The control spool (5) is actuated by wet-pin DC solenoids (3). The symbols are realized by different spools (C or U). The main ports ①, ②, and ③ are suitable for a continuous load with an operating pressure of 350 bar and the flow can be directed into both directions (see symbols).

The manual override (6) allows for the switching of the valve without solenoid energization. It is also available in screwable version "N10" (7) (see page 2).

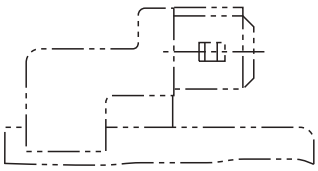
Symbol "C"



Symbol "U"

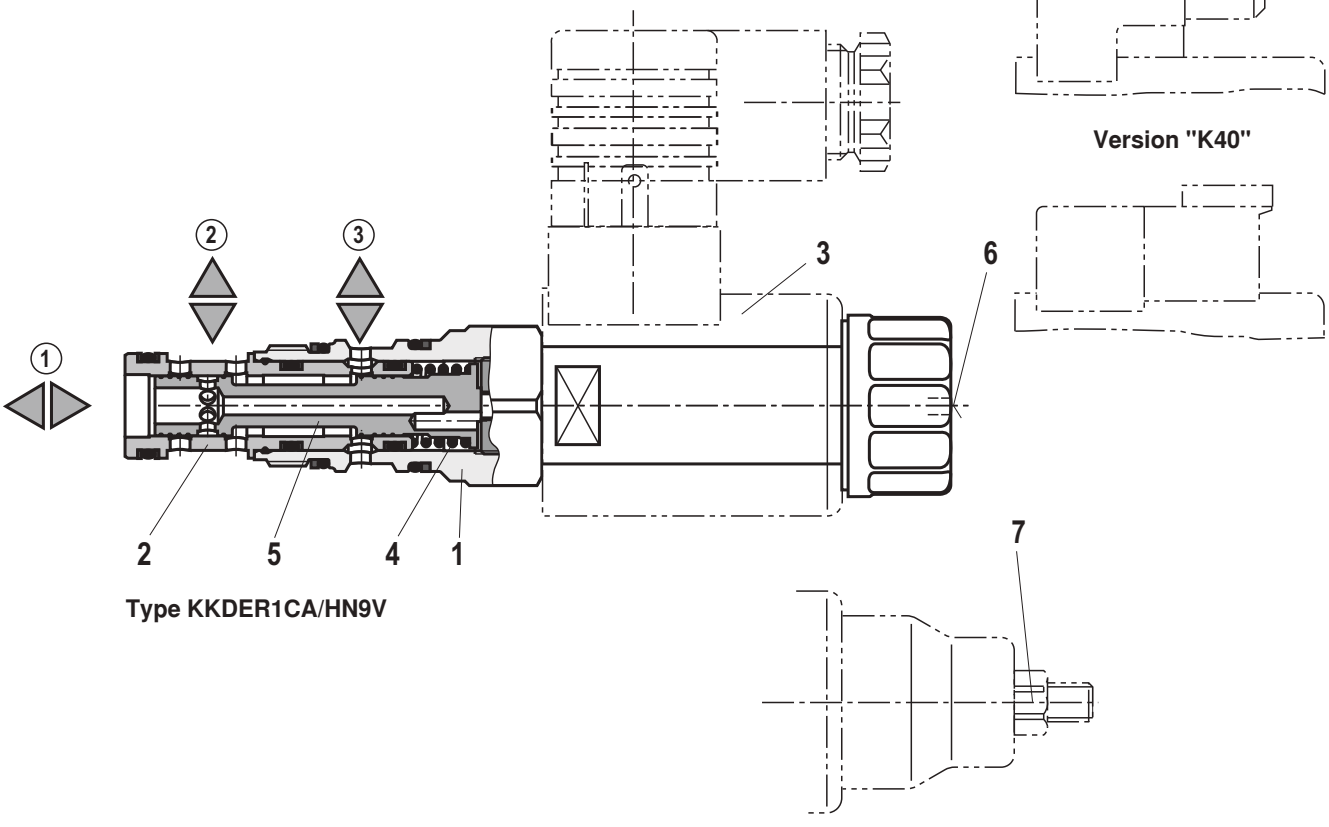


Version "C4"



Version "K4"
(with mating connector)

Version "K40"



Type KKDER1CA/HN9V

Technical data (For applications outside these parameters, please consult us!)

general

Weight	– Valve	kg	0.3
	– Coil	kg	0.25
Installation position			Any
Ambient temperature range		°C	–40 to +110

hydraulic

Maximum operating pressure	bar	350 (at all ports)
Maximum flow	l/min	60
Hydraulic fluid		See table below
Hydraulic fluid temperature range	°C	–40 to +80
Viscosity range	mm^2/s	4 to 500
Maximum permitted degree of contamination of the hydraulic fluid - cleanliness class according to ISO 4406 (c)		Class 20/18/15 [1)]
Load cycles		10 million (at 350 bar)

Hydraulic fluid		Classification	Suitable sealing materials	Standards
Mineral oils and related hydrocarbons		HL, HLP, HLPD, HVLP, HVLPD	FKM	DIN 51524
Environmentally compatible	– Insoluble in water	HEES	FKM	ISO 15380
		HEPR	FKM	
	– Soluble in water	HEPG	FKM	ISO 15380
Flame-resistant	– Water-free	HFDU, HFDR	FKM	ISO 12922
	– Water-containing	HFAS	FKM	ISO 12922

☞ **Important information on hydraulic fluids!**

- For more information and data on the use of other hydraulic fluids refer to data sheet 90220 or contact us!
- There may be limitations regarding the technical valve data (temperature, pressure range, service life, maintenance intervals, etc.)!
- The flash point of the process and operating medium used must be 40 K higher than the maximum solenoid surface temperature.
- **Flame-resistant – water-containing:** Maximum pressure differential per control edge 175 bar, otherwise, increased cavitation erosion!
  Tank pre-loading < 1 bar or > 20 % of the pressure differential. The pressure peaks should not exceed the maximum operating pressures!
- **Environmentally compatible:** When using environmentally compatible hydraulic fluids that are simultaneously zinc-solving, zinc may accumulate in the medium (700 mg zinc per pole tube).

[1)] The cleanliness classes specified for the components must be adhered to in hydraulic systems. Effective filtration prevents faults and at the same time increases the service life of the components.

For the selection of the filters see www.boschrexroth.com/filter.

Technical data (For applications outside these parameters, please consult us!)

electric

Voltage type			Direct voltage
Supply voltage [2]		V	12 DC; 24 DC
Voltage tolerance against ambient temperature			See characteristic curve below
Power consumption		W	22
Duty cycle		%	See characteristic curve below
Maximum coil temperature [3]		°C	150
Switching time according to ISO 6403 (solenoid horizontal)	– ON	ms	≤ 80
	– OFF	ms	≤ 50
Maximum switching frequency		cy/h	15000
Protection class according to VDE 0470-1 (DIN EN 60529) DIN 40050-9	– Version "K4"		IP 65 with mating connector mounted and locked
	– Version "C4"		IP 66 with mating connector mounted and locked
			IP 69K with Rexroth mating connector (Material no. R901022127)
	– Version "K40"		IP 69K with mating connector mounted and locked

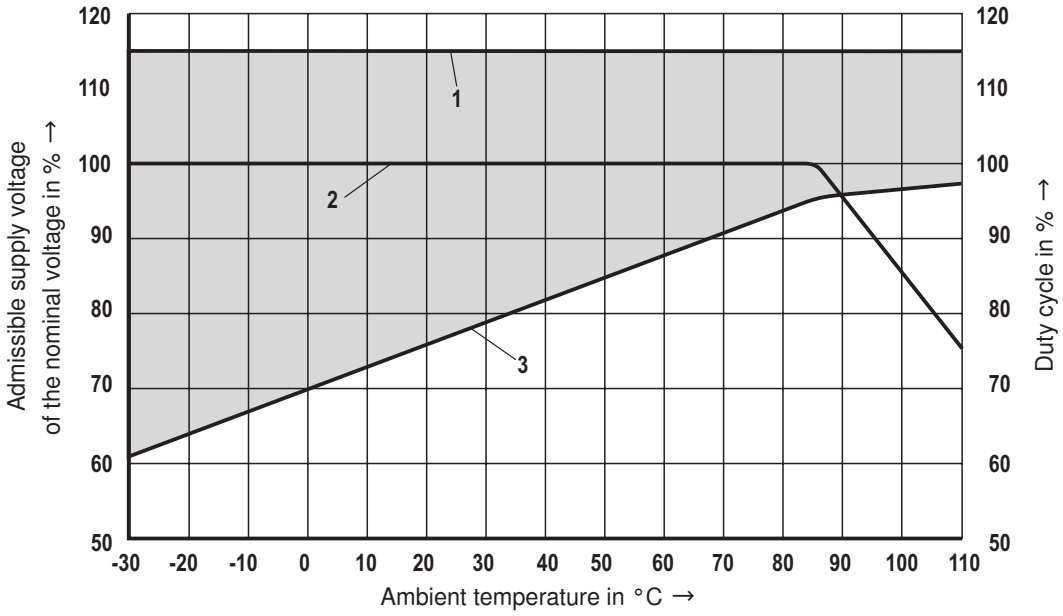
[2] Other voltages upon request

[3] Due to the surface temperatures of the solenoid coils, the standards ISO 13732-1 and EN 982 need to be adhered to!

At the electrical connection "K4", the protective earthing conductor (PE ⏚) has to be connected properly.

Voltage tolerance against ambient temperature; duty cycle

Voltage range and duty cycle depending on the ambient temperature



1 Maximum voltage

2 Duty cycle

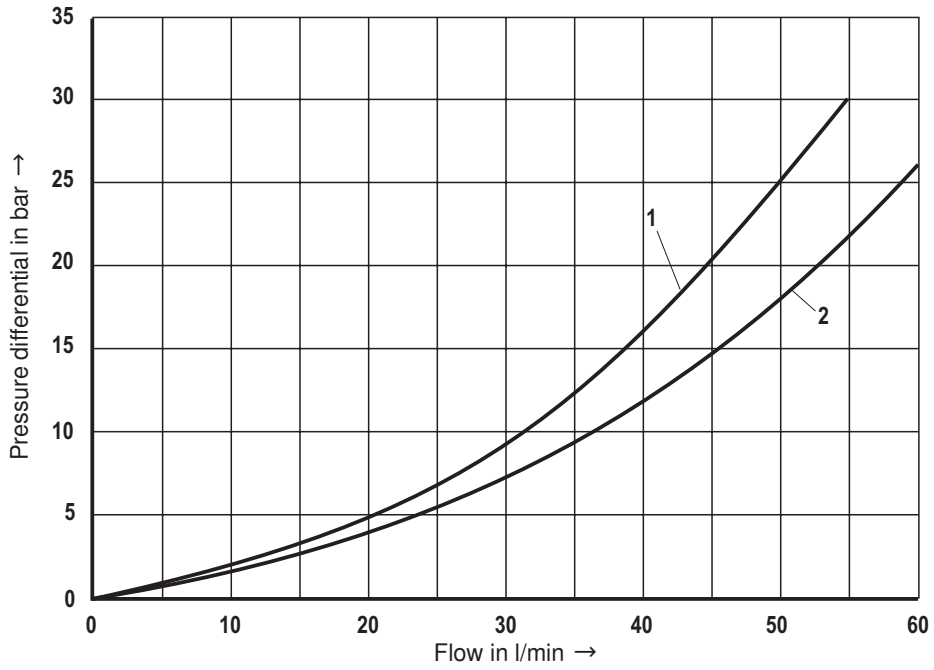
3 Minimum response voltage

Admissible supply voltage range

5

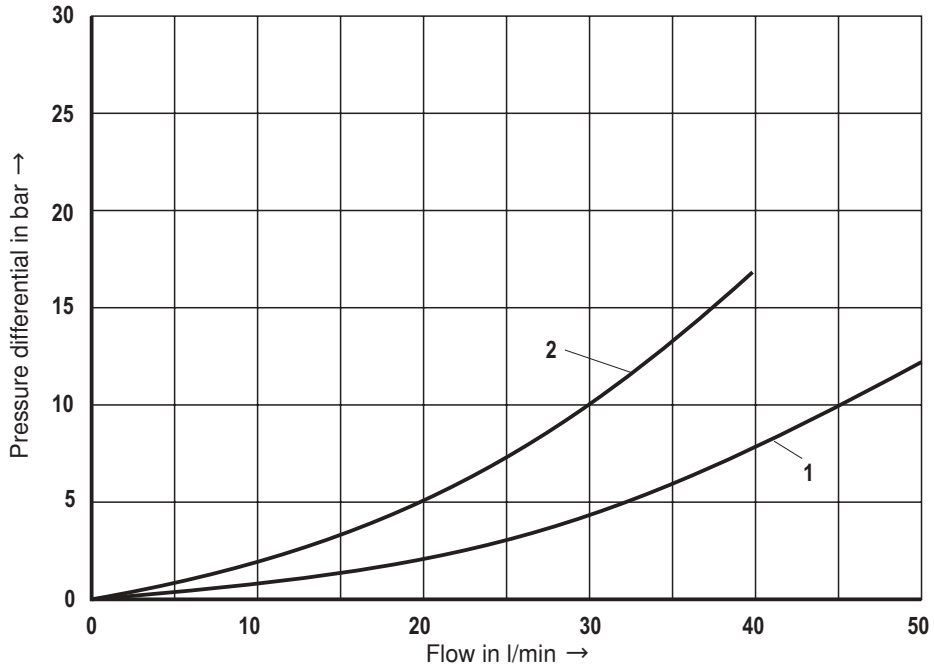
Characteristic curves (measured with HLP46, ϑ_{oil} = 40 °C ± 5 °C and 24 V coil)

Δp-q_V characteristic curves – symbol C



1	① → ② ② → ①
2	③ → ② ② → ③

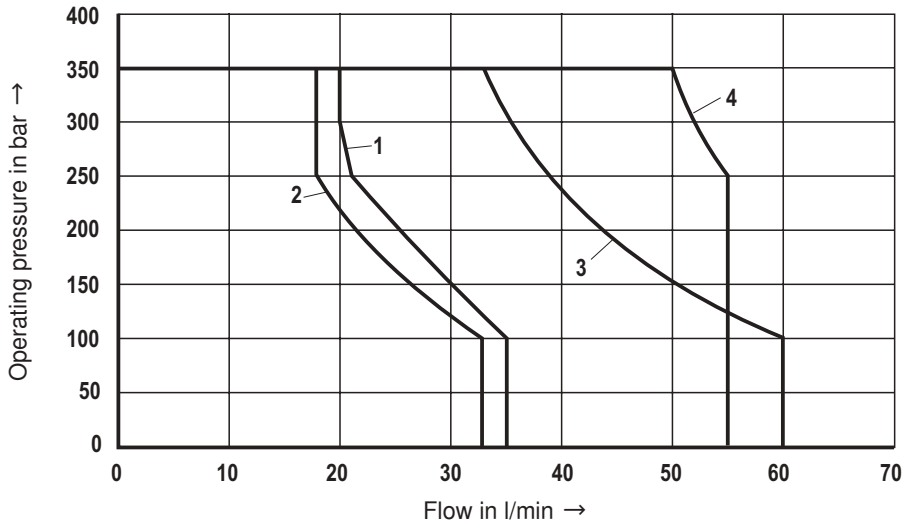
Δp-q_V characteristic curves – symbol C



1	① → ② ② → ①
2	③ → ② ② → ③

Performance limits (measured with HLP46, ϑ_{oil} = 40 °C ± 5 °C and 24 V coil)

Symbol C

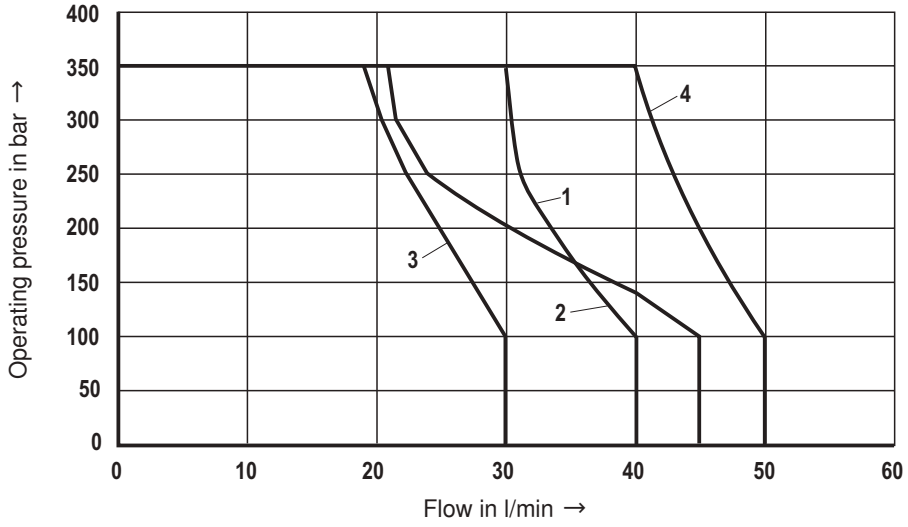


Attention!

The performance limits were determined when the solenoids were at operating temperature and at 10 % undervoltage.

1	① → ②
2	② → ③
3	③ → ②
4	② → ①

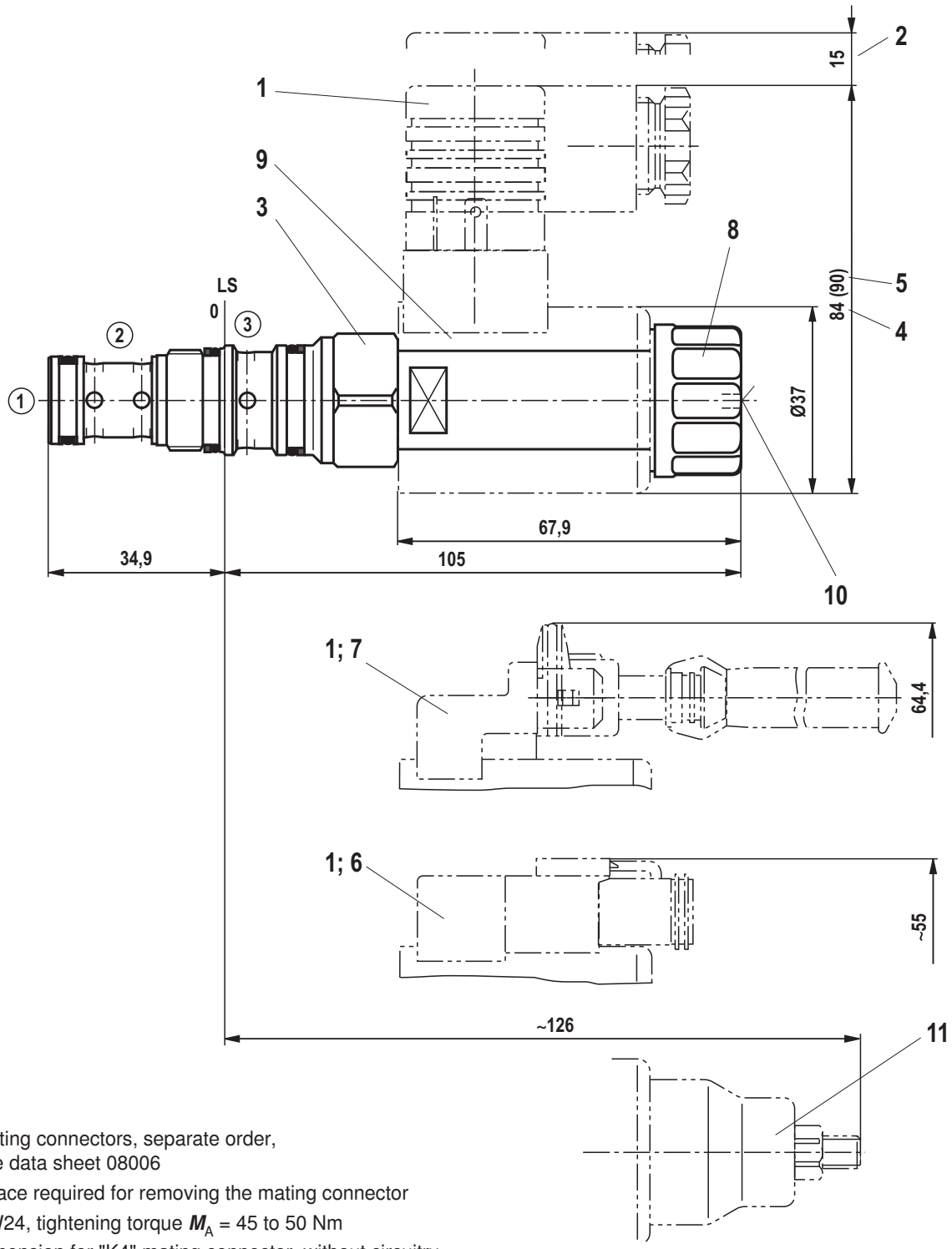
Symbol U



1	① → ②
2	② → ③
3	③ → ②
4	② → ①

5

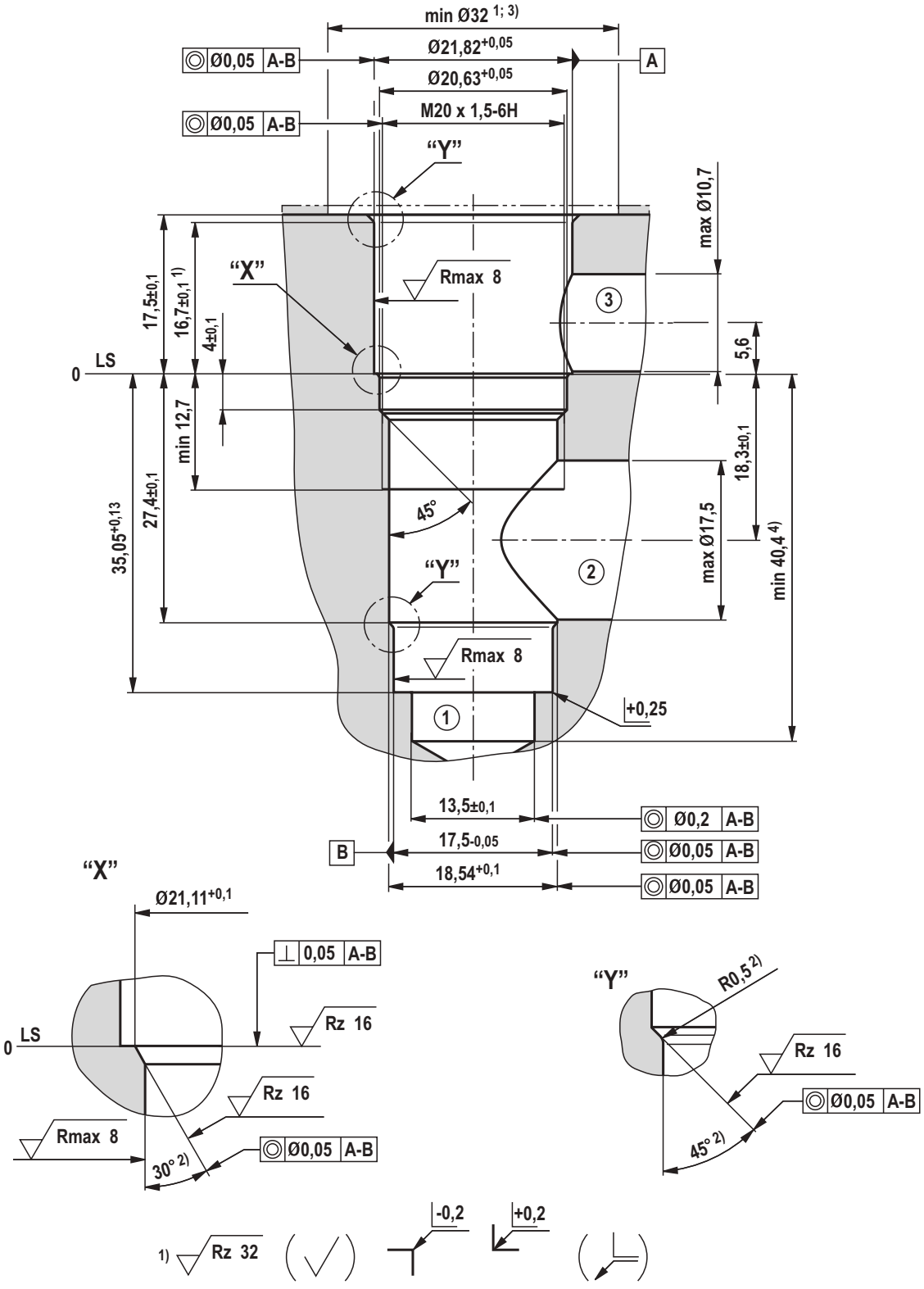
Unit dimensions (dimensions in mm)



1 Mating connectors, separate order, see data sheet 08006
2 Space required for removing the mating connector
3 SW24, tightening torque M_A = 45 to 50 Nm
4 Dimension for "K4" mating connector, without circuitry
5 Dimension () for "K4" mating connector, with circuitry
6 Version "K40"
7 Version "C4"
8 Nut, tightening torque $M_A = 5^{+1}$ Nm
9 Coil (separate order, see page 2)
10 Concealed manual override "N9", optional
11 Screwable manual override "N10" (separate order, see page 2)

① = Main port 1
② = Main port 2
③ = Main port 3
LS = Location shoulder

Mounting cavity R/T-11A; 3 main ports; thread M20 x 1.5 (dimensions in mm)

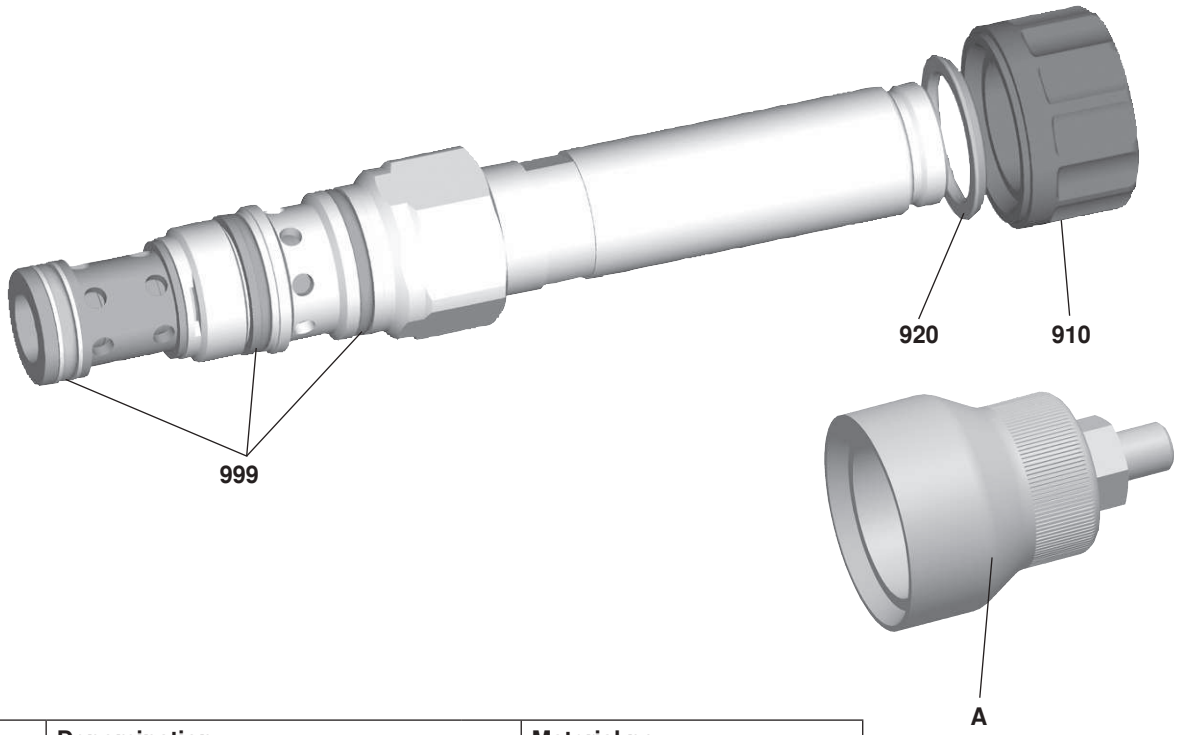


1) Differing from T-11A
2) All seal ring insertion faces are rounded and free of burrs
3) With counterbore
4) Depth for moving parts

① = Main port 1
② = Main port 2
③ = Main port 3

LS = Location shoulder
Tolerance for all angles ±0.5°

Available individual components



Item	Denomination	Material no.
910	Nut	R900991453
920	O-ring for pole tube	R900007769
999	Seal kit of the valve	R961003235
A	Manual override "N10" [1)]	R901051231

Coils, separate order, see page 2

[1)] Only with ordering code "N9", see page 2

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97816 Lohr am Main, Germany
Phone +49 (0) 93 52 / 18-0
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Rexroth
Bosch Group

4/2 directional spool valve direct operated with solenoid actuation

RE 18136-05/06.12 1/10
Replaces: 10.09

Type KKDE (high-performance)


H6812

Component size 1
Component series A
Maximum operating pressure 350 bar
Maximum flow 40 l/min

Table of contents

Information on available spare parts:
www.boschrexroth.com/spc

Features

- Mounting cavity R/T-31A
- Direct operated directional spool valve with solenoid actuation
- Free-flowing in both directions
- Wet-pin DC solenoids
- Rotatable solenoid coil
- With concealed manual override

Ordering code (Valve without coil) [1)]

KKDE	R	1		A / H		V	*

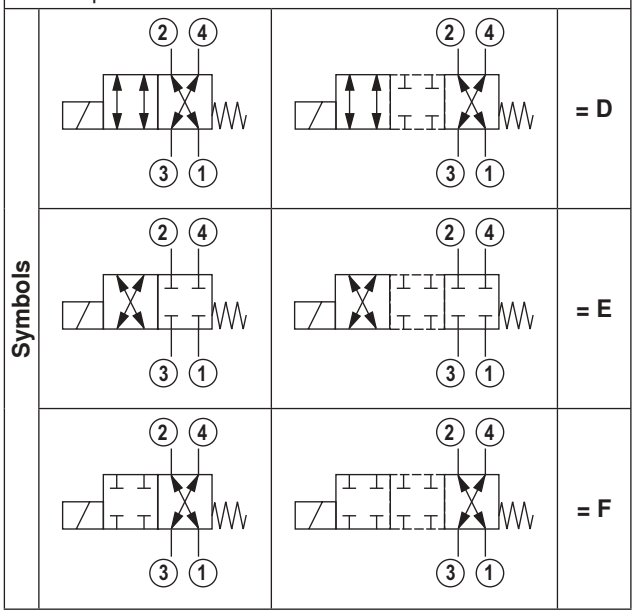
Directional spool valve, direct operated, electrically operated

Maximum operating pressure 350 bar **= R**

Component size **= 1**

4 main ports

Symbols



Further details in the plain text

Seal material

V = FKM seals (other seals upon request)
Attention! Observe compatibility of seals with hydraulic fluid used!

N0 = **without** manual override

N9 = **with** concealed manual override [4)]

H = High-performance and mounting cavity R/T-31A (see page 9)

A = Component series

Valve types (without coil) [1)]

	without manual override "**N0**"		with concealed manual override "**N9**"	
Spool symbol	**Type**	**Material no.**	**Type**	**Material no.**
D	KKDER1DA/HN0V	R901070118	KKDER1DA/HN9V	R901070125
E	KKDER1EA/HN0V	R901070123	KKDER1EA/HN9V	R901070127
F	KKDER1FA/HN0V	R901070124	KKDER1FA/HN9V	R901070129

Available coils (separate order) [1)]

	Material no. for coil with connector [2)]		
	"K4" 03pol (2+PE) DIN EN 175301-803	**"K40"** 02pol K40 DT 04-2PA, make. Deutsch	**"C4"** 02pol C4/Z30 AMP Junior Timer
Direct voltage DC [3)]			
12 V	R900991678	R900729189	R900315818
24 V	R900991121	R900729190	R900315819

[1)] Complete valves with mounted coil upon request

[2)] Mating connectors (separate order), see RE 08006

[3)] Other voltages upon request

[4)] Screwable manual override **"N10"** possible (Material no. **R901051231**, separate order)

Function, section, symbols

General

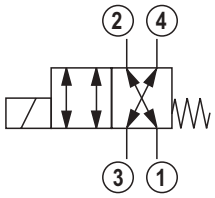
The 4/2 directional spool valves are direct operated, pressure compensated cartridge valves. They control the start, stop and direction of a flow and basically comprise a housing (1) with a movably mounted socket (2), the control spool (5) and a return spring (4).

Function

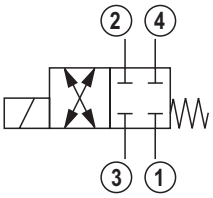
In the de-energized condition, control spool (5) is held in the initial position by the return spring (4). Control spool (5) is actuated by wet-pin DC solenoids (3). The various symbols are realized by corresponding spools (D; E, and F). The main ports ①, ②, ③, and ④ are suitable for a continuous load with an operating pressure of 350 bar and the flow can be directed into both directions (see symbols).

The manual override (6) allows for the switching of the valve without solenoid energization. It is also available in screwable version “N10” (7) (see page 2).

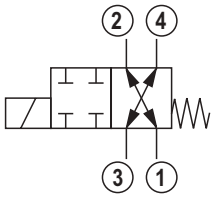
Symbol “D”



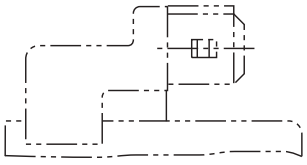
Symbol “E”



Symbol “F”

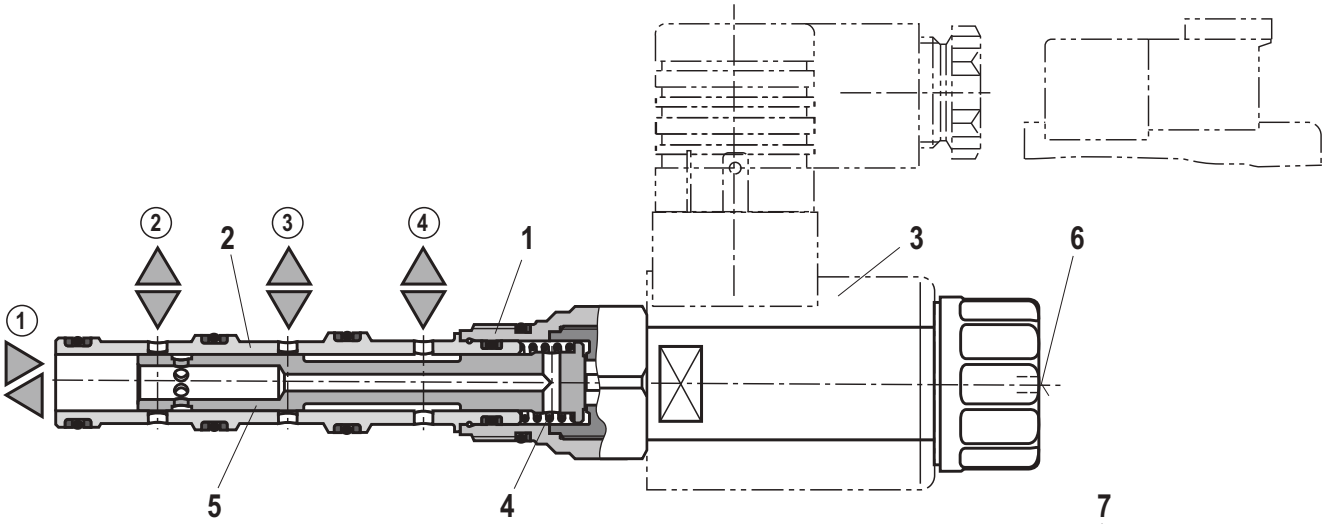


Version “C4”

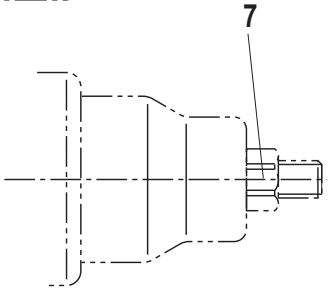


Version “K4”
(with mating connector)

Version “K40”



Type KKDER1EA/HN9V



5

Technical data (For applications outside these parameters, please consult us!)

general

Weight	– Valve	kg	0.35
	– Coil	kg	0.25
Installation position			Any
Ambient temperature range		°C	–40 to +110

hydraulic

Maximum operating pressure	bar	350 (at all ports)
Maximum flow	l/min	40
Hydraulic fluid		Mineral oil (HL, HLP) according to DIN 51524; quickly biodegradable hydraulic fluids according to VDMA 24568 (see also RE 90221); HETG (rape seed oil); HEPG (polyglycols); HEES (synthetic esters); other hydraulic fluids upon request
Hydraulic fluid temperature range	°C	–40 to +80
Viscosity range	mm^2/s	4 to 500
Maximum permitted degree of contamination of the hydraulic fluid - cleanliness class according to ISO 4406 (c)		Class 20/18/15 [1]
Load cycles		10 million (at 350 bar)

electrical

Voltage type			Direct voltage
Supply voltage [2]		V	12DC; 24DC
Voltage tolerance against ambient temperature			See characteristic curve page 5
Power consumption		W	22
Duty cycle		%	See characteristic curve page 5
Maximum coil temperature [3]		°C	150
Switching time according to ISO 6403 (solenoid horizontal)	– ON	ms	≤ 80
	– OFF	ms	≤ 50
Maximum switching frequency		cy/h	15000
Protection class according to VDE 0470-1 (DIN EN 60529) DIN 40050-9	– Version “K4”		IP 65 with mating connector mounted and locked
	– Version “C4”		IP 66 with mating connector mounted and locked
			IP 69K with Rexroth mating connector (Material no. R901022127)
	– Version “K40”		IP 69K with mating connector mounted and locked

[1] The cleanliness classes specified for the components must be adhered to in hydraulic systems. Effective filtration prevents faults and at the same time increases the service life of the components.

For the selection of filters, see data sheets RE 50070, RE 50076, RE 50081, RE 50086, RE 50087 and RE 50088.

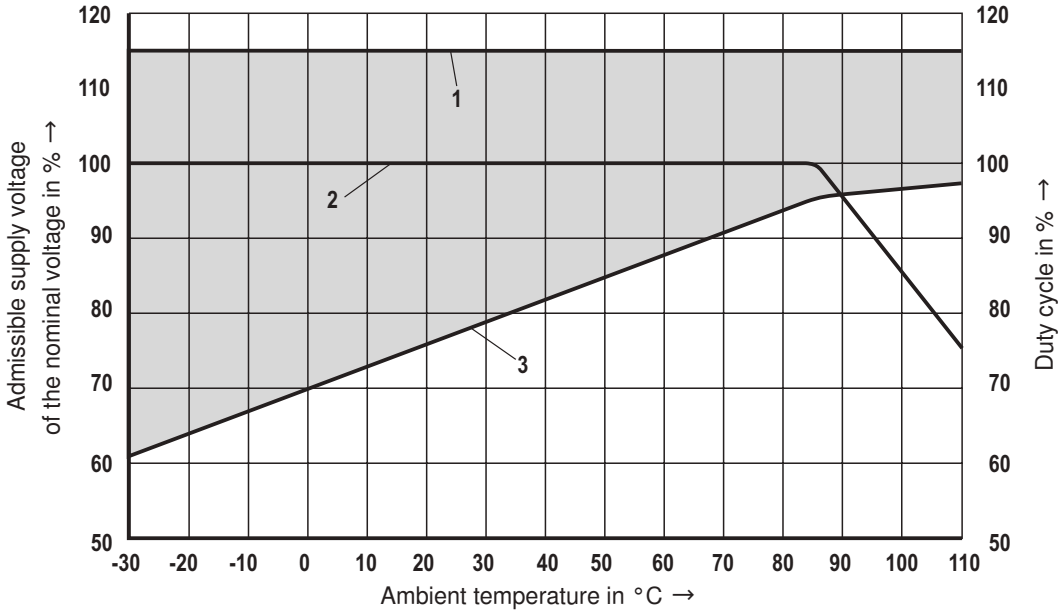
[2] Other voltages upon request

[3] Due to the temperatures occurring at the surfaces of the solenoid coils, the standards ISO 13732-1 and EN 982 need to be adhered to!

At the electrical connection “K4”, the protective earthing conductor (PE ⏚) has to be connected properly.

Voltage tolerance against ambient temperature; duty cycle

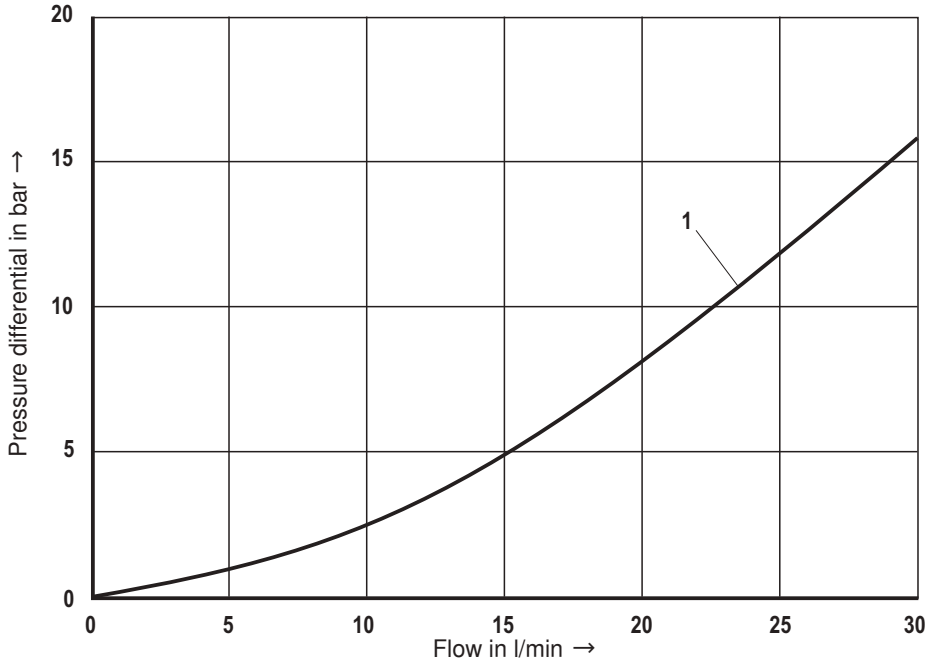
Voltage range and duty cycle depending on the ambient temperature



1 Maximum voltage
2 Duty cycle
3 Minimum response voltage
Admissible supply voltage range

Characteristic curves (measured with HLP46, ϑ_{oil} = 40 °C ± 5 °C and 24 V coil)

***Δp-q*$_V$ characteristic curves – symbol D**

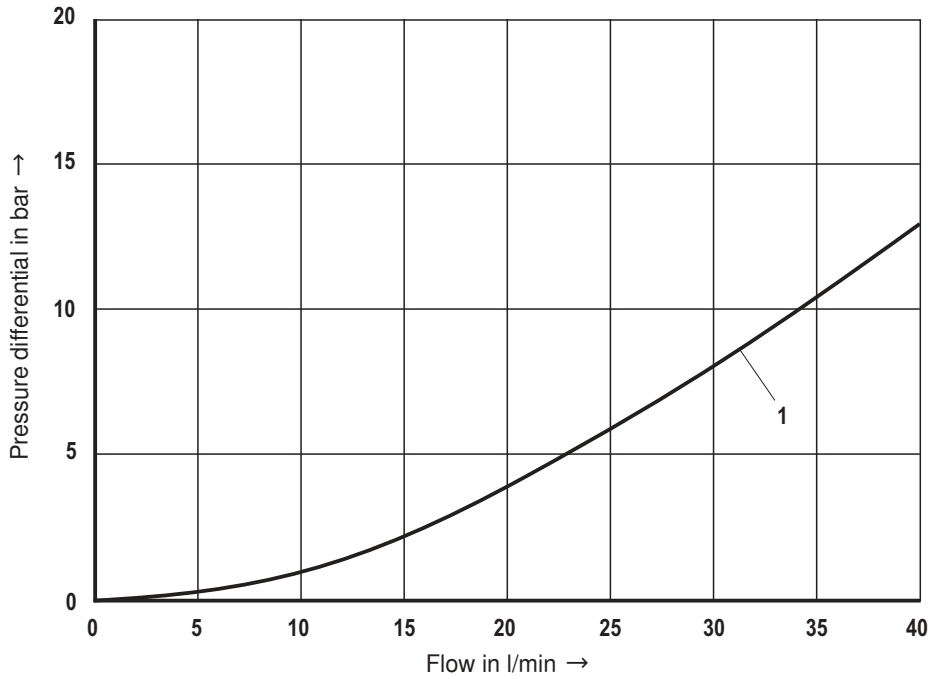


1	1 → 2 2 → 1 3 → 4 4 → 3

5

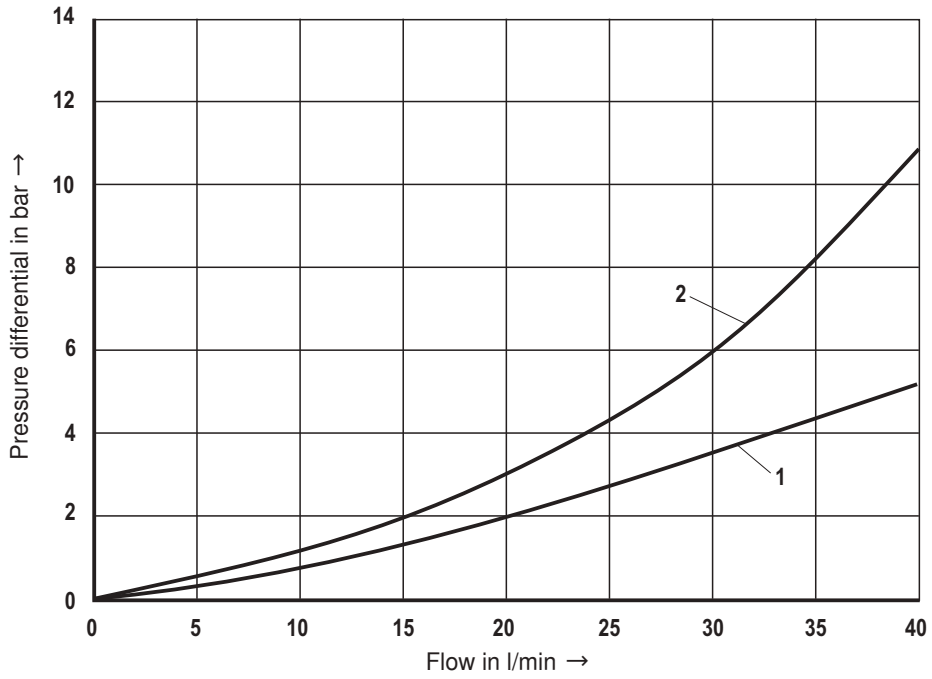
Characteristic curves (measured with HLP46, ϑ_{oil} = 40 °C ± 5 °C and 24 V coil)

***Δp-q*$_V$ characteristic curves – symbol E**



1	1 → 2 3 → 4 2 → 1 4 → 3

***Δp-q*$_V$ characteristic curves – symbol F**



1	1 → 2 2 → 1
2	3 → 4 4 → 3

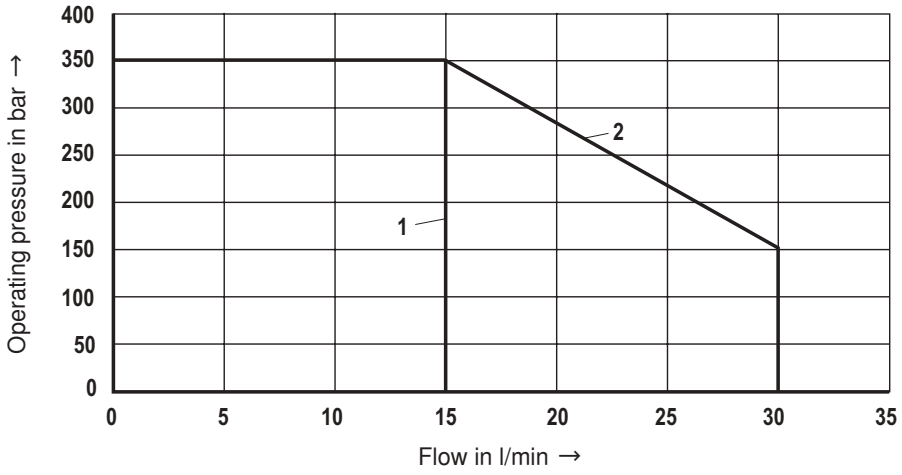
Performance limits (measured with HLP46, ϑ_{oil} = 40 °C ± 5 °C and 24 V coil)

Attention!

The specified performance limits are valid for operation with two directions of flow (e.g. symbol D: ① to ② and simultaneous return flow from ④ to ③).
Due to the flow forces acting within the valves, the permissible performance limit may be considerably lower with only one direction of flow (e. g. from ① to ② while port B is blocked)! In such cases, please consult us!

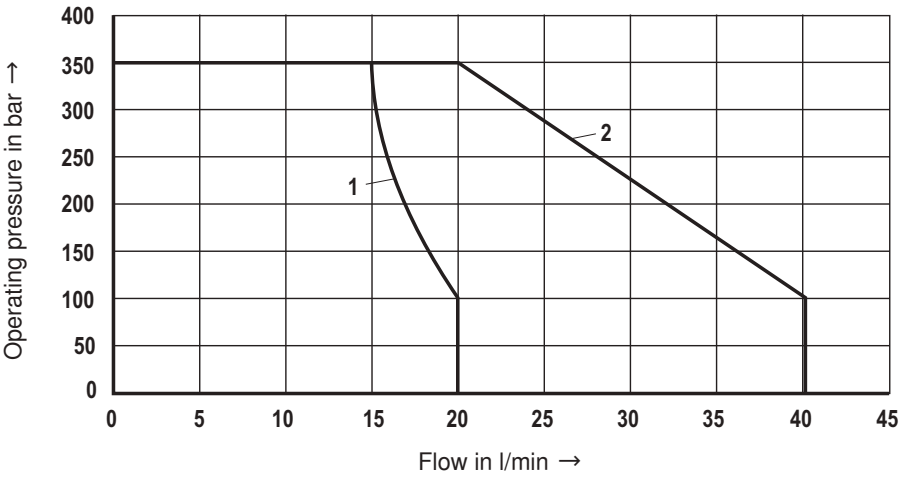
The performance limits were determined when the solenoids were at operating temperature and at 10 % undervoltage and without tank pre-loading.

Symbol D



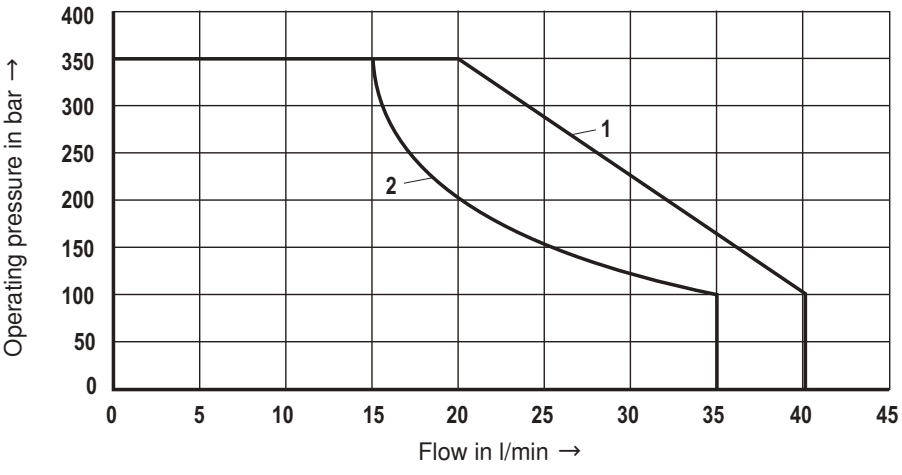
1	1 → 2 → 4 → 3
2	3 → 4 → 2 → 1

Symbol E



1	1 → 2 → 4 → 3
2	3 → 4 → 2 → 1

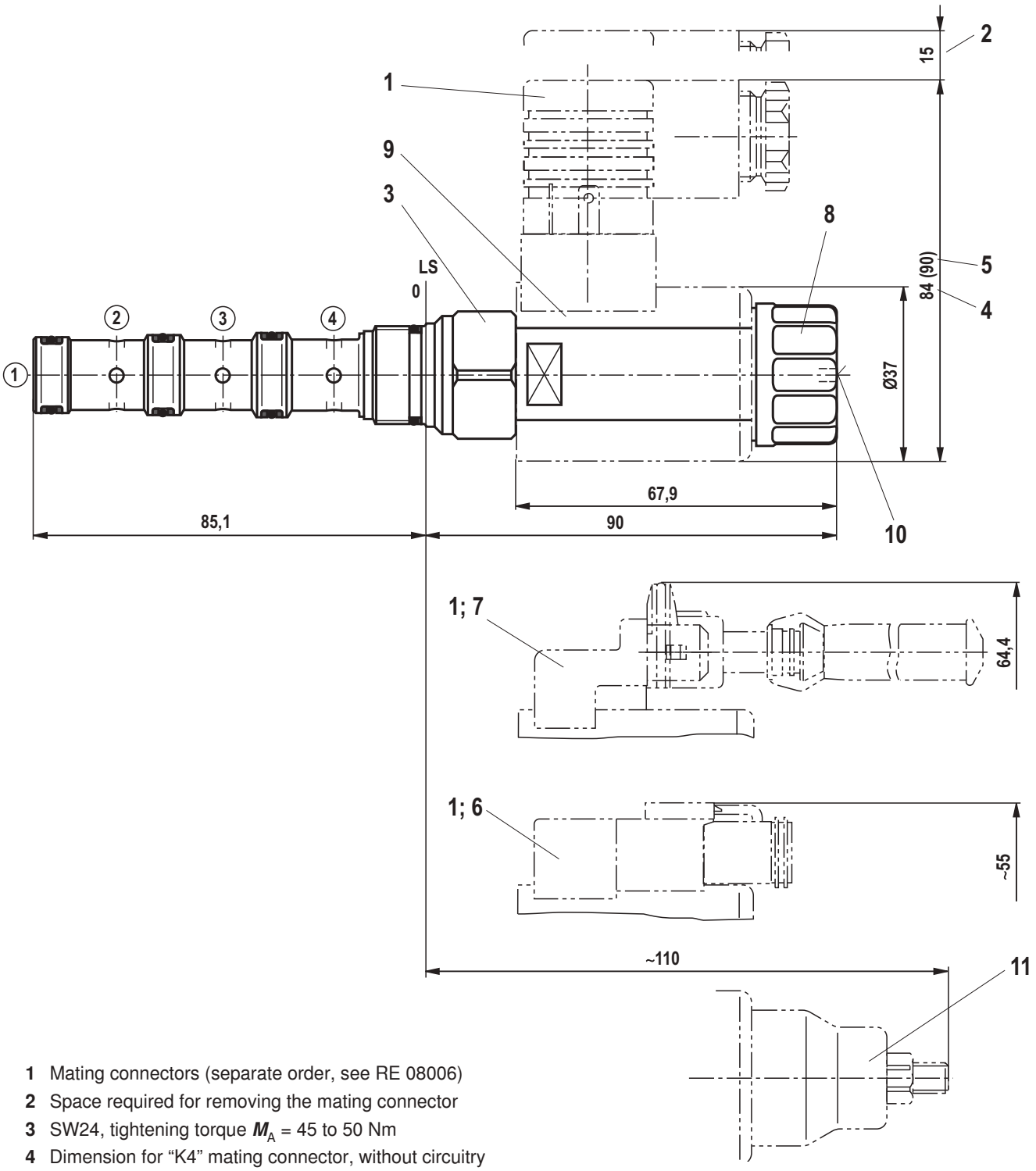
Symbol F



1	1 → 2 → 4 → 3
2	3 → 4 → 2 → 1

5

Unit dimensions (dimensions in mm)

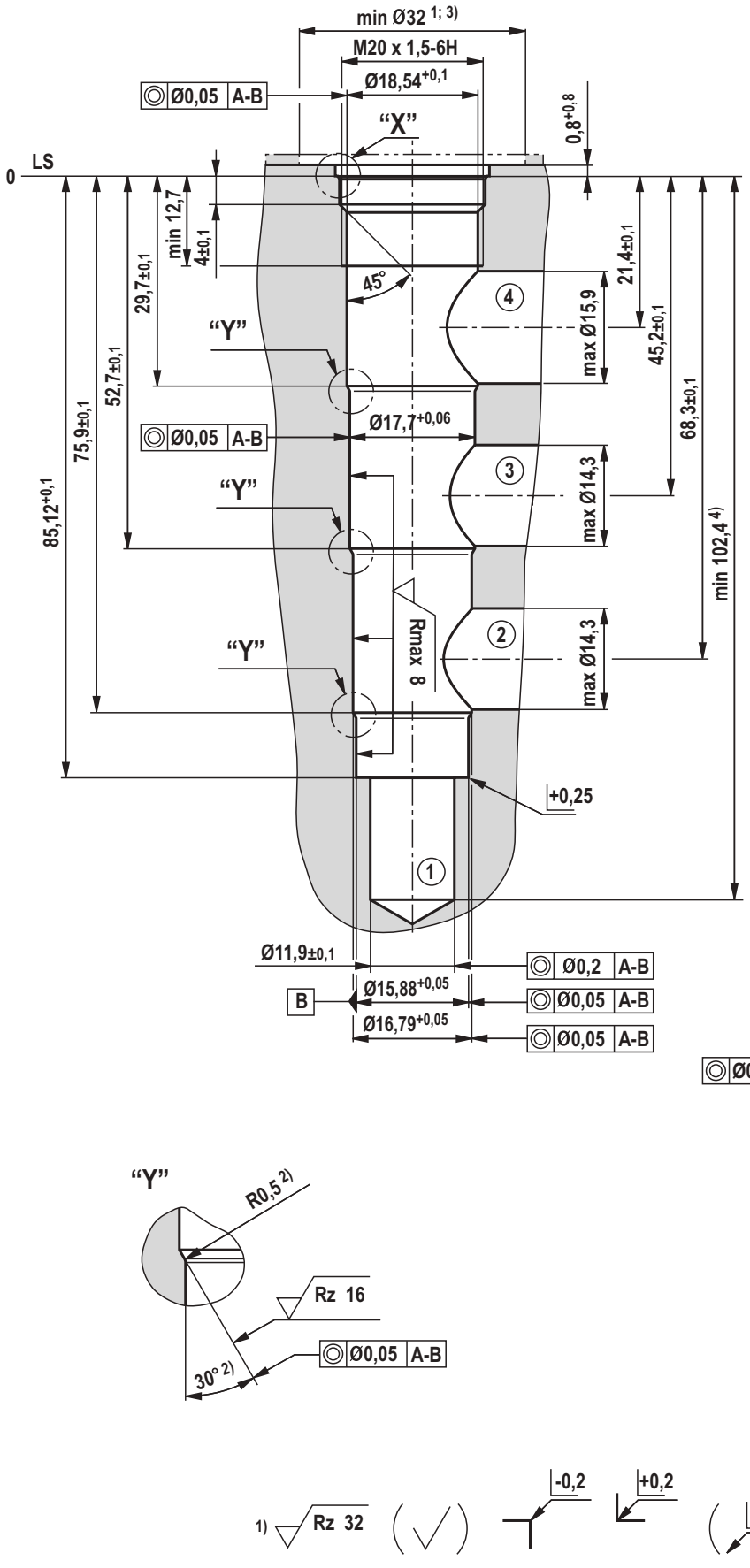


1 Mating connectors (separate order, see RE 08006)
2 Space required for removing the mating connector
3 SW24, tightening torque M_A = 45 to 50 Nm
4 Dimension for “K4” mating connector, without circuitry
5 Dimension () for “K4” mating connector, with circuitry
6 Version “K40”
7 Version “C4”
8 Nut, tightening torque $M_A = 5^{+1}$ Nm
9 Coil (separate order, see page 2)
10 Concealed manual override “N9”, optional
11 Screwable manual override “N10” (separate order, see page 2)

① = Main port 1
② = Main port 2
③ = Main port 3
④ = Main port 4
LS = Location shoulder

Mounting cavity R/T-31A; 4 main ports; thread M20 x 1.5

(dimensions in mm)



1) Differing from T-31A

2) All seal ring in sertion faces are rounded and free of burrs

3) with counterbore

4) Depth for moving parts

① = Main port 1

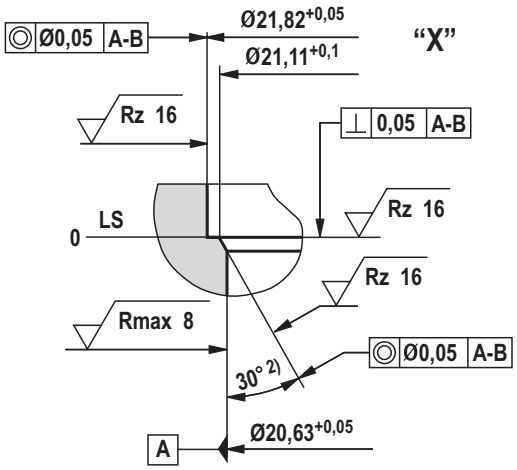
② = Main port 2

③ = Main port 3

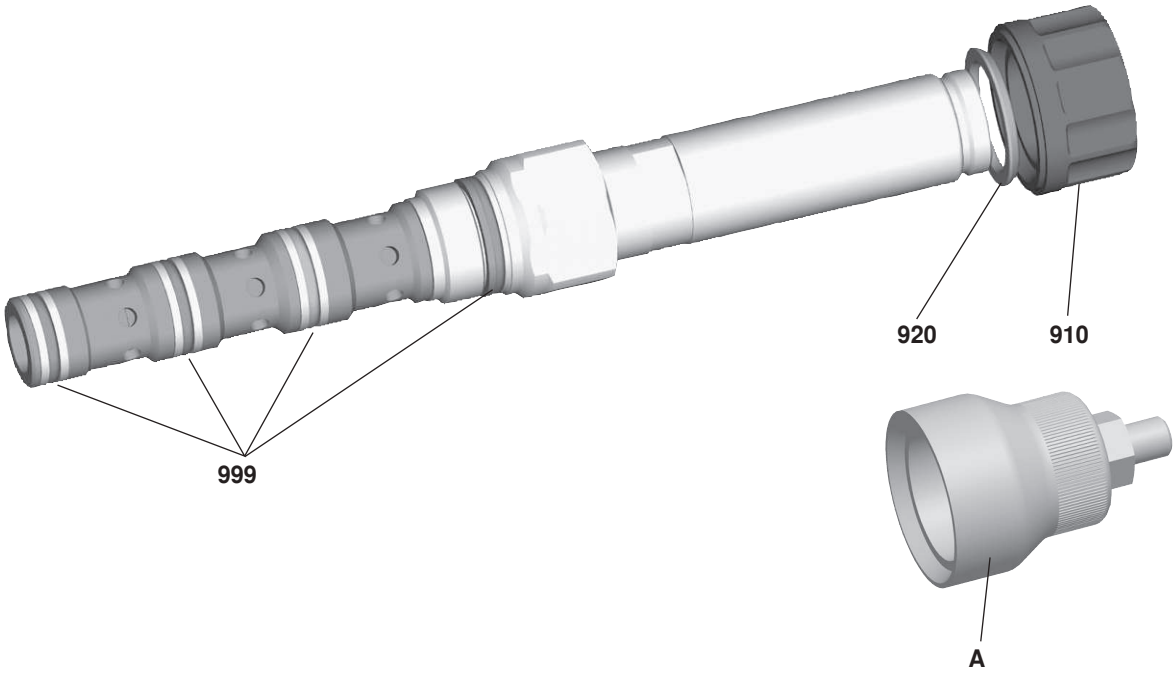
④ = Main port 4

LS = Location Shoulder

Tolerance for all angles ±0.5°



Available individual components



Item	Description	Material no.
910	Nut	R900991453
920	O-ring for pole tube	R900007769
999	Seal kit of the valve	R961003413
A	Manual override “N10” [1)]	R901051231

Coils, separate order, see page 2

[1)] Only with ordering code “N9”, see page 2

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www.boschrexroth.de

5/3 directional spool valve, direct operated, with solenoid actuation

Type VEDS..53

RE 18158
Edition: 2012-05


H7899

- Frame size 10
- Component series 0
- Maximum operating pressure 250 bar
- Maximum flow 25 l/min

Features

- Mounting cavity R/UNF10-05-0-08
- Wet-pin DC solenoids
- Rotatable solenoid coil
- Manual override optional
- Integrated load-sensing port

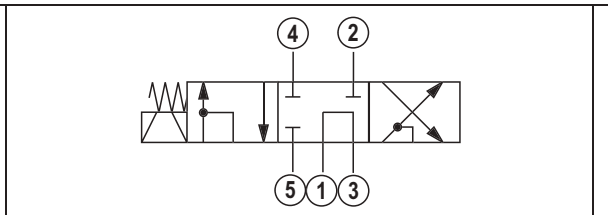
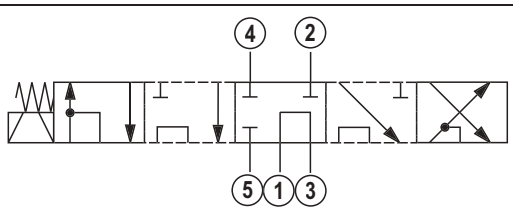
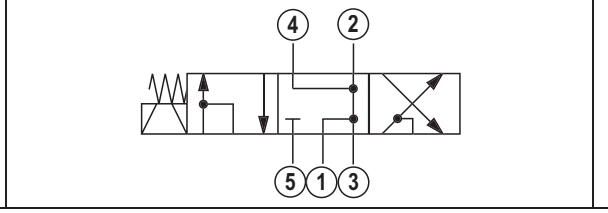
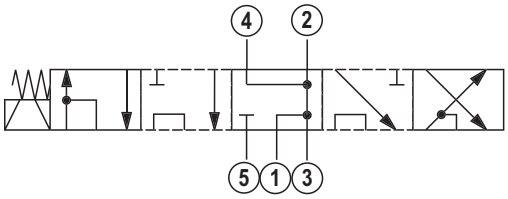
Contents

Ordering code (valve without coil) [1)]

01		02		03	04	05		06	07	08	09	10	11	12
VEDS	**–**	**10A**	**–**	**53**				**OD53**		**54**	**KK2**		**0**	**0**

01	Directional spool valve, direct operated	**VEDS**
02	Frame size 10	**10A**
03	5/3 directional design	**53**

Symbols

04			**10**
			**20**

05	**Without** manual override	**0**
	With pull/push manual override	**-M1**
06	5/3 directional spool valve, direct operated, with solenoid actuation	**OD53**

Symbols

07	See item 04	**10**
		20
08	Frame size 10: R/UNF 10-05-0-08, see page 9	**54**
09	On/off valve with 2 coils	**KK2**
10	**Without** manual override	**0**
	With pull/push manual override	**1**
11	Standard version	**0**
12	Revision status	**0**

Valve types (without coil) [1)]

Symbol	**Without** manual override **"0"**			**With** pull/push manual override **"-M1", "1"**		
	Type		**Material no.**	**Type**		**Material no.**
10	VEDS-10A-5310	OD531054KK2000	R901274118	VEDS-10A-5310-M1	OD531054KK2100	R901300057
20	VEDS-10A-5320	OD532054KK2000	R901274117	VEDS-10A-5320-M1	OD532054KK2100	R901300059

Available coils (separate order) [1)]

Direct voltage DC [3)]	**Material no. for coil with connector** [2)]		
	"K4" 03pol (2+PE) DIN EN 175301-803	**"K40"** 02pol K40 DT 04-2PA, make Deutsch	**"C4"** 02pol C4/Z30 AMP Junior-Timer
12 V	R900991678	R900729189	R900315818
24 V	R900991121	R900729190	R900315819

1) Complete valves with mounted coil on request.

2) Mating connectors, separate order, see data sheet 08006.

3) Other voltages upon request.

5

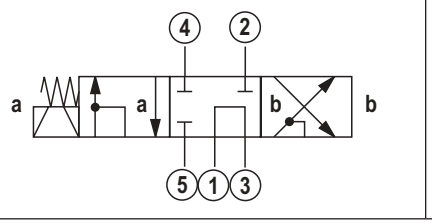
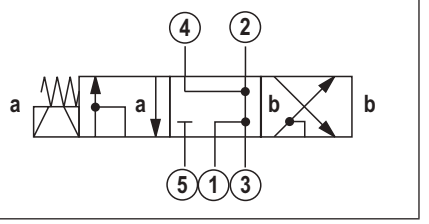
Function, section, symbols

General

The 5/3 directional spool valves are direct operated, pressure-compensated cartridge valves. They control the start, stop and direction of a flow and basically comprise of pole tube (1), socket (2), a control spool (5) as well as of a return spring (4).

Function

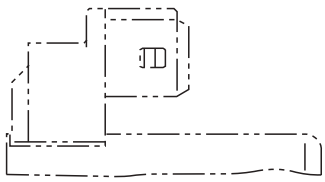
In the de-energized condition, the control spool (5) is held in the initial position by the return spring (4). The control spool (5) is actuated by wet-pin DC solenoids (3.1; 3.2). The symbols are realized by different spools ("10"; "20"). Main ports ①; ②; ③; ④ and ⑤ can be permanently pressurized with an operating pressure of 250 bar. The ports have a fixed pin assignment (see symbols).
The manual override (6) allows for the switching of the valve without solenoid energization.

Symbol "10"	Symbol "20"
	

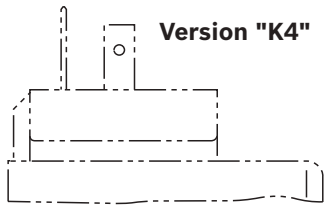
① = Main port 1 (LS)
② = Main port 2 (A)
③ = Main port 3 (T)
④ = Main port 4 (B)
⑤ = Main port 5 (P)

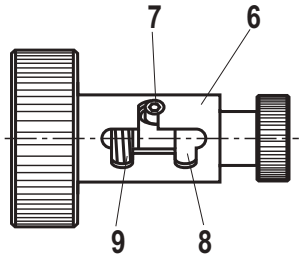
7 Initial position
8 Spool position "b"
9 Spool position "a"

Version "C4"

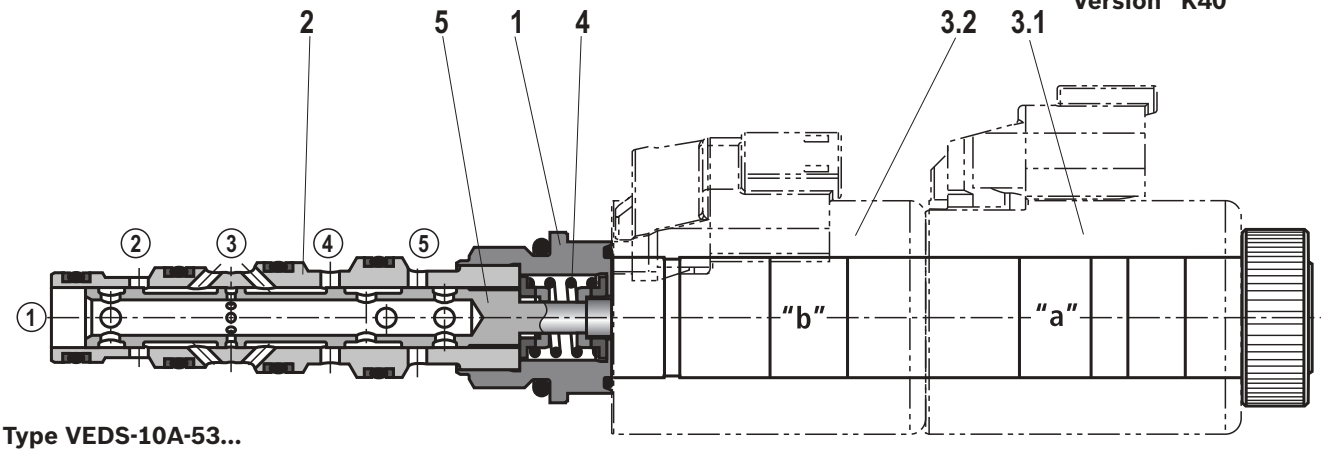


Version "K4"





Version "K40"



Type VEDS-10A-53...

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Technical data

(For applications outside these parameters, please consult us!)

general			
Weight	– Valve	kg	0.35
	– Coil	kg	0.25 each
Installation position			Any - if it is ensured that no air can collect upstream the valve. Otherwise, we recommend suspended installation of the valve.
Ambient temperature range		°C	–40 to +110 (see page 6)
Storage temperature		°C	–20 to +80

Environmental audits

Salt spray test according to DIN 50021	h	720
Surface protection DC solenoids		Coating according to DIN 50962-Fe//ZnNi with thick film passivation

hydraulic		
Maximum operating pressure	bar	250
Maximum flow	l/min	25
Leakage	ml/min	< 60 (with Δp = 250 bar; HLP46, ϑ_{oil} = 40 °C)
Hydraulic fluid		See table below
Hydraulic fluid temperature range	°C	–40 to +80
Viscosity range	mm^2/s	5 to 1000 (preferably 10 to 100)
Maximum permitted degree of contamination of the hydraulic fluid - cleanliness class according to ISO 4406 (c)		Class 20/18/15 [1)]
Load cycles		2 million

Hydraulic fluid		**Classification**	**Suitable sealing materials**	**Standards**
Mineral oils		HL, HLP	FKM	DIN 51524
Bio-degradable	– Insoluble in water	HEES	FKM	VDMA 24568
	– Soluble in water	HEPG	FKM	

☞ **Important information on hydraulic fluids!**

- For more information and data on the use of other hydraulic fluids refer to data sheet 90220 or contact us!
- There may be limitations regarding the technical valve data (temperature, pressure range, service life, maintenance intervals, etc.)!
- The flash point of the hydraulic fluids used must be 40 K higher than the maximum solenoid surface temperature.
- **Bio-degradable:** When using bio-degradable hydraulic fluids that are simultaneously zinc-solving, zinc may accumulate in the fluid.

[1)] The cleanliness classes specified for the components must be adhered to in hydraulic systems. Effective filtration prevents faults and at the same time increases the service life of the components.
For the selection of the filters see www.boschrexroth.com/filter.

Technical data

(For applications outside these parameters, please consult us!)

electric			
Voltage type			Direct voltage
Supply voltages [2]		V	12 DC; 24 DC
Voltage tolerance against ambient temperature			See characteristic curve below
Power consumption		W	22
Duty cycle		%	See characteristic curve below
Maximum coil temperature [3]		°C	150
Switching time according to ISO 6403 (solenoid horizontal)	– ON	ms	≤ 60
	– OFF	ms	≤ 60
Maximum switching frequency		cy/h	15000
Protection class according to VDE 0470-1 (DIN EN 60529) DIN 40050-9	– Version "K4"		IP 65 with mating connector mounted and locked
	– Version "C4"		IP 66 with mating connector mounted and locked
			IP 69K with Rexroth mating connector (material no. R901022127)
	– Version "K40"		IP 69K with mating connector mounted and locked

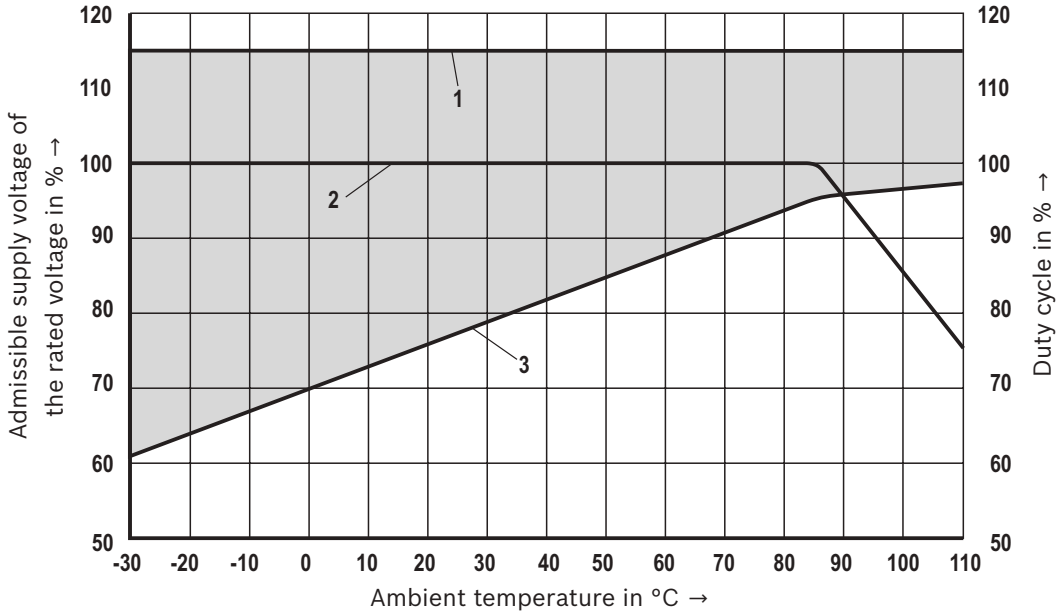
[2] Other voltages upon request

[3] Due to the surface temperatures of the solenoid coils, the standards ISO 13732-1 and ISO 4413 need to be adhered to!

When establishing the electrical connection, the protective earthing conductor (PE ⏚) has to be connected properly.

Voltage tolerance against ambient temperature; duty cycle

Voltage range and duty cycle depending on the ambient temperature



1 Maximum voltage

2 Duty cycle

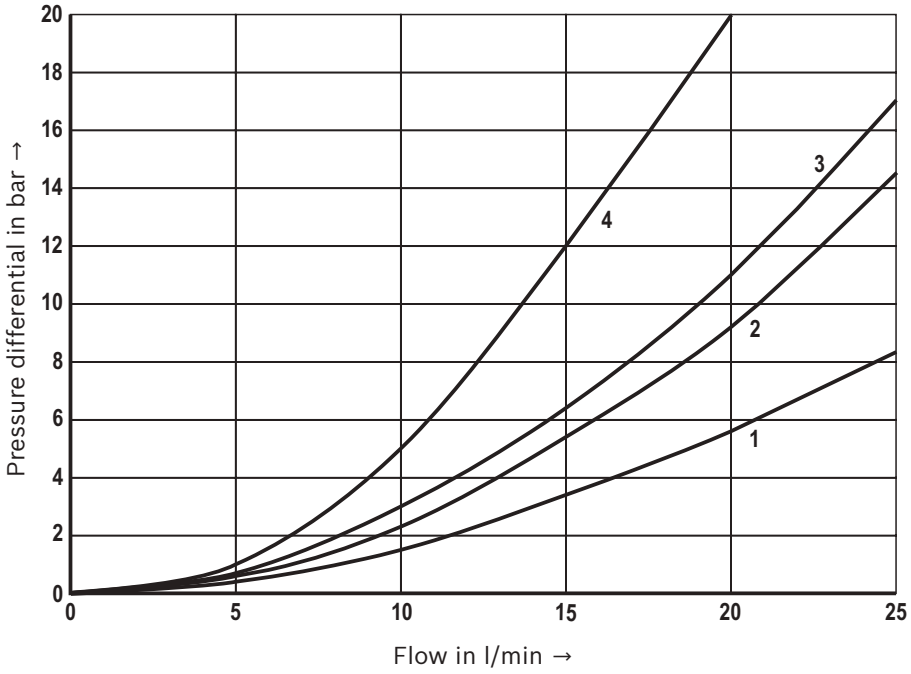
3 Minimum response voltage

Admissible supply voltage range

Characteristic curves

(measured with HLP46, ϑ_{oil} = 40 ±5 °C and 24 V coil)

Δp-q_V characteristic curves – Symbol "10" and "20"

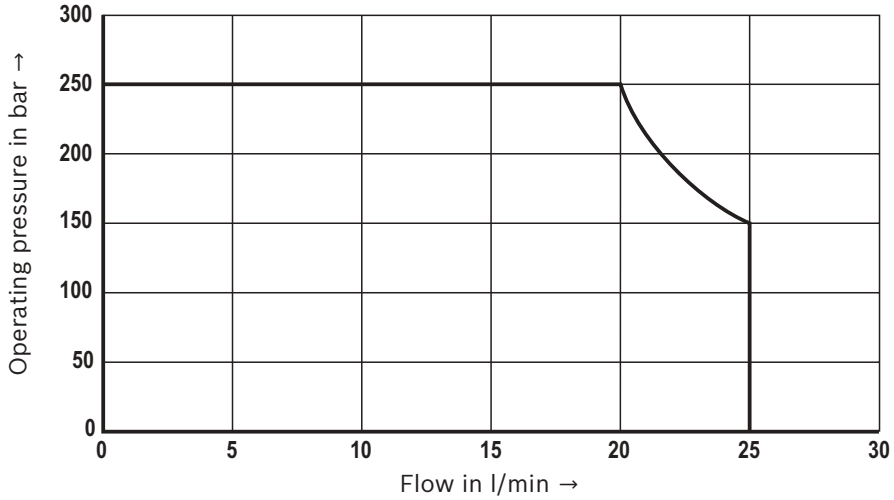


1	④ → ③ ② → ③
2	⑤ → ④
3	⑤ → ②
4	① → ③

Limits of performance

(measured with HLP46, ϑ_{oil} = 40 ±5 °C)

Symbol "10" and "20"



⚠ Attention!

The specified limits of performance are valid for operation with two directions of flow (e.g. from ⑤ to ② and simultaneous return flow from ④ to ③).

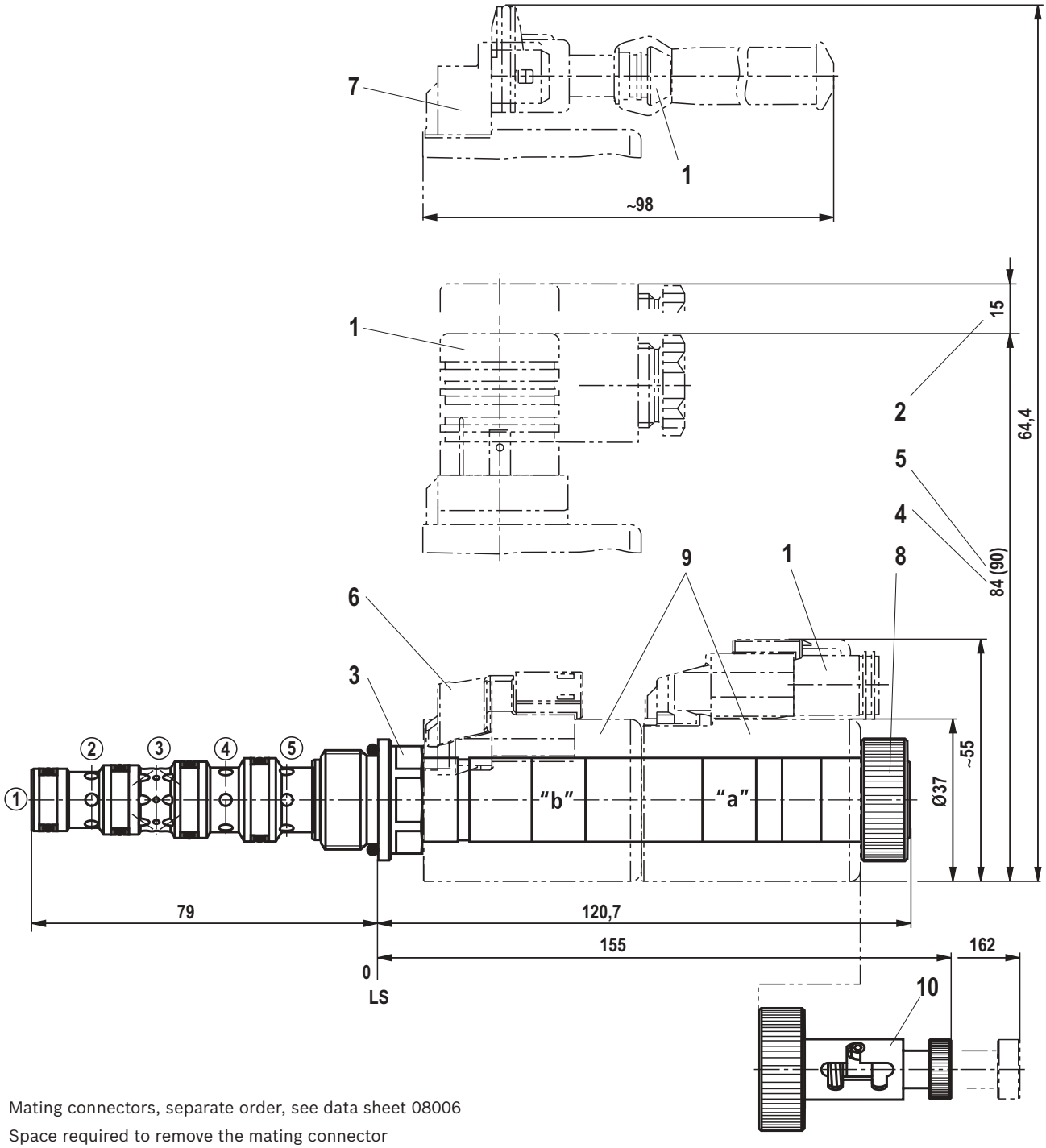
Due to the current forces acting within the valves, the permissible performance limit may be considerably lower with only one direction of flow (e.g. from ⑤ to ② and blocked port ④)!

In such applications, please consult us!

The performance limit was determined when the solenoids were at operating temperature, at 10% undervoltage and without tank pre-loading.

5

Unit dimensions
(dimensions in mm)



1 Mating connectors, separate order, see data sheet 08006
2 Space required to remove the mating connector
3 SW24, tightening torque $M_A = 55^{+5}$ Nm
4 Dimension for "K4" mating connector, without circuitry
5 Dimension () for "K4" mating connector, with circuitry
6 Version "K40"
7 Version "C4"
8 Nut, tightening torque $M_A = 5^{+1}$ Nm
9 Coil (separate order, see page 3)
10 Pull/push manual override "1"

① = Main port 1 (LS)
② = Main port 2 (A)
③ = Main port 3 (T)
④ = Main port 4 (B)
⑤ = Main port 5 (P)

LS = Location Shoulder

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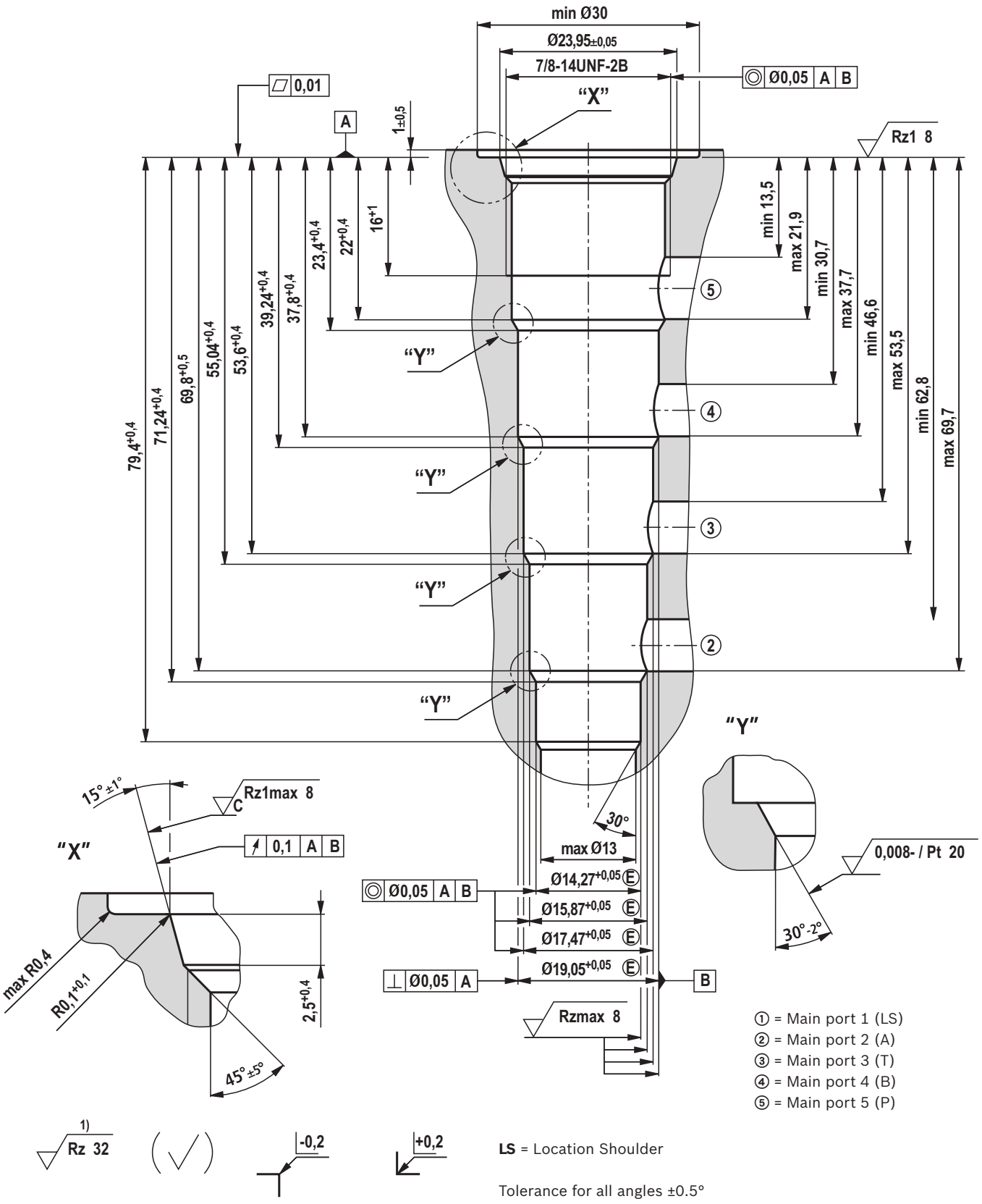
Mounting cavity R/UNF-10-05-0-08; 5 main ports; thread 7/8-14UNF-2B
(dimensions in mm)



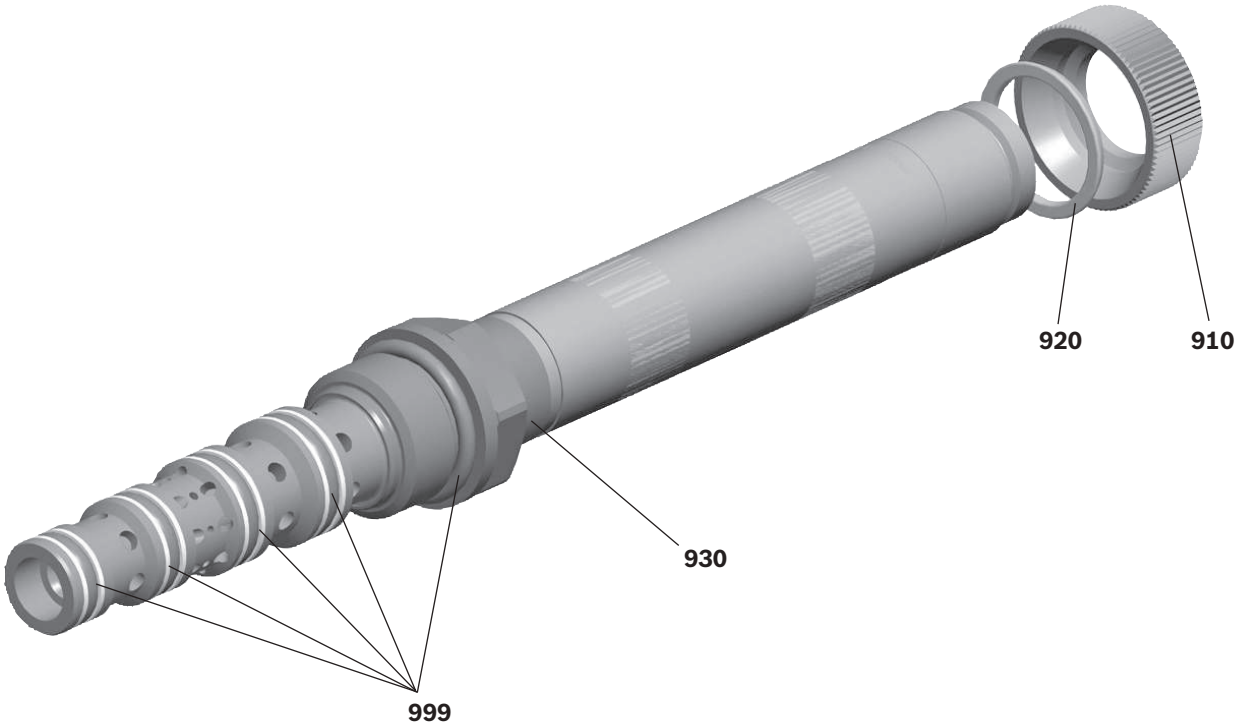
① = Main port 1 (LS)
② = Main port 2 (A)
③ = Main port 3 (T)
④ = Main port 4 (B)
⑤ = Main port 5 (P)

LS = Location Shoulder

Tolerance for all angles ±0.5°
All seal ring insertion faces are rounded and free of burrs

[1] Visual inspection

Available individual components



Item	Denomination	Material no.
910	Nut	R901241052
920	O-ring for pole tube	R900007769
930	O-ring for pole tube	R913014944
999	Seal kit of the valve	R961005837

Coils, separate order, see page 3

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