Cartridge valves: Mechanical, Solenoid, Electro-proportional

Product Selection Guide

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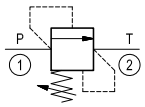
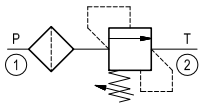
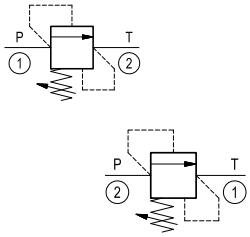
Mechanical - Relief and Unloading

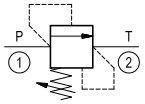
Relief direct acting poppet type

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VSAN-08A	up to 420 (6000)	3 (0.8)	CA-08A-2N	18318-01	41
	VS-5-CN	460 (6600)	1.5 (0.4)	Special 348	18318-19	37
						
	VS-5-CF	460 (6600)	1.5 (0.4)	Special 348	18318-20	39

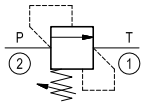
Relief direct acting guided poppet type

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VSBN-08A	350 (5000)	20 (5)	CA-08A-2N	18318-04	43
	VSBN-10A	350 (5000)	50 (13)	CA-10A-2N	18318-05	47
	VSBG-10A	350 (5000)	50 (13)	CA-10A-2N	18318-06	55
	VSBN-08F	350 (5000)	20 (5)	Special CA-08F-2N	18318-18	45
	VS-30	350 (5000)	30 (8)	Special 008	18318-23	49
	VS-80	250 (3600)	80 (21)	Special 009	18318-25	53

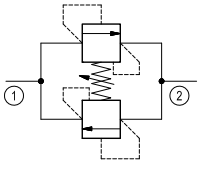
Relief direct acting guided poppet type hardened seat

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VS-30-NCF	420 (6000)	30 (8)	Special 008	18318-24	51

Relief direct acting poppet type differential area

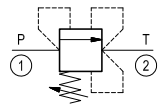
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VSDN-08A	350 (5000)	50 (13)	CA-08A-2N	18318-02	57
	VSDN-10A	350 (5000)	120 (32)	CA-10A-2N	18318-03	59
	VSD-350	210 (3000)	350 (93)	Special 004	18318-22	61

Relief bidirectional direct acting poppet type differential area

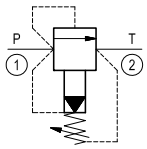
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VSNG-10A	240 (3500)	56 (15)	CA-10A-2N	18318-07	63

Mechanical - Relief and Unloading

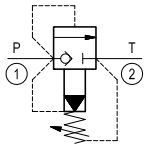
Relief direct acting poppet type pressure compensated

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VS-30-CC	350 (5000)	30 (8)	Special 008	18318-26	65

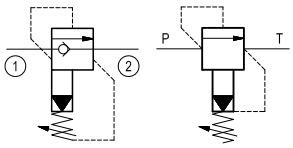
Relief pilot operated spool type

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VSPN-10A	420 (6000)	3-120 (1-32)	CA-10A-2N	18318-08	67
	VSPN-12A	420 (6000)	5-200 (1.3-53)	CA-12A-2N	18318-09	69
	VSPN-16A	420 (6000)	8-300 (2-79)	CA-16A-2N	18318-10	71

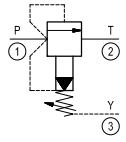
Relief pilot operated poppet type

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VSPC-10A	350 (5000)	3-80 (1-21)	CA-10A-2N	18318-11	73
	MHDBV-16	420 (6000)	100 (26)	Special	64605	895
	MHDBV-22	420 (6000)	240 (63)	Special	64605	895

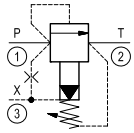
Pressure relief and anti-cavitation valve pilot operated

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	MHDBN-16	420 (6000)	100 (26)	Special	64602	903
	MHDBN-22	420 (6000)	240 (63)	Special	64602	903
	MHDBN-32	420 (6000)	400 (106)	Special	64602	903

Relief pilot operated spool type external drain

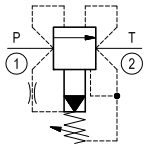
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VSPY-10A	420 (6000)	3-120 (0.8-32)	CA-10A-3N	18318-12	75
	VSPY-12A	350 (5000)	5-200 (1.3-53)	CA-12A-3C	18318-13	77

Relief pilot operated spool type external pilot

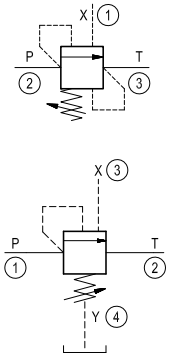
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VSPX-12A	350 (5000)	5-200 (1.3-53)	CA-12A-3C	18318-14	79

Mechanical - Relief and Unloading

Relief pilot operated spool type pressure compensated

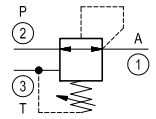
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VSP-CC-150	420 (6000)	5-150 (1.3-40)	Special 065	18318-27	81

Priority unloading pilot operated

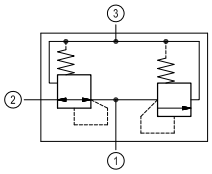
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VMSN-08A	350 (5000)	3 (1)	CA-08A-3N	18318-16	83
	VMSP-78	350 (5000)	5-30 (1.3-8)	Special 308	18318-17	85

Mechanical - Pressure reducing and relieving

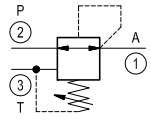
Pressure reducing and relieving direct acting spool type

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRPR-08A	350 (5000)	8 (2)	CA-08A-3N	18318-52	91
	VRPR-10A	350 (5000)	30 (8)	CA-10A-3N	18318-53	93
	VRPR-07A	420 (6000)	5 (1.3)	Special CA-07A-3N	18318-59	61

Pressure reducing and relieving direct acting spool damped type

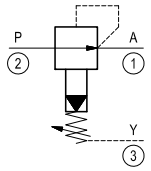
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	MHDRDB	315 (4500)	11 (3)	Special	18111-04	915

Pressure reducing and relieving direct acting spool damped type

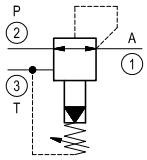
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRPR-10A-8	350 (5000)	20 (5)	CA-10A-3N	18318-54	97
	VRPR-07A-S	420 (6000)	5 (1.3)	Special CA-07A-3N	18318-60	95

Mechanical - Pressure reducing and relieving

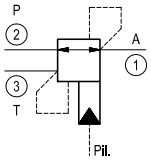
Pressure reducing pilot operated spool type

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRPP-10A	350 (5000)	60 (16)	CA-10A-3N	18318-50	99
	VRPP-12A	350 (5000)	100 (26)	CA-12A-3N	18318-51	101

Pressure reducing and relieving pilot operated spool type

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRPX-10A	350 (5000)	60 (16)	CA-10A-3N	18318-56	103

Pressure reducing and relieving with pilot controlled setting

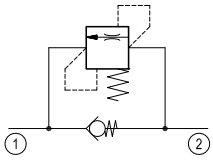
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRPE-10A	350 (5000)	20 (5)	CA-10A-3N	18318-58	105

Mechanical - Check and pilot operated check

Check poppet type

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VUCN-08A	420 (6000)	50 (13)	CA-08A-2N	18318-89	113
	VUCN-10A	350 (5000)	80 (21)	CA-10A-2N	18318-90	115
	VUCN-12A	350 (5000)	120 (32)	CA-12A-2N	18318-91	117
	VUCN-16A	350 (5000)	200 (53)	CA-16A-2N	18318-92	119
	VUCN-20A	350 (5000)	360 (95)	CA-20A-2N	18318-93	121
	VUCN-04A	350 (5000)	4 (1)	Special CA-04A-2N	18318-88	109
	VU-N-38	350 (5000)	30 (8)	Special 690	18318-99	111

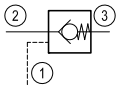
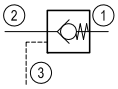
Check poppet type with thermal relief

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VUCN-10A-TR	350 (5000)	80 (21)	CA-10A-2N	18318-94	123
	VUCN-12A-TR	350 (5000)	120 (32)	CA-12A-2N	18318-95	125

Check poppet reverse type

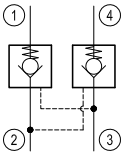
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VURN-08A	420 (6000)	25 (7)	CA-08A-2N	18318-96	127
	VURN-10A	350 (5000)	60 (16)	CA-10A-2N	18318-97	129
	VURN-12A	350 (5000)	90 (24)	CA-12A-2N	18318-98	131

Pilot operated check pilot to open

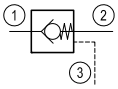
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VSOA-08A	350 (5000)	30 (8)	CA-08A-3N	18319-34	147
	VSOA-10A	350 (5000)	40 (11)	CA-10A-3N	18319-35	149
	VSON-08A	350 (5000)	30 (8)	CA-08A-3C	18319-30	133
	VSON-10A	350 (5000)	60 (16)	CA-10A-3C	18319-31	135
	VSON-12A	350 (5000)	120 (32)	CA-12A-3C	18319-32	139
	VSON-16A	350 (5000)	200 (53)	CA-16A-3C	18319-33	143
	VSON-08U	350 (5000)	60 (16)	T-11A	18319-39	137
	VSON-12U	350 (5000)	120 (32)	T-2A	18319-40	141
	VSON-16U	350 (5000)	240 (63)	T-17A	18319-41	145

Mechanical - Check and pilot operated check

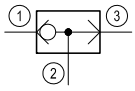
Dual pilot operated check pilot to open

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VSOD-10A	350 (5000)	30 (8)	CA-10A-4N	18319-38	151

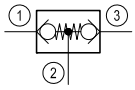
Pilot operated check pilot to close

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VUPC-10A	350 (5000)	70 (18)	CA-10A-3C	18319-36	153
	VUPC-12A	350 (5000)	120 (32)	CA-12A-3C	18319-37	155
	VUPC-25U	350 (5000)	560 (148)	T-19A	18319-29	157

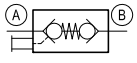
Directional poppet type shuttle

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	SELB-08A	350 (5000)	up to 10 (3)	CA-08A-3N	18319-80	161
	SELC-04A	350 (5000)	up to 4 (1)	Special CA-04A-3Y	18319-82	159
	SELC-08A	350 (5000)	up to 10 (3)	CA-08A-2N	18319-81	163
	MHSU	420 (6000)	up to 10 (3)	Special	18205	923

Directional poppet type shuttle double check

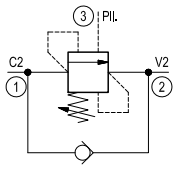
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VUDN-08A	350 (5000)	10 (3)	CA-08A-3N	18319-83	165

Check double lock with mechanical pilot

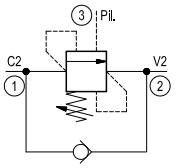
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VU-DT-D7-CM	350 (5000)	10 (3)	Special 748	18318-87	167

Mechanical - Counterbalance

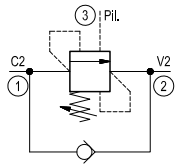
Standard guided poppet type

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VBSN-08AA	350 (5000)	30 (8)	CA-08A-3C	18320-01	173

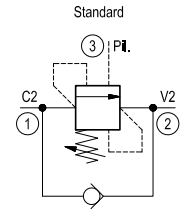
Standard guided poppet type counterclockwise adjustment

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VBSN-08UU-RS	280 (4000)	30 (8)	T-11A	18320-16	175

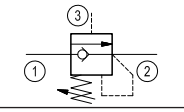
Standard poppet type differential area

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VBSN-10A	350 (5000)	60 (16)	CA-10-3C	18320-02	177
	VBSN-12A	350 (5000)	120 (32)	CA-12A-3C	18320-03	181
	VBSN-16A	350 (5000)	200 (53)	CA-16A-3C	18320-04	185
	VBSN-20A	350 (5000)	320 (85)	CA-20A-3C	18320-05	189

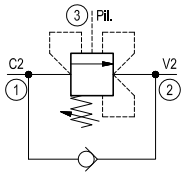
Standard poppet type differential area counterclockwise adjustment

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VBSN-08U-RS	350 (5000)	60 (16)	T-11A	18320-17	179
	VBSN-12U-RS	350 (5000)	120 (32)	T-2A	18320-18	183
	VBSN-16U-RS	420 (6000)	240 (63)	T-17A	18320-19	187
	VBSN-25U-RS	350 (5000)	480 (127)	T-19A	18320-29	191

Standard poppet type zero differential area

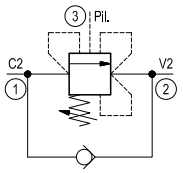
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VBSZ-20A	350 (5000)	320 (85)	CA-20A-3C	18319-99	193

Relief compensated guided poppet type

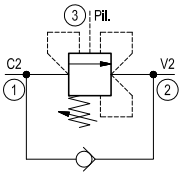
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VBSP-08AA	350 (5000)	30 (8)	CA-08A-3C	18320-06	195

Mechanical - Counterbalance

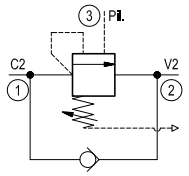
Relief compensated poppet type differential area

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VBSP-10A	350 (5000)	60 (16)	CA-10A-3C	18320-07	197
	VBSP-12A	350 (5000)	120 (32)	CA-12A-3C	18320-08	201
	VBSP-16A	350 (5000)	200 (53)	CA-16A-3C	18320-09	205
	VBSP-20A	350 (5000)	320 (85)	CA-20A-3C	18320-10	209

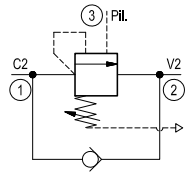
Relief compensated poppet type differential area counterclockwise adjustment

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VBSP-08U-RS	350 (5000)	60 (16)	T-11A	18320-20	199
	VBSP-12U-RS	350 (5000)	120 (32)	T-2A	18320-21	203
	VBSP-16U-RS	420 (6000)	240 (63)	T-17A	18320-22	207
	VBSP-25U-RS	350 (5000)	480 (127)	T-19A	18320-30	211

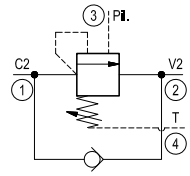
Vented guided poppet type

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VBST-08AA	350 (5000)	30 (8)	CA-08A-3C	18320-11	213
	VBST-10A	350 (5000)	60 (16)	CA-10A-3C	18320-12	215
	VBST-12A	350 (5000)	120 (32)	CA-12A-3C	18320-13	219
	VBST-16A	350 (5000)	200 (53)	CA-16A-3C	18320-14	223
	VBST-20A	350 (5000)	320 (85)	CA-20A-3C	18320-15	227

Vented guided poppet type counterclockwise adjustment

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VBST-08U-RS	350 (5000)	60 (16)	T-11A	18320-23	217
	VBST-12U-RS	350 (5000)	120 (32)	T-2A	18320-24	221
	VBST-16U-RS	350 (5000)	240 (63)	T-17A	18320-25	225

4 ports vented poppet type external drain counterclockwise adjustment

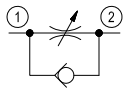
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VBSY-08U-RS	350 (5000)	60 (16)	T-21A	18320-26	229
	VBSY-12U-RS	350 (5000)	120 (32)	T-22A	18320-27	231
	VBSY-16U-RS	350 (5000)	240 (63)	T-23A	18320-28	233

Mechanical - Flow control

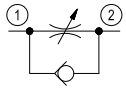
Cartridge restrictors

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	ST-C-06	350 (5000)	40 (11)	CA-08A-2N	18321-26	237
	ST-C-10	350 (5000)	70 (19)	CA-10A-2N	18321-27	239
	ST-C-12	350 (5000)	150 (39)	CA-12A-2N	18321-28	241
	ST-C-16	350 (5000)	150 (39)	CA-16A-2N	18321-29	243

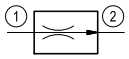
Needle restrictors free reverse flow

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	STVU-08A	350 (5000)	40 (11)	CA-08A-2N	18321-10	245
	STVU-10A	350 (5000)	80 (22)	CA-10A-2N	18321-11	247

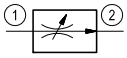
Needle restrictors free reverse flow fine adjustment

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	STFU-08A	350 (5000)	40 (11)	CA-08A-2N	18321-09	249

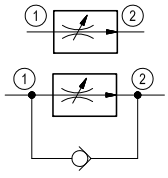
2-way pressure compensated fixed setting

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRFA-08A	up to 210 (3000)	8 (2)	CA-08A-2N	18321-12	251
	VRFA-10A-TF	up to 350 (5000)	19 (5)	CA-10A-2N	18321-13	253
	VRFA-12A-TF	up to 350 (5000)	63 (17)	CA-12A-2N	18321-14	259
	MH2FR	420 (6000)	1.2 (0.3)	Special	18351	929

2-way pressure compensated partially adjustable

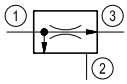
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRFA-10A	up to 350 (5000)	26 (7)	CA-10A-2N	18321-15	255

2-way pressure compensated fully adjustable

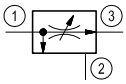
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRFB-10A	up to 350 (5000)	30 (8)	CA-10A-2N	18321-16	257
	VRFE-12A	up to 350 (5000)	50 (13)	CA-12A-2N	18321-30	261

Mechanical - Flow control

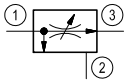
3-way pressure compensated fixed setting

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRFC-10A-TF	up to 350 (5000)	19 (5)	CA-10A-3N	18321-18	263
	VRFC-12A-TF	up to 350 (5000)	63 (17)	CA-12A-3N	18321-19	269

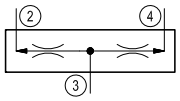
3-way pressure compensated partially adjustable

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRFC-10A	up to 350 (5000)	60 (16)	CA-10A-3N	18321-17	265

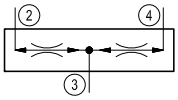
3-way pressure compensated fully adjustable

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRFD-10A	up to 350 (5000)	60 (16)	CA-10A-3N	18321-20	267
	VRFD-12A	up to 350 (5000)	120 (32)	CA-12A-3N	18321-21	271

Flow divider

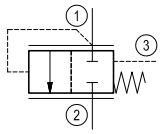
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	DSDN-10A	up to 350 (5000)	54 (14)	CA-10A-4N	18321-22	273
	DSDN-16A	up to 350 (5000)	165 (44)	CA-16A-4N	18321-23	275

Flow divider and combiner

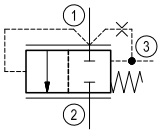
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	DRFN-10A	up to 350 (5000)	54 (14)	CA-10A-4N	18321-24	277
	DRFN-16A	up to 350 (5000)	165 (44)	CA-16A-4N	18321-25	279

Mechanical - Logic elements and compensator

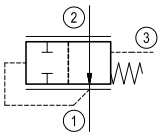
Flow and pressure control with external pilot

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VLST-10A	350 (5000)	60 (16)	CA-10A-3C	18321-60	285
	VLST-12A	350 (5000)	120 (32)	CA-12A-3C	18321-61	287
	VLST-16A	350 (5000)	up to 200 (53)	CA-16A-3C	18321-62	289
	VLST-20A	350 (5000)	up to 360 (95)	CA-20A-3C	18321-63	291

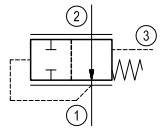
Flow and pressure control with internal pilot

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VLSP-10A	350 (5000)	60 (16)	CA-10A-3C	18321-64	293
	VLSP-12A	350 (5000)	120 (32)	CA-12A-3C	18321-65	295
	VLSP-16A	350 (5000)	200 (53)	CA-16A-3C	18321-66	297
	VLSP-20A	350 (5000)	360 (95)	CA-20A-3C	18321-67	299

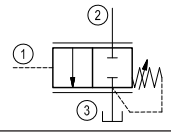
Flow control with external pilot

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VLSC-10A	350 (5000)	30 (8)	CA-10A-3C	18321-68	301
	VLSC-12A	350 (5000)	60 (16)	CA-12A-3C	18321-59	305
	VLSC-16A	350 (5000)	120 (32)	CA-16A-3C	18321-69	307
	VLSC-20A	350 (5000)	240 (63)	CA-20A-3C	18321-70	309

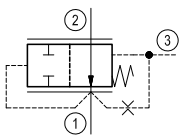
Flow control with external pilot damped type

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VLSC-10A-8-TF	350 (5000)	25 (7)	CA-10A-3C	18321-71	303

2-way Logic element with pressure shut-off function

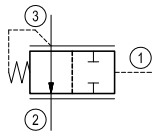
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	MH2DAD	420 (6000)	2.5 (0.7)	Special	64586	937

Pressure control with internal pilot

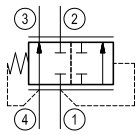
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VLSR-10A	350 (5000)	40 (11)	CA-10A-3C	18321-72	311
	VLSR-12A	350 (5000)	60 (16)	CA-12A-3C	18321-73	313
	VLSR-16A	350 (5000)	120 (32)	CA-16A-3C	18321-74	315
	VLSR-20A	350 (5000)	230 (61)	CA-20A-3C	18321-75	317

Mechanical - Logic elements and compensator

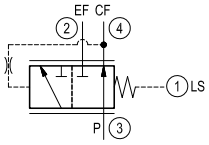
Pressure compensator

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VLSQ-10A	350 (5000)	40 (11)	CA-10A-3N	18321-77	319
	VLSQ-12A	350 (5000)	70 (18)	CA-12A-3N	18321-78	321
	VLSQ-16A	350 (5000)	120 (32)	CA-16A-3N	18321-79	323

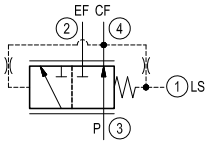
Pressure compensator combination type

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VCSQ-10A	350 (5000)	60 (16)	CA-10A-4N	18321-80	325
	VCSQ-12A	350 (5000)	120 (32)	CA-12A-4N	18321-81	327
	VCSQ-16A	350 (5000)	200 (53)	CA-16A-4N	18321-82	329

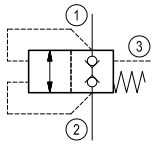
Pressure compensator with static load sense

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRLA-10A-S	350 (5000)	45 (12)	CA-10A-4N	18321-86	331
	VRLA-12A-S	350 (5000)	100 (26)	CA-12A-4N	18321-87	333
	VRLA-16A-S	350 (5000)	160 (42)	CA-16A-4N	18321-88	335
	VRLA-20A-S	350 (5000)	230 (60)	CA-20A-4N	18321-89	337

Pressure compensator with dynamic load sense

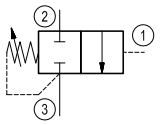
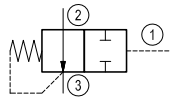
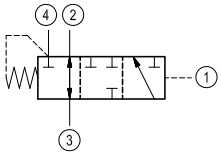
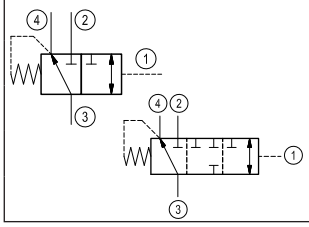
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRLA-10A-D	350 (5000)	45 (12)	CA-10A-4N	18321-90	339
	VRLA-12A-D	350 (5000)	100 (26)	CA-12A-4N	18321-83	341
	VRLA-16A-D	350 (5000)	160 (42)	CA-16A-4N	18321-84	343
	VRLA-20A-D	350 (5000)	230 (60)	CA-20A-4N	18321-85	345

Directional control poppet type

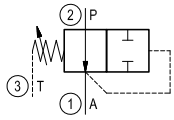
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VLDT-10A	350 (5000)	80 (21)	CA-10A-3C	18321-76	347

Mechanical - Directional direct acting

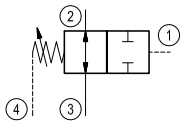
Spool type direct acting external pilot internal drain

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VDSA-10A-6	350 (5000)	30 (8)	CA-10A-3N	18320-73	351
	VDSA-10A	350 (5000)	50 (13)	CA-10A-3N	18320-83	353
	VDSA-16A	350 (5000)	160 (43)	CA-16A-3N	18320-92	355
	VDSB-10A-6	350 (5000)	30 (8)	CA-10A-3N	18320-74	357
	VDSB-10A	350 (5000)	50 (13)	CA-10A-3N	18320-84	359
	VDSB-16A	350 (5000)	160 (43)	CA-16A-3N	18320-93	391
	VDSH-10A	350 (5000)	40 (11)	CA-10A-4N	18320-75	375
	VDSH-16A	350 (5000)	160 (43)	CA16A-4N	18320-85	377
	VDSK-10A	350 (5000)	40 (11)	CA-10A-4N	18320-76	379
	VDSK-16A	350 (5000)	160 (43)	CA16A-4N	18320-86	381

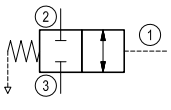
Spool type direct acting internal pilot external drain

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VDSR-10A-6	350 (5000)	12 (3)	CA-10A-3N	18320-82	361

Spool type direct acting external pilot external drain

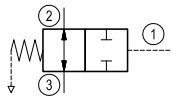
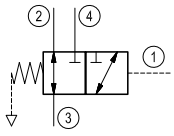
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VDSE-10A-6	350 (5000)	20 (5)	CA-10A-4N	18320-88	363

Spool type direct acting external pilot external vent

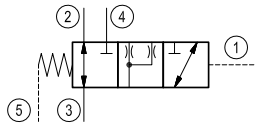
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VDSC-10A	350 (5000)	50 (13)	CA-10A-3N	18320-77	365
	VDSC-12A	350 (5000)	120 (32)	CA-12A-3N	18320-91	367
	VDSC-16A	350 (5000)	160 (43)	CA-16A-3N	18320-78	369

Mechanical - Directional direct acting

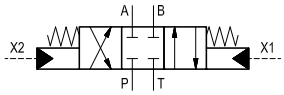
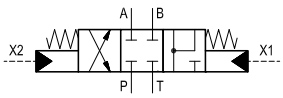
Spool type direct acting external pilot external vent

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VDSD-10A	350 (5000)	50 (13)	CA-10A-3N	18320-79	371
	VDSD-16A	350 (5000)	160 (43)	CA-16A-3N	18320-80	373
	VDSJ-10A	350 (5000)	50 (13)	CA-10A-4N	18320-87	383
	VDSJ-16A	350 (5000)	160 (43)	CA-16A-4N	18320-81	385

Spool type direct acting external pilot 5 ports vented

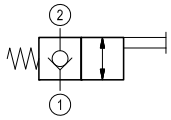
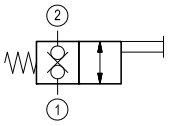
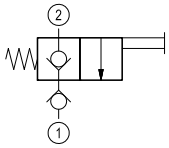
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VDSJ-16A-RN	350 (5000)	160 (43)	Special CA-16A-5C	18320-94	393

Spool type 4-way

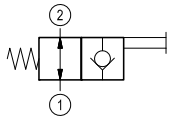
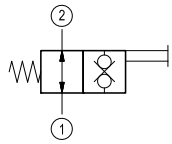
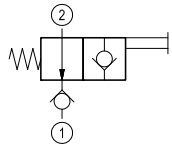
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VDSP-20B	350 (5000)	200 (53)	Special CA-20B-6C	18320-89	387
	VDSP-20B-R	350 (5000)	200 (53)	Special CA-20B-6C	18320-90	389

Mechanical - Directional manual pilot operated

Manual operated poppet 2-way normally closed

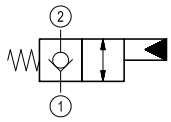
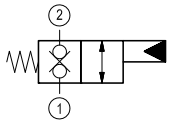
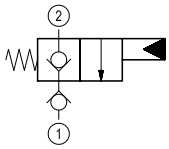
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VMI-8A-2A-06-NC	350 (5000)	40 (11)	CA-08A-2N	18326-01	397
	VMI-8A-2A-09-NC	350 (5000)	70 (19)	Special 017-E	18326-05	405
	VMI-8A-2A-12-NC	350 (5000)	150 (39)	Special 021-E	18326-07	409
	VMI-8A-2A-06-NC	350 (5000)	40 (11)	CA-08A-2N	18326-01	397
	VMI-8A-2A-09-NC	350 (5000)	70 (19)	Special 017-E	18326-05	405
	VMI-8A-2A-12-NC	350 (5000)	150 (39)	Special 021-E	18326-07	409
	VMI-8A-2A-06-NC-VU	350 (5000)	40 (11)	Special 019-E	18326-02	401
	VMI-8A-2A-09-NC-VU	350 (5000)	70 (19)	Special 017-E	18326-05	405
	VMI-8A-2A-12-NC-VU	350 (5000)	150 (39)	Special 021-E	18326-07	409

Manual operated poppet 2-way normally open

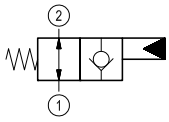
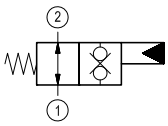
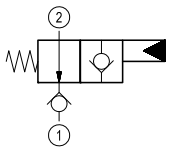
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VMI-8A-2A-06-NA	350 (5000)	40 (11)	CA-8A-2N	18326-03	413
	VMI-8A-2A-09-NA	350 (5000)	70 (19)	Special 017-E	18326-06	421
	VMI-8A-2A-12-NA	350 (5000)	150 (39)	Special 021-E	18326-08	425
	VMI-8A-2A-06-NA	350 (5000)	40 (11)	CA-8A-2N	18326-03	413
	VMI-8A-2A-09-NA	350 (5000)	70 (19)	Special 017-E	18326-06	421
	VMI-8A-2A-12-NA	350 (5000)	150 (39)	Special 021-E	18326-08	425
	VMI-8A-2A-06-NA-VU	350 (5000)	40 (11)	Special 019-E	18326-04	417
	VMI-8A-2A-09-NA-VU	350 (5000)	70 (19)	Special 017-E	18326-06	421
	VMI-8A-2A-12-NA-VU	350 (5000)	150 (39)	Special 021-E	18326-08	425

Mechanical - Directional hydraulic pilot operated

Hydraulic operated poppet 2-way normally closed

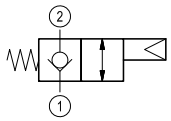
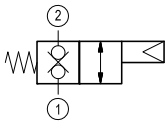
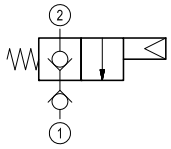
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VOI-8A-2A-06-NC	350 (5000)	40 (11)	CA-08A-2N	18326-40	431
	VOI-8A-2A-09-NC	350 (5000)	70 (19)	Special 017-E	18326-44	439
	VOI-8A-2A-12-NC	350 (5000)	150 (39)	Special 021-E	18326-46	443
	VOI-8A-2A-06-NC	350 (5000)	40 (11)	CA-08A-2N	18326-40	431
	VOI-8A-2A-09-NC	350 (5000)	70 (19)	Special 017-E	18326-44	439
	VOI-8A-2A-12-NC	350 (5000)	150 (39)	Special 021-E	18326-46	443
	VOI-8A-2A-06-NC-VU	350 (5000)	40 (11)	Special 019-E	18326-41	435
	VOI-8A-2A-09-NC-VU	350 (5000)	70 (19)	Special 017-E	18326-44	439
	VOI-8A-2A-12-NC-VU	350 (5000)	150 (39)	Special 021-E	18326-46	443

Hydraulic operated poppet 2-way normally open

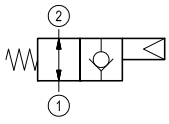
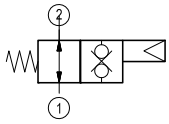
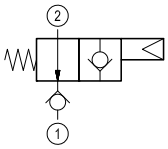
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VOI-8A-2A-06-NA	350 (5000)	40 (11)	CA-08A-2N	18326-42	447
	VOI-8A-2A-09-NA	350 (5000)	70 (19)	Special 017-E	18326-45	455
	VOI-8A-2A-12-NA	350 (5000)	150 (39)	Special 021-E	18326-47	459
	VOI-8A-2A-06-NA	350 (5000)	40 (11)	CA-08A-2N	18326-42	447
	VOI-8A-2A-09-NA	350 (5000)	70 (19)	Special 017-E	18326-45	455
	VOI-8A-2A-12-NA	350 (5000)	150 (39)	Special 021-E	18326-47	459
	VOI-8A-2A-06-NA-VU	350 (5000)	40 (11)	Special 019-E	18326-43	451
	VOI-8A-2A-09-NA-VU	350 (5000)	70 (19)	Special 017-E	18326-45	455
	VOI-8A-2A-12-NA-VU	350 (5000)	150 (39)	Special 021-E	18326-47	459

Mechanical - Directional pneumatic pilot operated

Pneumatic operated poppet 2-way normally closed

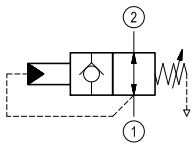
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VPI-8A-2A-06-NC	350 (5000)	40 (11)	CA-8A-2N	18326-70	465
	VPI-8A-2A-09-NC	350 (5000)	70 (19)	Special 017-E	18326-74	473
	VPI-8A-2A-12-NC	350 (5000)	150 (39)	Special 021-E	18326-76	477
	VPI-8A-2A-06-NC	350 (5000)	40 (11)	CA-8A-2N	18326-70	465
	VPI-8A-2A-09-NC	350 (5000)	70 (19)	Special 017-E	18326-74	473
	VPI-8A-2A-12-NC	350 (5000)	150 (39)	Special 021-E	18326-76	477
	VPI-8A-2A-06-NC-VU	350 (5000)	40 (11)	Special 019-E	18326-71	469
	VPI-8A-2A-09-NC-VU	350 (5000)	70 (19)	Special 017-E	18326-74	473
	VPI-8A-2A-12-NC-VU	350 (5000)	150 (39)	Special 021-E	18326-76	477

Pneumatic operated poppet 2-way normally open

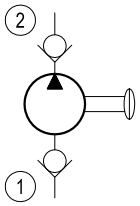
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VPI-8A-2A-06-NA	350 (5000)	40 (11)	CA-8A-2N	18326-72	481
	VPI-8A-2A-09-NA	350 (5000)	70 (19)	Special 017-E	18326-75	489
	VPI-8A-2A-12-NA	350 (5000)	150 (39)	Special 021-E	18326-77	493
	VPI-8A-2A-06-NA	350 (5000)	40 (11)	CA-8A-2N	18326-72	481
	VPI-8A-2A-09-NA	350 (5000)	70 (19)	Special 017-E	18326-75	489
	VPI-8A-2A-12-NA	350 (5000)	150 (39)	Special 021-E	18326-77	493
	VPI-8A-2A-06-NA-VU	350 (5000)	40 (11)	Special 019-E	18326-73	485
	VPI-8A-2A-09-NA-VU	350 (5000)	70 (19)	Special 017-E	18326-75	489
	VPI-8A-2A-12-NA-VU	350 (5000)	150 (39)	Special 021-E	18326-78	497

Mechanical - Accessories

Automatic shut-off pilot to close

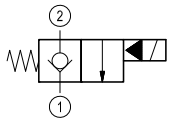
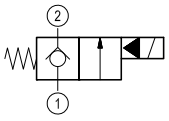
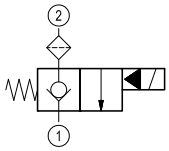
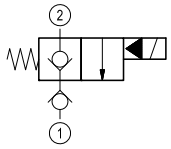
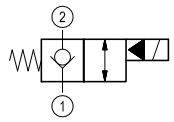
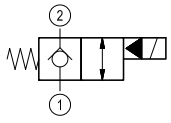
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VEM-5-C-N	350 (5000)	1 (0.26)	Special 348	18320-70	503

Hand pump

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	PM-06	210 (3000)	1 (0.06)	CA-08A-2N	18321-95	505

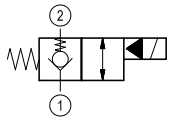
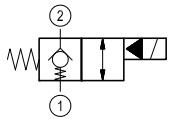
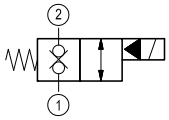
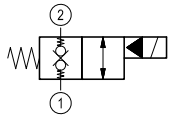
Solenoid - On-off pilot operated

Pilot operated poppet 2-way normally closed

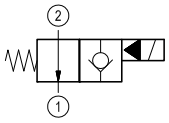
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEI-8I-06-NC	350 (5000)	up to 30 (8)	CA-08A-2N	S8	18323-01	669
	VEI-8A-06-NC	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-02	673
	VEI-8A-09-NC	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-03	689
	VEI-8A-12-NC	350 (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

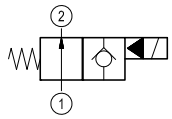
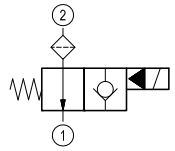
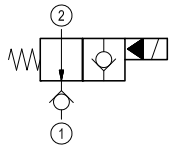
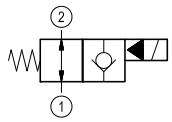
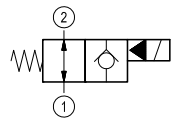
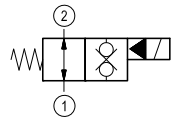
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEI-8A-06-NC	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-02	673
	VEI-8A-10-NC	350 (5000)	up to 70 (18)	CA-10A-2N	S8	18323-11	685
	VEI-8A-12-NC	350 (5000)	up to 150 (40)	CA-12A-2N	S8	18323-13	693
	VEI-8A-09-NC	350 (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

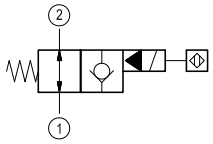
Solenoid - On-off pilot operated

Pilot operated poppet 2-way normally open

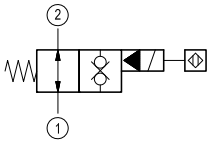
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEI-8A-06-NA	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-06	713
	VEI-8A-09-NA	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-07	725
	VEI-8A-12-NA	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-08	733
	VEI-8I-06-NA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

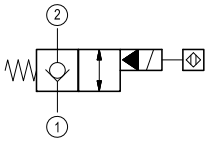
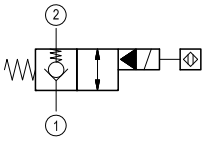
Pilot operated poppet 2-way normally open proximity sensor

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

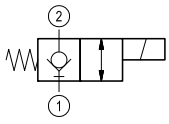
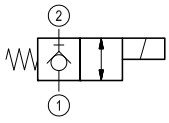
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEI-8A-2T-06-NA-S-M-NSS	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18325-16	761
	VEI-8A-2T-09-NA-S-M-NSS	350 (5000)	up to 70 (18)	Special 017-E	S8	18325-15	765

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

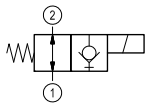
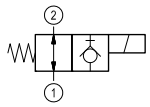
Solenoid - On-off direct acting

Direct acting 2-way poppet type normally closed

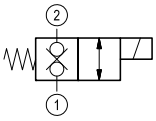
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VED-8I-NC	350 (5000)	1.5 (0.4)	CA-08A-2N	S8	18324-06	783
	VED-8I-NC	350 (5000)	1.5 (0.4)	CA-08A-2N	S8	18324-06	783

Solenoid - On-off direct acting

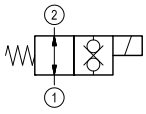
Direct acting 2-way poppet type normally open

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

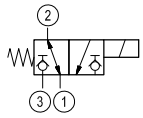
Direct acting 2-way poppet type normally closed double lock

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

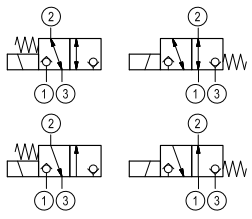
Direct acting 2-way poppet type normally open double lock

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

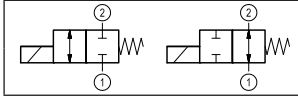
Direct acting poppet 3-way 2-position

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

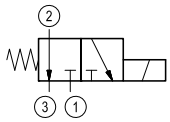
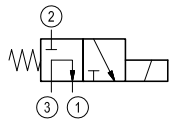
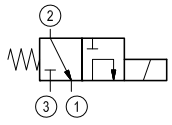
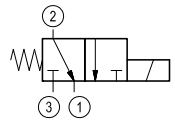
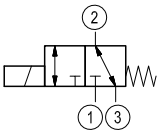
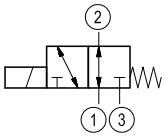
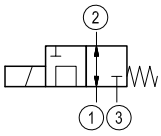
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	KSDER1-C	350 (5000)	12 (3)	T-11A	GZ37	18136-21	973
	KSDER1-U	350 (5000)	12 (3)	T-11A	GZ37	18136-21	973
	KSDEU1-C	500 (7250)	6 (2)	T-11A	GZ37	18136-21	973
	KSDEU1-U	500 (7250)	6 (2)	T-11A	GZ37	18136-21	973

Direct acting spool type 2-way 2-position

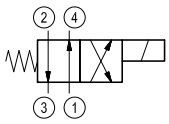
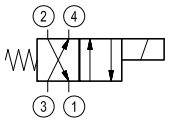
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	KKDER1 N-P	350 (5000)	55 (15)	T-13A	GZ37	18136-06	1001
	KKDER8 N-P	350 (5000)	45 (12)	T-8A	GZ37	18136-08	981

Solenoid - On-off direct acting

Direct acting 3-way 2-position spool type

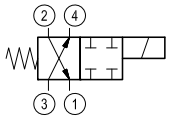
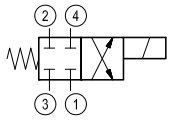
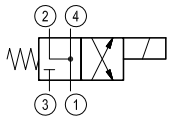
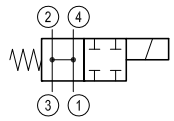
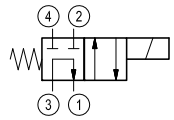
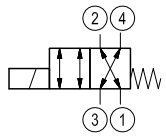
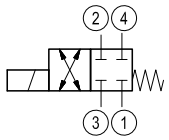
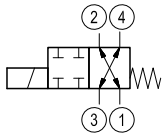
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEDS-08A-32	315 (4500)	20 (5)	CA-08A-3N	S8	18324-50	807
	VED-10A-32	210 (3000)	20 (6)	CA-10A-3N	S7	18324-58	819
	VEDS-12A-32	315 (4500)	60 (16)	CA-12A-3N	R5	18324-56	831
	VEDS-08A-32	315 (4500)	20 (5)	CA-08A-3N	S8	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

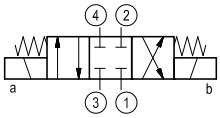
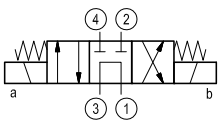
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEDS-08A-42	210 (3000)	16 (4)	CA-08A-4N	S8	18324-51	811
	VED-10A-42	210 (3000)	20 (5)	CA-10A-4N	S7	18324-59	823
	VEDS-08A-42	210 (3000)	16 (4)	CA-08A-4N	S8	18324-51	811

Solenoid - On-off direct acting

Direct acting 4-way 2-position spool type

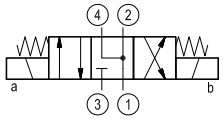
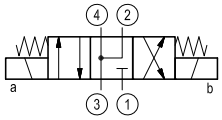
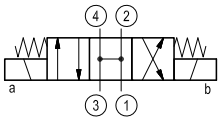
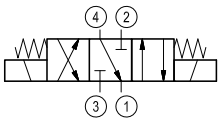
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VED-10A-42	210 (3000)	20 (5)	CA-10A-4N	S7	18324-59	823
	VEDS-08A-42	210 (3000)	16 (4)	CA-08A-4N	S8	18324-51	811
	VED-10A-42	210 (3000)	20 (5)	CA-10A-4N	S7	18324-59	823
	VEDS-08A-42	210 (3000)	16 (4)	CA-08A-4N	S8	18324-51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

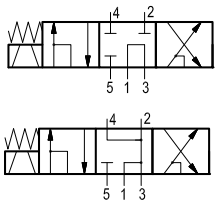
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEDS-08A-43	315 (4500)	20 (5)	CA-08A-4N	S8	18324-52	815
	VED-10A-43	210 (3000)	20 (6)	CA-10A-4N	S7	18324-60	827
	VEDS-08A-43	315 (4500)	20 (5)	CA-08A-4N	S8	18324-52	815
	VED-10A-43	210 (3000)	20 (6)	CA-10A-4N	S7	18324-60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

Solenoid - On-off direct acting

Direct acting 4-way 3-position spool type

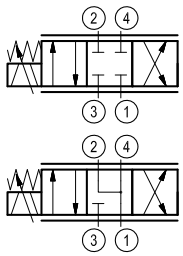
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEDS-08A-43	315 (4500)	20 (5)	CA-08A-4N	S8	18324-52	815
	VED-10A-43	210 (3000)	20 (6)	CA-10A-4N	S7	18324-60	827
	VEDS-08A-43	315 (4500)	20 (5)	CA-08A-4N	S8	18324-52	815
	VEDS-08A-43	315 (4500)	20 (5)	CA-08A-4N	S8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

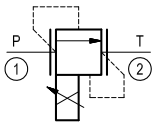
Solenoid - Electro-proportional

Electro-proportional Direct acting 4-way 3-position

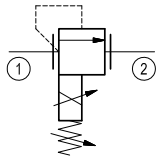
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEPS-10A-43	350 (5000)	25 (7)	Size 10	GP37	18162	1129

Solenoid - Electro-proportional

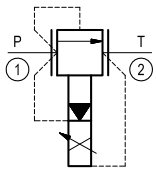
Electro-proportional relief direct acting (rising characteristic curve)

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEP-5B-2S-D	350 (5000)	5 (1.3)	CA-08A-2N	S5	18323-65	837
	KBPS.8A	420 (6000)	2 (0.5)	T-8A	GP37	18139-04	1043

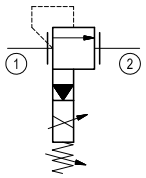
Electro-proportional relief direct acting (falling characteristic curve)

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	KBPS.8B	420 (6000)	2 (0.5)	T-8A	GP37	18139-05	1057

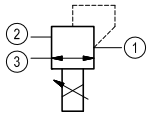
Electro-proportional relief pilot operated (rising characteristic curve)

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEP-5B-2S-10A-P	350 (5000)	up to 120 (32)	CA-10A-2N	S5	18323-66	841
	VEP-5B-2S-P	350 (5000)	up to 150 (40)	Special 065	S5	18323-67	845
	KBVS.3A	350 (5000)	200 (53)	Special	GP37	18139-08	1095
	KBVS.1A	420 (6000)	80 (21)	Size 10	GP37	18160	1071

Electro-proportional relief pilot operated (falling characteristic curve)

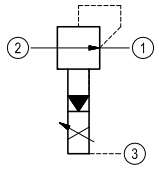
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	KBVS.3B	350 (5000)	200 (53)	Special	GP37	18139-07	1105
	KBVS.1B	420 (6000)	80 (21)	Size 10	GP37	18152	1083

Electro-proportional direct acting pressure reducing

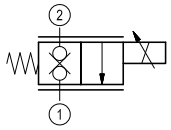
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEP-5A-3R-06	210 (3000)	10 (3)	CA-10A-3N	S5	18323-60	849
	MHDRE 02 K	30 (450)	2.5 (0.7)	Special		64658	1155
	MHDRE 04 K	30 (450)	6 (1.6)	Special		64666	1165
	MHDRE 06 K	30 (450)	40 (11)	Special	GP45	64655	1173
	FTDRE 2K	100 (1450)	2 (0.5)	Special		58032	1183
	FTDRE 4K	210 (3000)	5 (1.3)	Special		58038	1187

Solenoid - Electro-proportional

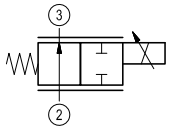
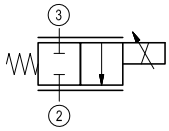
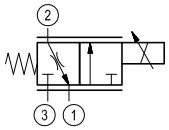
Electro-proportional pilot operated pressure reducing

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEP-5A-2R-06-P	210 (3000)	up to 60 (16)	CA-10A-3N	S5	18323-61	853

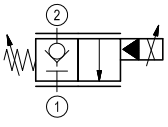
Electro-proportional 2-way double lock normally closed

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEP-5A-2T-06-NC	210 (3000)	up to 20 (5)	CA-08A-2N	S5	18323-68	857

Electro-proportional flow regulator not compensated

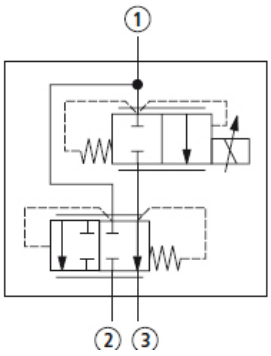
Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEP-5A-2Q-09 NA	210 (3000)	up to 40 (11)	CA-10A-3N	S5	18323-64	869
	VEP-5A-2Q-09 NA	210 (3000)	up to 40 (11)	CA-10A-3N	S5	18323-63	861
	VEP-5A-2Q-14	210 (3000)	up to 60 (16)	CA-12A-3N	S5	18323-62	865
	VEP-5A-2Q-09 NA	210 (3000)	up to 40 (11)	CA-10A-3N	S5	18323-63	861
	VEP-5A-2Q-14	210 (3000)	up to 60 (16)	CA-12A-3N	S5	18323-62	865

Electro-proportional poppet type flow regulator not compensated

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEPN-12A	210 (3000)	up to 60 (16)	CA-12A-2N	R7	18323-69	873

Solenoid - Electro-proportional

Electro-proportional flow regulator pressure compensated

Symbol	Type	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	KUDSR	350 (5000)	120 (32)	Size 16	GP45	18702	1115

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Subject to change.