

# Cartridge valves: Mechanical, Solenoid, Electro-proportional

## Product Selection Guide

**RE 18318-00**

Edition: 10.2017

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### Summary

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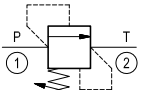
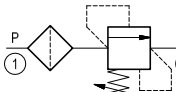
<b>Mechanical cartridge valves</b>	<b>Page</b>
Relief and Unloading	2-4
Pressure Reducing and Relieving	4-5
Check and Pilot Operated Check	6-7
Counterbalance	8-9
Flow Control	10-11
Logic Elements and Compensator	12-13
Directional Direct Acting	14-15
Directional Manual Pilot Operated	16
Directional Hydraulic Pilot Operated	17
Directional Pneumatic Pilot Operated	18
Accessories	18

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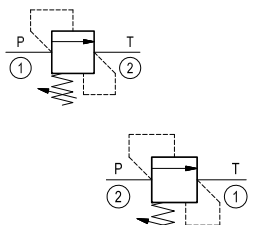
<b>Solenoid cartridge valves</b>	<b>Page</b>
On-Off Pilot Operated	19-22
On-Off Direct Acting	22-26
Electro-Proportional	26-29

## Mechanical - Relief and Unloading

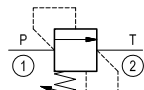
### Relief direct acting poppet type

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VSAN-08A	041148X56Z	up to 420 (6000)	3 (0.8)	CA-08A-2N	18318-01	41
	VS-5-CN	041158X99Z	460 (6600)	1.5 (0.4)	Special 348	18318-19	37
	VS-5-CF	041157X99Z	460 (6600)	1.5 (0.4)	Special 348	18318-20	39

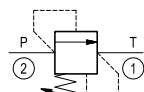
### Relief direct acting guided poppet type

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VSBN-08A	041149X56Z	350 (5000)	20 (5)	CA-08A-2N	18318-04	43
	VSBN-10A	041155X85Z	350 (5000)	50 (13)	CA-10A-2N	18318-05	47
	VSBG-10A	041156X85Z	350 (5000)	50 (13)	CA-10A-2N	18318-06	55
	VSBN-08F	041149X20Z	350 (5000)	20 (5)	Special CA-08F-2N	18318-18	45
	VS-30	041118X99Z	350 (5000)	30 (8)	Special 008	18318-23	49
	VS-80	041105X99Z	250 (3600)	80 (21)	Special 009	18318-25	53

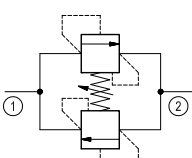
### Relief direct acting guided poppet type hardened seat

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VS-30-NCF	041118X09Z	420 (6000)	30 (8)	Special 008	18318-24	51

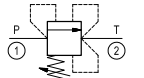
### Relief direct acting poppet type differential area

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VSDN-08A	041522X56Z	350 (5000)	50 (13)	CA-08A-2N	18318-02	57
	VSDN-10A	041523X85Z	350 (5000)	120 (32)	CA-10A-2N	18318-03	59
	VSD-350	041504X99Z	210 (3000)	350 (93)	Special 004	18318-22	61

### Relief bidirectional direct acting poppet type differential area

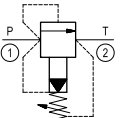
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VSNG-10A	041159X85Z	240 (3500)	56 (15)	CA-10A-2N	18318-07	63

### Relief direct acting poppet type pressure compensated

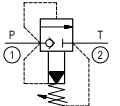
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VS-30-CC	041127X99Z	350 (5000)	30 (8)	Special 008	18318-26	65

## Mechanical - Relief and Unloading

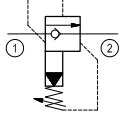
### Relief pilot operated spool type

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VSPN-10A	041208X85Z	420 (6000)	3-120 (1-32)	CA-10A-2N	18318-08	67
	VSPN-12A	041210X57Z	420 (6000)	5-200 (1.3-53)	CA-12A-2N	18318-09	69
	VSPN-16A	041211X27Z	420 (6000)	8-300 (2-79)	CA-16A-2N	18318-10	71

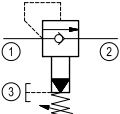
### Relief pilot operated poppet type

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VSPC-10A	041209X85Z	350 (5000)	3-80 (1-21)	CA-10A-2N	18318-11	73
	VMP1-16	VMP1.100...	420 (6000)	100 (26)	Special, FB	18318-36	75

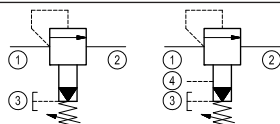
### Relief pilot operated poppet type and anti-cavitation

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VMR1-16	VMR1.100.NG...	420 (6000)	100 (26)	Special, FB	18318-35	77
	VMR2-22-FC	VMR2.240.NG...	420 (6000)	240 (63)	Special, FC	18318-37	79
	VMR2-22-LG	VMR2.240.LG...	420 (6000)	240 (63)	Special, LG	18318-38	81
	MHDBN-16		420 (6000)	100 (26)	Special, metric	64602	1005
	MHDBN-32		420 (6000)	400 (106)	Special, metric	64602	1005

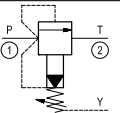
### Relief pilot operated with pulling function

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	MHDBN..Y..02		420 (6000)	400 (106)	Special, metric	64599	995

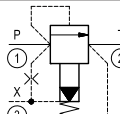
### Relief pilot operated

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	MHDBV.Y-MHDBV.XY		420 (6000)	up to 800 (211)	Special, metric	64606	985

### Relief pilot operated spool type external drain

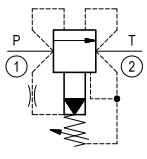
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VSPY-10A	041305X85Z	420 (6000)	3-120 (0.8-32)	CA-10A-3N	18318-12	83
	VSPY-12A	041307X57Z	350 (5000)	5-200 (1.3-53)	CA-12A-3C	18318-13	85

### Relief pilot operated spool type external pilot

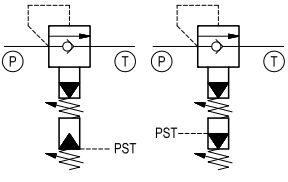
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VSPX-12A	041308X57Z	350 (5000)	5-200 (1.3-53)	CA-12A-3C	18318-14	87

## Mechanical - Relief and Unloading

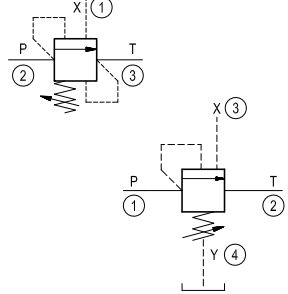
### Relief pilot operated spool type pressure compensated

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VSP-CC-150	041801X99Z	420 (6000)	5-150 (1.3-40)	Special 065	18318-27	91
	VSPP-10A	041803X85Z	420 (6000)	3-120 (1-32)	CA-10A-2N	18318-39	89

### Relief pilot operated, sequence + cut-off stage

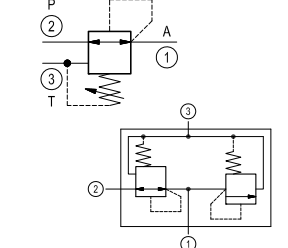
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	MHDBB/MHDBL		420 (6000)	400 (106)	Special, metric	64612	1015

### Priority unloading pilot operated

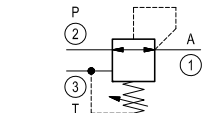
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VMSN-08A	047521X56Z	350 (5000)	3 (1)	CA-08A-3N	18318-16	93
	VMSP-78	047510X99Z	350 (5000)	5-30 (1.3-8)	Special 308	18318-17	95

## Mechanical - Pressure reducing and relieving

### Pressure reducing and relieving direct acting spool type

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRPR-08A	0495118356Z	350 (5000)	8 (2)	CA-08A-3N	18318-52	101
	VRPR-10A	049504X85Z	350 (5000)	30 (8)	CA-10A-3N	18318-53	103
	VRPR-07A	049508X99Z	420 (6000)	5 (1.3)	Special CA-07A-3N	18318-59	99
	MHDRDB			315 (4500)	11 (3)	Special R/LA	18318-55

### Pressure reducing and relieving direct acting spool damped type

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRPR-10A-8	0495098385Z	350 (5000)	20 (5)	CA-10A-3N	18318-54	111
	VRPR-07A-S	049509X99Z	420 (6000)	5 (1.3)	Special CA-07A-3N	18318-60	109

## Mechanical - Pressure reducing and relieving

### Pressure reducing pilot operated spool type

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRPP-10A	049306X85Z	350 (5000)	60 (16)	CA-10A-3N	18318-50	113
	VRPP-12A	049308X57Z	350 (5000)	100 (26)	CA-12A-3N	18318-51	115

### Pressure reducing and relieving pilot operated spool type


Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRPX-10A	049307X85Z	350 (5000)	60 (16)	CA-10A-3N	18318-56	117

### Pressure reducing and relieving with pilot controlled setting

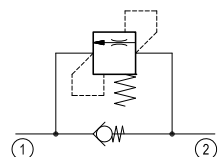
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRPE-10A	049507X85Z	350 (5000)	20 (5)	CA-10A-3N	18318-58	119

## Mechanical - Check and pilot operated check


### Check poppet type

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VUCN-08A	0431200056Z	420 (6000)	50 (13)	CA-08A-2N	18318-89	127
	VUCN-10A	0431230085Z	350 (5000)	80 (21)	CA-10A-2N	18318-90	131
	VUCN-12A	0431280057Z	350 (5000)	120 (32)	CA-12A-2N	18318-91	133
	VUCN-16A	0431250027Z	350 (5000)	200 (53)	CA-16A-2N	18318-92	135
	VUCN-20A	0431320058Z	350 (5000)	360 (95)	CA-20A-2N	18318-93	137
	VUCN-04A	0431310054Z	350 (5000)	4 (1)	Special CA-04A-2N	18318-88	123
	VU-N-38	0431190099Z	350 (5000)	30 (8)	Special 690	18318-99	125
	VUCN-08F	043138002000	420 (6000)	50 (13)	Hydac 06020	18319-04	129

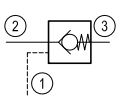
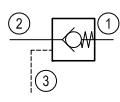
### Check poppet type with thermal relief

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VUCN-10A-TR	043137X85Z	350 (5000)	80 (21)	CA-10A-2N	18318-94	139
	VUCN-12A-TR	043137X57Z	350 (5000)	120 (32)	CA-12A-2N	18318-95	141

### Check poppet reverse type

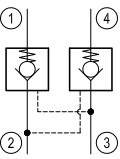
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VURN-08A	0431210056Z	420 (6000)	25 (7)	CA-08A-2N	18318-96	143
	VURN-10A	0431270085Z	350 (5000)	60 (16)	CA-10A-2N	18318-97	145
	VURN-12A	0431360057Z	350 (5000)	90 (24)	CA-12A-2N	18318-98	147
	VUR1-16	VUR1.100..	420 (6000)	100 (26)	Special, FB	18319-01	149
	VUR2-22-FC	VUR2.240.FC..	420 (6000)	240 (63)	Special, FC	18319-02	151
	VUR2-22-LG	VUR2.240.LG..	420 (6000)	240 (63)	Special, LG	18319-03	153
	MHSV 16-22-32		420 (6000)	up to 400 (107)	Special, FB/FC/FK	64609	1025

### Pilot operated check pilot to open

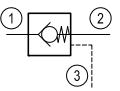
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
 	VSOA-08A	043310X56Z	350 (5000)	30 (8)	CA-08A-3N	18319-34	169
	VSOA-10A	043310X85Z	350 (5000)	40 (11)	CA-10A-3N	18319-35	171
	VSON-08A	043306X56Z	350 (5000)	30 (8)	CA-08A-3C	18319-30	155
	VSON-10A	043305X85Z	350 (5000)	60 (16)	CA-10A-3C	18319-31	157
	VSON-12A	043307X57Z	350 (5000)	120 (32)	CA-12A-3C	18319-32	161
	VSON-16A	043308X27Z	350 (5000)	200 (53)	CA-16A-3C	18319-33	165
	VSON-08U	043306X20Z	350 (5000)	60 (16)	SUN T-11A	18319-39	159
	VSON-12U	043307X86Z	350 (5000)	120 (32)	SUN T-2A	18319-40	163
	VSON-16U	043309X47Z	350 (5000)	240 (63)	SUN T-17A	18319-41	167

## Mechanical - Check and pilot operated check

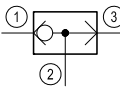
### Dual pilot operated check pilot to open

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VSOD-10A	043603X85Z	350 (5000)	30 (8)	CA-10A-4N	18319-38	173

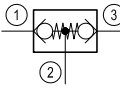
### Pilot operated check pilot to close

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VUPC-10A	043404X85Z	350 (5000)	70 (18)	CA-10A-3C	18319-36	175
	VUPC-12A	043404X57Z	350 (5000)	120 (32)	CA-12A-3C	18319-37	177
	VUPC-25U	043404X50Z	350 (5000)	560 (148)	SUN T-19A	18319-29	179

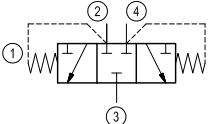
### Directional poppet type shuttle

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	SELB-08A	049405005600	350 (5000)	up to 10 (3)	CA-08A-3N	18319-80	183
	SELB-10A	049409008500	220 (3200)	up to 30 (8)	CA-10A-3N	18319-79	187
	SELC-04A	049407005400	350 (5000)	up to 4 (1)	Special CA-04A-3Y	18319-82	181
	SELC-08A	049406X5600	350 (5000)	up to 10 (3)	CA-08A-2N	18319-81	185
	MHSU		420 (6000)	up to 10 (3)	Special, metric	18205	1033

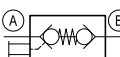
### Directional poppet type shuttle double lock

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VUDN-08A	0439010056Z	350 (5000)	10 (3)	CA-08A-3N	18319-83	191

### Directional hot oil shuttle

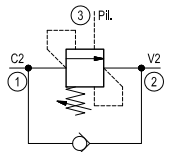
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	SELO-10M	049410X99Z	380 (5500)	40 (11)	Special, 1004	18320-95	189

### Check double lock with mechanical pilot

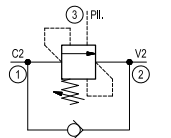
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VU-DT-D7-CM	0443010000Z	350 (5000)	10 (3)	Special 748	18318-87	193

## Mechanical - Counterbalance

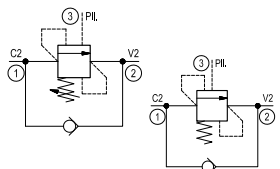
### Standard guided poppet type

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VBSN-08AA	045220X56Z	350 (5000)	30 (8)	CA-08A-3C	18320-01	199
	VBSN-07HH-TF	045250X18Z	350 (5000)	20 (5.3)	Eaton 22903	18320-33	197

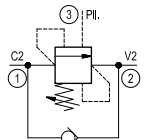
### Standard guided poppet type counterclockwise adjustment

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VBSN-08UU-RS	045242X20Z	280 (4000)	30 (8)	SUN T-11A	18320-16	201

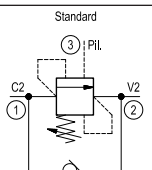
### Standard poppet type differential area

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VBSN-10A	045231X85Z	350 (5000)	60 (16)	CA-10-3C	18320-02	203
	VBSN-12A	045228X57Z	350 (5000)	120 (32)	CA-12A-3C	18320-03	209
	VBSN-16A	045229X27Z	350 (5000)	200 (53)	CA-16A-3C	18320-04	213
	VBSN-20A	045225X58Z	350 (5000)	320 (85)	CA-20A-3C	18320-05	219
	VBSN-08U-TF (fix. set.)	045237X20Z	350 (5000)	60 (16)	SUN T-11A	18319-98	207

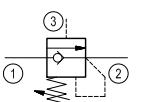
### Standard poppet type differential area, for motor applications

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VBSN-16U-RF	045247X47Z	420 (6000)	240 (63)	SUN T-17A	18320-31	217

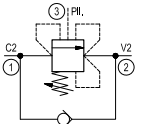
### Standard poppet type differential area counterclockwise adjustment

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VBSN-08U-RS	045243X20Z	350 (5000)	60 (16)	SUN T-11A	18320-17	205
	VBSN-12U-RS	045244X86Z	350 (5000)	120 (32)	SUN T-2A	18320-18	211
	VBSN-16U-RS	045245X47Z	420 (6000)	240 (63)	SUN T-17A	18320-19	215
	VBSN-25U-RS	045246X50Z	350 (5000)	480 (127)	SUN T-19A	18320-29	221

### Standard poppet type zero differential area

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VBSZ-20A	045241X58Z	350 (5000)	320 (85)	CA-20A-3C	18319-99	223

### Relief compensated guided poppet type

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VBSP-08AA	045404X56Z	350 (5000)	30 (8)	CA-08A-3C	18320-06	225



## Mechanical - Counterbalance

### Relief compensated poppet type differential area

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VBSP-10A	045409X85Z	350 (5000)	60 (16)	CA-10A-3C	18320-07	227
	VBSP-12A	045408X57Z	350 (5000)	120 (32)	CA-12A-3C	18320-08	231
	VBSP-16A	045410X27Z	350 (5000)	200 (53)	CA-16A-3C	18320-09	235
	VBSP-20A	045413X58Z	350 (5000)	320 (85)	CA-20A-3C	18320-10	241

### Relief compensated poppet type differential area, for motor applications

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VBSP-16U-RF	045419X47Z	350 (5000)	240 (63)	SUN T-11A	18320-32	239

### Relief compensated poppet type differential area counterclockwise adjustment

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VBSP-08U-RS	045415X20Z	350 (5000)	60 (16)	SUN T-11A	18320-20	229
	VBSP-12U-RS	045416X86Z	350 (5000)	120 (32)	SUN T-2A	18320-21	233
	VBSP-16U-RS	045417X47Z	420 (6000)	240 (63)	SUN T-17A	18320-22	237
	VBSP-25U-RS	045418X50Z	350 (5000)	480 (127)	SUN T-19A	18320-30	243

### Vented guided poppet type

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VBST-08AA	045408X56Z	350 (5000)	30 (8)	CA-08A-3C	18320-11	245
	VBST-10A	045916X85Z	350 (5000)	60 (16)	CA-10A-3C	18320-12	247
	VBST-12A	045926X57Z	350 (5000)	120 (32)	CA-12A-3C	18320-13	251
	VBST-16A	045927X27Z	350 (5000)	200 (53)	CA-16A-3C	18320-14	255
	VBST-20A	045918X58Z	350 (5000)	320 (85)	CA-20A-3C	18320-15	259

### Vented guided poppet type counterclockwise adjustment


Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VBST-08U-RS	045929X20Z	350 (5000)	60 (16)	SUN T-11A	18320-23	249
	VBST-12U-RS	045930X86Z	350 (5000)	120 (32)	SUN T-2A	18320-24	253
	VBST-16U-RS	045931X47Z	350 (5000)	240 (63)	SUN T-17A	18320-25	257

### 4 ports vented poppet type external drain counterclockwise adjustment

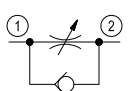
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VBSY-08U-RS	045932X20Z	350 (5000)	60 (16)	SUN T-21A	18320-26	261
	VBSY-12U-RS	045933X86Z	350 (5000)	120 (32)	SUN T-22A	18320-27	263
	VBSY-16U-RS	045934X47Z	350 (5000)	240 (63)	SUN T-23A	18320-28	265
	VBSY-25U-RS	045935X50Z	420 (6000)	480 (127)	SUN T-24A	18320-36	267

## Mechanical - Flow control

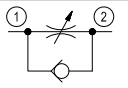
### Cartridge restrictors

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	ST-C-06	OD2101X56	350 (5000)	40 (11)	CA-08A-2N	18321-26	271
	ST-C-10	OD2101X36	350 (5000)	70 (19)	CA-10A-2N	18321-27	273
	ST-C-12	OD2101X89	350 (5000)	150 (39)	CA-12A-2N	18321-28	275
	ST-C-16	OD2101X75	350 (5000)	150 (39)	CA-16A-2N	18321-29	277

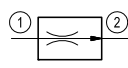
### Needle restrictors free reverse flow

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	STVU-08A	040103X5600	350 (5000)	40 (11)	CA-08A-2N	18321-10	279
	STVU-10A	040105X8500	350 (5000)	80 (22)	CA-10A-2N	18321-11	281

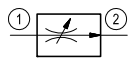
### Needle restrictors free reverse flow fine adjustment

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	STFU-08A	040106X5600	350 (5000)	40 (11)	CA-08A-2N	18321-09	283

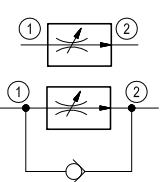
### 2-way pressure compensated fixed setting

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRFA-08A	0402010056Z	up to 210 (3000)	8 (2)	CA-08A-2N	18321-12	287
	VRFA-10A-TF	0402010085Z	up to 350 (5000)	19 (5)	CA-10A-2N	18321-13	289
	VRFA-12A-TF	0402030057Z	up to 350 (5000)	63 (17)	CA-12A-2N	18321-14	295
	MH2FR		420 (6000)	1.2 (0.3)	Special R/MH2FR04K	18321-31	285

### 2-way pressure compensated partially adjustable

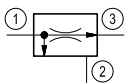
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRFA-10A	040201X85Z	up to 350 (5000)	26 (7)	CA-10A-2N	18321-15	291

### 2-way pressure compensated fully adjustable

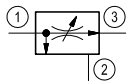
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRFB-10A	040202X85Z	up to 350 (5000)	30 (8)	CA-10A-2N	18321-16	293
	VRFE-12A	040701X57Z	up to 350 (5000)	50 (13)	CA-12A-2N	18321-30	297

## Mechanical - Flow control

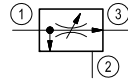
### 3-way pressure compensated fixed setting

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRFC-10A-TF	0404010085Z	up to 350 (5000)	19 (5)	CA-10A-3N	18321-18	299
	VRFC-12A-TF	0404030057Z	up to 350 (5000)	63 (17)	CA-12A-3N	18321-19	305

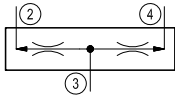
### 3-way pressure compensated partially adjustable

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRFC-10A	040401X85Z	up to 350 (5000)	60 (16)	CA-10A-3N	18321-17	301

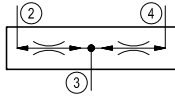
### 3-way pressure compensated fully adjustable

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRFD-10A	040402X85Z	up to 350 (5000)	60 (16)	CA-10A-3N	18321-20	303
	VRFD-12A	040404X57Z	up to 350 (5000)	120 (32)	CA-12A-3N	18321-21	307

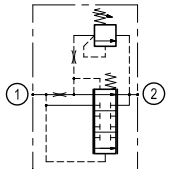
### Flow divider

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	DSDN-10A	0405040085Z	up to 350 (5000)	54 (14)	CA-10A-4N	18321-22	309
	DSDN-16A	0405030027Z	up to 350 (5000)	165 (44)	CA-16A-4N	18321-23	311

### Flow divider and combiner

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	DRFN-10A	0405010085Z	up to 350 (5000)	54 (14)	CA-10A-4N	18321-24	313
	DRFN-16A	0405020027Z	up to 350 (5000)	165 (44)	CA-16A-4N	18321-25	315

### 2-way pressure compensated fixed setting with integrated relief pilot operated spool type

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VSRF-08S	040801X19Z	420 (6000)	20 (5)	Special 019-E	18321-32	

## Mechanical - Logic elements and compensator

### Flow and pressure control with external pilot

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VLST-10A	048401X85Z	350 (5000)	60 (16)	CA-10A-3C	18321-60	319
	VLST-12A	048401X57Z	350 (5000)	120 (32)	CA-12A-3C	18321-61	321
	VLST-16A	048401X27Z	350 (5000)	up to 200 (53)	CA-16A-3C	18321-62	323
	VLST-20A	048401X58Z	350 (5000)	up to 360 (95)	CA-20A-3C	18321-63	325

### Flow and pressure control with internal pilot

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VLSP-10A	048403X85Z	350 (5000)	60 (16)	CA-10A-3C	18321-64	327
	VLSP-12A	048403X57Z	350 (5000)	120 (32)	CA-12A-3C	18321-65	329
	VLSP-16A	048403X27Z	350 (5000)	200 (53)	CA-16A-3C	18321-66	331
	VLSP-20A	048403X58Z	350 (5000)	360 (95)	CA-20A-3C	18321-67	333

### Flow control with external pilot

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VLSC-10A	048402X85Z	350 (5000)	30 (8)	CA-10A-3C	18321-68	335
	VLSC-12A	048402X57Z	350 (5000)	60 (16)	CA-12A-3C	18321-59	339
	VLSC-16A	048402X27Z	350 (5000)	120 (32)	CA-16A-3C	18321-69	341
	VLSC-20A	048402X58Z	350 (5000)	240 (63)	CA-20A-3C	18321-70	343

### Flow control with external pilot damped type

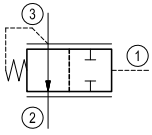
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VLSC-10A-8-TF	048412X85Z	350 (5000)	25 (7)	CA-10A-3C	18321-71	337

### Pressure control with internal pilot

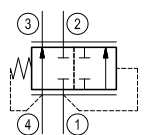
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VLSR-10A	048404X85Z	350 (5000)	40 (11)	CA-10A-3C	18321-72	345
	VLSR-12A	048404X57Z	350 (5000)	60 (16)	CA-12A-3C	18321-73	347
	VLSR-16A	048404X27Z	350 (5000)	120 (32)	CA-16A-3C	18321-74	349
	VLSR-20A	048404X58Z	350 (5000)	230 (61)	CA-20A-3C	18321-75	351

## Mechanical - Logic elements and compensator

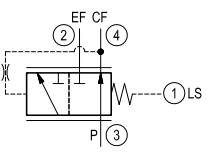
### Pressure compensator

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VLSQ-10A	048405X85Z	350 (5000)	40 (11)	CA-10A-3N	18321-77	353
	VLSQ-12A	048405X57Z	350 (5000)	70 (18)	CA-12A-3N	18321-78	355
	VLSQ-16A	048405X27Z	350 (5000)	120 (32)	CA-16A-3N	18321-79	357

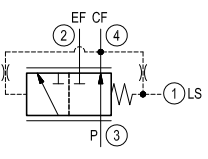
### Pressure compensator combination type

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VCSQ-10A	048406X85Z	350 (5000)	60 (16)	CA-10A-4N	18321-80	359
	VCSQ-12A	048406X57Z	350 (5000)	120 (32)	CA-12A-4N	18321-81	361
	VCSQ-16A	048406X27Z	350 (5000)	200 (53)	CA-16A-4N	18321-82	363

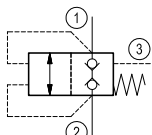
### Pressure compensator with static load sense

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRLA-10A-S	0484090085Z	350 (5000)	45 (12)	CA-10A-4N	18321-86	365
	VRLA-12A-S	0484090057Z	350 (5000)	100 (26)	CA-12A-4N	18321-87	367
	VRLA-16A-S	0484090027Z	350 (5000)	160 (42)	CA-16A-4N	18321-88	369
	VRLA-20A-S	0484090058Z	350 (5000)	230 (60)	CA-20A-4N	18321-89	371

### Pressure compensator with dynamic load sense

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VRLA-10A-D	048410X85Z	350 (5000)	45 (12)	CA-10A-4N	18321-90	373
	VRLA-12A-D	048410X57Z	350 (5000)	100 (26)	CA-12A-4N	18321-83	375
	VRLA-16A-D	048410X27Z	350 (5000)	160 (42)	CA-16A-4N	18321-84	377
	VRLA-20A-D	048410X58Z	350 (5000)	230 (60)	CA-20A-4N	18321-85	379

### Directional control poppet type

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VLDT-10A	048407X85Z	350 (5000)	80 (21)	CA-10A-3C	18321-76	381

## Mechanical - Directional direct acting

### Spool type direct acting external pilot internal drain

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VDSA-10A-6	047729X85Z	350 (5000)	30 (8)	CA-10A-3N	18320-73	385
	VDSA-10A	047732X85Z	350 (5000)	50 (13)	CA-10A-3N	18320-83	387
	VDSA-16A	047732X27Z	350 (5000)	160 (43)	CA-16A-3N	18320-92	389
	VDSB-10A-6	047723X85Z	350 (5000)	30 (8)	CA-10A-3N	18320-74	391
	VDSB-10A	047733X85Z	350 (5000)	50 (13)	CA-10A-3N	18320-84	393
	VDSB-16A	047733X27Z	350 (5000)	160 (43)	CA-16A-3N	18320-93	395
	VDSH-10A	047725X85Z	350 (5000)	40 (11)	CA-10A-4N	18320-75	411
	VDSH-16A	047725X27Z	350 (5000)	160 (43)	CA16A-4N	18320-85	413
	VDSK-10A	047726X85Z	350 (5000)	40 (11)	CA-10A-4N	18320-76	415
	VDSK-16A	047726X27Z	350 (5000)	160 (43)	CA16A-4N	18320-86	417

### Spool type direct acting internal pilot external drain

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VDSR-10A-6	047717X85Z	350 (5000)	12 (3)	CA-10A-3N	18320-82	397

### Spool type direct acting external pilot external drain

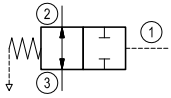
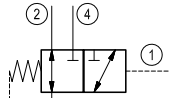
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VDSE-10A-6	047737X85Z	350 (5000)	20 (5)	CA-10A-4N	18320-88	399

### Spool type direct acting external pilot external vent

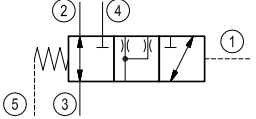
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VDSC-10A	047721X85Z	350 (5000)	50 (13)	CA-10A-3N	18320-77	401
	VDSC-12A	047721X57Z	350 (5000)	120 (32)	CA-12A-3N	18320-91	403
	VDSC-16A	047720X27Z	350 (5000)	160 (43)	CA-16A-3N	18320-78	405

## Mechanical - Directional direct acting

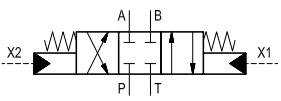
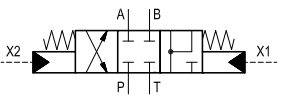
### Spool type direct acting external pilot external vent

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VDSJ-10A	047722X85Z	350 (5000)	50 (13)	CA-10A-3N	18320-79	407
	VDSJ-16A	047722X27Z	350 (5000)	160 (43)	CA-16A-3N	18320-80	409
	VDSJ-10A	047719X85Z	350 (5000)	50 (13)	CA-10A-4N	18320-87	419
	VDSJ-16A	047719X27Z	350 (5000)	160 (43)	CA-16A-4N	18320-81	421

### Spool type direct acting external pilot 5 ports vented

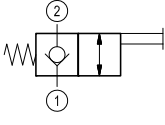
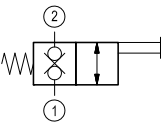
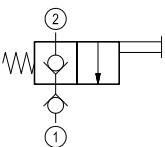
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VDSJ-16A-RN	047742X27Z	350 (5000)	160 (43)	Special CA-16A-5C	18320-94	423

### Spool type 4-way

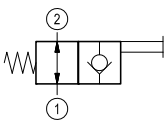
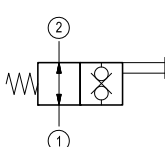
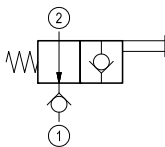
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VDSP-20B	047735X93Z	350 (5000)	200 (53)	Special CA-20B-6C	18320-89	425
	VDSP-20B-R	047736X93Z	350 (5000)	200 (53)	Special CA-20B-6C	18320-90	427

## Mechanical - Directional manual pilot operated

### Manual operated poppet 2-way normally closed

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VMI-8A-2A-06-NC	OD55X1837Z	350 (5000)	40 (11)	CA-08A-2N	18326-01	431
	VMI-8A-2A-09-NC	OD55X1737Z	350 (5000)	70 (19)	Special 017-E	18326-05	439
	VMI-8A-2A-12-NC	OD55X2137Z	350 (5000)	150 (39)	Special 021-E	18326-07	443
	VMI-8A-2A-06-NC	OD55X1837Z	350 (5000)	40 (11)	CA-08A-2N	18326-01	431
	VMI-8A-2A-09-NC	OD55X1737Z	350 (5000)	70 (19)	Special 017-E	18326-05	439
	VMI-8A-2A-12-NC	OD55X2137Z	350 (5000)	150 (39)	Special 021-E	18326-07	443
	VMI-8A-2A-06-NC-VU	OD55111937Z	350 (5000)	40 (11)	Special 019-E	18326-02	435
	VMI-8A-2A-09-NC-VU	OD55X1737Z	350 (5000)	70 (19)	Special 017-E	18326-05	439
	VMI-8A-2A-12-NC-VU	OD55X2137Z	350 (5000)	150 (39)	Special 021-E	18326-07	443

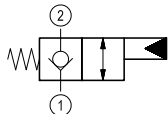
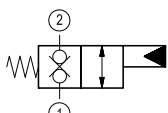
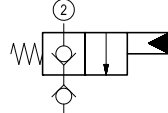
### Manual operated poppet 2-way normally open

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VMI-8A-2A-06-NA	OD55X181700	350 (5000)	40 (11)	CA-8A-2N	18326-03	447
	VMI-8A-2A-09-NA	OD55X171700	350 (5000)	70 (19)	Special 017-E	18326-06	455
	VMI-8A-2A-12-NA	OD55X211700	350 (5000)	150 (39)	Special 021-E	18326-08	459
	VMI-8A-2A-06-NA	OD55X181700	350 (5000)	40 (11)	CA-8A-2N	18326-03	447
	VMI-8A-2A-09-NA	OD55X171700	350 (5000)	70 (19)	Special 017-E	18326-06	455
	VMI-8A-2A-12-NA	OD55X211700	350 (5000)	150 (39)	Special 021-E	18326-08	459
	VMI-8A-2A-06-NA-VU	OD55121917Z	350 (5000)	40 (11)	Special 019-E	18326-04	451
	VMI-8A-2A-09-NA-VU	OD55X171700	350 (5000)	70 (19)	Special 017-E	18326-06	455
	VMI-8A-2A-12-NA-VU	OD55X211700	350 (5000)	150 (39)	Special 021-E	18326-08	459

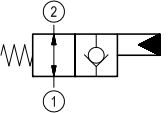
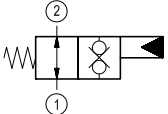
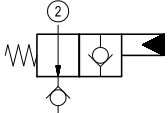


## Mechanical - Directional hydraulic pilot operated

### Hydraulic operated poppet 2-way normally closed

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VOI-8A-2A-06-NC	OD75X18Y00	350 (5000)	40 (11)	CA-08A-2N	18326-40	465
	VOI-8A-2A-09-NC	OD75X17Y00	350 (5000)	70 (19)	Special 017-E	18326-44	473
	VOI-8A-2A-12-NC	OD75X21Y00	350 (5000)	150 (39)	Special 021-E	18326-46	477
	VOI-8A-2A-06-NC	OD75X18Y00	350 (5000)	40 (11)	CA-08A-2N	18326-40	465
	VOI-8A-2A-09-NC	OD75X17Y00	350 (5000)	70 (19)	Special 017-E	18326-44	473
	VOI-8A-2A-12-NC	OD75X21Y00	350 (5000)	150 (39)	Special 021-E	18326-46	477
	VOI-8A-2A-06-NC-VU	OD751119Y00	350 (5000)	40 (11)	Special 019-E	18326-41	469
	VOI-8A-2A-09-NC-VU	OD75X17Y00	350 (5000)	70 (19)	Special 017-E	18326-44	473
	VOI-8A-2A-12-NC-VU	OD75X21Y00	350 (5000)	150 (39)	Special 021-E	18326-46	477

### Hydraulic operated poppet 2-way normally open

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VOI-8A-2A-06-NA	OD75X18Y00	350 (5000)	40 (11)	CA-08A-2N	18326-42	481
	VOI-8A-2A-09-NA	OD75X17Y00	350 (5000)	70 (19)	Special 017-E	18326-45	489
	VOI-8A-2A-12-NA	OD75X21Y00	350 (5000)	150 (39)	Special 021-E	18326-47	493
	VOI-8A-2A-06-NA	OD75X18Y00	350 (5000)	40 (11)	CA-08A-2N	18326-42	481
	VOI-8A-2A-09-NA	OD75X17Y00	350 (5000)	70 (19)	Special 017-E	18326-45	489
	VOI-8A-2A-12-NA	OD75X21Y00	350 (5000)	150 (39)	Special 021-E	18326-47	493
	VOI-8A-2A-06-NA-VU	OD751219Y00	350 (5000)	40 (11)	Special 019-E	18326-43	485
	VOI-8A-2A-09-NA-VU	OD75X17Y00	350 (5000)	70 (19)	Special 017-E	18326-45	489
	VOI-8A-2A-12-NA-VU	OD75X21Y00	350 (5000)	150 (39)	Special 021-E	18326-47	493

## Mechanical - Directional pneumatic pilot operated

### Pneumatic operated poppet 2-way normally closed

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VPI-8A-2A-06-NC	OD65X181400	350 (5000)	40 (11)	CA-8A-2N	18326-70	499
	VPI-8A-2A-09-NC	OD65X171400	350 (5000)	70 (19)	Special 017-E	18326-74	507
	VPI-8A-2A-12-NC	OD65X211400	350 (5000)	150 (39)	Special 021-E	18326-76	511
	VPI-8A-2A-06-NC	OD65X181400	350 (5000)	40 (11)	CA-8A-2N	18326-70	499
	VPI-8A-2A-09-NC	OD65X171400	350 (5000)	70 (19)	Special 017-E	18326-74	507
	VPI-8A-2A-12-NC	OD65X211400	350 (5000)	150 (39)	Special 021-E	18326-76	511
	VPI-8A-2A-06-NC-VU	OD6511191400	350 (5000)	40 (11)	Special 019-E	18326-71	503
	VPI-8A-2A-09-NC-VU	OD65X171400	350 (5000)	70 (19)	Special 017-E	18326-74	507
	VPI-8A-2A-12-NC-VU	OD65X211400	350 (5000)	150 (39)	Special 021-E	18326-76	511

### Pneumatic operated poppet 2-way normally open

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VPI-8A-2A-06-NA	OD65X181400	350 (5000)	40 (11)	CA-8A-2N	18326-72	515
	VPI-8A-2A-09-NA	OD65X171400	350 (5000)	70 (19)	Special 017-E	18326-75	523
	VPI-8A-2A-12-NA	OD65X211400	350 (5000)	150 (39)	Special 021-E	18326-77	527
	VPI-8A-2A-06-NA	OD65X181400	350 (5000)	40 (11)	CA-8A-2N	18326-72	515
	VPI-8A-2A-09-NA	OD65X171400	350 (5000)	70 (19)	Special 017-E	18326-75	523
	VPI-8A-2A-12-NA	OD65X211400	350 (5000)	150 (39)	Special 021-E	18326-77	527
	VPI-8A-2A-06-NA-VU	OD6512191400	350 (5000)	40 (11)	Special 019-E	18326-73	519
	VPI-8A-2A-09-NA-VU	OD65X171400	350 (5000)	70 (19)	Special 017-E	18326-75	523
	VPI-8A-2A-12-NA-VU	OD6512211400	350 (5000)	150 (39)	Special 021-E	18326-78	531

## Mechanical - Accessories

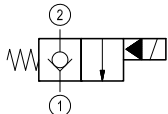
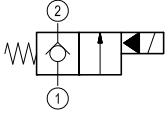
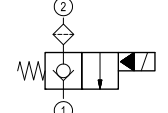
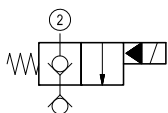
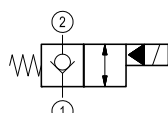
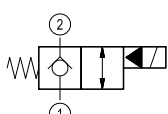
### Automatic shut-off pilot to close

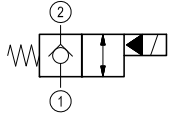
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	VEM-5-SA	049806X99Z	350 (5000)	1 (0.26)	Special 348	18320-71	537

### Hand pump

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Data Sheet	Page
	PM-06	PM5110001800	210 (3000)	1 (0.06)	CA-08A-2N	18321-95	539

**Solenoid - On-off pilot operated****Pilot operated poppet 2-way normally closed****\* in phase out!**

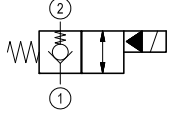
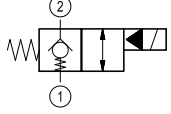
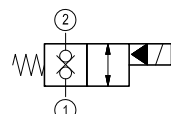
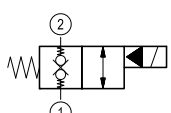
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEI-8I-06-NC	OD15X18YS0	350 (5000)	up to 30 (8)	CA-08A-2N	S8	18323-01	695
	VEI-8A-06-NC *	OD15XYZS	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-02	699
	VEI-8A-09-NC *	OD15X17YZ	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-03	715
	VEI-8A-12-NC	OD15X21YZ	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-04	723
	VEI-16-08A-NC	OD15X18YZ	350 (5000)	up to 40 (11)	CA-08A-2N	D36	18323-25	
	VEI-16-08S-NC	OD15X19YZ	350 (5000)	up to 40 (11)	Special 019-E	D36	18323-27	
	VEI-16-NC	OD15X17YZ	350 (5000)	up to 70 (18)	Special 017-E	D36	18323-34	
	VEI-8A-06-NC *	OD15XYZS	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-02	699
	VEI-8A-09-NC *	OD15X17YZ	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-03	715
	VEI-8A-12-NC	OD15X21YZ	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-04	723
	VEI-16-08A-NC	OD15X18YZ	350 (5000)	up to 40 (11)	CA-08A-2N	D36	18323-25	
	VEI-8I-06-NC	OD15X18YS0	350 (5000)	up to 30 (8)	CA-08A-2N	S8	18323-01	695
	VEI-16-08A-NC	OD15X18YZ	350 (5000)	up to 40 (11)	CA-08A-2N	D36	18323-25	
	VEI-16-08S-NC	OD15X19YZ	350 (5000)	up to 40 (11)	Special 019-E	D36	18323-27	
	VEI-8A-06-NC-019-E *	OD15X19Z	350 (5000)	up to 40 (11)	Special 019-E	S8	18323-20	703
	VEI-8A-09-NC *	OD15X17YZ	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-03	715
	VEI-8A-12-NC	OD15X21YZ	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-04	723
	VEI-16-08S-NC	OD15X19YZ	350 (5000)	up to 40 (11)	Special 019-E	D36	18323-27	
	VEI-16-NC	OD15X17YZ	350 (5000)	up to 70 (18)	Special 017-E	D36	18323-34	
	VEI-8I-06-NC	OD15X18YS0	350 (5000)	up to 30 (8)	CA-08A-2N	S8	18323-01	695
	VEI-8A-06-NC *	OD15XYZS	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-02	699
	VEI-8A-06-NC-ET	OD15X183CZ	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-09	707
	VEI-8A-10-NC *	OD15X36YZ	350 (5000)	up to 70 (18)	CA-10A-2N	S8	18323-11	711
	VEI-8A-12-NC	OD15X89YZ	350 (5000)	up to 150 (40)	CA-12A-2N	S8	18323-13	719
	VEI-8A-16A-NC	OD15X75YS0	350 (5000)	up to 150 (40)	CA-16A-2N	S8	18323-17	727
	VEI-8A-09-NC *	OD15X17YZ	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-03	715
	VEI-8A-12-NC	OD15X21YZ	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-04	723
	VEI-8A-06-NC-019-E *	OD15X19Z	350 (5000)	up to 40 (11)	Special 019-E	S8	18323-20	703
	VEI-16-08A-NC	OD15X18YZ	350 (5000)	up to 40 (11)	CA-08A-2N	D36	18323-25	
	VEI-16-08S-NC	OD15X19YZ	350 (5000)	up to 40 (11)	Special 019-E	D36	18323-27	
	VEI-16-NC	OD15X17YZ	350 (5000)	up to 70 (18)	Special 017-E	D36	18323-34	
	VEI-16-10A-NC	OD15X36YZ	350 (5000)	up to 70 (18)	CA-10A-2N	D36	18323-32	
	VEI-8A-06-NC *	OD15XYZS	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-02	699
	VEI-8A-10-NC *	OD15X36YZ	350 (5000)	up to 70 (18)	CA-10A-2N	S8	18323-11	711
	VEI-8A-12-NC	OD15X89YZ	350 (5000)	up to 150 (40)	CA-12A-2N	S8	18323-13	719
	VEI-8A-16A-NC	OD15X75YS0	350 (5000)	up to 150 (40)	CA-16A-2N	S8	18323-17	727
	VEI-8A-09-NC *	OD15X17YZ	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-03	715
	VEI-8A-12-NC	OD15X21YZ	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-04	723
	VEI-8A-2B-16-NC-NSS *	OD150304YS0	350 (5000)	up to 260 (69)	Special 004	S8	18323-15	731
VEI-8A-06-NC-019-E *	OD15X19Z	350 (5000)	up to 40 (11)	Special 019-E	S8	18323-20	703	

	VEI-16-NC	OD15X17YZ	350 (5000)	up to 70 (18)	Special 017-E	D36	18323-34	
	VEI-16-10A-NC	OD15X36YZ	350 (5000)	up to 70 (18)	CA-10A-2N	D36	18323-32	
	VEI-16-NC_004	OD150304YZ	350 (5000)	260 (69)	Special 004	D36	18323-30	

## Solenoid - On-off pilot operated

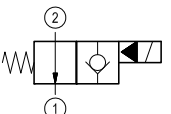
### Pilot operated poppet 2-way normally closed

\* in phase out!

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEI-8A-06-NC *	OD15XYZS	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-02	699
	VEI-8A-10-NC *	OD15X36YZ	350 (5000)	up to 70 (18)	CA-10A-2N	S8	18323-11	711
	VEI-8A-12-NC	OD15X89YZ	350 (5000)	up to 150 (40)	CA-12A-2N	S8	18323-13	719
	VEI-8A-09-NC *	OD15X17YZ	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-03	715
	VEI-8A-12-NC	OD15X21YZ	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-04	723
	VEI-8A-06-NC *	OD15XYZS	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-02	699
	VEI-8A-10-NC *	OD15X36YZ	350 (5000)	up to 70 (18)	CA-10A-2N	S8	18323-11	711
	VEI-8A-12-NC	OD15X89YZ	350 (5000)	up to 150 (40)	CA-12A-2N	S8	18323-13	719
	VEI-8A-09-NC *	OD15X17YZ	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-03	715
	VEI-8A-12-NC	OD15X21YZ	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-04	723
	VEI-8A-06-NC *	OD15XYZS	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-02	699
	VEI-8A-06-NC-ET	OD15X183CZ	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-09	707
	VEI-8A-10-NC *	OD15X36YZ	350 (5000)	up to 70 (18)	CA-10A-2N	S8	18323-11	711
	VEI-8A-12-NC	OD15X89YZ	350 (5000)	up to 150 (40)	CA-12A-2N	S8	18323-13	719
	VEI-8A-16A-NC	OD15X75YS0	350 (5000)	up to 150 (40)	CA-16A-2N	S8	18323-17	727
	VEI-8A-09-NC *	OD15X17YZ	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-03	715
	VEI-8A-12-NC	OD15X21YZ	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-04	723
	VEI-16-08A-NC	OD15X18YZ	350 (5000)	up to 40 (11)	CA-08A-2N	D36	18323-25	
	VEI-16-NC	OD15X17YZ	350 (5000)	up to 70 (18)	Special 017-E	D36	18323-34	
	VEI-16-10A-NC	OD15X36YZ	350 (5000)	up to 70 (18)	CA-10A-2N	D36	18323-32	
	VEI-8A-06-NC *	OD15XYZS	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-02	699
	VEI-8A-10-NC *	OD15X36YZ	350 (5000)	up to 70 (18)	CA-10A-2N	S8	18323-11	711
	VEI-8A-12-NC	OD15X89YZ	350 (5000)	up to 150 (40)	CA-12A-2N	S8	18323-13	719
	VEI-8A-09-NC *	OD15X17YZ	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-03	715
	VEI-8A-12-NC	OD15X21YZ	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-04	723

### Pilot operated poppet 2-way normally open

\* in phase out!

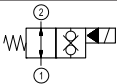
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEI-8I-06-NA	OD15X18YS0	350 (5000)	up to 30 (8)	CA-08A-2N	S8	18323-05	735
	VEI-8A-06-NA *	OD15XYZS0	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-06	739
	VEI-8A-09-NA *	OD15X17YS0	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-07	751
	VEI-8A-12-NA	OD15X21YS0	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-08	759
	VEI-16-08A-NA	OD15X18YZ00	350 (5000)	up to 40 (11)	CA-08A-2N	D36	18323-26	
	VEI-16-08S-NA	OD15X19YZ00	350 (5000)	up to 40 (11)	Special 019-E	D36	18323-28	
	VEI-16-NA	OD15X17YZ00	350 (5000)	up to 70 (18)	Special 017-E	D36	18323-35	

## Solenoid - On-off pilot operated

### Pilot operated poppet 2-way normally open

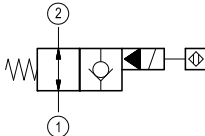
\* in phase out!

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEI-8A-06-NA *	OD15XYZS0	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-06	739
	VEI-8A-09-NA *	OD15X17YS0	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-07	751
	VEI-8A-12-NA	OD15X21YS0	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-08	759
	VEI-16-08A-NA	OD15X18YZ00	350 (5000)	up to 40 (11)	CA-08A-2N	D36	18323-26	
	VEI-8I-06-NA	OD15X18YS0	350 (5000)	up to 30 (8)	CA-08A-2N	S8	18323-05	735
	VEI-16-08A-NA	OD15X18YZ00	350 (5000)	up to 40 (11)	CA-08A-2N	D36	18323-26	
	VEI-16-08S-NA	OD15X19YZ00	350 (5000)	up to 40 (11)	Special 019-E	D36	18323-28	
	VEI-8A-06-NA-019-E *	OD15X19Z	350 (5000)	up to 40 (11)	Special 019-E	S8	18323-21	743
	VEI-8A-09-NA *	OD15X17YS0	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-07	751
	VEI-8A-12-NA	OD15X21YS0	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-08	759
	VEI-16-08S-NA	OD15X19YZ00	350 (5000)	up to 40 (11)	Special 019-E	D36	18323-28	
	VEI-16-NA	OD15X17YZ00	350 (5000)	up to 70 (18)	Special 017-E	D36	18323-35	
	VEI-8I-06-NA	OD15X18YS0	350 (5000)	up to 30 (8)	CA-08A-2N	S8	18323-05	735
	VEI-8A-06-NA *	OD15XYZS0	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-06	739
	VEI-8A-10-NA *	OD15X36YS0	350 (5000)	up to 70 (18)	CA-10A-2N	S8	18323-12	747
	VEI-8A-12A-NA	OD15X89YS0	350 (5000)	up to 150 (40)	CA-12A-2N	S8	18323-14	755
	VEI-8A-16A-NA	OD15X75YS0	350 (5000)	up to 150 (40)	CA-16A-2N	S8	18323-18	763
	VEI-8A-09-NA *	OD15X17YS0	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-07	751
	VEI-8A-12-NA	OD15X21YS0	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-08	759
	VEI-8A-06-NA-019-E *	OD15X19Z	350 (5000)	up to 40 (11)	Special 019-E	S8	18323-21	743
	VEI-16-08A-NA	OD15X18YZ00	350 (5000)	up to 40 (11)	CA-08A-2N	D36	18323-26	
	VEI-16-08S-NA	OD15X19YZ00	350 (5000)	up to 40 (11)	Special 019-E	D36	18323-28	
	VEI-16-NA	OD15X17YZ00	350 (5000)	up to 70 (18)	Special 017-E	D36	18323-35	
	VEI-16-10A-NA	OD15X36YZ00	350 (5000)	up to 70 (18)	CA-10A-2N	D36	18323-33	
	VEI-8A-06-NA *	OD15XYZS0	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-06	739
	VEI-8A-10-NA *	OD15X36YS0	350 (5000)	up to 70 (18)	CA-10A-2N	S8	18323-12	747
	VEI-8A-12A-NA	OD15X89YS0	350 (5000)	up to 150 (40)	CA-12A-2N	S8	18323-14	755
	VEI-8A-16A-NA	OD15X75YS0	350 (5000)	up to 150 (40)	CA-16A-2N	S8	18323-18	763
	VEI-8A-09-NA *	OD15X17YS0	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-07	751
	VEI-8A-12-NA	OD15X21YS0	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-08	759
	VEI-8A-2B-16-NA-NSS *	OD150404YS0	350 (5000)	up to 260 (69)	Special 004	S8	18323-16	767
	VEI-16-08A-NA	OD15X18YZ00	350 (5000)	up to 40 (11)	CA-08A-2N	D36	18323-26	
	VEI-8A-06-NA *	OD15XYZS0	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18323-06	739
	VEI-8A-10-NA *	OD15X36YS0	350 (5000)	up to 70 (18)	CA-10A-2N	S8	18323-12	747
	VEI-8A-12A-NA	OD15X89YS0	350 (5000)	up to 150 (40)	CA-12A-2N	S8	18323-14	755
	VEI-8A-16A-NA	OD15X75YS0	350 (5000)	up to 150 (40)	CA-16A-2N	S8	18323-18	763
	VEI-8A-09-NA *	OD15X17YS0	350 (5000)	up to 70 (18)	Special 017-E	S8	18323-07	751
	VEI-8A-12-NA	OD15X21YS0	350 (5000)	up to 150 (40)	Special 021-E	S8	18323-08	759
	VEI-16-08A-NA	OD15X18YZ00	350 (5000)	up to 40 (11)	CA-08A-2N	D36	18323-26	

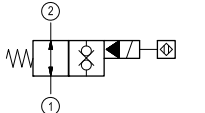
	VEI-16-NA	OD15X17YZ00	350 (5000)	up to 70 (18)	Special 017-E	D36	18323-35	
	VEI-16-10A-NA	OD15X36YZ00	350 (5000)	up to 70 (18)	CA-10A-2N	D36	18323-33	

## Solenoid - On-off pilot operated

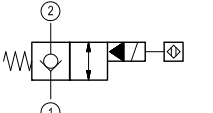
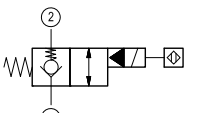
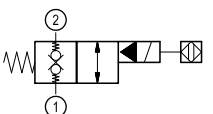
### Pilot operated poppet 2-way normally open proximity sensor

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEI-8A-2A-06-NA-S-M-NSS	OD1506181DS2Z	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18325-07	771
	VEI-8A-2A-09-NA-S-M-NSS	OD1506761DS2Z	350 (5000)	up to 70 (18)	Special 076-E	S8	18325-08	775
	VEI-8A-2A-09-NA-S-M-NSS	OD1506171DS0Z	350 (5000)	up to 70 (18)	Special 017-E	S8	18325-09	779
	VEI-8A-2A-12-NA-S-M-NSS	OD1506211DS2Z	350 (5000)	up to 150 (40)	Special 021-E	S8	18325-10	783

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

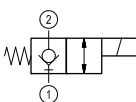
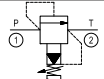
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEI-8A-2T-06-NA-S-M-NSS	OD1532181DS2Z	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18325-16	787
	VEI-8A-2T-09-NA-S-M-NSS	OD1532171DS2Z	350 (5000)	up to 70 (18)	Special 017-E	S8	18325-15	791

### Pilot operated poppet 2-way normally closed proximity sensor and double lock

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VESP-8A-2A-12A/00-2A05-N7	OD15051841YZ	350 (5000)	up to 40 (11)	CA-08A-2N	S8	18325-03	795
	VESP-16G-16A/00-2A-N7	OD15052165YZ	350 (5000)	up to 150 (40)	Special 021-E	S7	18325-05	803
	VESP-12G-16A/00-2A05-N7	OD1505176504Z	350 (5000)	up to 70 (18)	Special 017-E	S7	18325-04	799
	VESP-16G-16A/00-2A-N7	OD15052165YZ	350 (5000)	up to 150 (40)	Special 021-E	S7	18325-05	803
	VEI-8A-2T-09-NC-S-M-NSS	OD1531176501Z	350 (5000)	up to 70 (18)	Special 017-E	S8	18325-17	

## Solenoid - On-off direct acting

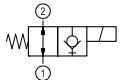
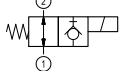
### Direct acting 2-way poppet type normally closed

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VED-8I-NC	OD11X18Y00	350 (5000)	1.5 (0.4)	CA-08A-2N	S8	18324-06	809
	VED-8I-NC	OD11X18Y00	350 (5000)	1.5 (0.4)	CA-08A-2N	S8	18324-06	809
	VER-10A	OD100436Y00	350 (5000)	120 (32)	CA-10A-2N	D36	18324-15	

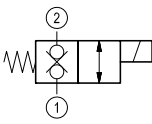
## Solenoid - On-off direct acting

### Direct acting 2-way poppet type normally open

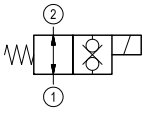
\* in phase out!

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VED-8I-NA	OD11X18Y00	350 (5000)	1.5 (0.4)	CA-08A-2N	S8	18324-07	813
	VED-8I-NA	OD11X18Y00	350 (5000)	1.5 (0.4)	CA-08A-2N	S8	18324-07	813

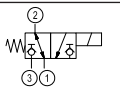
### Direct acting 2-way poppet type normally closed double lock

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEDT-08A-A-12.7-NC	OD113118Y00	250 (3600)	15 (4)	CA-08A-2N	S8	18324-01	817
	VEDT-08A-A-16-NC *	OD1131186Y00	250 (3600)	25 (7)	CA-08A-2N	S7	18324-03	821
	VEDT-08F-A-16 *	OD11X40Y00	250 (3600)	25 (7)	Hydac 06020	S7	18324-04	825
	KSDE U/R 8		500 (7250)	5 (1.3)	SUN T-8A	GZ37	18136-12	1041
	KSDE 0		350 (5000)	20 (5)	Special, metric	GZ37	18136-23	1051
	KSDE U/R 1		500 (7250)	20 (5)	SUN T-13A	GZ37	18136-20	1059
	VEDT-16-08S-NC	OD11X19YZ	250 (3600)	up to 15 (4)	Special, 019-E	D36	18323-99	
	VEDT-16-NC	OD11X39YZ	250 (3600)	up to 15 (4)	Bosch cavity	D36	18324-13	
	VEDT-16-NC-08F	OD11X40YZ	250 (3600)	up to 15 (4)	Hydac 06020	D36	18324-14	
VEDT-16-08A-NC	OD11X18YZ	250 (3600)	up to 15 (4)	CA-08A-2N	D36	18324-02		

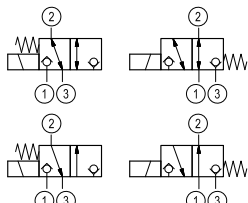
### Direct acting 2-way poppet type normally open double lock

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEDT-08F-A-16 *	OD11X40Y00	250 (3600)	25 (7)	Hydac 06020	S7	18324-04	825
	KSDE U/R 8		500 (7250)	5 (1.3)	SUN T-8A	GZ37	18136-12	1041
	KSDE 0		350 (5000)	20 (5)	Special, metric	GZ37	18136-23	1051
	KSDE U/R 1		500 (7250)	20 (5)	SUN T-13A	GZ37	18136-20	1059

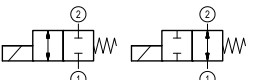
### Direct acting poppet 3-way 2-position

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEDT-08A-32	OD130151Y00	250 (3600)	15 (4)	CA-08A-3N	S7	18324-05	829

### Direct acting seat valve 3-way 2-position

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	KSDE1-C		350 (5000)	12 (3)	SUN T-11A	GZ37	18136-21	1067
	KSDE1-U		350 (5000)	12 (3)	SUN T-11A	GZ37	18136-21	1067
	KSDEU1-C		500 (7250)	6 (2)	SUN T-11A	GZ37	18136-21	1067
	KSDEU1-U		500 (7250)	6 (2)	SUN T-11A	GZ37	18136-21	1067

### Direct acting spool type 2-way 2-position

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	KKDER1 N-P		350 (5000)	55 (15)	SUN T-13A	GZ37	18136-06	1095
	KKDER8 N-P		350 (5000)	45 (12)	SUN T-8A	GZ37	18136-08	1075

**Solenoid - On-off direct acting****Direct acting 3-way 2-position spool type****\* in phase out!**

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VED-8I-32 *	OD13X51YZ	210 (3000)	10 (3)	CA-08A-3N	S8	18324-61	833
	VED-10A-32	OD13X77Y00	210 (3000)	20 (6)	CA-10A-3N	S7	18324-58	845
	VEDS-12A-32	OD13X12Y00	315 (4500)	60 (16)	CA-12A-3N	R5	18324-56	861
	VED-16-08A-32	OD13X51YZ	280 (4060)	up to 20 (6)	CA-08A-3N	D36	18324-08	
	VED-8I-32 *	OD13X51YZ	210 (3000)	10 (3)	CA-08A-3N	S8	18324-61	833
	VED-10A-32	OD13X77Y00	210 (3000)	20 (6)	CA-10A-3N	S7	18324-58	845
	VED-16-08A-32	OD13X51YZ	280 (4060)	up to 20 (6)	CA-08A-3N	D36	18324-08	
	VED-8I-32 *	OD13X51YZ	210 (3000)	10 (3)	CA-08A-3N	S8	18324-61	833
	VED-10A-32	OD13X77Y00	210 (3000)	20 (6)	CA-10A-3N	S7	18324-58	845
	VED-16-08A-32	OD13X51YZ	280 (4060)	up to 20 (6)	CA-08A-3N	D36	18324-08	
	VED-8I-32 *	OD13X51YZ	210 (3000)	10 (3)	CA-08A-3N	S8	18324-61	833
	VED-10A-32	OD13X77Y00	210 (3000)	20 (6)	CA-10A-3N	S7	18324-58	845
	VED-16-08A-32	OD13X51YZ	280 (4060)	up to 20 (6)	CA-08A-3N	D36	18324-08	
	KKDER1-C		350 (5000)	60 (16)	SUN T-11A	GZ37	18136-04	1105
	KKDER8-C		350 (5000)	30 (12)	SUN T-9A	GZ37	18136-09	1085
	KKDER1-U		350 (5000)	60 (16)	SUN T-11A	GZ37	18136-04	1105
	KKDER8-U		350 (5000)	30 (12)	SUN T-9A	GZ37	18136-09	1085
	KKDER8-G		350 (5000)	30 (12)	SUN T-9A	GZ37	18136-09	1085
	FTWE 2		100 (1450)	2 (0.5)	Special, metric		58007	1295
	FTWE 4		210 (3000)	7 (2)	Special, metric		58008	1303



## Solenoid - On-off direct acting

### Direct acting 4-way 2-position spool type

\* in phase out!

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VED-8I-42 *	OD14X58YZ	210 (3000)	10 (3)	CA-08A-4N	S8	18324-62	837
	VED-10A-42	OD144W78Y00	210 (3000)	20 (6)	CA-10A-4N	S7	18324-59	849
	VED-16-08A-42	OD14X58YZ	280 (4060)	up to 20 (6)	CA-08A-4N	D36	18324-09	
	VED-8I-42 *	OD14X58YZ	210 (3000)	10 (3)	CA-08A-4N	S8	18324-62	837
	VED-10A-42	OD144W78Y00	210 (3000)	20 (5)	CA-10A-4N	S7	18324-59	849
	VED-16-08A-42	OD14X58YZ	280 (4060)	up to 20 (6)	CA-08A-4N	D36	18324-09	
	KKDER1-D		350 (5000)	40 (11)	SUN T-31A	GZ37	18136-05	1115
	KKDER1-E		350 (5000)	40 (11)	SUN T-31A	GZ37	18136-05	1115
	KKDER1-F		350 (5000)	40 (11)	SUN T-31A	GZ37	18136-05	1115

### Direct acting 4-way 3-position spool type

\* in phase out!

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VED-8I-43 *	OD14X58YZ	210 (3000)	10 (3)	CA-08A-4N	S8	18324-63	841
	VEDS-10A-43	OD14X78KK2Y00	350 (5000)	35 (9)	CA-10A-4N	GP37	18324-64	853
	VEDS-10A-43	OD14X78KK2Y00	350 (5000)	35 (9)	CA-10A-4N	GP37	18324-64	853
	VED-16-08A-43	OD14X58YZ00	280 (4060)	up to 15 (4)	CA-08A-4N	D36	18324-10	
	VED-8I-43 *	OD14X58YZ	210 (3000)	10 (3)	CA-08A-4N	S8	18324-63	841
	VEDS-10A-43	OD14X78KK2Y00	350 (5000)	35 (9)	CA-10A-4N	GP37	18324-64	853
	VEDS-10A-43	OD14X78KK2Y00	350 (5000)	35 (9)	CA-10A-4N	GP37	18324-64	853
	VED-16-08A-43	OD14X58YZ00	280 (4060)	up to 15 (4)	CA-08A-4N	D36	18324-10	

## Solenoid - On-off direct acting

### Direct acting 5-way 3-position spool type

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEDS-10A-53	OD53X54KK2Y00	250 (3600)	25 (7)	CA-10A-5N	GP37	18324-65	857

## Solenoid - Electro-proportional

### Electro-proportional Direct acting 4-way 3-position

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEPS-10A-43	OD14X78KP2Y00	350 (5000)	25 (7)	CA-10A-4N	GP37	18324-66	931

### Electro-proportional Direct acting 5-way 3-position

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEPS-10A-53	OD53X54KP2Y00	250 (3600)	25 (7)	CA-10A-5N	GP37	18324-67	935

### Electro-proportional relief direct acting (rising characteristic curve)

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEP-5B-2S-D	OD940118YZ	350 (5000)	5 (1.3)	CA-08A-2N	S5	18323-65	867
	KBPS.8A		420 (6000)	2 (0.5)	SUN T-8A	GP37	18139-04	1127

### Electro-proportional relief direct acting (falling characteristic curve)

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	KBPS.8B		420 (6000)	2 (0.5)	SUN T-8A	GP37	18139-05	1141

## Solenoid - Electro-proportional

### Electro-proportional relief pilot operated (rising characteristic curve)

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEP-5B-2S-10A-P	OD940536YZ	350 (5000)	up to 120 (32)	CA-10A-2N	S5	18323-66	871
	VEP-5B-2S-P	OD940561YZ	350 (5000)	up to 150 (40)	Special 065	S5	18323-67	875
	KBVS.3A		350 (5000)	200 (53)	Special, metric	GP37	18139-08	1179
	KBVS.1A		420 (6000)	80 (21)	CA-10A-2N	GP37	18160	1155

### Electro-proportional relief pilot operated (falling characteristic curve)

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	KBVS.3B		350 (5000)	200 (53)	Special, metric	GP37	18139-07	1191
	KBVS.1B		420 (6000)	80 (21)	CA-10A-2N	GP37	18152	1167

### Electro-proportional direct acting pressure reducing

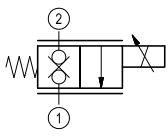
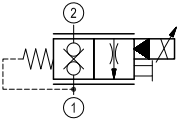
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEP-5A-3R-06	OD910177Y00	210 (3000)	10 (3)	CA-10A-3N	S5	18323-60	879
	MHDRE 06 K		30 (450)	40 (11)	Special, MHDRE	GP45	64655	1241
	MHDRE 06 FK		30 (450)	40 (11)	Special, MHDRE	GP45	64656	1251
	FTDRE 2K		100 (1450)	2 (0.5)	Special, metric		58032	1261
	FTDRE 4K		210 (3000)	5 (1.3)	Special, metric		58038	1285
	FTDRE 2K-044		250 (3600)	2 (0.5)	Special, metric		58034	1273

### Electro-proportional pilot operated pressure reducing

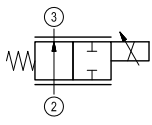
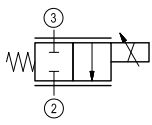
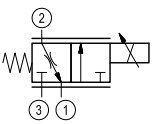
Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEP-5A-2R-06-P	OD910677Y00	210 (3000)	up to 60 (16)	CA-10A-3N	S5	18323-61	883
	KTVS.1A		210 (3000)	80 (21)	CA-10A-3N		18166	1203

## Solenoid - Electro-proportional

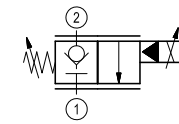
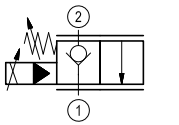
### Electro-proportional 2-way double lock normally closed

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEPA-5A-2T-06-NC	OD953118Y00	210 (3000)	up to 20 (5)	CA-08A-2N	S5	18323-68	887
	VEPA-08A-16	OD95311854Y00	250 (3600)	up to 20 (5)	CA-08A-2N	R7	18323-70	907
	VEPA-19E-16	OD95311954Y00	250 (3600)	up to 20 (5)	Special, 019-E	R7	18323-71	911

### Electro-proportional flow regulator not compensated

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEP-5A-2Q-09 NA	OD920277YZ	210 (3000)	up to 40 (11)	CA-10A-3N	S5	18323-64	899
	VEP-5A-2Q-09 NA	OD92X77YZ	210 (3000)	up to 40 (11)	CA-10A-3N	S5	18323-63	891
	VEP-5A-2Q-14	OD92X12Y00	210 (3000)	up to 60 (16)	CA-12A-3N	S5	18323-62	895
	VEP-5A-2Q-09 NA	OD92X77YZ	210 (3000)	up to 40 (11)	CA-10A-3N	S5	18323-63	891
	VEP-5A-2Q-14	OD92X12Y00	210 (3000)	up to 60 (16)	CA-12A-3N	S5	18323-62	895

### Electro-proportional poppet type flow regulator not compensated

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	VEPA-12A	OD9506897200	210 (3000)	up to 60 (16)	CA-12A-2N	R7	18323-69	903
	KSVS.0	KSVSR0AA/F-YV	350 (5000)	30 (8)	CA-08A-2N	GP37	18323-72	915
	KSVS.1	KSVSR1AA/F-YV	350 (5000)	50 (13)	CA-10A-2N	GP37	18323-73	919
	KSVS.2	KSVSR2AA/F-YV	350 (5000)	85 (22)	CA-12A-2N	GP37	18323-74	923
	KSVS.3	KSVSR3AA/F-YV	350 (5000)	100 (26)	CA-16A-2N	GP37	18323-75	927

## Solenoid - Electro-proportional

### Electro-proportional flow regulator pressure compensated

Symbol	Type	Code	Max. Pressure bar (psi)	Max. Flow l/min. (gpm)	Cavity	Coil	Data Sheet	Page
	KUDSR		350 (5000)	120 (32)	CA-16A-3N	GP45	18702	1217

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