

Cartridge Installation & Torque Values

CARTRIDGES

- Inspect the cartridge to ensure that no external contaminant is present.
- Be sure O-rings and back-ups are intact and correctly positioned. The O-ring should always be toward the higher pressure port or between double back-ups on bi-directional valves. See page 8.650.1 for O-ring installation.

COILS

- Coils should be removed from the cartridge when installing terminations or making connections with conduit, etc.
- See below for coil nut torque values for specific valve models.

HOUSINGS

- Verify correct plumbing by referring to specific product catalog pages.
- Inspect cavity for burrs or other machining irregularities which could damage O-rings during installation.
- See page 8.250.1 for panel mount spacer plates.

ASSEMBLY

- Dip the cartridge in clean oil.
- Screw the cartridge in BY HAND until the top O-ring is met, then wrench tighten to the torque specification shown below.

Cartridge Installation Torque								
(Listed in Alpha-Numeric order by valve model number.)								
Model	Ft-lbs	Nm	Model	Ft-lbs	Nm	Model	Ft-lbs	Nm
BV10	24-26	32.6-35.4	EPFR16	46-54	62.6-73.4	HS10, -50	24-26	32.6-35.4
CB10	24-26	32.6-35.4	EPFR20	65-75	88.4-102	HS52	33-37	44.9-50.3
CR08	19-21	25.8-28.6	EPFR50	24-26	32.6-35.4	KS10	24-26	32.6-35.4
CR10	24-26	32.6-35.4	EPFR52	33-37	44.9-50.3	LS04-B30	4-5	5.4-6.8
CV04-20	12-14	16.3-19	ER10	24-26	32.6-35.4	LS08-30	19-21	25.8-28.6
CV04-B20	4-5	5.4-6.8	ER12	33-37	44.9-50.3	LS10, -50	24-26	32.6-35.4
CV08	19-21	25.8-28.6	EV10	24-26	32.6-35.4	MD10	24-26	32.6-35.4
CV10	24-26	32.6-35.4	EV12	33-37	44.9-50.3	MP08	19-21	25.8-28.6
CV12	33-37	44.9-50.3	EV16	46-54	62.6-73.4	MP10	24-26	32.6-35.4
CV16	46-54	62.6-73.4	EV20	65-75	88.4-102	MPCV08	19-21	25.8-28.6
CV42	110-130	150-177	EV58	19-21	25.8-28.6	MR10	24-26	32.6-35.4
CV50	24-26	32.6-35.4	FC08	19-21	25.8-28.6	MV08	19-21	25.8-28.6
DC08	19-21	25.8-28.6	FC10	24-26	32.6-35.4	NV08	19-21	25.8-28.6
DC10	24-26	32.6-35.4	FC12	33-37	44.9-50.3	NV10	24-26	32.6-35.4
EC08	19-21	25.8-28.6	FD10	24-26	32.6-35.4	NV12	33-37	44.9-50.3
EC10	24-26	32.6-35.4	FD12	33-37	44.9-50.3	NV58	24-26	32.6-35.4
EC12-30, -32, -35, -40, -41	33-37	44.9-50.3	FD16	46-54	62.6-73.4	PC08	19-21	25.8-28.6
EC12-42, -43	73-77	99-104.4	FD50	46-54	62.6-73.4	PC10	24-26	32.6-35.4
EC16-32, -34, -40	46-54	62.6-73.4	FD52	73-77	99-104.4	PD10	24-26	32.6-35.4
EC16-42, -43	98-102	133-138	FD56	98-102	133-138	PD12	33-37	44.9-50.3
EC42	65-75	88.4-102	FR08	19-21	25.8-28.6	PD16	46-54	62.6-73.4
EC50	33-37	44.9-50.3	FR10	24-26	32.6-35.4	PD42	65-75	88.4-102
EC56	98-102	133-138	FR12	33-37	44.9-50.3	PE12	33-37	44.9-50.3
ECR16	46-54	62.6-73.4	FR16-20F	98-102	133-138	PE16	46-54	62.6-73.4
EHPR08	19-21	25.8-28.6	FR16-30F	46-54	62.6-73.4	PE42	65-75	88.4-102
EP08	19-21	25.8-28.6	FR50	33-37	44.9-50.3	PR08	19-21	25.8-28.6
EP10	24-26	32.6-35.4	FRRV10	24-26	32.6-35.4	PR10	24-26	32.6-35.4
EP12	33-37	44.9-50.3	FRRV12	33-37	44.9-50.3	PR12	33-37	44.9-50.3
EP16	46-54	62.6-73.4	HP10	24-26	32.6-35.4	PR50	24-26	32.6-35.4
EP20	65-75	88.4-102	HP16	46-54	62.6-73.4	PRES50-30	50-55	67.8-74.6

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Cartridge Installation & Torque Values

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Cartridge Installation Torque					
Model	Ft-lbs	Nm	Model	Ft-lbs	Nm
PS08-30	19-21	25.8-28.6	SV07	19-21	25.8-28.6
PS10, PS50	24-26	32.6-35.4	SV08	19-21	25.8-28.6
PV08	19-21	25.8-28.6	SV10	24-26	32.7-35.4
PV16	46-54	62.6-73.4	SV12-20, -21, -22		
PV42	65-75	88.4-102	-23, -28, -29	33-37	44.9-50.3
PV70	24-26	32.6-35.4	SV12-24, -25, -31		
PV72	33-37	44.9-50.3	-33, -34, -40,		
PV76	46-54	52.6-73.4	-41, -42, -60	52-60	70.7-81.6
RV08	19-21	25.8-28.6	SV16	46-54	52.6-73.4
RV10	24-26	32.6-35.4	SV38, SV58	19-21	25.8-28.6
RV12	33-37	44.9-50.3	SVCL10	33-37	44.9-50.3
RV16	46-54	62.7-73.4	SVCV08	19-21	25.8-28.6
RV50	24-26	32.6-35.4	SVRV10	24-26	32.7-35.4
RV52	33-37	44.9-50.3	SV80	24-26	32.6-35.4
RV56	46-54	52.6-73.4	SV98	19-21	25.8-28.6
RV58	19-21	25.8-28.6	TR04-B20	4-5	5.4-6.8
RVD50	46-54	52.6-73.4	TS08	19-21	25.8-28.6
SF08	19-21	25.8-28.6	TS10	24-26	34-36.7
SF20	65-75	88.4-102	TS12	33-37	44.9-50.3
SL08	19-21	25.8-28.6	TS38-20	24-26	32.6-35.4
SP08-20, -21, -22, -24, -25, -31, -46, -47	19-21	25.8-28.6	TS38-21	19-21	25.8-28.6
SP08-57	25-30	33.9-40.7	TS58-20	24-26	32.6-35.4
SP08-58	19-21	25.8-28.6	TS80, TS98	24-26	32.6-35.4
SP10-20, -21, -24	33-37	44.9-50.3	UP10	24-26	32.6-35.4
SP10-25, -46, -47 -57, -58	24-26	32.6-35.4	ZL70	24-26	32.6-35.4
SP12	33-37	44.9-50.3	ZL72	33-37	44.9-50.3
SP16	46-54	52.6-73.4	ZL76	46-54	52.6-73.4
SPCL10	24-26	32.7-35.4			

Coil Nut Installation Torque		
Model	Ft-lbs	Nm
EHPR08	5-7	6.8-9.5
CR08, CR10	5-7	6.8-9.5
FC10, FC12	5-7	6.8-9.5
FR10, FR12	5-7	6.8-9.5
KS10	5-7	6.8-9.5
NV08, NV10, NV12	5-7	6.8-9.5
PR08, PR10, PR50	5-7	6.8-9.5
PS08, PS10, PS50	5-7	6.8-9.5
PV08	5-7	6.8-9.5
PV70, PV72	10-12	13.6-16.3
RV	5-7	6.8-9.5
SF08, SL08	4-5	5.4-6.8
SV07	4-5	5.4-6.8
SV08, SV80, SV98	4-5	5.4-6.8
SV08-W, SV80-W, SV98-W	6-7	8.1-9.5
SV10, SV16, SV38, SV58, w/D-Coil	5-7	6.8-9.5
SV10W, SV16W, SV38W, SV58W	9-10	12.2-13.6
SV10, SV16, SV38, SV58, w/E-Coil	7-10	9.5-13.6
SV12-20, -21, -22 -23 w/D-Coil	5-7	6.8-9.5
SV12-20W, -21W -22W, -23W	7-10	9.5-13.6
SV12-20, -21, -22 -23 w/E-Coil	7-10	9.5-13.6
SV12-24, -25, -3x, -4x	7-10	9.5-13.6
SV20	4-5	5.4-6.8
TS08, TS98	4-5	5.4-6.8
TS10, TS12	7-10	9.5-13.6
TS38-20	4-5	5.4-6.8
TS38-21	7-10	9.5-13.6
UP10-30	5-7	6.8-9.5
ZL72	10-12	13.6-16.3

Drop-In Valves Mounting Screw Torque		
Model	Ft-lbs	Nm
SV98-T39	2.2-3	3-4
SV98-T40	2.2-3	3-4
TS98-T34	2.2-3	3-4