

Cartridge Valve

- Pressure Control
- Flow Control
- Directional
- Load Holding
- Logic Element
- Specialty
- Proportional
- Cavity Plug



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Operating Recommendation

· **Fluid Viscosity Recommendations**

15 to 380 cSt

· **Fluid Cleanliness Recommendations**

Specified in accordance with ISO 4406:1999; 4µm / 6µm / 14µm

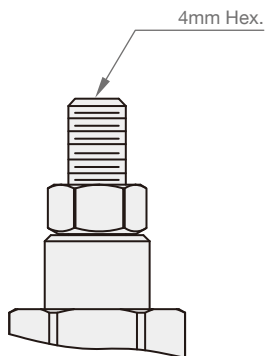
· **Fluid Temperature Recommendations**

Buna N (Nitrile) : -35°C to 90°C

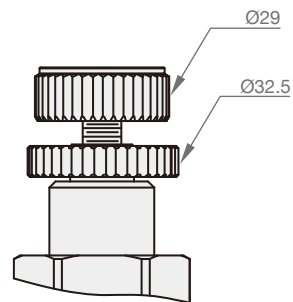
Viton : -20°C to 120°C

CONTROL MANNER

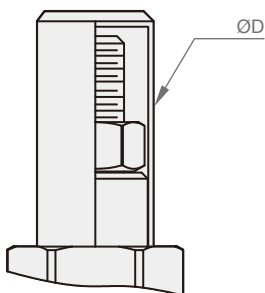
► **L : Standard Screw Adjustment**



► **K : Hand Knob with Lock Knob**



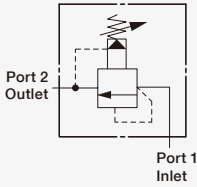
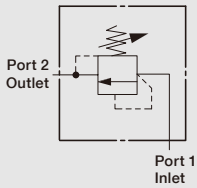
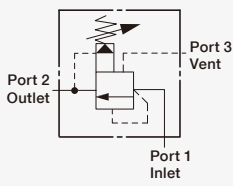
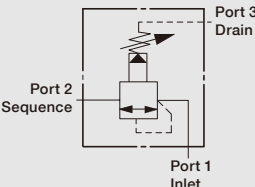
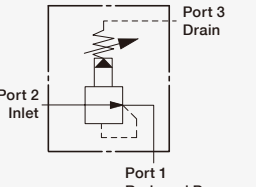
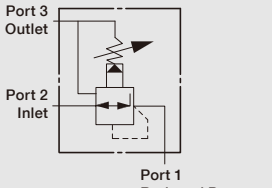
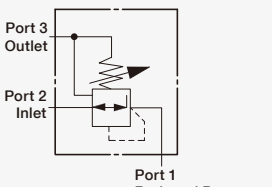
► **C : Tamper Resistant Cover**

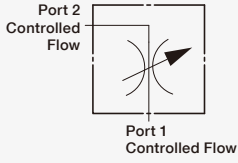
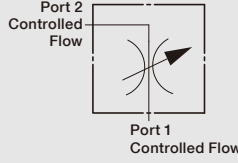
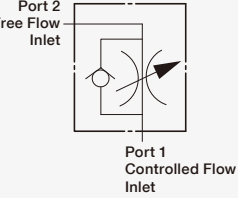
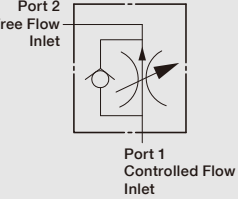
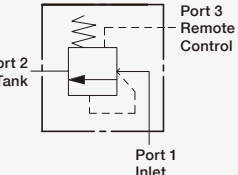
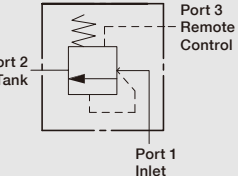


ØD	Size	Cavity
Ø19	02	T10, T11, T13
Ø25	03	T2, T3, T5
Ø30	06	T16, T17
Ø40	08	T18, T19

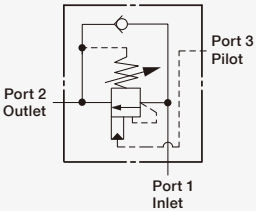
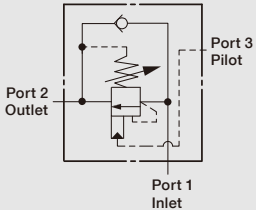
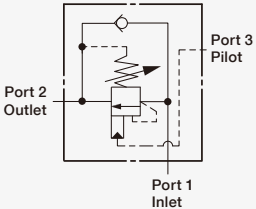
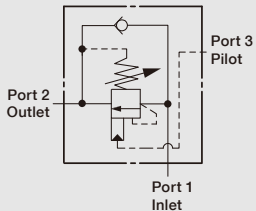
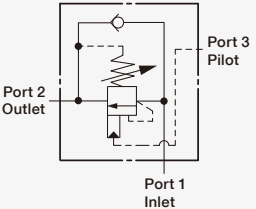
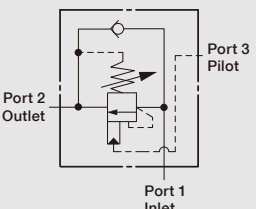
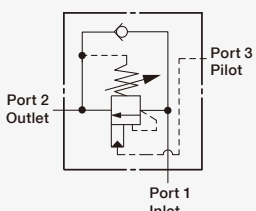
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Pressure Control

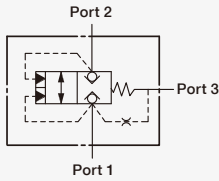
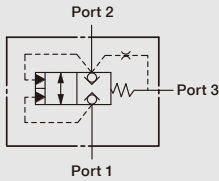
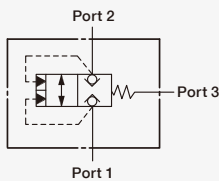
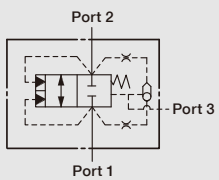
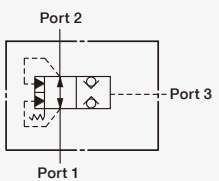
Page No.	Function	Symbols	Model No.	Cavity	Capacity (l/min)	Control Manner		
						L	K	X
14	Pilot Operated Relief Valve		RP2C	T10A	95	✓	✓	
			RP3C	T3A	200	✓	✓	
			RP6C	T16A	380	✓	✓	
			RP8C	T18A	760	✓	✓	
16	Direct-acting Relief Valve		RD2A	T10A	95	✓		
			RD3A	T3A	200	✓		
			RD6A	T16A	380	✓		
			RD8A	T18A	760	✓		
18	Pilot Operated Relief Valve with Vent		RV2A	T11A	60	✓	✓	
			RV3A	T2A	120	✓	✓	
			RV6A	T17A	240	✓	✓	
			RV8A	T19A	480	✓	✓	
20	Pilot Operated Sequence Valve		RS2C	T11A	60	✓	✓	
			RS3C	T2A	120	✓	✓	
			RS6C	T17A	240	✓	✓	
			RS8C	T19A	480	✓	✓	
22	Pilot Operated Reducing Valve		PB2B	T11A	40	✓	✓	
			PB3B	T2A	80	✓	✓	
			PB6B	T17A	160	✓	✓	
			PB8B	T19A	320	✓	✓	
24	Pilot Operated Reducing / Relieving Valve		PP2B	T11A	40	✓	✓	
			PP3B	T2A	80	✓	✓	
			PP6B	T17A	160	✓	✓	
			PP8B	T19A	320	✓	✓	
26	Direct-acting Pressure Reducing / Relieving Valve		PR2B	T11A	40	✓	✓	
			PR3B	T2A	80	✓	✓	
			PR6B	T17A	160	✓	✓	
			PR8B	T19A	320	✓	✓	

Page No.	Function	Symbols	Model No.	Cavity	Capacity (l/min)	Control Manner		
						L	K	X
28	Fully Adjustable Needle Valve		NF2C	T13A	25	✓	✓	
			NF3C	T5A	50	✓	✓	
			NF6C	T16A	100	✓	✓	
			NF8C	T18A	200	✓	✓	
30	Fully Adjustable and High Capacity Needle Valve		NF2D	T13A	80	✓	✓	
			NF3D	T5A	160	✓	✓	
			NF6D	T16A	320	✓	✓	
			NF8D	T18A	500	✓	✓	
32	Fully Adjustable Needle Valve (with Free Flow Check Valve)		NC2B	T13A	25	✓	✓	
			NC3B	T5A	50	✓	✓	
			NC6B	T16A	100	✓	✓	
			NC8B	T18A	200	✓	✓	
34	Pressure Compensated Fully Adjustable Flow Control Valve (with Free Flow Check Valve)		FD2A	T13A	23	✓	✓	
			FD3B	T5A	45	✓	✓	
			FD6A	T16A	95	✓	✓	
			FD8A	T18A	200	✓	✓	
36	Normally Closed, Modulating Element with Pilot Source from Port 1		LR2A	T11A	60	✓		✓
			LR3A	T2A	120	✓		✓
			LR6A	T17A	240	✓		✓
			LR8A	T19A	480	✓		✓
38	Normally Closed, Modulating Element		LR2C	T11A	60	✓		✓
			LR3C	T2A	120	✓		✓
			LR6C	T17A	240	✓		✓
			LR8C	T19A	480	✓		✓

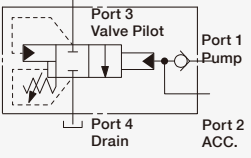
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						L	K	X
40	Pilot to Open Check Valve		CK2B	T11A	60			✓
			CK3B	T2A	120			✓
			CK6B	T17A	240			✓
			CK8B	T19A	480			✓
42	Vented, Pilot to Open Check Valve		CK2F	T11A	60			
			CK3F	T2A	120			
			CK6F	T17A	240			
			CK8F	T19A	480			
44	Pilot to Close Check Valve		CO1A	T163A	40			✓
			CO2A	T11A	80			✓
			CO3A	T2A	160			✓
			CO6A	T17A	320			✓
			CO8A	T19A	640			✓
46	Shuttle Valve		CS1Z	T163A	5			✓
			CS2D	T11A	10			✓
			CS1X	T163A	5			✓
			CS2B	T11A	10			✓
48	Check Valve (Free Flow Port1 to Port2)		CX2A	T13A	80			✓
			CX3A	T5A	160			✓
			CX7A	T16A	320			✓
			CX8A	T18A	640			✓
50	Check Valve (Free Flow Port2 to Port1)		CX2D	T13A	60			✓
			CX3D	T5A	120			✓
			CX7D	T16A	240			✓
			CX8D	T18A	480			✓

Page No.	Function	Symbols	Model No.	Cavity	Capacity (l/min)	Control Manner		
						L	K	X
52	Counterbalance 3:1 Pilot Ratio External Pilot Non-Vented Valve		CB2A	T11A	60	✓		
			CB3A	T2A	120	✓		
			CB6A	T17A	240	✓		
			CB8A	T19A	480	✓		
54	Counterbalance 4.5:1 Pilot Ratio External Pilot Non-Vented Valve		CB2G	T11A	60	✓		
			CB3G	T2A	120	✓		
			CB6G	T17A	240	✓		
			CB8G	T19A	480	✓		
56	Counterbalance 10:1 Pilot Ratio External Pilot Non-Vented Valve		CB2H	T11A	60	✓		
			CB3H	T2A	120	✓		
			CB6H	T17A	240	✓		
			CB8H	T19A	480	✓		
58	3:1 Pilot Ratio, Semi-restrictive Counterbalance Valve		CB2C	T11A	40	✓		
			CB3C	T2A	80	✓		
			CB6C	T17A	160	✓		
60	4.5:1 Pilot Ratio, Semi-restrictive Counterbalance Valve		CB2D	T11A	40	✓		
			CB3D	T2A	80	✓		
			CB6D	T17A	160	✓		
62	3:1 Pilot Ratio, Restrictive Counterbalance Valve		CB2E	T11A	15	✓		
			CB3E	T2A	30	✓		
			CB6E	T17A	60	✓		
			CB8E	T19A	80	✓		
64	4.5:1 Pilot Ratio, Restrictive Counterbalance Valve		CB2F	T11A	15	✓		
			CB3F	T2A	30	✓		
			CB6F	T17A	60	✓		
			CB8F	T19A	80	✓		

Logic Element

Page No.	Function	Symbols	Model No.	Cavity	Capacity (l/min)	Control Manner		
						L	K	X
66	Logic Elements (Spring biased closed, pilot source from port 1)		LO2A	T11A	80	✓		✓
			LO3A	T2A	160	✓		✓
			LO6A	T17A	320	✓		✓
			LO8A	T19A	640	✓		✓
66	Logic Elements (Spring biased closed, pilot source from port 2)		LO2B	T11A	80	✓		✓
			LO3B	T2A	160	✓		✓
			LO6B	T17A	320	✓		✓
			LO8B	T19A	640	✓		✓
66	Logic Elements (Spring biased closed, pilot source from port 3)		LO2C	T11A	80	✓		✓
			LO3C	T2A	160	✓		✓
			LO6C	T17A	320	✓		✓
			LO8C	T19A	640	✓		✓
66	Logic Elements (Spring biased closed, higher of port 1 or 2 pilot source)		LO2D	T11A	80	✓		✓
			LO3D	T2A	160	✓		✓
			LO6D	T17A	320	✓		✓
			LO8D	T19A	640	✓		✓
66	Logic Elements (Spring biased open, pilot source from port 3)		LO2O	T11A	80	✓		✓
			LO3O	T2A	160	✓		✓
			LO6O	T17A	320	✓		✓
			LO8O	T19A	640	✓		✓

Specialty

Page No.	Function	Symbols	Model No.	Cavity	Capacity (l/min)	Control Manner		
						L	K	X
68	30%, Accumulator Sense, Pump Unload Valve with Check - Pilot Capacity		QC2C	T21A	60	✓	✓	

Cavity Plug

Page No.	Function	Symbols	Model No.	Cavity	Thread
70	2 Holes External Port Blocked Cavity Plug		X10A2	T162A	M16 P15
			X20A2	T10A	M20 P1.5
			X20A2	T13A	M20 P1.5
			X30A2	T3A	1"-14UNS-2B
			X30A2	T5A	1"-14UNS-2B
			X60A2	T16A	M36 P2
			X80A2	T18A	M48 P2
71	2 Holes All Ports Blocked Cavity Plug		X1CA2	T162A	M16 P15
			X2CA2	T10A	M20 P1.5
			X2CA2	T13A	M20 P1.5
			X3CA2	T3A	1"-14UNS-2B
			X3CA2	T5A	1"-14UNS-2B
			X6CA2	T16A	M36 P2
			X8CA2	T18A	M48 P2
72	Port 1 to 2 Open, Port 3 Blocked Cavity Plug		X10A3	T163A	M16 P1.5
			X20A3	T11A	M20 P1.5
			X30A3	T2A	1"-14UNS-2B
			X60A3	T17A	M36 P2
			X80A3	T19A	M48 P2
73	3 Holes All Ports Blocked Cavity Plug		X1CA3	T163A	M16 P1.5
			X2CA3	T13A	M20 P1.5
			X3CA3	T2A	1"-14UNS-2B
			X6CA3	T17A	M36 P2
			X8CA3	T19A	M48 P2

SAE Cavity Cartridge Valve > Pressure Control

Page No.	Function	Symbols	Model No.	Cavity	Capacity (l/min)	Control Manner			
						L	K	X	V
74	Noiseless Direct Acting Diagonal Area Relief Valve		MH-082	T082	25	✓	✓		✓
			MH-092	T092	45	✓	✓		✓
			MH-102	T102	55	✓	✓		✓

SAE Cavity Cartridge Valve > Flow Control

Page No.	Function	Symbols	Model No.	Cavity	Capacity (l/min)	Control Manner		
						L	K	X
76	Check with Manual Flow Adjustment		CN-082	T082	30	✓	✓	
			CN-102	T102	50	✓	✓	
			CN-122	T122	80	✓	✓	
			CN-162	T162	150	✓	✓	
78	Fully Adjustable Needle		NV-082	T082	30	✓	✓	
			NV-102	T102	50	✓	✓	
			NV-122	T122	80	✓	✓	
			NV-162	T162	150	✓	✓	
80	Fully Adjustable Needle with Free Flow Check		NC-082	T082	30	✓	✓	
			NC-102	T102	50	✓	✓	
			NC-122	T122	80	✓	✓	
			NC-162	T162	150	✓	✓	
82	Flow Divider (Flow Ratio: 1:1)		CP-104	T104	45			✓
			CP-124	T124	75			✓
			CP-164	T164	150			✓

SAE Cavity Cartridge Valve > Directional

Page No.	Function	Symbols	Model No.	Cavity	Capacity (l/min)	Control Manner		
						L	K	X
84	Check Free Flow 1-2		CV-082	T082	30			✓
			CV-102	T102	50			✓
			CV-122	T122	80			✓
			CV-162	T162	150			✓
86	Shuttle Valve		LS-083	T083	15			✓
			LS-103	T103	30			✓

SAE Cavity Cartridge Valve > Directional

Page No.	Function	Symbols	Model No.	Cavity	Capacity (l/min)	
					12 VDC	24 VDC
88	Solenoid On/Off Valves 2-Way Valve		HS-2A-16	T082	28	
			HS-2B-16	T082	28	
			HS-2C-16	T082	28	
			HS-2D-16	T082	30	
			HS-2J-16	T082	12	
			JS-2A-16	T102	50	
			JS-2B-16	T102	50	
			JS-2C-16	T102	50	
			JS-2D-16	T102	55	
			JS-2I-16	T102	20	
			HS-2J-16	T082	12	
			LS-2A-16	T122	100	
			LS-2B-16	T122	100	
			LS-2C-16	T122	100	
			LS-2D-16	T122	105	
			LS-2I-16	T122	40	
			PS-2A-19	T162	150	
			PS-2B-19	T162	150	
PS-2C-19	T162	150				
PS-2D-19	T162	150				
PS-2I-19	T162	60				
90	Solenoid On/Off Valves 3-Way Valve		HS-3A-16	T082	15	
			HS-3D-16	T082	11	
			HS-3X-16	T082	13	

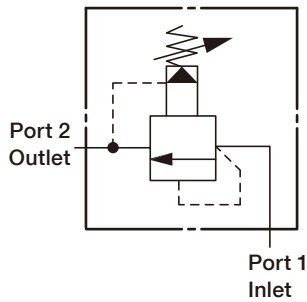
SAE Cavity Cartridge Valve > Proportional

Page No.	Function	Symbols	Model No.	Cavity	Capacity (l/min)	Max. Current (mA)	
						12 VDC	24 VDC
92	Normally Closed, 2 Way Proportional Flow Control Valve		PV-1033	T103	30	1800	900
94	3 Way Normally Closed, Pressure Compensated, Proportional Flow Control Valve		EVP-M33	C332-3	50	1900	950

RP



SYMBOLS



ORDER CODES

RP **2C** - **T10A** - **L** **A** **N**

1 2 3 4 5 6

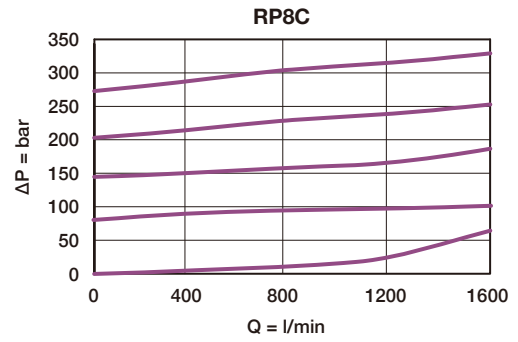
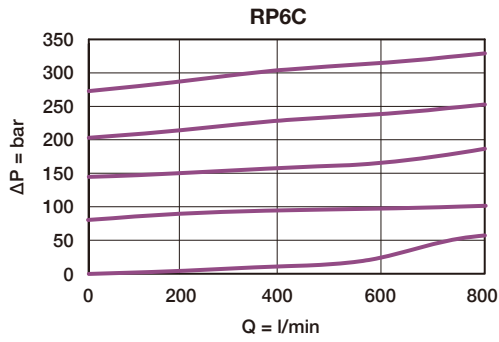
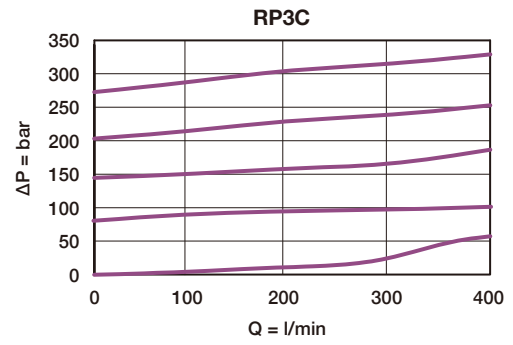
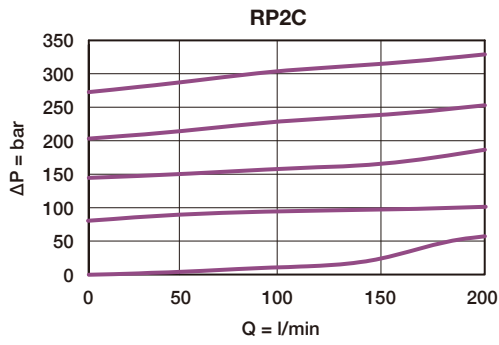
1	Model Name	RP	
2	Valve Size	2C, 3C, 6C, 8C	
3	Cavity	T10A, T3A, T16A, T18A	
4	Control Manner	L	standard screw adjustment
		K	hand knob with lock knob
5	Adjustable Range	A	7 ~ 210 bar
		B	3.5 ~ 105 bar
		C	10 ~ 400 bar
		E	2 ~ 25 bar
6	Material of Seal	N	buna-N
		V	viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
RP2C	T10A	95	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.15
RP3C	T3A	200	350	60/70		0.25
RP6C	T16A	380	350	200/215		0.55
RP8C	T18A	760	350	465/500		1.17

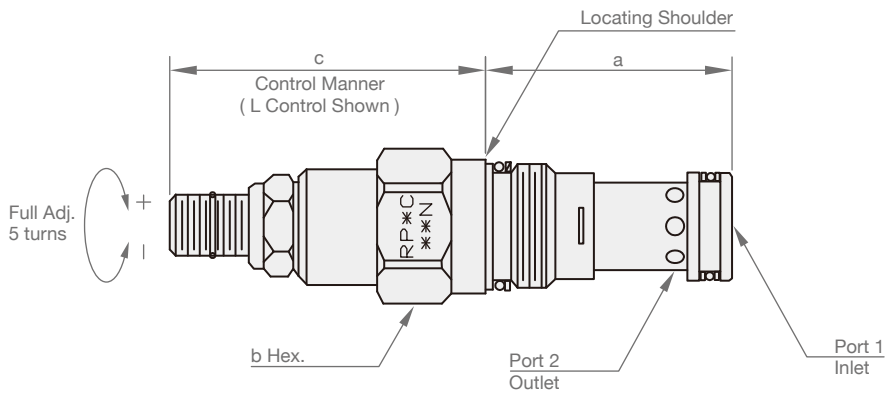
PERFORMANCE CURVES

► Typical Pressure Rise



DIMENSION

(UNIT : mm)

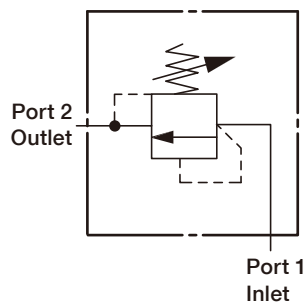


Model	a	b	c	
			L	K
RP2C	39.7	22.2	51	58
RP3C	47.8	28.6	54	61
RP6C	61.9	31.8	62	69
RP8C	79.4	41.3	71	78

RD



SYMBOLS



ORDER CODES

RD **2A** - **T10A** - **L** **A** **N**

1 2 3 4 5 6

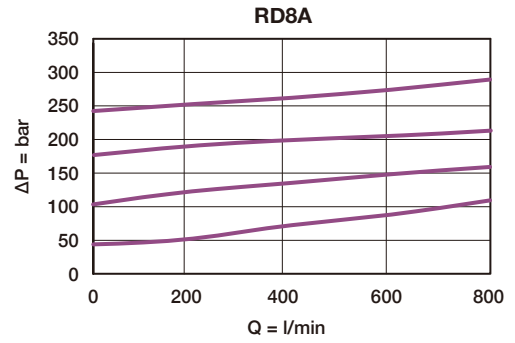
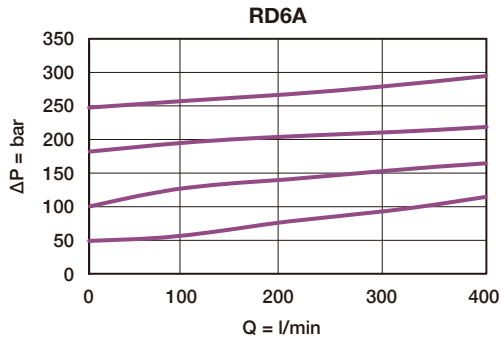
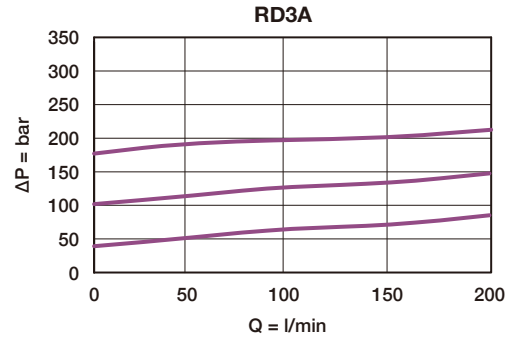
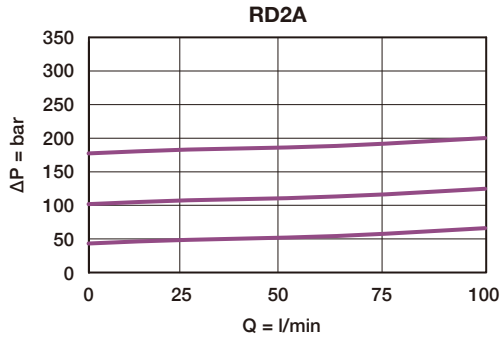
1	Model Name	RD	
2	Valve Size	2A, 3A, 6A, 8A	
3	Cavity	T10A, T3A, T16A, T18A	
4	Control Manner	L	standard screw adjustment
5	Adjustable Range	A	35 ~ 210 bar
		B	20 ~ 105 bar
		E	7 ~ 25 bar
		W	70 ~ 315 bar
6	Material of Seal	N	buna-N
		V	viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
RD2A	T10A	95	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.155
RD3A	T3A	200	350	60/70		0.295
RD6A	T16A	380	350	200/215		0.670
RD8A	T18A	760	350	465/500		1.450

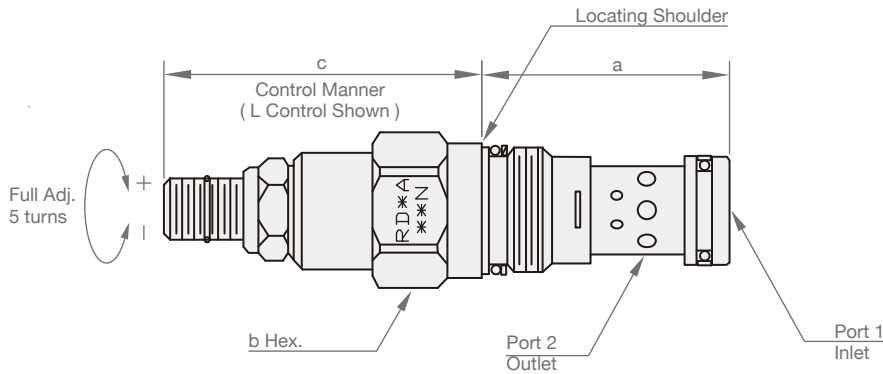
PERFORMANCE CURVES

► Typical Pressure Rise



DIMENSION

(UNIT : mm)

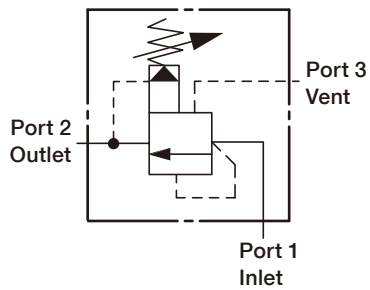


Model	a	b	c
			L
RD2A	39.7	22.2	61
RD3A	47.8	28.6	64
RD6A	61.9	31.8	83
RD8A	79.4	41.3	100

RV



SYMBOLS



ORDER CODES

RV 2A - T11A - L A N

1 2 3 4 5 6

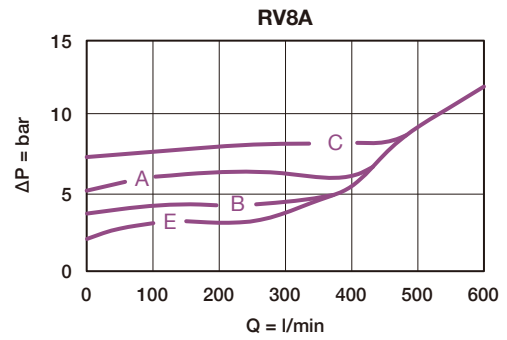
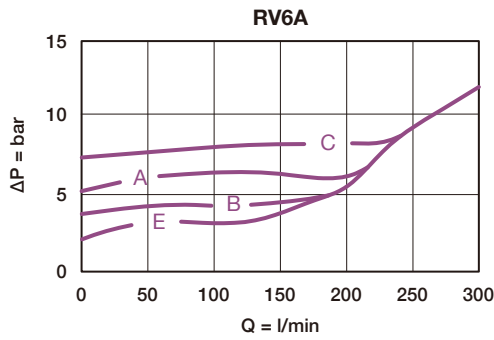
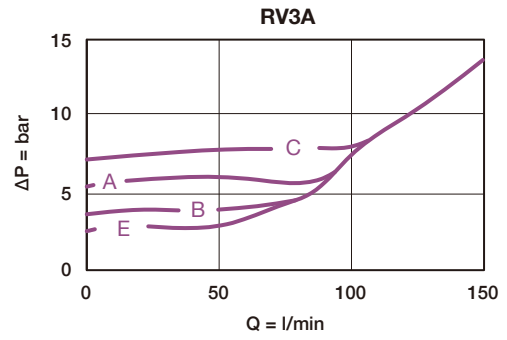
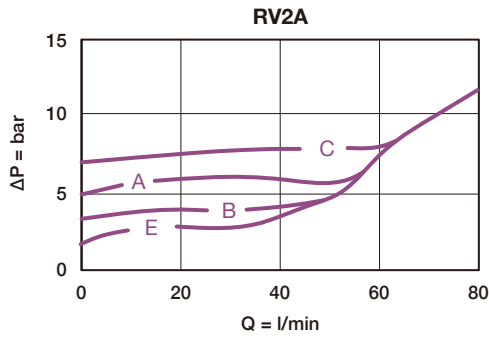
1	▶ Model Name	RV
2	▶ Valve Size	2A, 3A, 6A, 8A
3	▶ Cavity	T11A, T2A, T17A, T19A
4	▶ Control Manner	L standard screw adjustment
		K hand knob with lock knob
5	▶ Adjustable Range	A 7 ~ 210 bar
		B 3.5 ~105 bar
		C 10 ~ 400 bar
		E 2 ~ 25 bar
6	▶ Material of Seal	N buna-N
		V viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
RV2A	T11A	60	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.17
RV3A	T2A	120	350	60/70		0.30
RV6A	T17A	240	350	200/215		0.64
RV8A	T19A	480	350	465/500		1.43

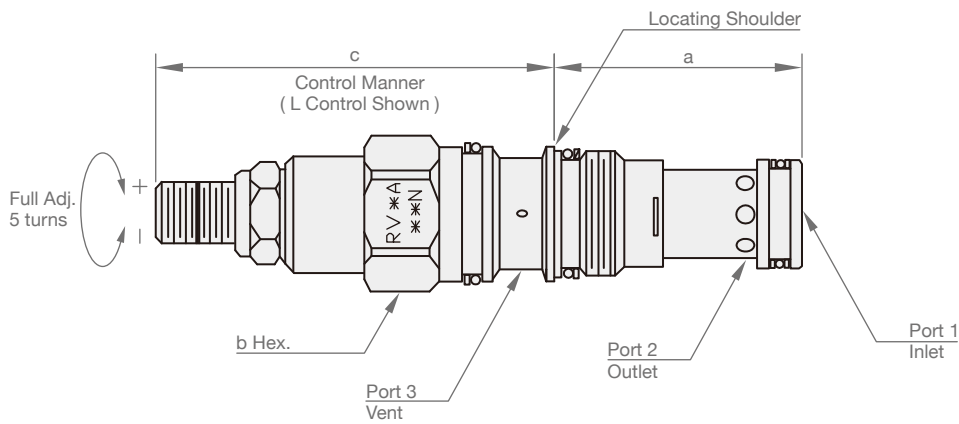
PERFORMANCE CURVES

► Vented Pressure



DIMENSION

(UNIT : mm)

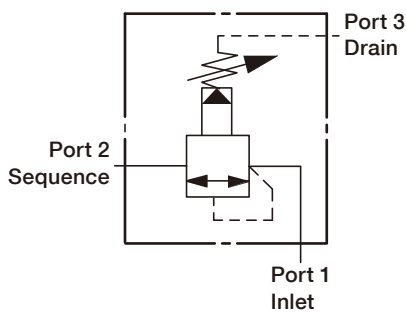


Model	a	b	c	
			L	K
RV2A	34.9	22.2	64	70
RV3A	34.9	28.6	72	78
RV6A	46.0	31.8	84	90
RV8A	63.5	41.3	100	107

RS



SYMBOLS



ORDER CODES

RS **2C** - **T11A** - **L** **A** **N**

1 2 3 4 5 6

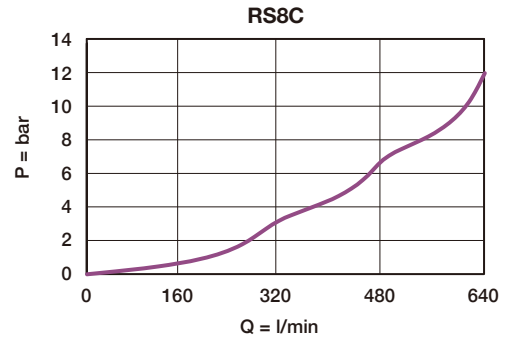
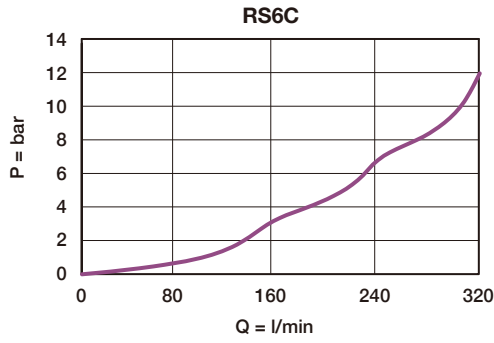
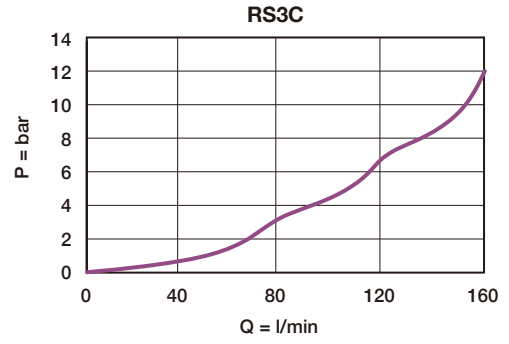
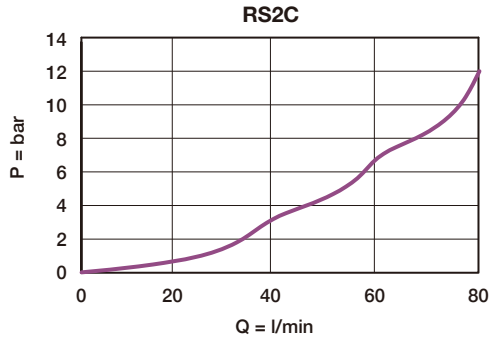
1	▶ Model Name	RS	
2	▶ Valve Size	2C, 3C, 6C, 8C	
3	▶ Cavity	T11A, T2A, T17A, T19A	
4	▶ Control Manner	L	standard screw adjustment
		K	hand knob with lock knob
5	▶ Adjustable Range	A	7 ~ 210 bar
		B	3.5 ~105 bar
		N	4 ~ 55 bar
		W	10 ~ 315 bar
6	▶ Material of Seal	N	buna-N
		V	viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
RS2C	T11A	60	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.17
RS3C	T2A	120	350	60/70		0.30
RS6C	T17A	240	350	200/215		0.64
RS8C	T19A	480	350	465/500		1.43

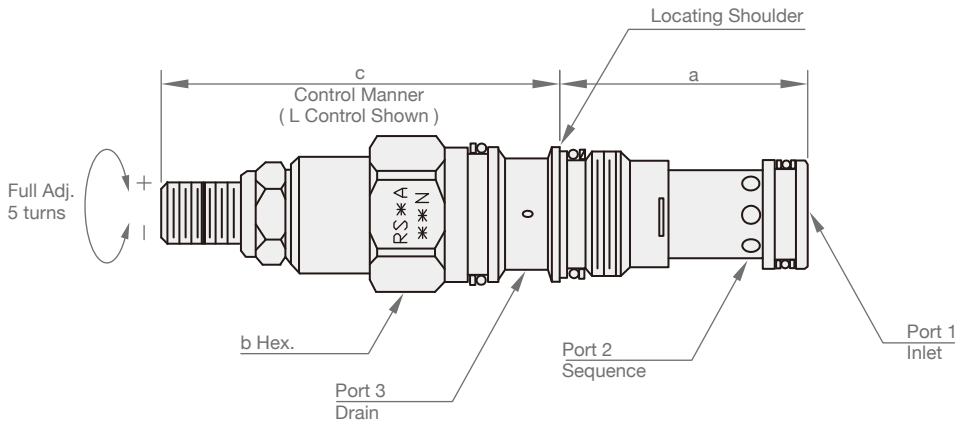
PERFORMANCE CURVES

► Pressure Drop Fully Sequence



DIMENSION

(UNIT : mm)

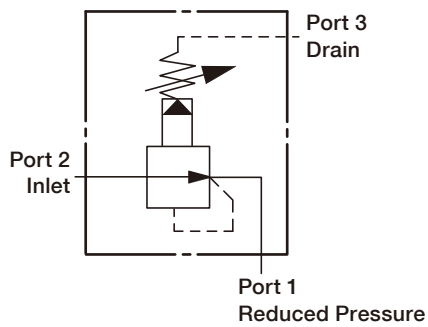


Model	a	b	c	
			L	K
RS2C	34.9	22.2	64	70
RS3C	34.9	28.6	72	78
RS6C	46.0	31.8	84	90
RS8C	63.5	41.3	100	107

PB



SYMBOLS



ORDER CODES

PB **2B** - **T11A** - **L** **A** **N**

① ② ③ ④ ⑤ ⑥

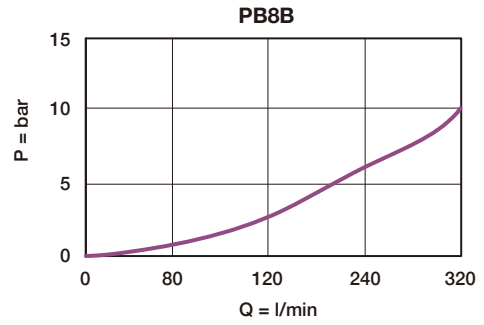
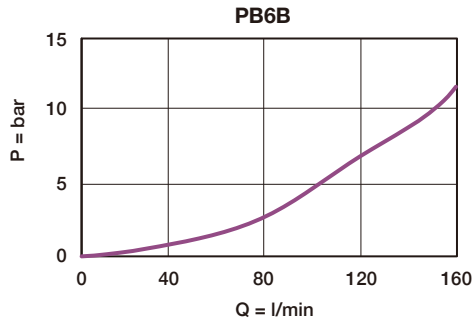
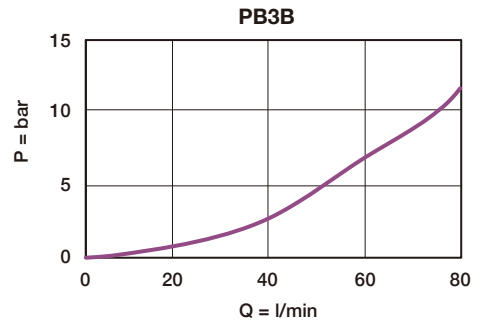
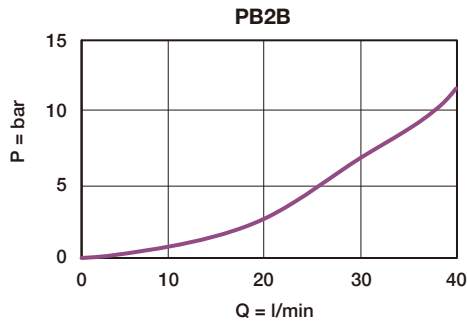
① ▶ Model Name	PB	
② ▶ Valve Size	2B, 3B, 6B, 8B	
③ ▶ Cavity	T11A, T2A, T17A, T19A	
④ ▶ Control Manner	L	standard screw adjustment
	K	hand knob with lock knob
⑤ ▶ Adjustable Range	A	7 ~ 210 bar
	B	3.5 ~105 bar
	N	4~55 bar
	W	10~315 bar
⑥ ▶ Material of Seal	N	buna-N
	V	viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
PB2B	T11A	40	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.17
PB3B	T2A	80	350	60/70		0.30
PB6B	T17A	160	350	200/215		0.64
PB8B	T19A	320	350	465/500		1.43

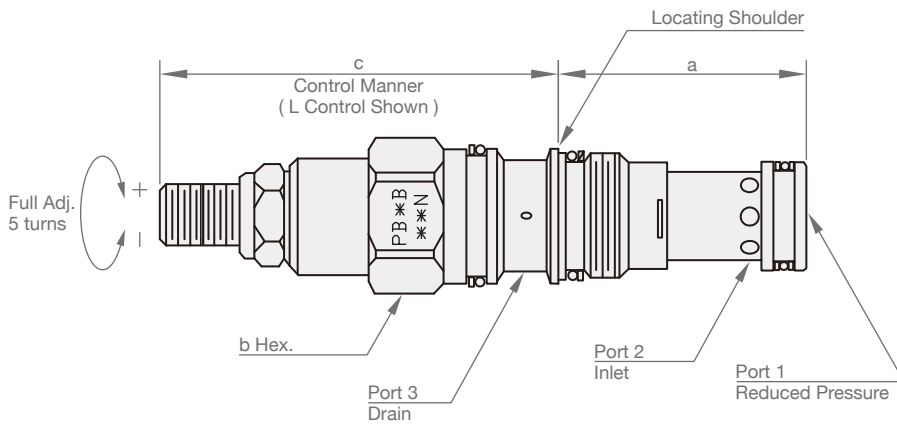
PERFORMANCE CURVES

► No Load Pressure Drop



DIMENSION

(UNIT : mm)

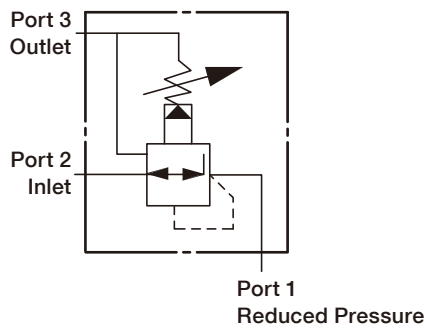


Model	a	b	c	
			L	K
PB2B	34.9	22.2	64	70
PB3B	34.9	28.6	72	78
PB6B	46.0	31.8	84	90
PB8B	63.5	41.3	100	107

PP



SYMBOLS



ORDER CODES

PP 2B - T11A - L A N

1 2 3 4 5 6

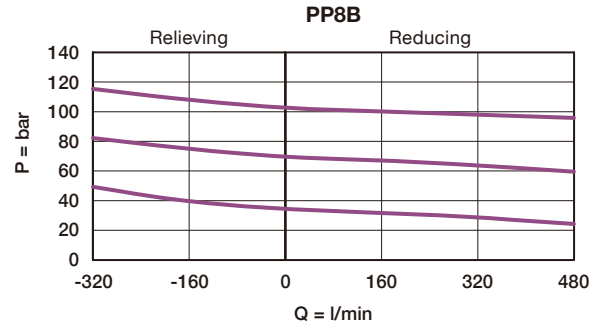
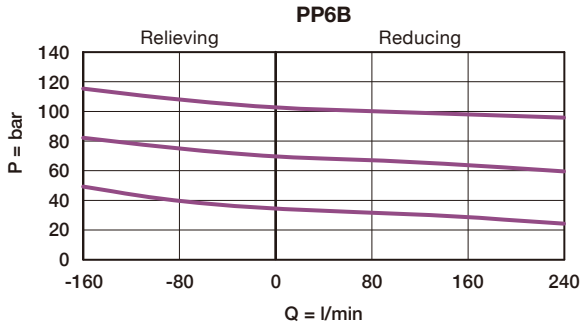
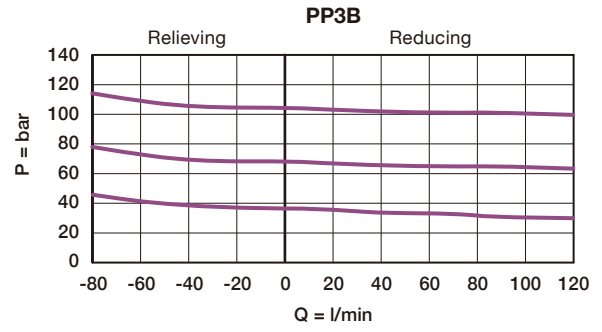
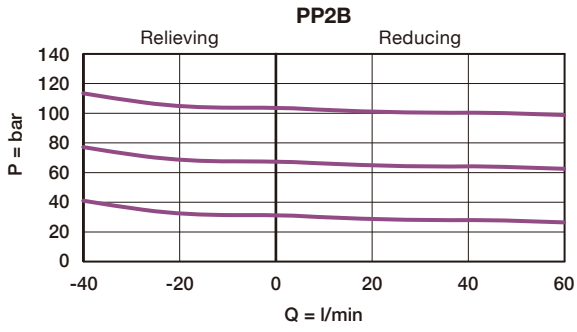
1	▶ Model Name	PP	
2	▶ Valve Size	2B, 3B, 6B, 8B	
3	▶ Cavity	T11A, T2A, T17A, T19A	
4	▶ Control Manner	L	standard screw adjustment
		K	hand knob with lock knob
5	▶ Adjustable Range	A	7 ~ 210 bar
		B	3.5 ~105 bar
		N	4~55 bar
		W	10~315 bar
6	▶ Material of Seal	N	buna-N
		V	viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
PP2B	T11A	40	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.17
PP3B	T2A	80	350	60/70		0.30
PP6B	T17A	160	350	200/215		0.64
PP8B	T19A	320	350	465/500		1.43

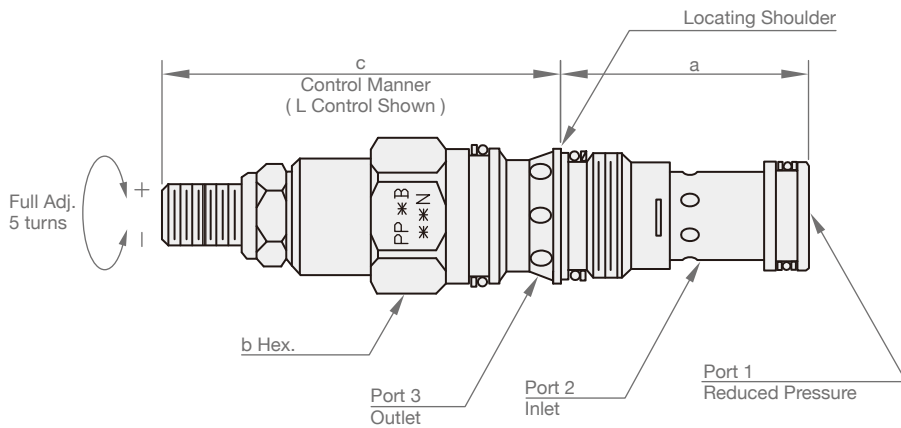
PERFORMANCE CURVES

► Regulated Pressure



DIMENSION

(UNIT : mm)

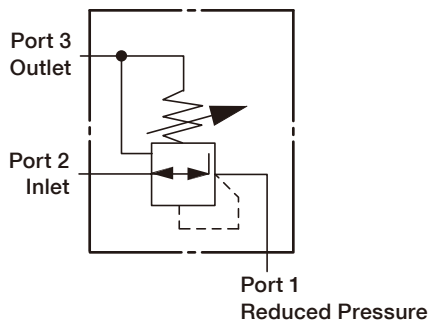


Model	a	b	c	
			L	K
PP2B	34.9	22.2	64	70
PP3B	34.9	28.6	72	78
PP6B	46.0	31.8	84	90
PP8B	63.5	41.3	100	107

PR



SYMBOLS



ORDER CODES

PR **2B** - **T11A** - **L** **A** **N**

1 2 3 4 5 6

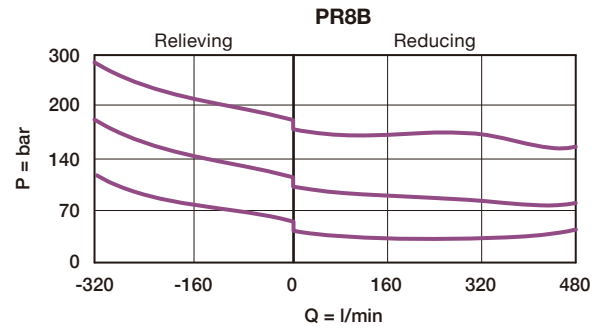
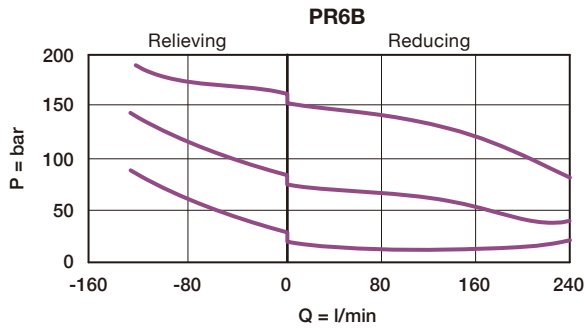
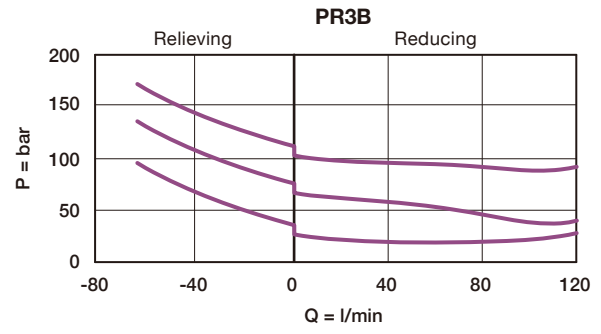
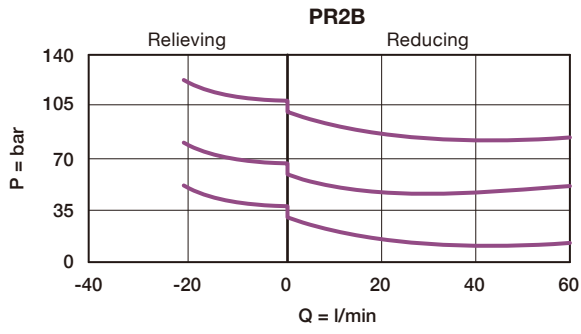
1	▶ Model Name	PR	
2	▶ Valve Size	2B, 3B, 6B, 8B	
3	▶ Cavity	T11A, T2A, T17A, T19A	
4	▶ Control Manner	L	standard screw adjustment
		K	hand knob with lock knob
5	▶ Adjustable Range	A	35 ~ 210 bar
		B	6.5 ~ 105 bar
		D	5 ~ 55 bar
		E	2 ~ 25 bar
		W	50 ~ 315 bar
6	▶ Material of Seal	N	buna-N
		V	viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
PR2B	T11A	40	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.20
PR3B	T2A	80	350	60/70		0.36
PR6B	T17A	160	350	200/215		0.76
PR8B	T19A	320	350	465/500		1.58

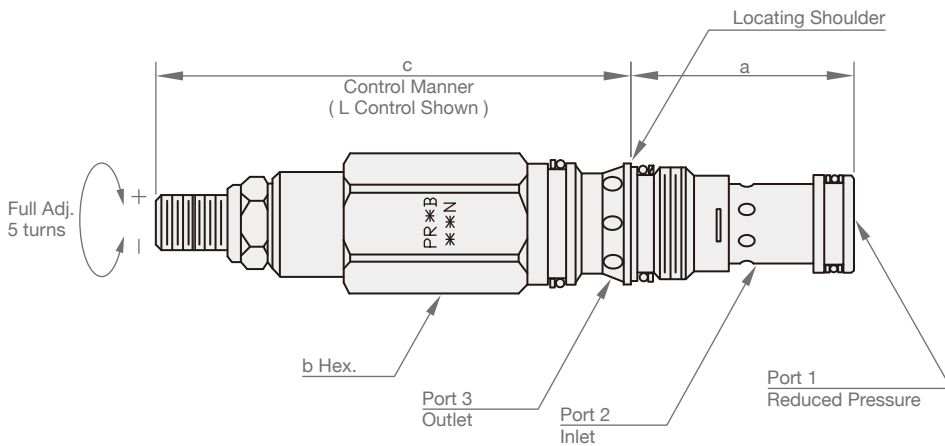
PERFORMANCE CURVES

► Regulated Pressure



DIMENSION

(UNIT : mm)

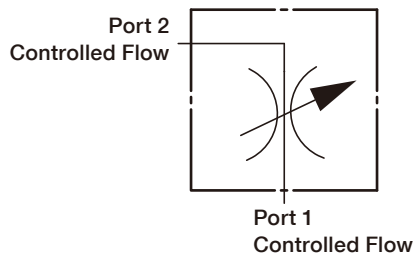


Model	a	b	c	
			L	K
PR2B	34.9	22.2	79	85
PR3B	34.9	28.6	89	96
PR6B	46.0	31.8	100	107
PR8B	63.5	41.3	124	130

NFC



SYMBOLS



ORDER CODES

NF **2C** - **T13A** - **L** **C** **N**

1 2 3 4 5 6

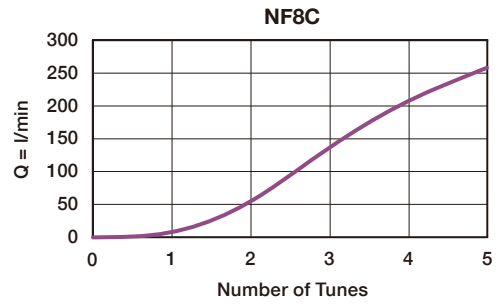
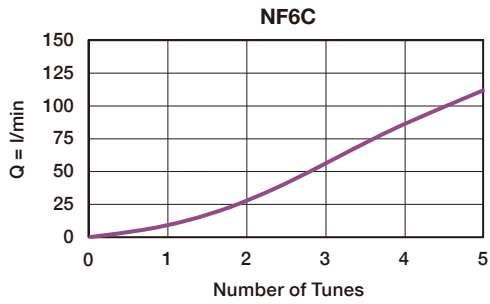
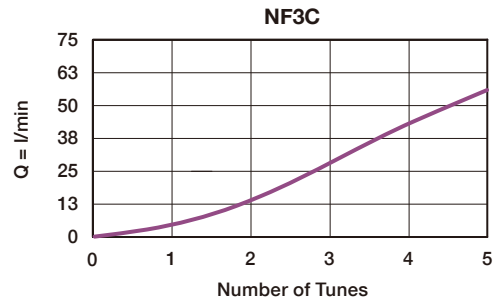
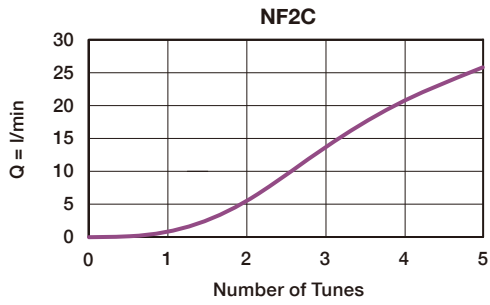
1	▶ Model Name	NF	
2	▶ Valve Size	2C, 3C, 6C, 8C	
3	▶ Cavity	T13A, T5A, T16A, T18A	
4	▶ Control Manner	L	standard screw adjustment
		K	hand knob with lock knob
5	▶ Max. Orifice	C	T13A : 4.8mm
		A	T5A : 6.3mm
		E	T16A : 9.6mm
		G	T18A : 14.2mm
6	▶ Material of Seal	N	buna-N
		V	viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
NF2C	T13A	25	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.14
NF3C	T5A	50	350	60/70		0.26
NF6C	T16A	100	350	200/215		0.55
NF8C	T18A	200	350	465/500		1.21

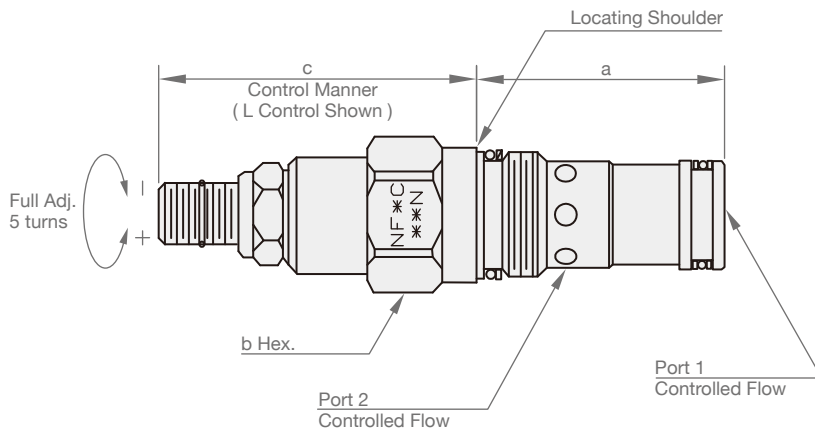
PERFORMANCE CURVES

► Adjustment Sensitivity at 7 bar Differential



DIMENSION

(UNIT : mm)

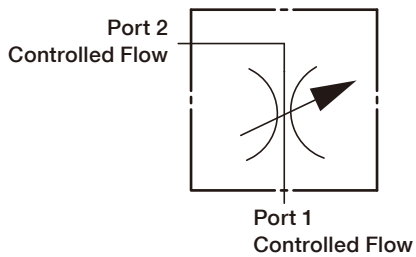


Model	a	b	c	
			L	K
NF2C	34.9	22.2	58	64
NF3C	41.1	28.6	67	73
NF6C	61.9	31.8	73	79
NF8C	79.4	41.3	84	90

NFD



SYMBOLS



ORDER CODES

NF 2 D - T13A - L F N

1 2 3 4 5 6 7

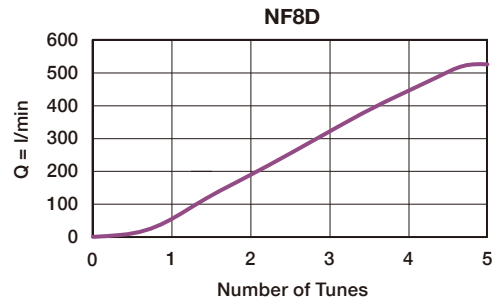
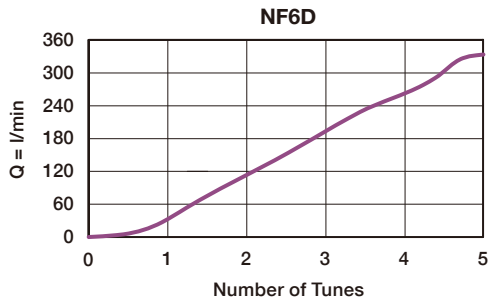
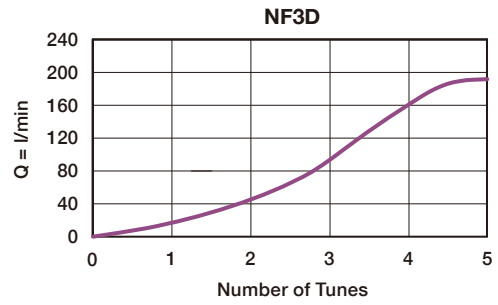
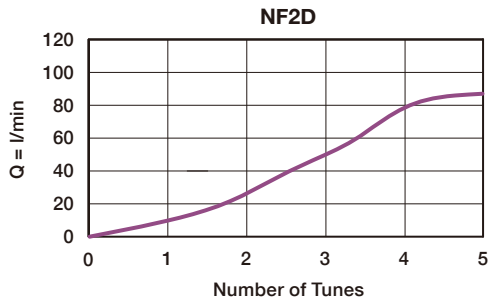
1	▶ Model Name	NF
2	▶ Valve Size	2, 3, 6, 8
3	▶ Operation	D high capacity
4	▶ Cavity	T13A, T5A, T16A, T18A
5	▶ Control Manner	L standard screw adjustment
		K hand knob with lock knob
6	▶ Max. Orifice	F T13A : 8.4mm
		G T5A : 12.7mm
		H T16A : 17.5mm
		I T18A : 21.6mm
7	▶ Material of Seal	N buna-N
		V viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
NF2D	T13A	80	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.15
NF3D	T5A	160	350	60/70		0.28
NF6D	T16A	320	350	200/215		0.57
NF8D	T18A	500	350	465/500		1.24

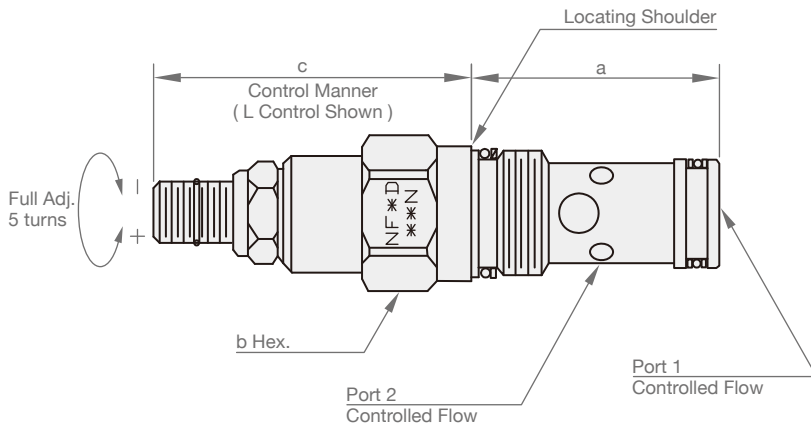
PERFORMANCE CURVES

► Adjustment Sensitivity at 7 bar Differential



DIMENSION

(UNIT : mm)

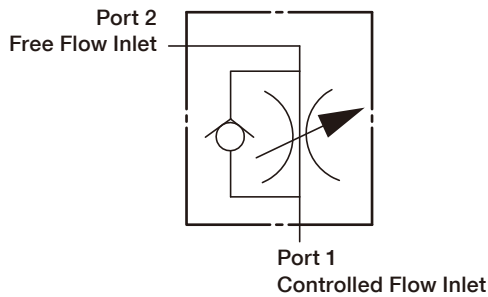


Model	a	b	c	
			L	K
NF2D	34.9	22.2	58	64
NF3D	41.1	28.6	67	73
NF6D	61.9	31.8	73	79
NF8D	79.4	41.3	84	90

NCB



SYMBOLS



ORDER CODES

NC **2B** - **T13A** - **L** **C** **N**

1 2 3 4 5 6

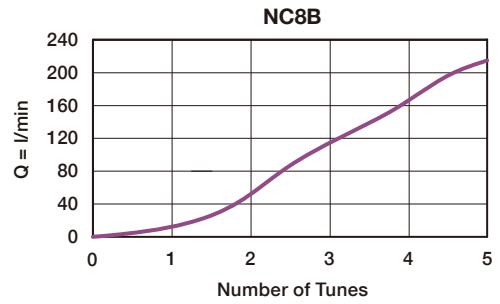
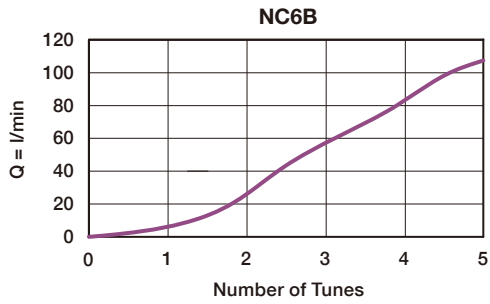
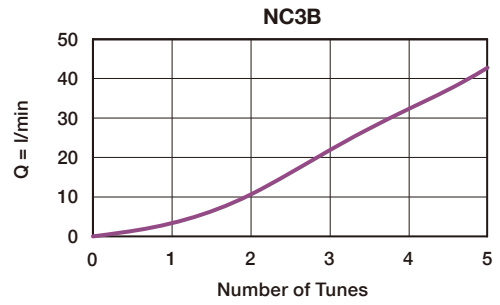
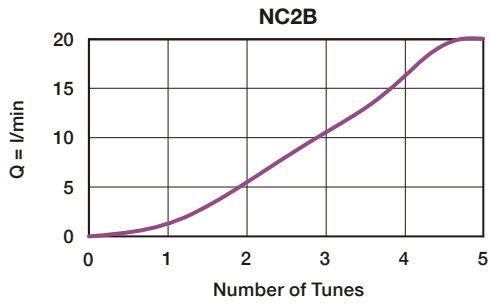
1	▶ Model Name	NC	
2	▶ Valve Size	2B, 3B, 6B, 8B	
3	▶ Cavity & Max. Orifice	T13A	4.8mm
		T5A	6.3mm
		T16A	9.6mm
		T18A	14.2mm
4	▶ Control Manner	L	standard screw adjustment
		K	hand knob with lock knob
5	▶ Cracking Pressure	A	0.3 bar
		C	2.0 bar
		E	5.0 bar
6	▶ Material of Seal	N	buna-N
		V	viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
NC2B	T13A	25	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.14
NC3B	T5A	50	350	60/70		0.26
NC6B	T16A	100	350	200/215		0.58
NC8B	T18A	200	350	465/500		1.23

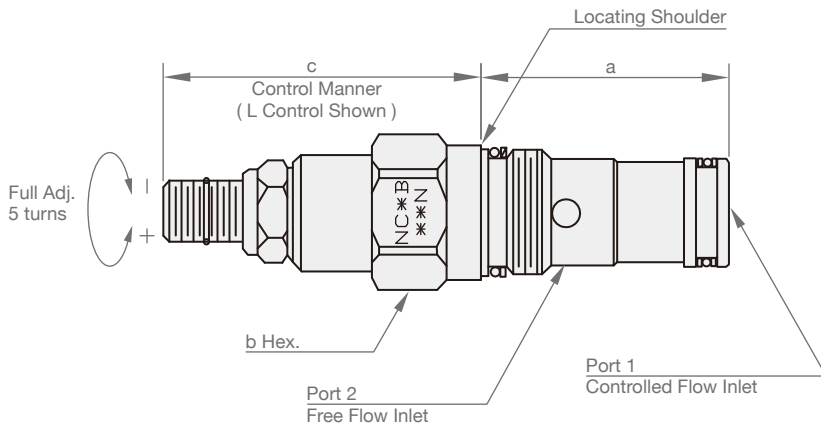
PERFORMANCE CURVES

► Adjustment Sensitivity at 7 bar Differential



DIMENSION

(UNIT : mm)

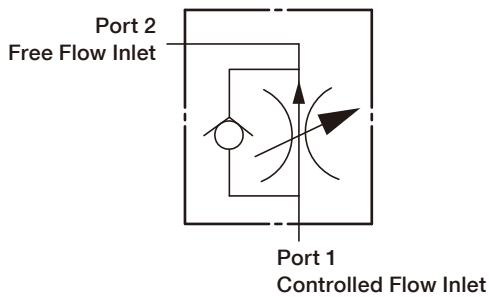


Model	a	b	c	
			L	K
NC2B	34.9	22.2	58	64
NC3B	41.1	28.6	67	73
NC6B	61.9	31.8	73	79
NC8B	79.4	41.3	84	90

FD



SYMBOLS



ORDER CODES

FD 2A - T13A - L A N

1 2 3 4 5 6

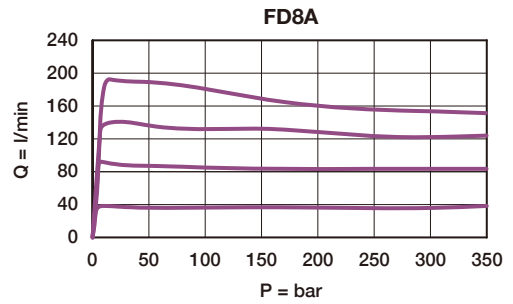
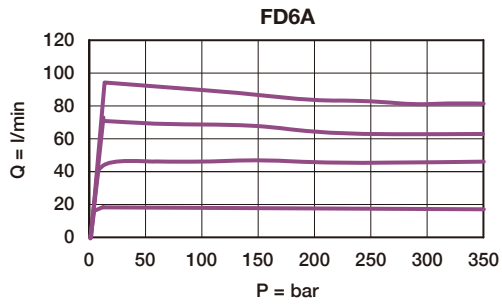
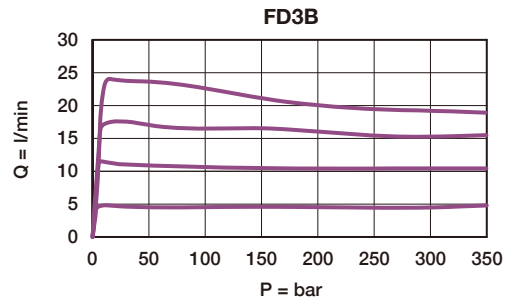
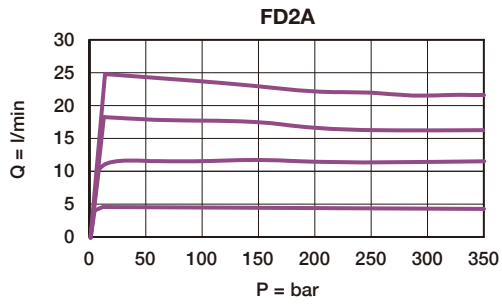
1	Model Name	FD
2	Valve Size	2A, 3B, 6A, 8A
3	Cavity	T13A, T5A, T16A, T18A
4	Control Manner	L standard screw adjustment
		K hand knob with lock knob
5	Adjustable Range	A 2A : 0.4 ~ 23 l/min 3B : 0.4 ~ 45 l/min 6A : 1.0 ~ 95 l/min 8A : 1.0 ~ 200 l/min
6	Material of Seal	N buna-N
		V viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
FD2A	T13A	23	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.14
FD3B	T5A	45	350	60/70		0.28
FD6A	T16A	95	350	200/215		0.55
FD8A	T18A	200	350	465/500		1.23

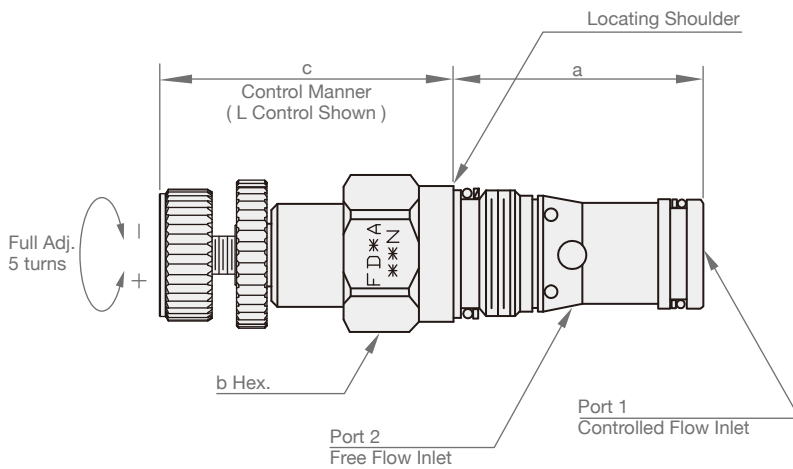
PERFORMANCE CURVES

► Typical Performance



DIMENSION

(UNIT : mm)

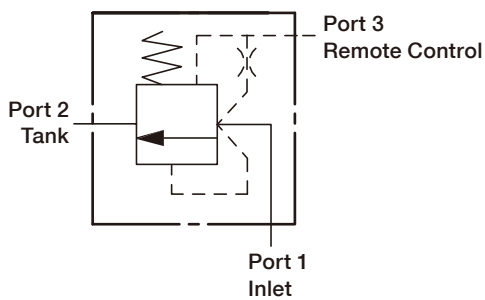


Model	a	b	c	
			L	K
FD2A	34.9	22.2	58	64
FD3B	41.1	28.6	67	73
FD6A	61.9	31.8	73	79
FD8A	79.4	41.3	84	90

LRA



SYMBOLS



ORDER CODES

LR 2 A - T11A - X D N

1 2 3 4 5 6 7

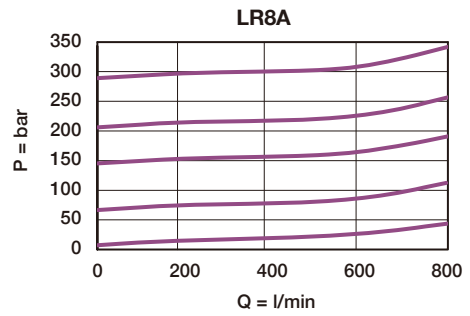
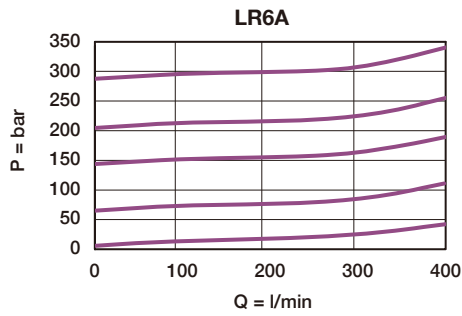
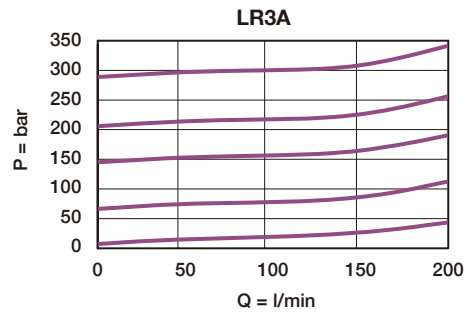
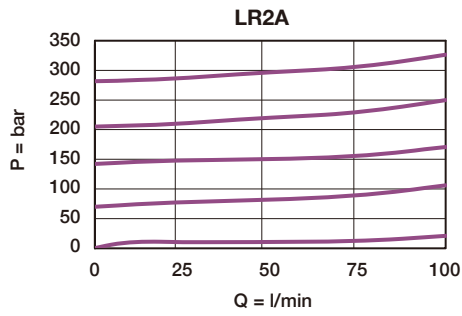
1	▶ Model Name	LR
2	▶ Valve Size	2, 3, 6, 8
3	▶ Type	A internal pilot
4	▶ Cavity	T11A, T2A, T17A, T19A
5	▶ Control Manner	X unadjustable
		L standard screw adjustment
6	▶ Cracking Pressure	D 3.5 bar
		F 7.0 bar
		G 10.0 bar
7	▶ Material of Seal	N buna-N
		V viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
LR2A	T11A	60	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.12
LR3A	T2A	120	350	60/70		0.22
LR6A	T17A	240	350	200/215		0.50
LR8A	T19A	480	350	465/500		1.15

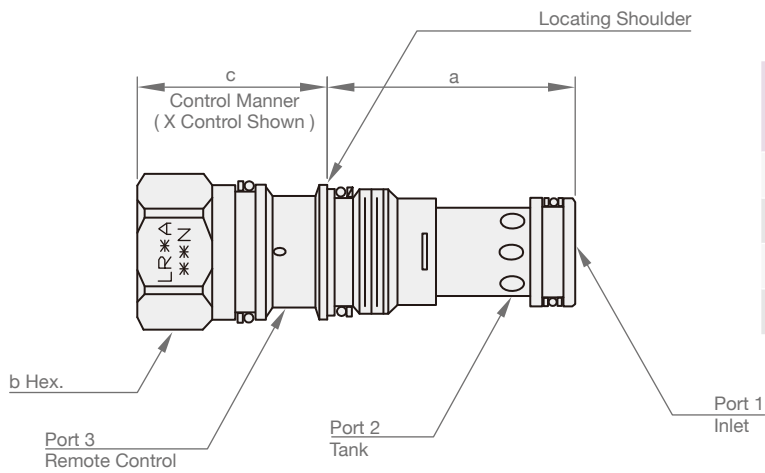
PERFORMANCE CURVES

► Typical Pressure Drop



DIMENSION

(UNIT : mm)

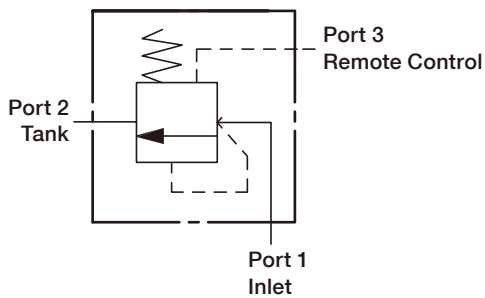


Model	a	b	c	
			X	L
LR2A	34.9	22.2	31	64
LR3A	34.9	28.6	35	72
LR6A	46.0	31.8	46	84
LR8A	63.5	41.3	59	100

LRC



SYMBOLS



ORDER CODES

LR 2 C - T11A - X D N

1 2 3 4 5 6 7

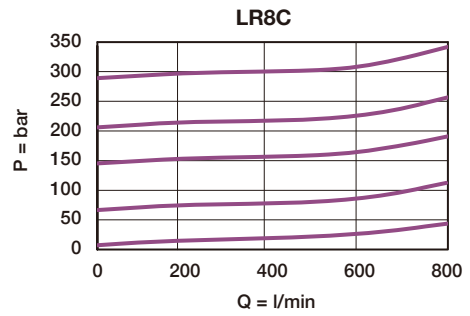
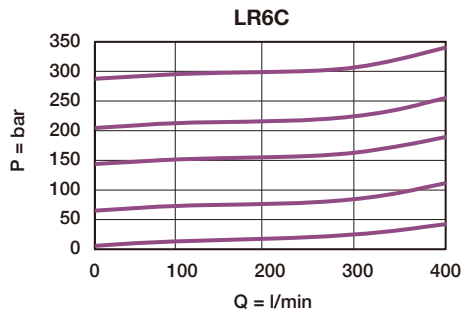
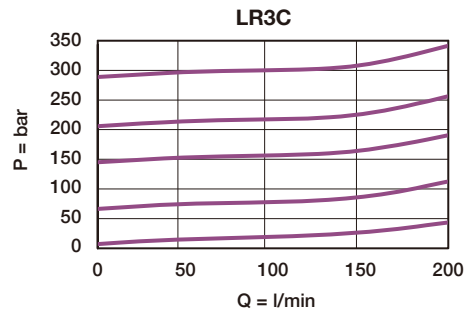
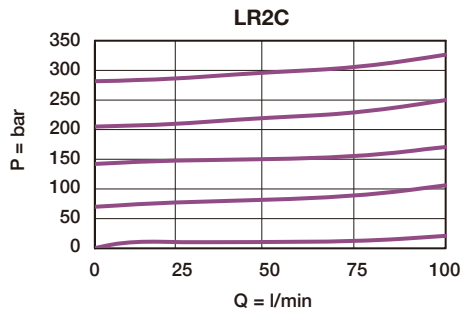
1	▶ Model Name	LR
2	▶ Valve Size	2, 3, 6, 8
3	▶ Type	C external pilot
4	▶ Cavity	T11A, T2A, T17A, T19A
5	▶ Control Manner	X unadjustable L standard screw adjustment
6	▶ Cracking Pressure	D 3.5 bar F 7.0 bar G 10.0 bar
7	▶ Material of Seal	N buna-N V viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
LR2C	T11A	60	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.12
LR3C	T2A	120	350	60/70		0.22
LR6C	T17A	240	350	200/215		0.50
LR8C	T19A	480	350	465/500		1.15

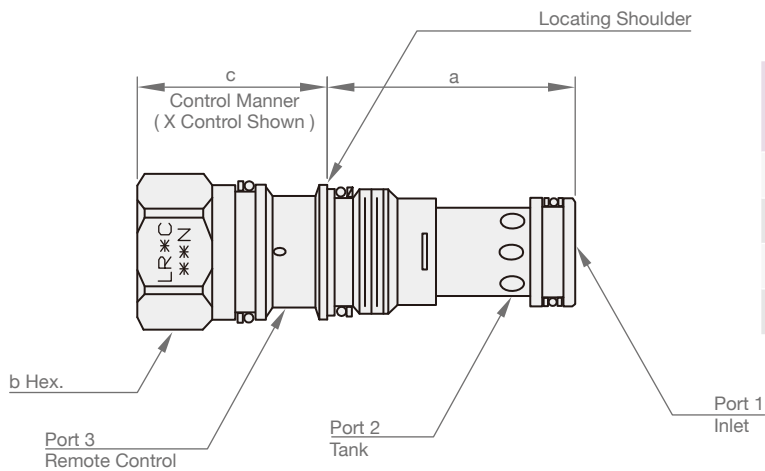
PERFORMANCE CURVES

► Typical Pressure Drop



DIMENSION

(UNIT : mm)

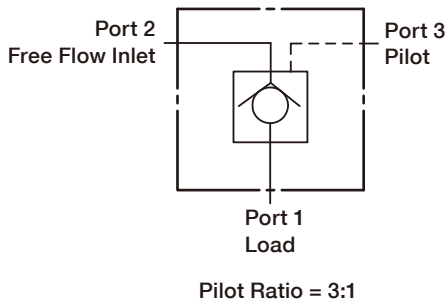


Model	a	b	c	
			X	L
LR2C	34.9	22.2	31	64
LR3C	34.9	28.6	35	72
LR6C	46.0	31.8	46	84
LR8C	63.5	41.3	59	100

CKB



SYMBOLS



ORDER CODES

CK **2B** - **T11A** - **X** **C** **N**

1 2 3 4 5 6

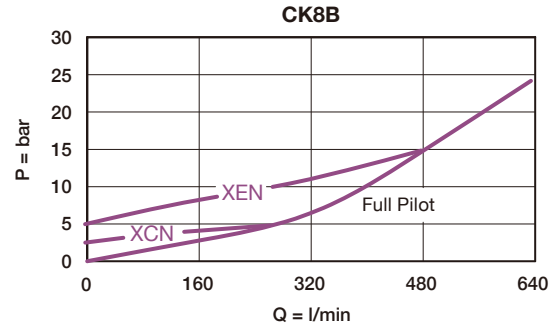
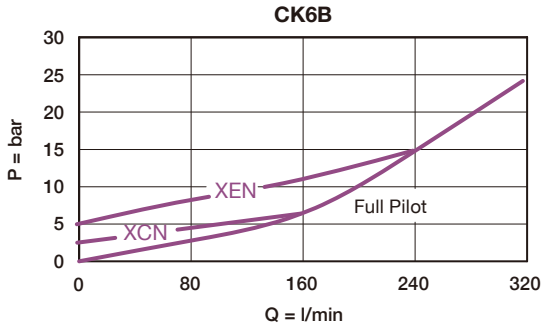
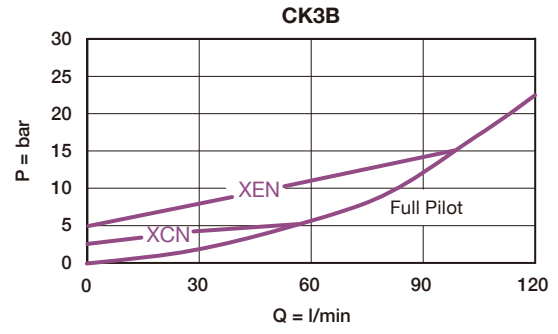
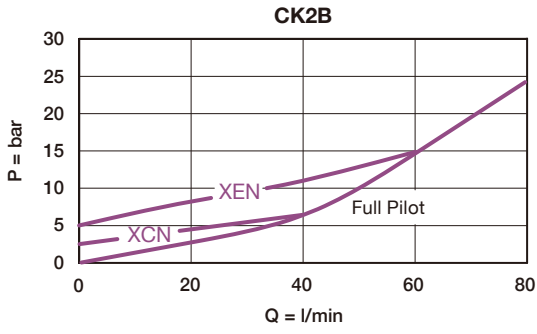
1	Model Name	CK	
2	Valve Size	2B, 3B, 6B, 8B	
3	Cavity	T11A, T2A, T17A, T19A	
4	Control Manner	X	standard pilot
		L	manual load release
5	Cracking Pressure	A	0.3 bar
		C	2.0 bar
		E	5.0 bar
6	Material of Seal	N	buna-N
		V	viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
CK2B	T11A	60	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.13
CK3B	T2A	120	350	60/70		0.24
CK6B	T17A	240	350	200/215		0.53
CK8B	T19A	480	350	465/500		1.16

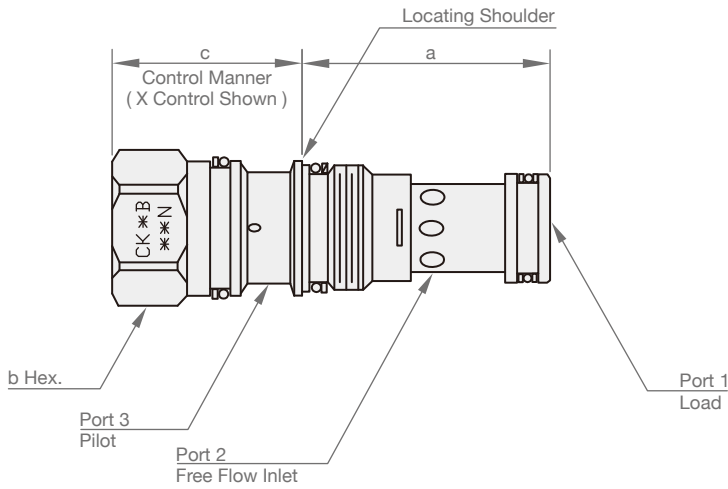
PERFORMANCE CURVES

► Typical Pressure Drop



DIMENSION

(UNIT : mm)

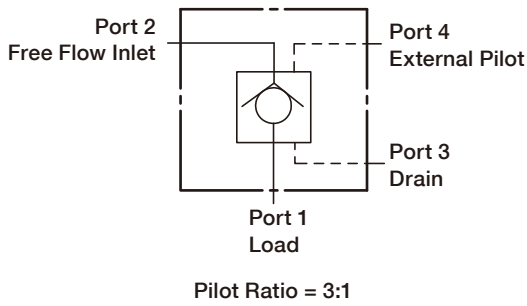


Model	a	b	c	
			X	L
CK2B	34.9	22.2	31	64
CK3B	34.9	28.6	35	72
CK6B	46.0	31.8	46	84
CK8B	63.5	41.3	59	100

CKF



SYMBOLS



ORDER CODES

CK **2F** - **T11A** - **V** **C** **N**

1 2 3 4 5 6

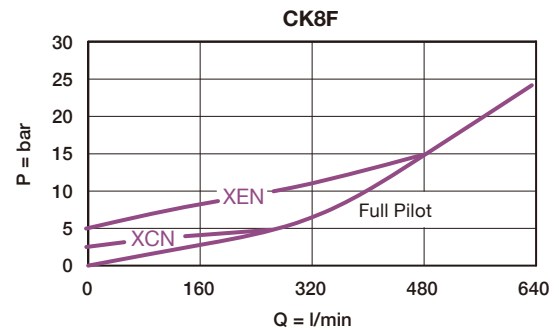
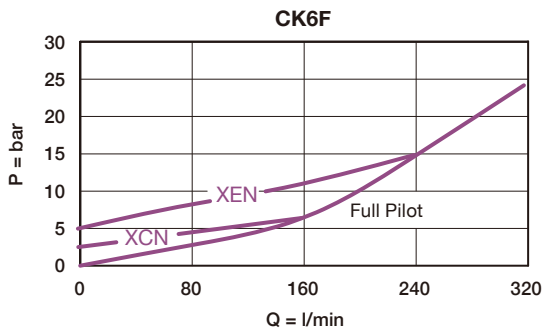
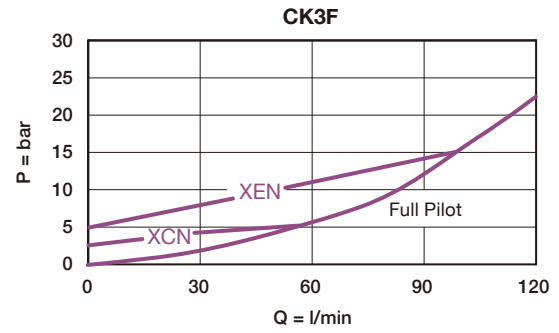
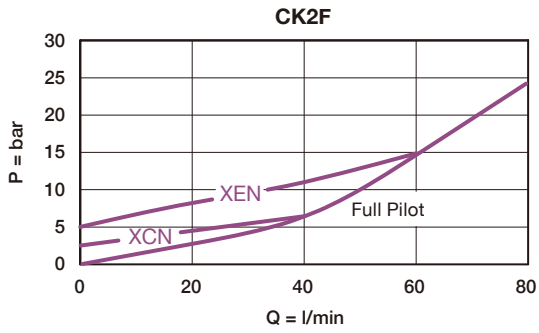
1	▶ Model Name	CK	
2	▶ Valve Size	2F, 3F, 6F, 8F	
3	▶ Cavity	T11A, T2A, T17A, T19A	
4	▶ Control Manner	V	external pilot port
5	▶ Cracking Pressure	A	0.3 bar
		C	2.0 bar
		E	5.0 bar
6	▶ Material of Seal	N	buna-N
		V	viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
CK2F	T11A	60	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.13
CK3F	T2A	120	350	60/70		0.24
CK6F	T17A	240	350	200/215		0.53
CK8F	T19A	480	350	465/500		1.16

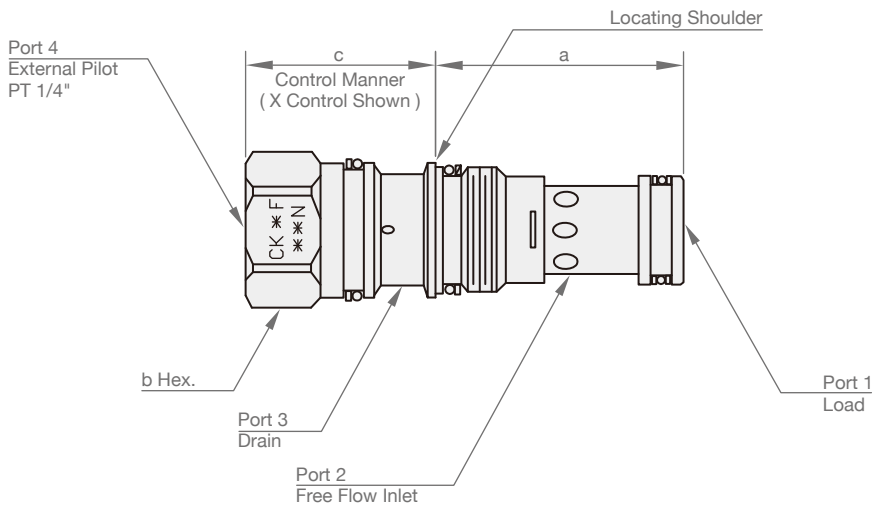
PERFORMANCE CURVES

► Typical Pressure Drop



DIMENSION

(UNIT : mm)

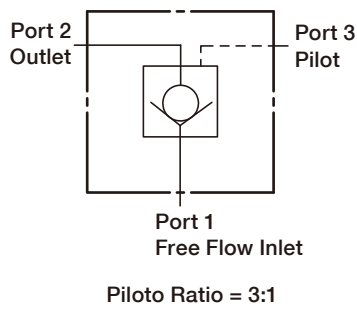


Model	a	b	c	
			X	L
CK2B	34.9	22.2	31	64
CK3B	34.9	28.6	35	72
CK6B	46.0	31.8	46	84
CK8B	63.5	41.3	59	100

CO



SYMBOLS



ORDER CODES

CO **2A** - **T11A** - **X** **C** **N**

1 2 3 4 5 6

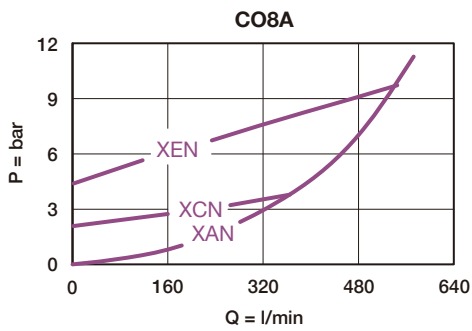
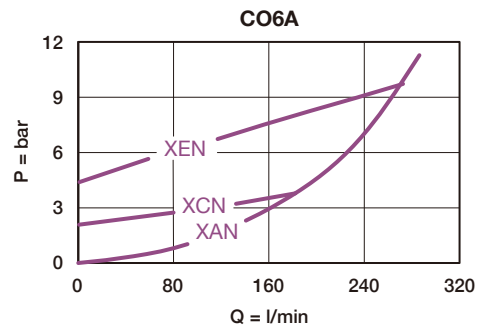
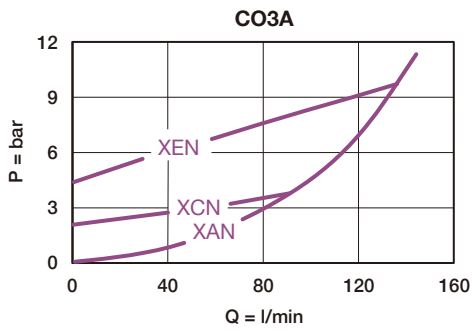
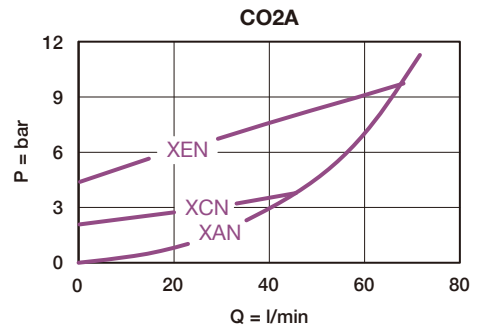
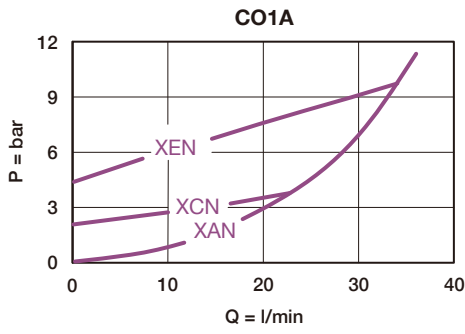
1	Model Name	CO	
2	Valve Size	1A, 2A, 3A, 6A, 8A	
3	Cavity	T163A, T11A, T2A, T17A, T19A	
4	Control Manner	X	standard pilot
5	Cracking Pressure	A	0.3 bar
		C	2.0 bar
		E	5.0 bar
6	Material of Seal	N	buna-N
		V	viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
CO1A	T163A	40	350	30/40	-35 ~ 100°C (-31 ~ 212°F)	0.10
CO2A	T11A	80	350	40/50		0.13
CO3A	T2A	160	350	60/70		0.24
CO6A	T17A	320	350	200/215		0.53
CO8A	T19A	640	350	465/500		1.19

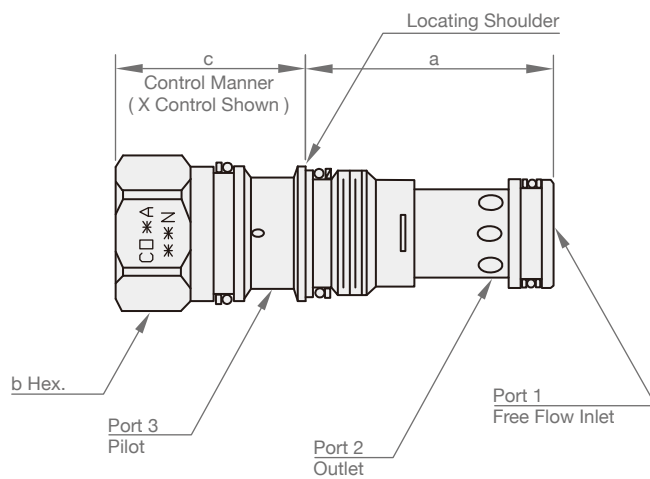
PERFORMANCE CURVES

► Typical Pressure Drop



DIMENSION

(UNIT : mm)

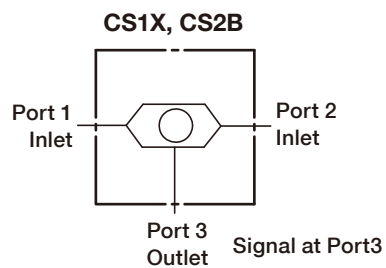
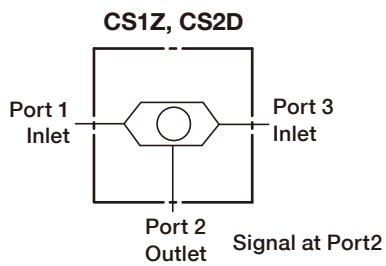


Model	a	b	c
			X
CO1A	31.0	19.1	32
CO2A	34.9	22.2	31
CO3A	34.9	28.6	35
CO6A	46.0	31.8	46
CO8A	63.5	41.3	59

CS



SYMBOLS



ORDER CODES

CS 2 D - T11A - X X N

1 2 3 4 5 6 7

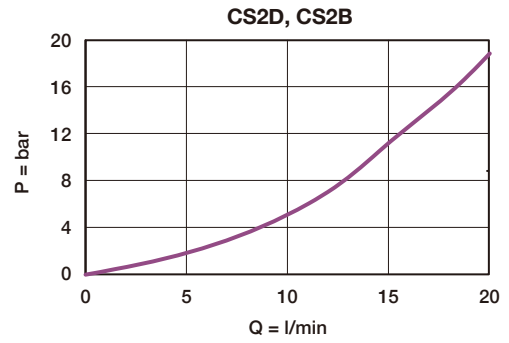
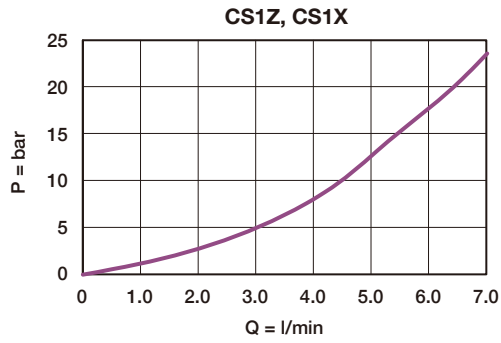
1	Model Name	CS	
2	Valve Size	1, 2	
3	Operation	CS1Z	T163A, signal at port 2
		CS2D	T11A, signal at port 2
		CS1X	T163A, signal at port 3
		CS2B	T11A, signal at port 3
4	Cavity	T163A, T11A	
5	Control Manner	X	unadjustable
6	Adjustment Range	X	unadjustable
7	Material of Seal	N	buna-N
		V	viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
CS1Z	T163A	5	350	30/40	-35 ~ 100°C (-31 ~ 212°F)	0.10
CS2D	T11A	10	350	40/50		0.12
CS1X	T163A	5	350	30/40		0.10
CS2B	T11A	10	350	40/50		0.12

PERFORMANCE CURVES

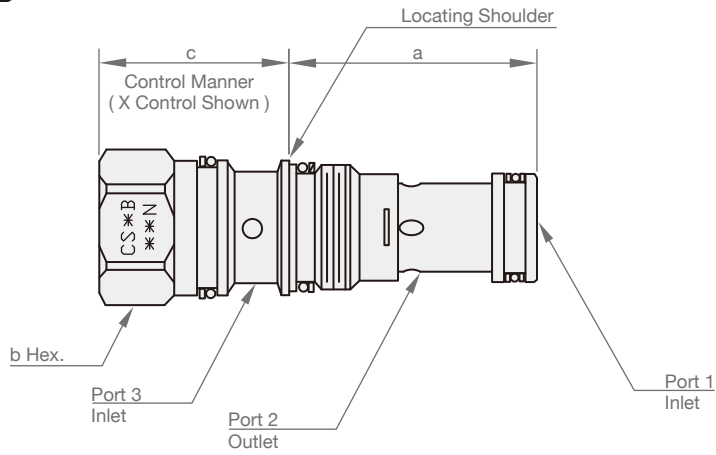
► Typical Pressure Drop



DIMENSION

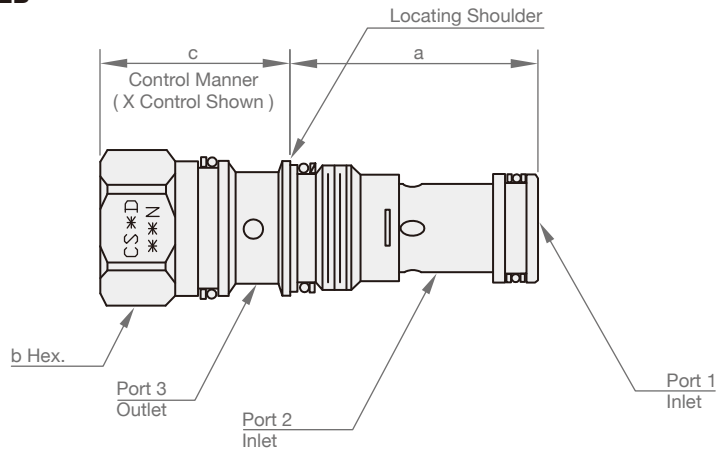
(UNIT : mm)

► CS1Z, CS2D



Model	a	b	c
			X
CS1Z	31	19.1	32
CS2D	34.9	22.2	31
CS1X	31	19.1	32
CS2B	34.9	22.2	31

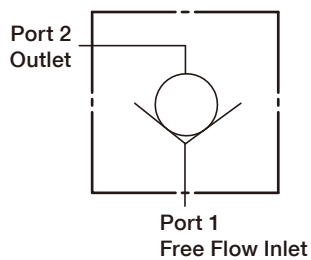
► CS1X, CS2B



CXA



SYMBOLS



ORDER CODES

CX **2** **A** - **T13A** - **X** **C** **N**

1
2
2
3
4
5
6

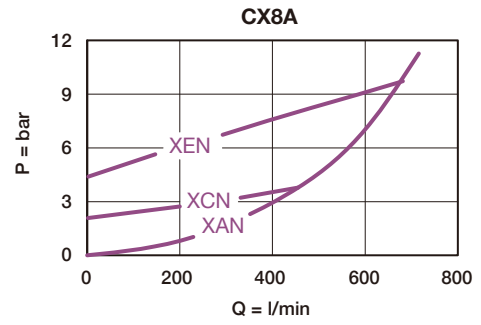
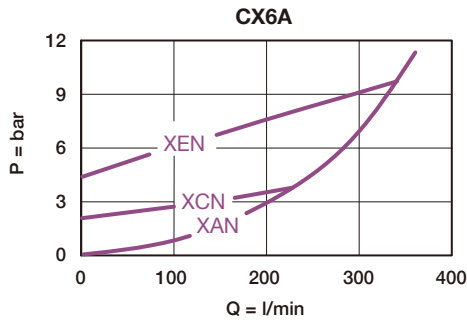
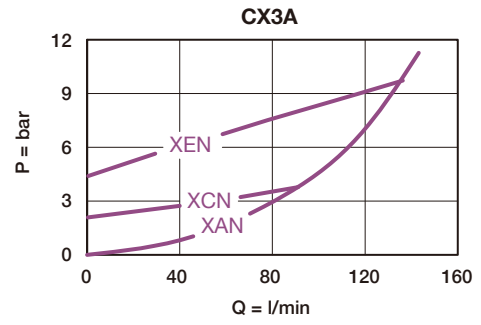
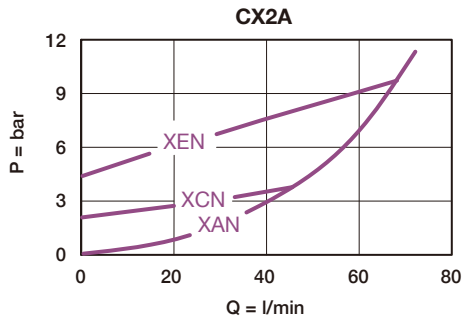
1	▶ Model Name	CX	
2	▶ Valve Size	2, 3, 6, 8	
3	▶ Operation	A	Free Flow Port1 to Port2
4	▶ Cavity	T13A, T5A, T16A, T18A	
5	▶ Control Manner	X	unadjustable
6	▶ Cracking Pressure	A	0.3 bar
		B	1.0 bar
		C	2.0 bar
		D	3.5 bar
		E	5.0 bar
7	▶ Material of Seal	N	buna-N
		V	viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
CX2A	T13A	80	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.12
CX3A	T5A	160	350	60/70		0.18
CX6A	T16A	320	350	200/215		0.42
CX8A	T18A	640	350	465/500		0.93

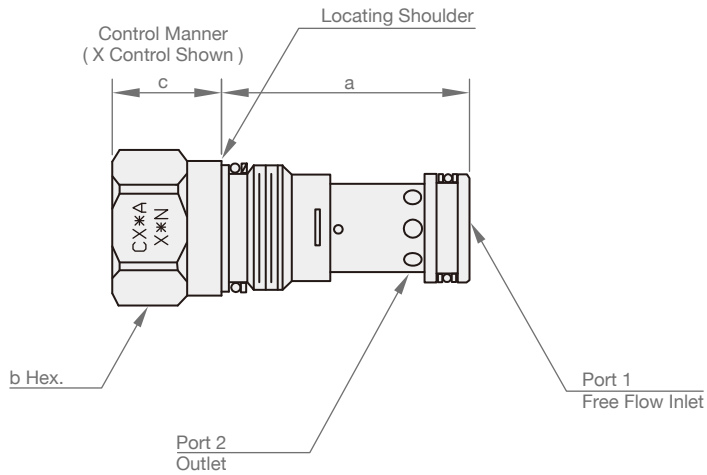
PERFORMANCE CURVES

► Typical Pressure Drop



DIMENSION

(UNIT : mm)

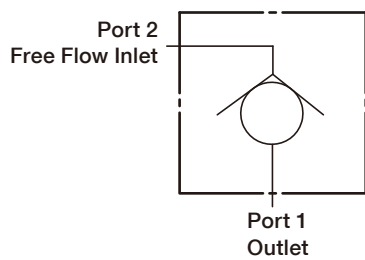


Model	a	b	c
			X
CX2A	34.9	22.2	19
CX3A	41.1	28.6	18
CX6A	61.9	31.8	25
CX8A	79.4	41.3	31

CXD



SYMBOLS



ORDER CODES

CX **2** **D** - **T13A** - **X** **C** **N**

1 2 2 3 4 5 6

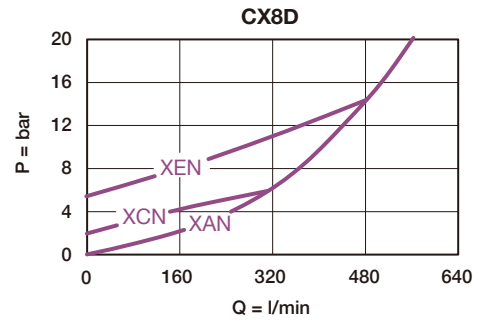
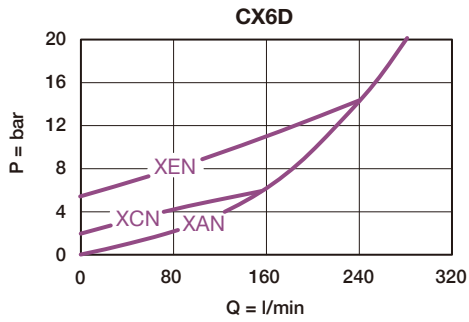
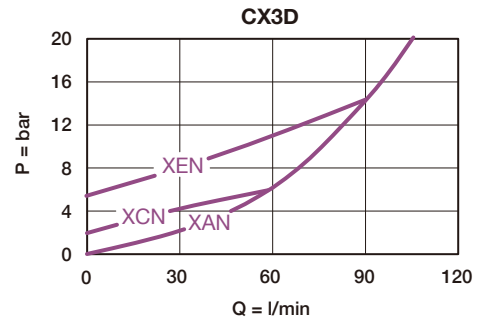
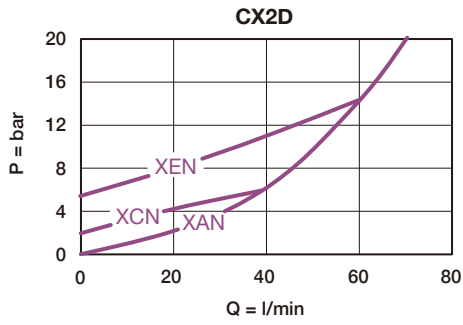
1	▶ Model Name	CX
2	▶ Valve Size	2, 3, 6, 8
3	▶ Operation	D Free Flow Por2 to Port1
4	▶ Cavity	T13A, T5A, T16A, T18A
5	▶ Control Manner	X unadjustable
6	▶ Cracking Pressure	A 0.3 bar
		B 1.0 bar
		C 2.0 bar
		D 3.5 bar
		E 5.0 bar
7	▶ Material of Seal	N buna-N
		V viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
CX2D	T13A	60	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.12
CX3D	T5A	120	350	60/70		0.18
CX6D	T16A	240	350	200/215		0.42
CX8D	T18A	480	350	465/500		0.93

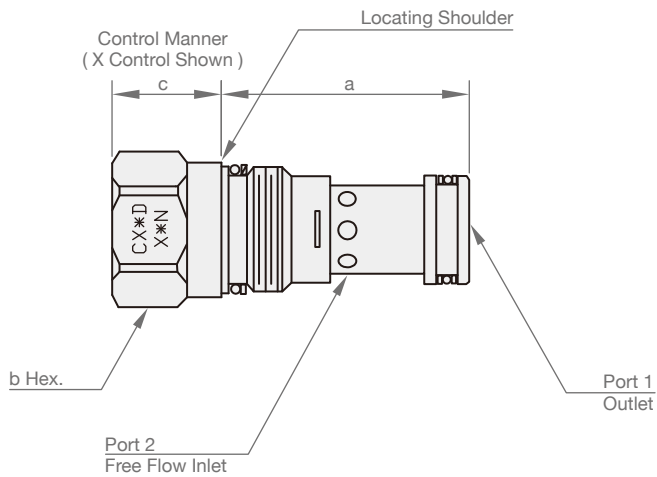
PERFORMANCE CURVES

► Typical Pressure Drop



DIMENSION

(UNIT : mm)

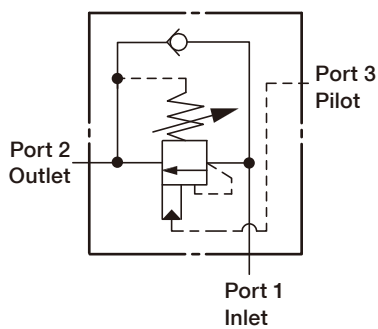


Model	a	b	c
			X
CX2D	34.9	22.2	19
CX3D	41.1	28.6	18
CX6D	61.9	31.8	25
CX8D	79.4	41.3	31

CBA



SYMBOLS



ORDER CODES

CB 2 A - T11A - L I N

1 2 3 4 5 6 7

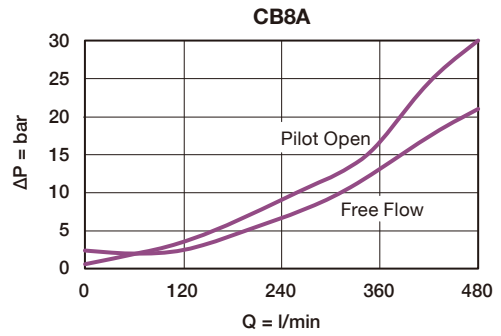
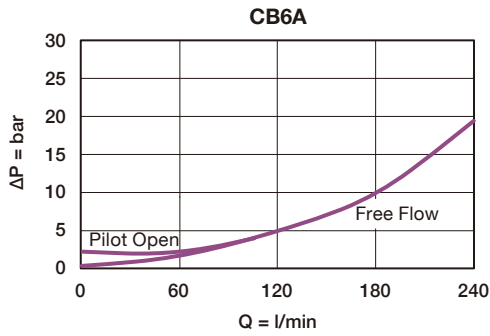
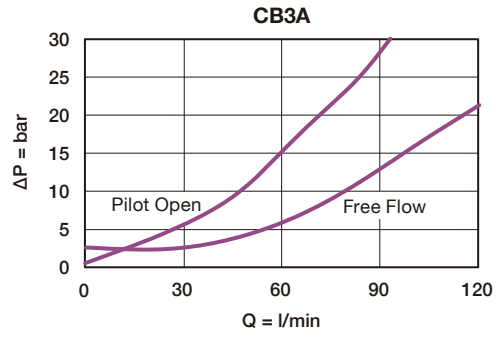
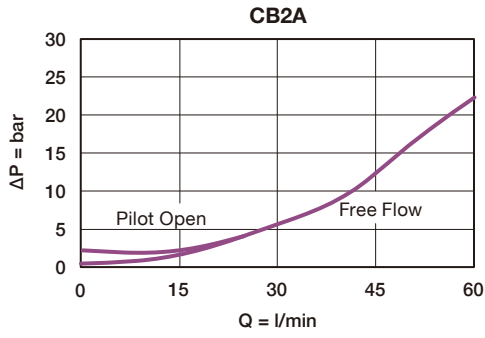
1	Model Name	CB
2	Valve Size	2, 3, 6, 8
3	Pilot Ratio	A 3:1
4	Cavity	T11A, T2A, T17A, T19A
5	Control Manner	L standard screw adjustment
6	Adjustable Range	H 70 ~ 280 bar, w/1.7 bar check, 210 bar initially setting
		I 25 ~ 105 bar, w/1.7 bar check, 70 bar initially setting
		A 70 ~ 280 bar, w/0.3 bar check, 210 bar initially setting
		B 25 ~ 105 bar, w/0.3 bar check, 70 bar initially setting
7	Material of Seal	N buna-N
		V viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
CB2A	T11A	60	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.17
CB3A	T2A	120	350	60/70		0.30
CB6A	T17A	240	350	200/215		0.64
CB8A	T19A	480	350	465/500		1.47

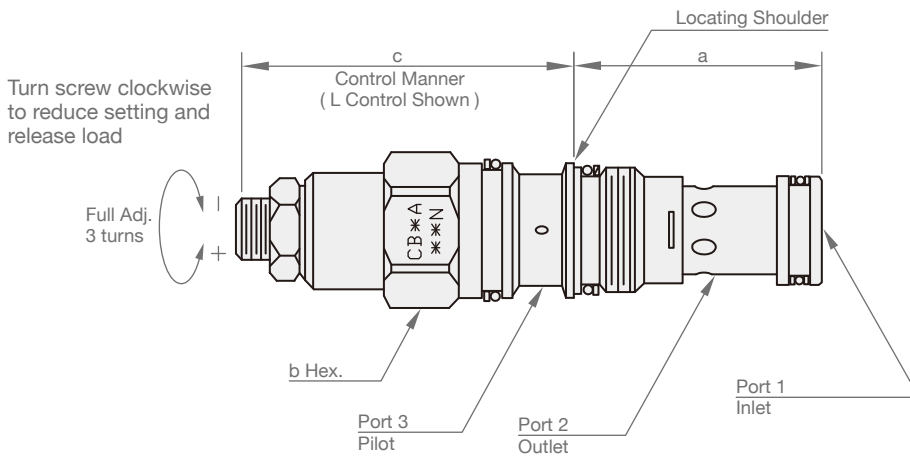
PERFORMANCE CURVES

Free Flow and Piloted Open Pressure Drop



DIMENSION

(UNIT : mm)

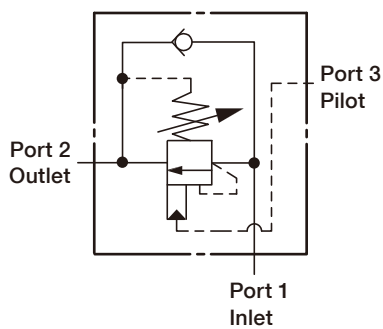


Model	a	b	c
			L
CB2A	34.9	22.2	50
CB3A	34.9	28.6	61
CB6A	46.0	31.8	70
CB8A	63.5	41.3	90

CBG



SYMBOLS



ORDER CODES

CB 2 G - T11A - L K N

1 2 3 4 5 6 7

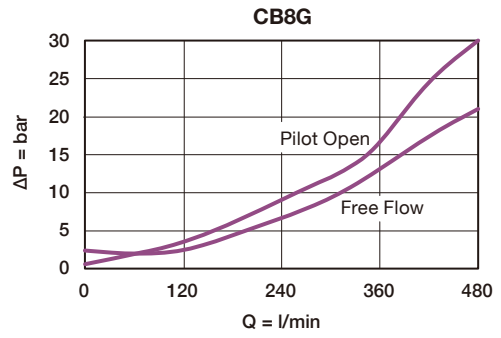
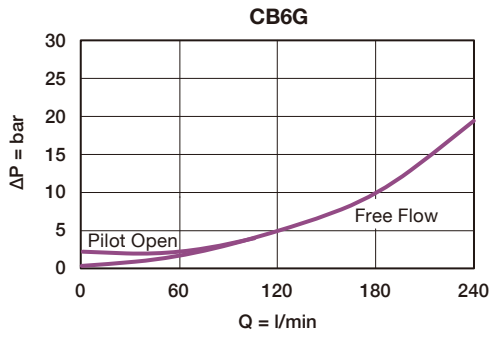
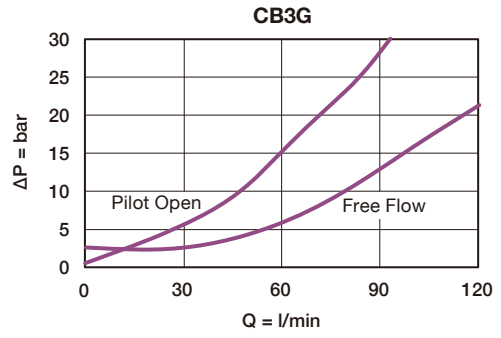
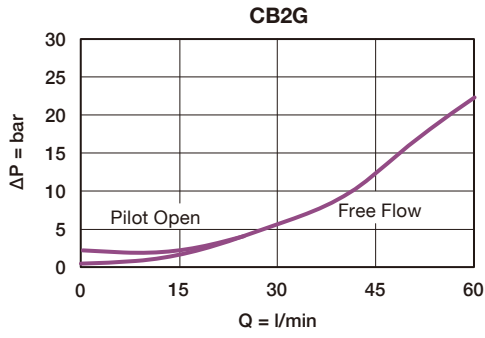
1	Model Name	CB
2	Valve Size	2, 3, 6, 8
3	Pilot Ratio	G 4.5:1
4	Cavity	T11A, T2A, T17A, T19A
5	Control Manner	L standard screw adjustment
6	Adjustable Range	J 140 ~ 350 bar, w/1.7 bar check, 210 bar initially setting
		K 70 ~ 175 bar, w/1.7 bar check, 140 bar initially setting
		C 140 ~ 350 bar, w/0.3 bar check, 210 bar initially setting
		D 70 ~ 175 bar, w/0.3 bar check, 140 bar initially setting
7	Material of Seal	N buna-N
		V viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
CB2G	T11A	60	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.17
CB3G	T2A	120	350	60/70		0.30
CB6G	T17A	240	350	200/215		0.64
CB8G	T19A	480	350	465/500		1.47

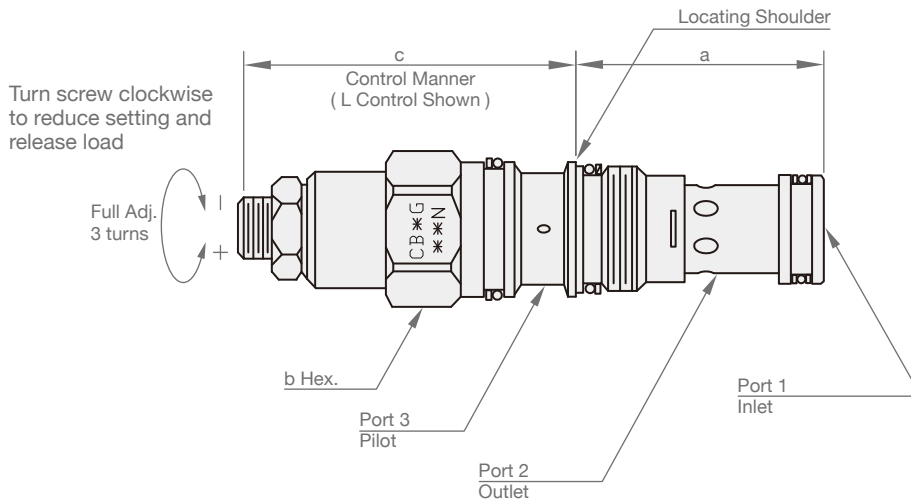
PERFORMANCE CURVES

Free Flow and Piloted Open Pressure Drop



DIMENSION

(UNIT : mm)

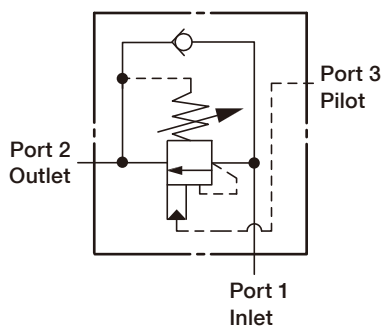


Model	a	b	c
			L
CB2G	34.9	22.2	50
CB3G	34.9	28.6	61
CB6G	46.0	31.8	70
CB8G	63.5	41.3	90

CBH



SYMBOLS



ORDER CODES

CB 2 H - T11A - L K N

1 2 3 4 5 6 7

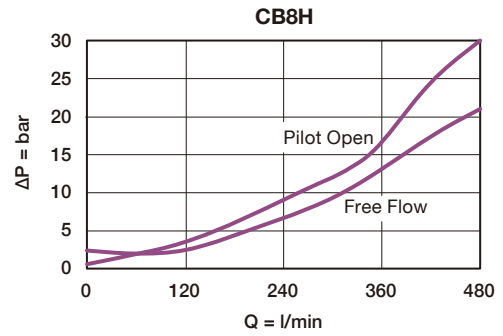
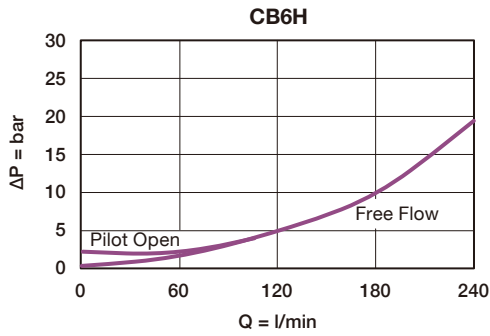
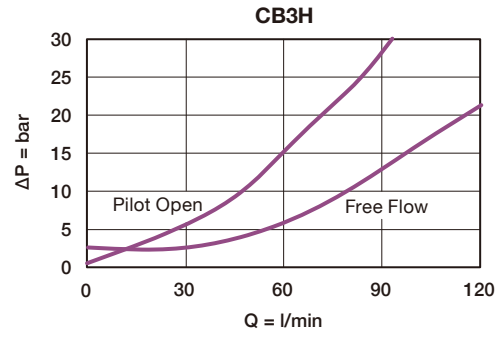
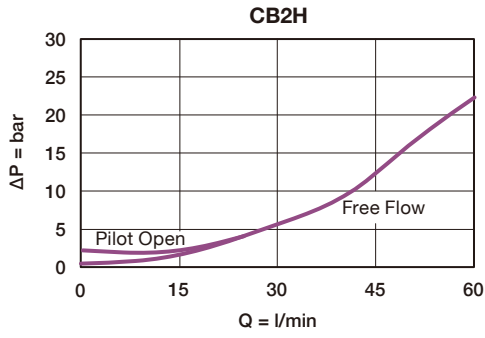
1	▶ Model Name	CB	
2	▶ Valve Size	2, 3, 6, 8	
3	▶ Pilot Ratio	H	10:1
4	▶ Cavity	T11A, T2A, T17A, T19A	
5	▶ Control Manner	L	standard screw adjustment
6	▶ Adjustable Range	J	140 ~ 350 bar, w/1.7 bar check, 210 bar initially setting
		K	70 ~ 175 bar, w/1.7 bar check, 140 bar initially setting
		C	140 ~ 350 bar, w/0.3 bar check, 210 bar initially setting
7	▶ Material of Seal	D	70 ~ 175 bar, w/0.3 bar check, 140 bar initially setting
		N	buna-N
		V	viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
CB2H	T11A	60	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.17
CB3H	T2A	120	350	60/70		0.30
CB6H	T17A	240	350	200/215		0.64
CB8H	T19A	480	350	465/500		1.47

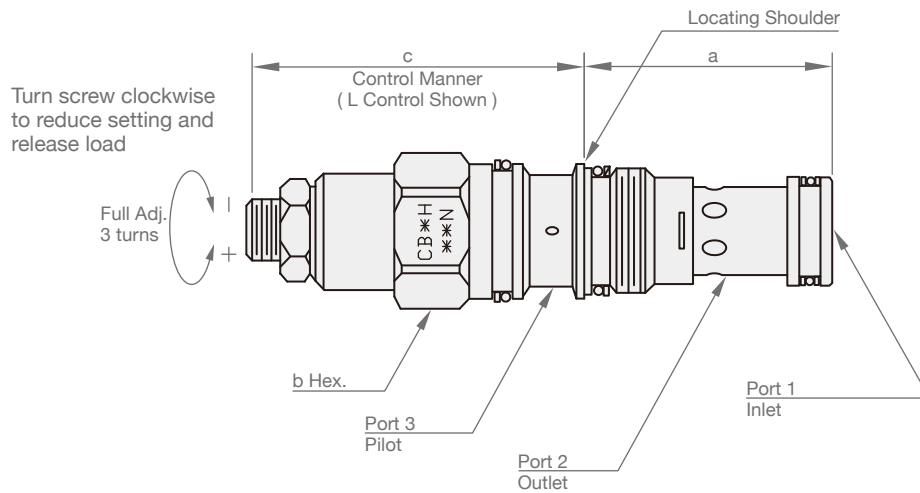
PERFORMANCE CURVES

Free Flow and Piloted Open Pressure Drop



DIMENSION

(UNIT : mm)

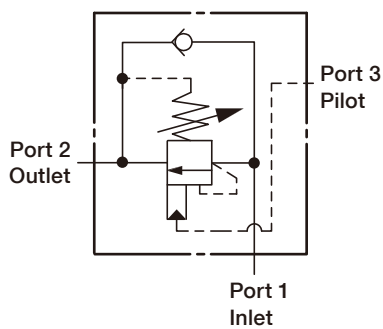


Model	a	b	c
			L
CB2H	34.9	22.2	50
CB3H	34.9	28.6	61
CB6H	46.0	31.8	70
CB8H	63.5	41.3	90

CBC



SYMBOLS



ORDER CODES

CB 2 C - T11A - L I N

1 2 3 4 5 6 7

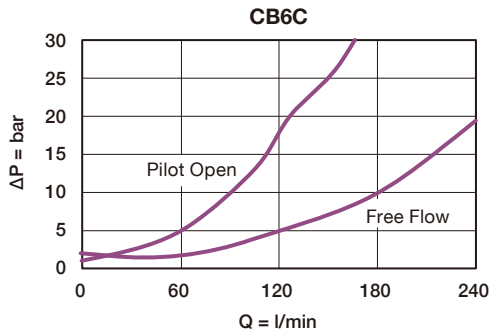
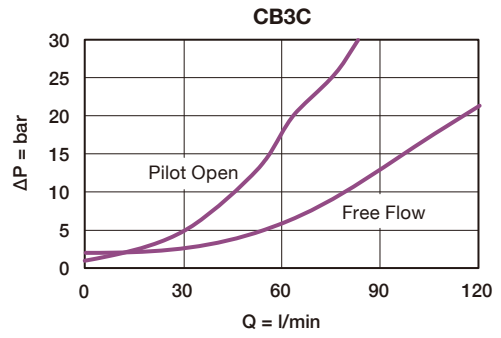
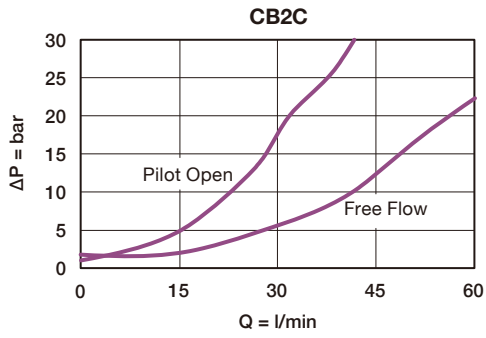
1	Model Name	CB	
2	Valve Size	2, 3, 6	
3	Pilot Ratio	C	3:1
4	Cavity	T11A, T2A, T17A	
5	Control Manner	L	standard screw adjustment
6	Adjustable Range	H	70 ~ 280 bar, w/1.7 bar check, 210 bar initially setting
		I	25 ~ 105 bar, w/1.7 bar check, 70 bar initially setting
		A	70 ~ 280 bar, w/0.3 bar check, 210 bar initially setting
		B	25 ~ 105 bar, w/0.3 bar check, 70 bar initially setting
7	Material of Seal	N	buna-N
		V	viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
CB2C	T11A	40	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.17
CB3C	T2A	80	350	60/70		0.30
CB6C	T17A	160	350	200/215		0.64

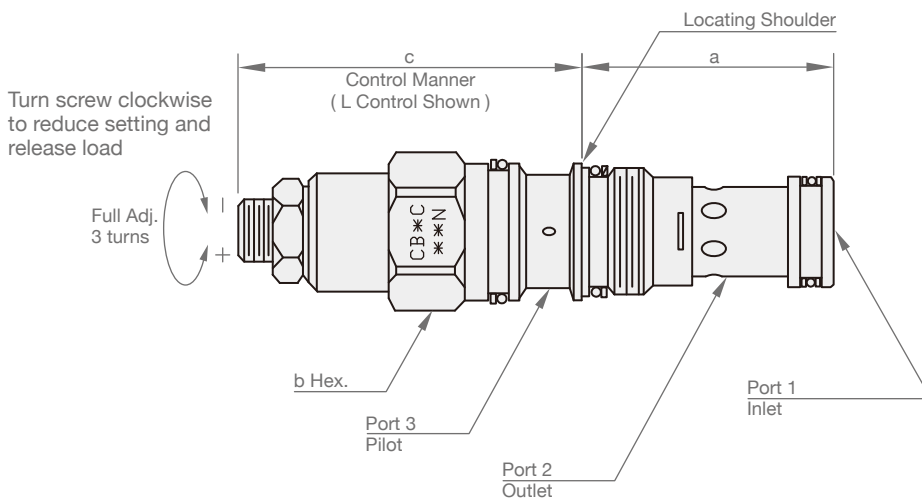
PERFORMANCE CURVES

Free Flow and Piloted Open Pressure Drop



DIMENSION

(UNIT : mm)

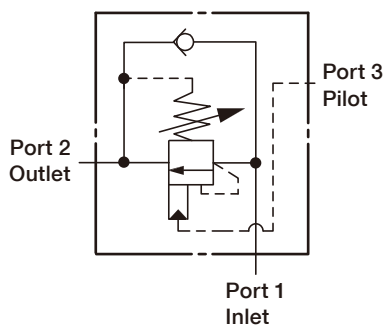


Model	a	b	c
			L
CB2C	34.9	22.2	50
CB3C	34.9	28.6	61
CB6C	46.0	31.8	70

CBD



SYMBOLS



ORDER CODES

CB 2 D - T11A - L J N

1 2 3 4 5 6 7

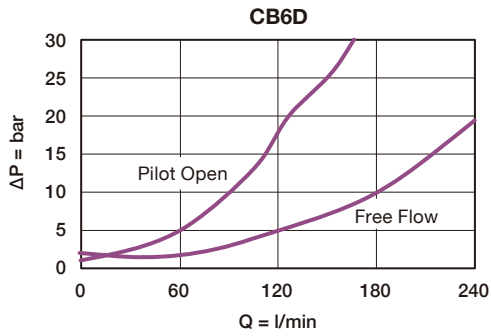
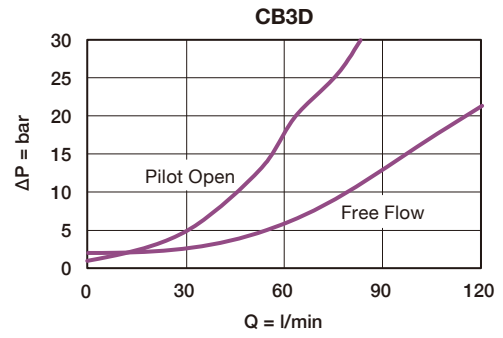
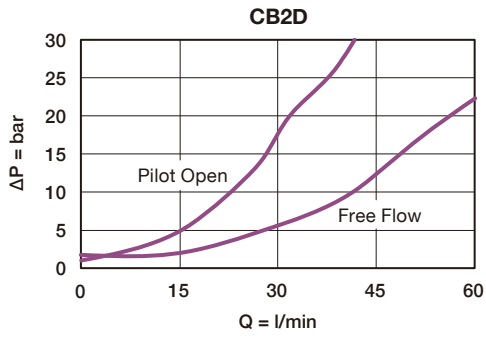
1	Model Name	CB	
2	Valve Size	2, 3, 6	
3	Pilot Ratio	D	4.5:1
4	Cavity	T11A, T2A, T17A	
5	Control Manner	L	standard screw adjustment
6	Adjustable Range	J	140 ~ 350 bar, w/1.7 bar check, 210 bar initially setting
		K	70 ~ 175 bar, w/1.7 bar check, 140 bar initially setting
		C	140 ~ 350 bar, w/0.3 bar check, 210 bar initially setting
		D	70 ~ 175 bar, w/0.3 bar check, 140 bar initially setting
7	Material of Seal	N	buna-N
		V	viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
CB2D	T11A	40	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.17
CB3D	T2A	80	350	60/70		0.30
CB6D	T17A	160	350	200/215		0.64

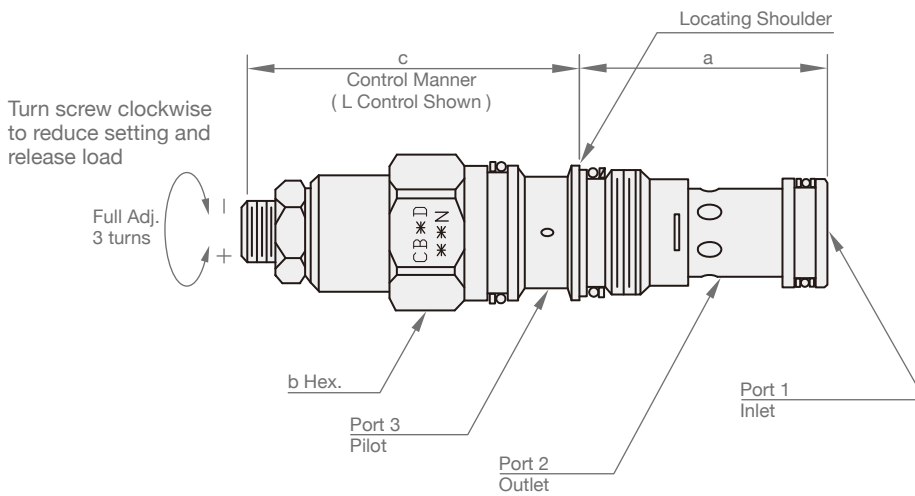
PERFORMANCE CURVES

Free Flow and Piloted Open Pressure Drop



DIMENSION

(UNIT : mm)

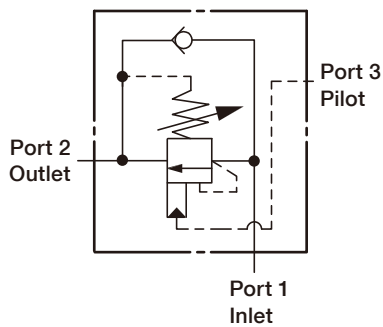


Model	a	b	c
			L
CB2D	34.9	22.2	50
CB3D	34.9	28.6	61
CB6D	46.0	31.8	70

CBE



SYMBOLS



ORDER CODES

CB 2 E - T11A - L I N

1 2 3 4 5 6 7

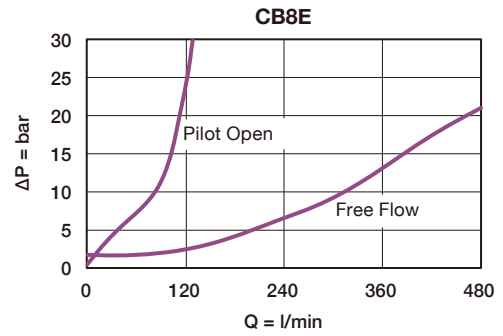
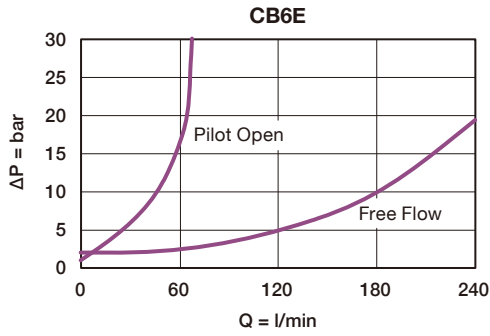
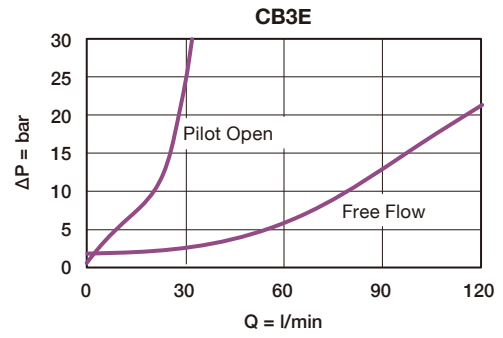
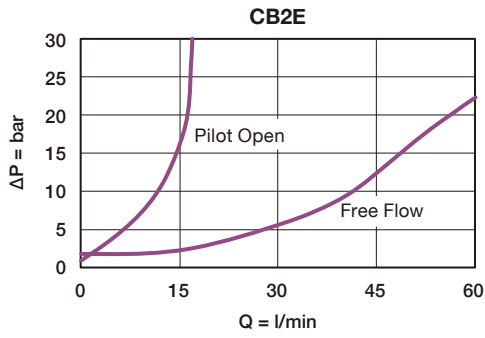
1	Model Name	CB	
2	Valve Size	2, 3, 6, 8	
3	Pilot Ratio	E	3:1
4	Cavity	T11A, T2A, T17A, T19A	
5	Control Manner	L	standard screw adjustment
6	Adjustable Range	H	70 ~ 280 bar, w/1.7 bar check, 210 bar initially setting
		I	25 ~ 105 bar, w/1.7 bar check, 70 bar initially setting
		A	70 ~ 280 bar, w/0.3 bar check, 210 bar initially setting
7	Material of Seal	B	25 ~ 105 bar, w/0.3 bar check, 70 bar initially setting
		N	buna-N
		V	viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
CB2E	T11A	15	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.17
CB3E	T2A	30	350	60/70		0.30
CB6E	T17A	60	350	200/215		0.64
CB8E	T19A	80	350	465/500		1.47

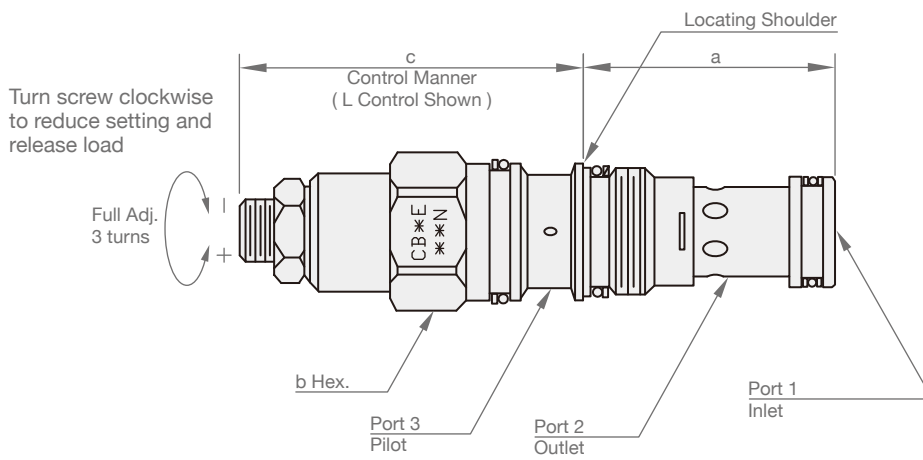
PERFORMANCE CURVES

Free Flow and Piloted Open Pressure Drop



DIMENSION

(UNIT : mm)

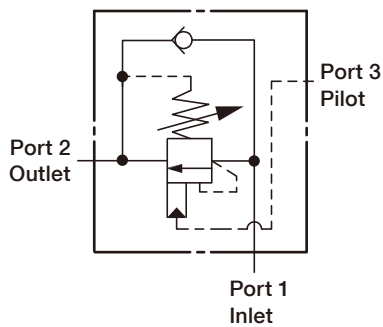


Model	a	b	c
			L
CB2E	34.9	22.2	50
CB3E	34.9	28.6	61
CB6E	46.0	31.8	70
CB8E	63.5	41.3	90

CBF



SYMBOLS



ORDER CODES

CB 2 F - T11A - L K N

1 2 3 4 5 6 7

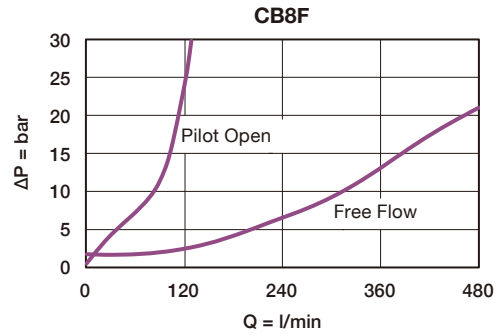
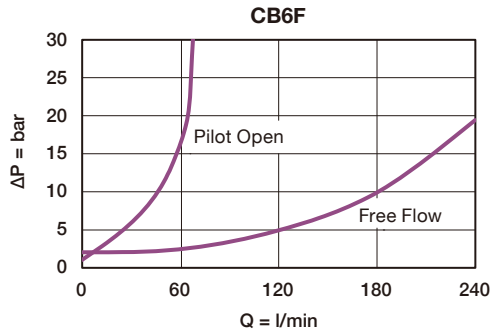
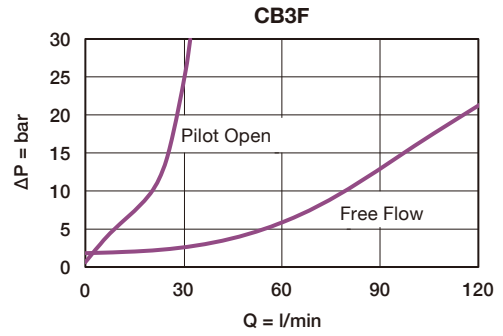
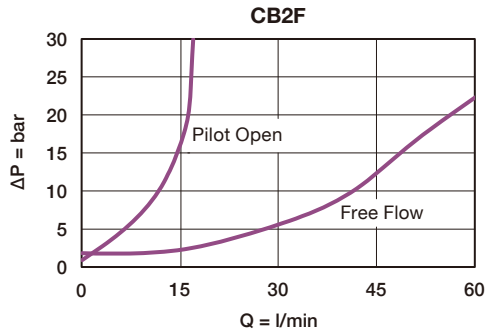
1	Model Name	CB	
2	Valve Size	2, 3, 6, 8	
3	Pilot Ratio	F	4.5:1
4	Cavity	T11A, T2A, T17A, T19A	
5	Control Manner	L	standard screw adjustment
6	Adjustable Range	J	140 ~ 350 bar, w/1.7 bar check, 210 bar initially setting
		K	70 ~ 175 bar, w/1.7 bar check, 140 bar initially setting
		C	140 ~ 350 bar, w/0.3 bar check, 210 bar initially setting
7	Material of Seal	D	70 ~ 175 bar, w/0.3 bar check, 140 bar initially setting
		N	buna-N
		V	viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
CB2F	T11A	15	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.17
CB3F	T2A	30	350	60/70		0.30
CB6F	T17A	60	350	200/215		0.64
CB8F	T19A	80	350	465/500		1.47

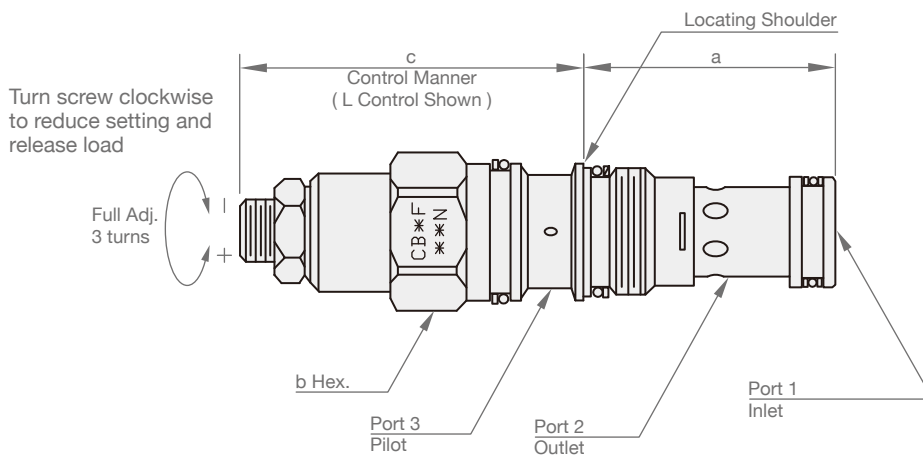
PERFORMANCE CURVES

Free Flow and Piloted Open Pressure Drop



DIMENSION

(UNIT : mm)



Model	a	b	c
			L
CB2F	34.9	22.2	50
CB3F	34.9	28.6	61
CB6F	46.0	31.8	70
CB8F	63.5	41.3	90

LO



ORDER CODES

LO 2 C - T11A - X D N

1 2 3 4 5 6 7

1	▶ Model Name	LO
2	▶ Valve Size	2, 3, 6, 8
3	▶ Operation	A, B, C, D, O
4	▶ Cavity	T11A, T2A, T17A, T19A
5	▶ Control Manner	X unadjustable L standard screw adjustment

6	▶ Cracking Pressure (bar)	D	Type A, B, C, D, Port1 : 3.5 Type O, Port 3 : 2
7	▶ Material of Seal	N	buna-N
		V	viton

SYMBOLS

LO*A	LO*B	LO*C	LO*D	LO*O
Vent-to-Open	Vent-to-Open	Pilot-to-Close	Vent-to-Open	Pilot-to-Close
Spring biased closed, pilot source from port 1	Spring biased closed, pilot source from port 2	Spring biased closed, pilot source from port 3	Spring biased closed, higher of port 1 or 2 pilot source	Spring biased open, pilot source from port 3

MODEL SPEC.

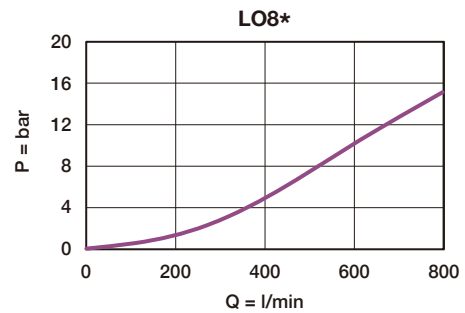
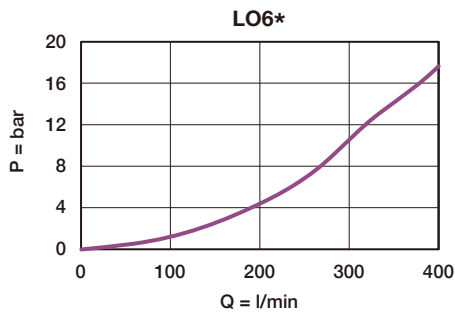
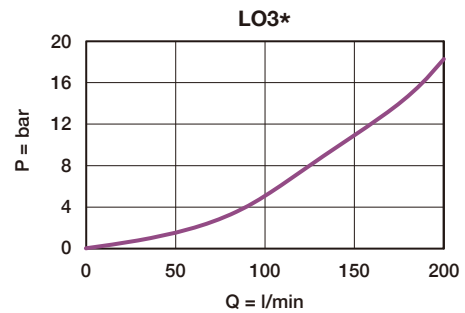
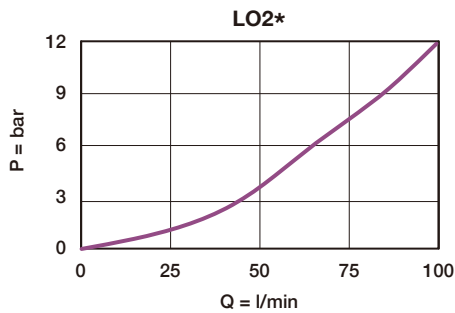
Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Control Orifice Diameter (mm)	Operational Temperature	Weight (kg)
LO2*	T11A	80	350	40/50	Ø0.5	-35 ~ 100°C (-31 ~ 212°F)	0.12
LO3*	T2A	160	350	60/70	Ø0.5		0.22
LO6*	T17A	320	350	200/215	Ø0.8		0.50
LO8*	T19A	640	350	465/500	Ø0.9		1.15

Area ratio, A3 to A1 : 1.8:1 (with sealed piston)

Area ratio, A3 to A2 : 2.25:1 (with sealed piston)

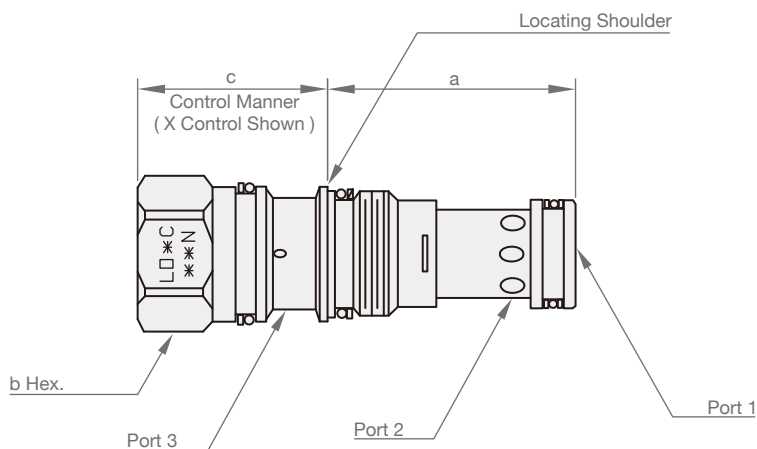
PERFORMANCE CURVES

► Typical Pressure Drop



DIMENSION

(UNIT : mm)

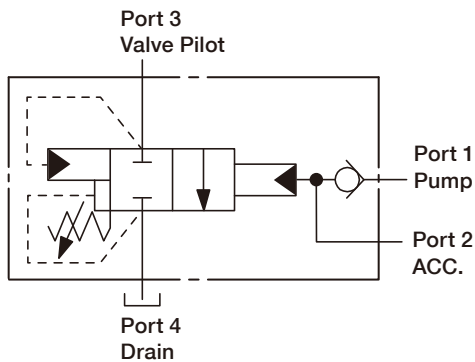


Model	a	b	c	
			X	L
LO2*	34.9	22.2	31	64
LO3*	34.9	28.6	35	72
LO6*	46.0	31.8	46	84
LO8*	63.5	41.3	59	100

QC



SYMBOLS



ORDER CODES

QC **2** **C** - **T21A** - **L** **A** **N**

1 2 3 4 5 6 7

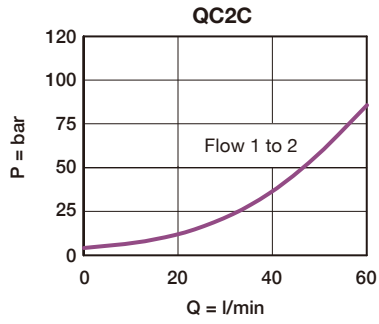
1	▶ Model Name	QC
2	▶ Valve Size	2
3	▶ Operation	C 30% ratio between unload setting and reset
4	▶ Cavity	T21A
5	▶ Control Manner	L standard screw adjustment
		K hand knob with lock knob
6	▶ Adjustable Range	A 70 ~ 210 bar, 70 bar standard setting
		B 35 ~ 105 bar, 35 bar standard setting
		C 140 ~ 350 bar, 140 bar standard setting
		D 18 ~ 55 bar, 18 bar standard setting
7	▶ Material of Seal	N buna-N
		V viton

MODEL SPEC.

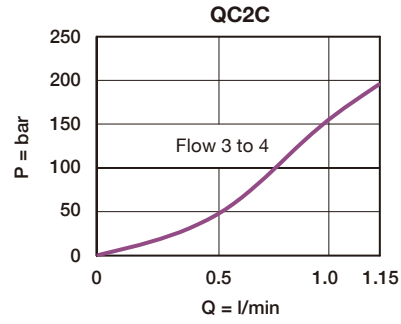
Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
QC2C	T21A	60	350	41/47	-35 ~ 100°C (-31 ~ 212°F)	0.19

PERFORMANCE CURVES

► Pressure Differential vs. Flow

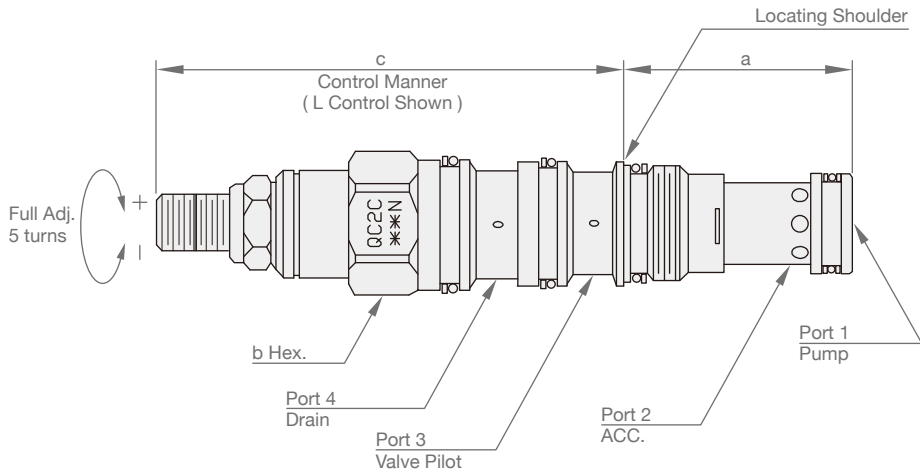


► Pressure Differential vs. Flow (Full Piloted Open)



DIMENSION

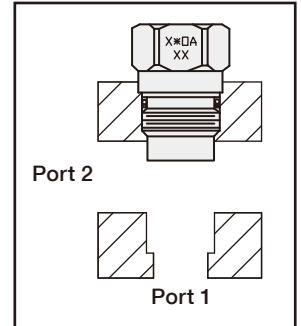
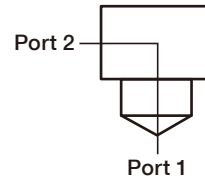
(UNIT : mm)



Model	a	b	c	
			L	K
QC2C	34.9	22.2	78.5	84.8

OA2

SYMBOLS

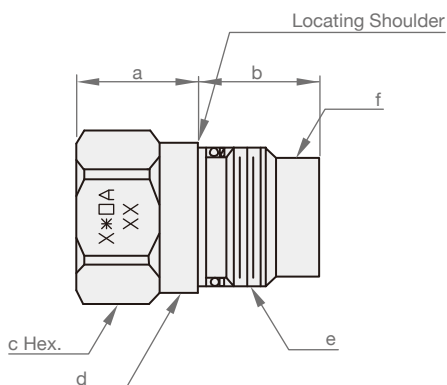


MODEL SPEC.

Model	Cavity	Thread	Material of Seal	Weight (kg)
X10A2-T162A-XX	T162A	M16 P15	buna-N	0.05
X20A2-T10A-XX	T10A	M20 P1.5		0.09
X20A2-T13A-XX	T13A	M20 P1.5		0.09
X30A2-T3A-XX	T3A	1"-14UNS-2B		0.13
X30A2-T5A-XX	T5A	1"-14UNS-2B		0.13
X60A2-T16A-XX	T16A	M36 P2		0.28
X80A2-T18A-XX	T18A	M48 P2		0.57

DIMENSION

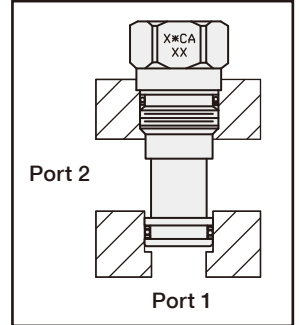
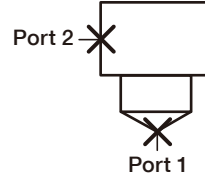
(UNIT : mm)



Model	a	b	c	d	e	f
X20A2	20.3	16.3	22.2	Ø21.7	M16 P1.5-6H	Ø17.4
X30A2	17.8	22.2	28.6	Ø27.3	1"-14UNS-2B	Ø22.6
X60A2	26	25	31.7	Ø39.7	M36 P2.0-6H	Ø33
X80A2	30.4	26.8	41.2	Ø52.5	M48 P2.0-6H	Ø43

CA2

SYMBOLS

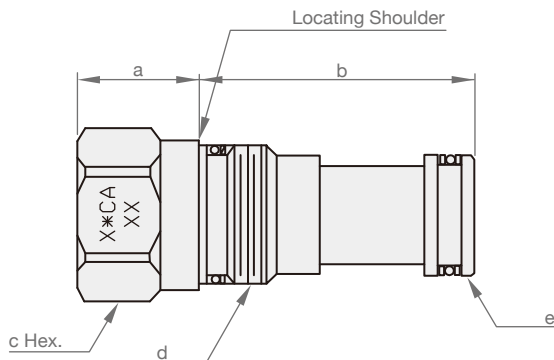


MODEL SPEC.

Model	Cavity	Thread	Material of Seal	Weight (kg)
X1CA2-T162A-XX	T162A	M16 P15	buna-N	0.07
X2CA2-T10A-XX	T10A	M20 P1.5		0.12
X2CA2-T13A-XX	T13A	M20 P1.5		0.12
X3CA2-T3A-XX	T3A	1"-14UNS-2B		0.21
X3CA2-T5A-XX	T5A	1"-14UNS-2B		0.20
X6CA2-T16A-XX	T16A	M36 P2		0.49
X8CA2-T18A-XX	T18A	M48 P2		1.10

DIMENSION

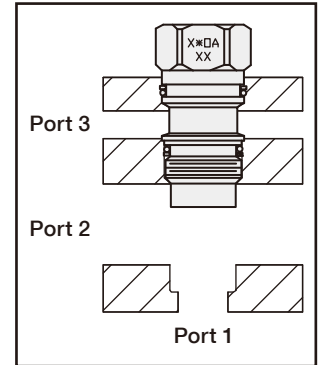
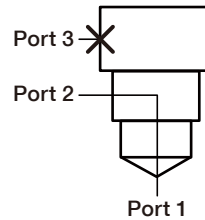
(UNIT : mm)



Model	a	b	c	d	e
X2CA2	20.2	38.2	22.2	M16 P1.5-6H	Ø17.4
X3CA2	17.8	47.7	28.6	1"-14UNS-2B	Ø22.2
X6CA2	25.7	60.8	31.7	M32 P2.0-6H	Ø31.7
X8CA2	30	79.6	41.2	M48 P2.0-6H	Ø41.2

OA3

SYMBOLS

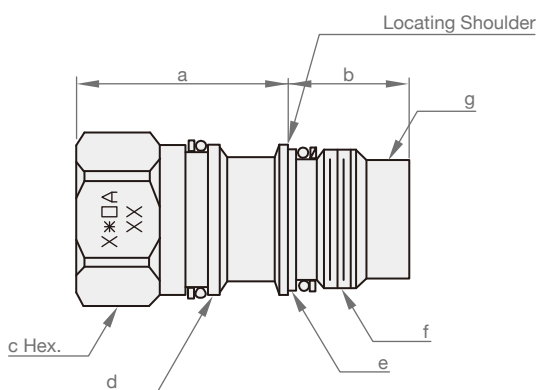


MODEL SPEC.

Model	Cavity	Thread	Material of Seal	Weight (kg)
X10A3-T163A-XX	T163A	M16 P1.5	buna-N	0.06
X20A3-T11A-XX	T11A	M20 P1.5		0.09
X30A3-T2A-XX	T2A	1"-14UNS-2B		0.16
X60A3-T17A-XX	T17A	M36 P2		0.31
X80A3-T19A-XX	T19A	M48 P2		0.68

DIMENSION

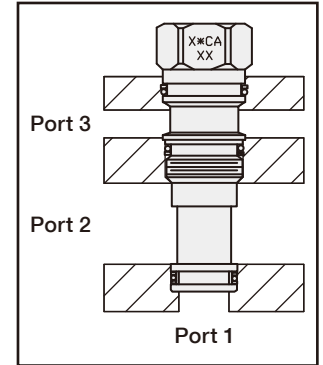
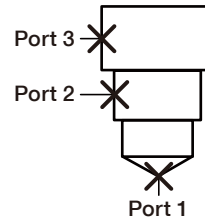
(UNIT : mm)



Model	a	b	c	d	e	f	g
X10A3	31.86	14.54	19.1	Ø17.8	Ø16.6	M16 P1.5-6H	Ø13.9
X20A3	30	17.8	22.2	Ø21.7	Ø20.5	M16 P1.5-6H	Ø17.4
X30A3	35.2	15.2	28.6	Ø27.3	Ø26	1"-14UNS-2B	Ø22.8
X60A3	46.2	18.3	31.6	Ø39.6	Ø36.4	M36 P2.0-6H	Ø32.5
X80A3	59	23.5	41	Ø52.4	Ø48.2	M36 P2.0-6H	Ø43

CA3

SYMBOLS

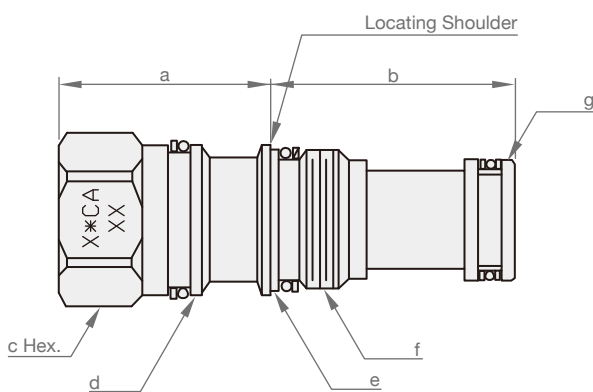


MODEL SPEC.

Model	Cavity	Thread	Material of Seal	Weight (kg)
X1CA3-T163A-XX	T163A	M16 P1.5	buna-N	0.08
X2CA3-T11A-XX	T11A	M20 P1.5		0.12
X3CA3-T2A-XX	T2A	1"-14UNS-2B		0.22
X6CA3-T17A-XX	T17A	M36 P2		0.52
X8CA3-T19A-XX	T19A	M48 P2		1.20

DIMENSION

(UNIT : mm)

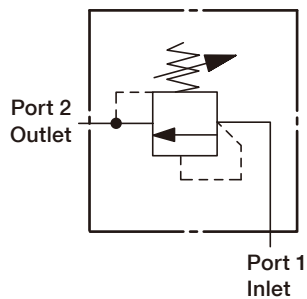


Model	a	b	c	d	e	f	g
X1CA3	32	31	19.1	Ø17.8	Ø16.6	M16 P1.5-6H	Ø13.9
X2CA3	30.5	34.8	22.2	Ø21.8	Ø20.5	M16 P1.5-6H	Ø17.3
X3CA3	35	35	28.6	Ø27.3	Ø26	1"-14UNS-2B	Ø22.1
X6CA3	46.4	46	31.6	Ø39.6	Ø36.4	M36 P2.0-6H	Ø31.6
X8CA3	46.4	46	31.6	Ø39.6	Ø36.4	M36 P2.0-6H	Ø31.6

MH



SYMBOLS



ORDER CODES

MH - **082** - **L** **A** **N**

1 2 3 4 5

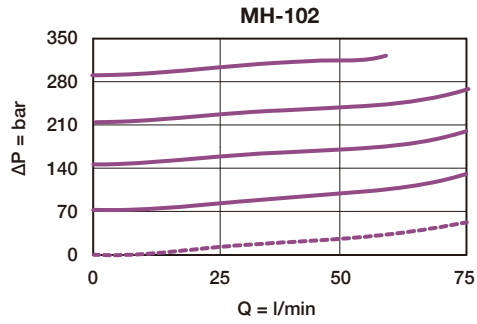
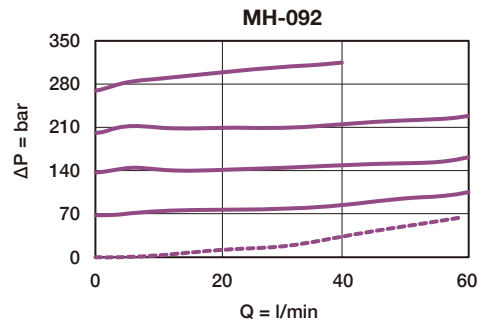
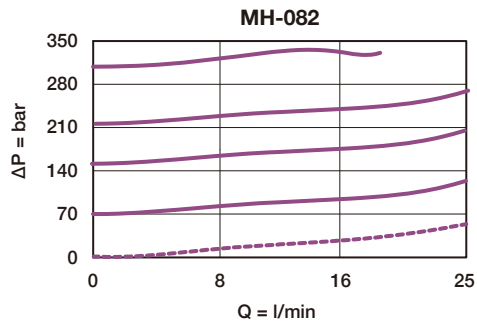
1	▶ Model Name	MH	
2	▶ Valve Size & Cavity	082, 092, 102	
3	▶ Control Manner	L	standard screw adjustment
		K	hand knob with lock knob
		C	tamper resistant cover
4	▶ Adjustable Range	A	7 ~ 210 bar
		B	3.5 ~105 bar
		C	90 ~ 350 bar
5	▶ Material of Seal	N	buna-N
		V	viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
MH-082	T082	25	350	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.15
MH-092	T092	45	350	40/50		0.25
MH-102	T102	55	350	40/50		0.20

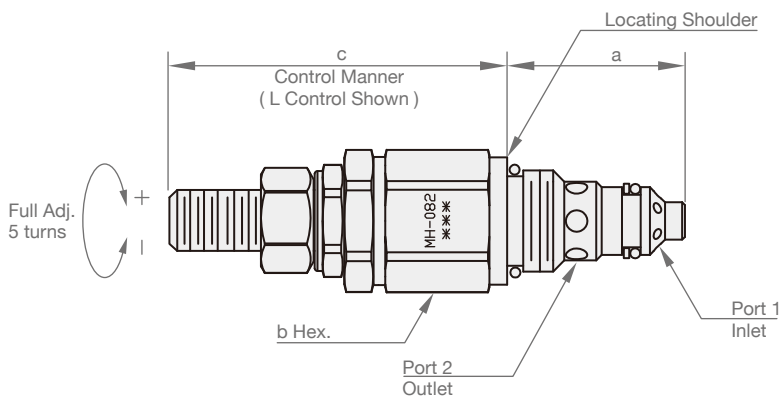
PERFORMANCE CURVES

► Typical Pressure Rise



DIMENSION

(UNIT : mm)

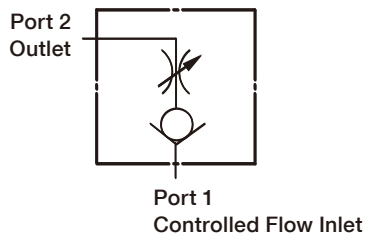


Model	a	b	c	
			L	K
MH-082	34	24	60	66
MH-092	54	26	58	93
MH-102	38.8	25.4	58	64

CN



SYMBOLS



ORDER CODES

CN - **082** - **L** **A** **N**

1 2 3 4 5

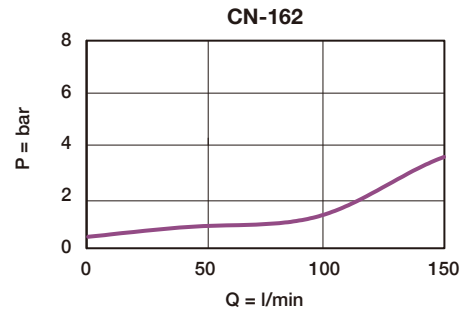
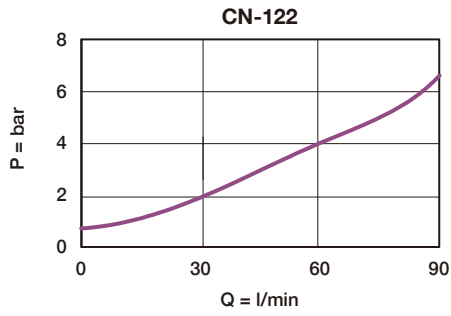
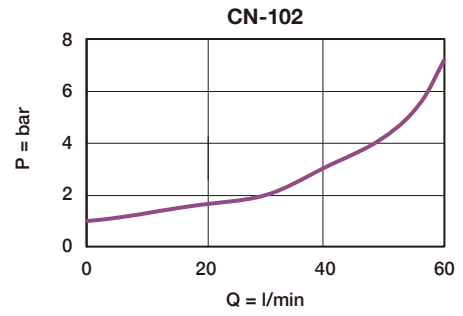
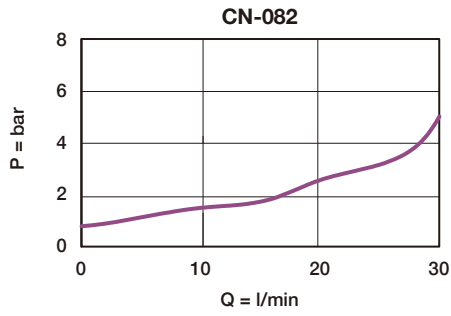
1	▶ Model Name	CN	
2	▶ Cavity & Max. Orifice	082, 102, 122, 162	
3	▶ Control Manner	L	standard screw adjustment
		K	hand knob with lock knob
4	▶ Cracking Pressure	A	0.3 bar
		C	2.0 bar
		E	5.0 bar
5	▶ Material of Seal	N	buna-N
		V	viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
CN-082	T082	30	300	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.11
CN-102	T102	50	300	40/50		0.14
CN-122	T122	80	300	40/50		0.26
CN-162	T162	150	300	40/50		0.39

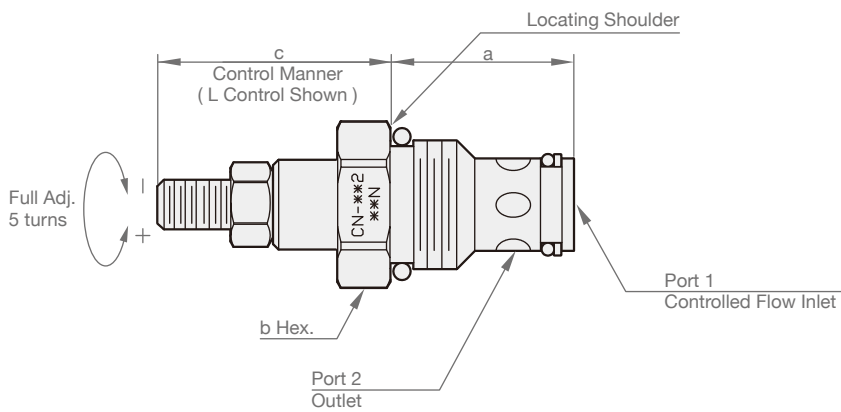
PERFORMANCE CURVES

► Typical Pressure Drop



DIMENSION

(UNIT : mm)

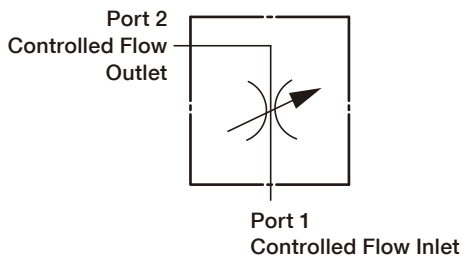


Model	a	b	c	
			L	K
CN-082	27.7	22.4	48	53
CN-102	31.8	25.4	51	56
CN-122	46.0	31.8	53	58
CN-162	44.5	38.1	59	64

NV



SYMBOLS



ORDER CODES

NV - **082** - **L** **A** **N**

1 2 3 4

1	▶ Model Name	NV	
2	▶ Cavity & Max. Orifice	082	T082, 6.5mm
		102	T102, 8.5mm
		122	T122, 12.5mm
		162	T162, 16mm
3	▶ Control Manner	L	standard screw adjustment
		K	hand knob with lock knob
4	▶ Material of Seal	N	buna-N
		V	viton

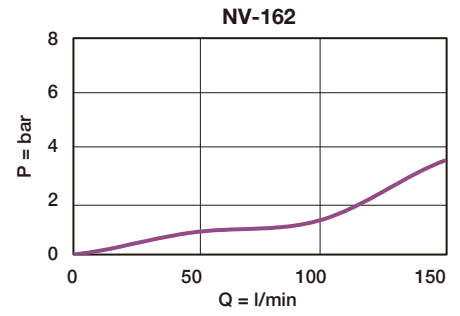
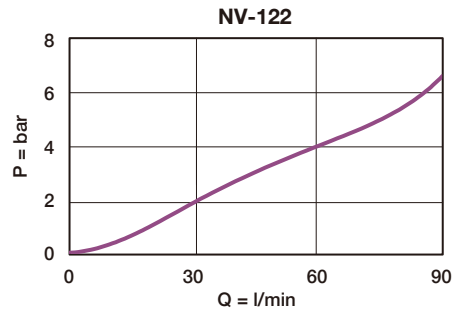
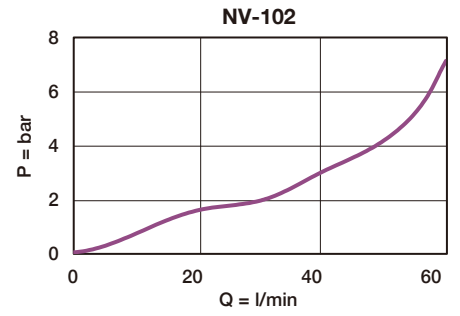
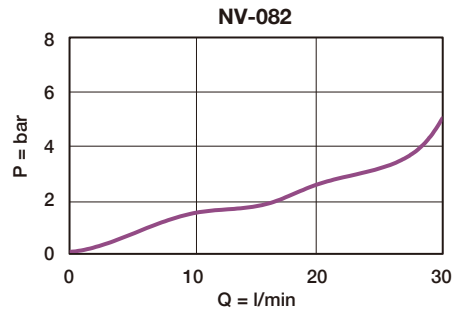
MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
NV-082	T082	30	300	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.11
NV-102	T102	50	300	40/50		0.14
NV-122	T122	80	300	40/50		0.26
NV-162	T162	150	300	40/50		0.39

PERFORMANCE CURVES

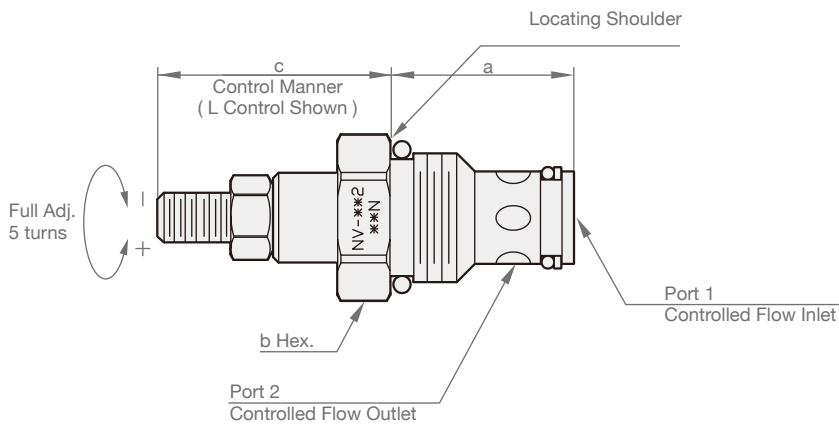
Typical Pressure Drop

— Fully Open, Port1 ~ Port2



DIMENSION

(UNIT : mm)

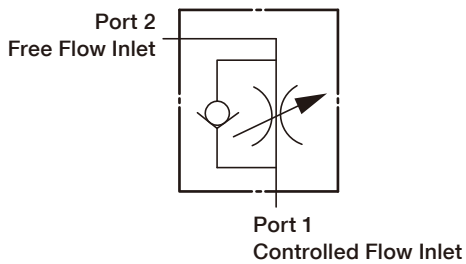


Model	a	b	c	
			L	K
NC-082	27.7	22.4	48	53
NC-102	31.8	25.4	51	56
NC-122	46.0	31.8	53	58
NC-162	44.5	38.1	59	64

NC



SYMBOLS



ORDER CODES

NC - **082** - **L** **A** **N**

1 2 3 4

1 ▶	Model Name	NC	
2 ▶	Cavity & Max. Orifice	082	T082, 5.9mm
		102	T102, 8mm
		122	T122, 11mm
		162	T162, 13mm
3 ▶	Control Manner	L	standard screw adjustment
		K	hand knob with lock knob
4 ▶	Material of Seal	N	buna-N
		V	viton

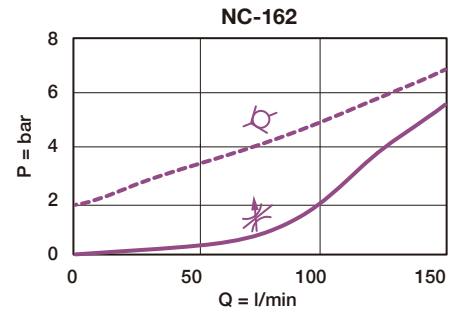
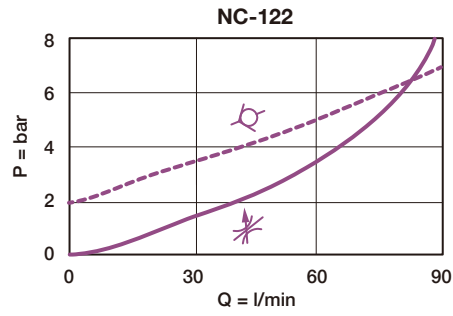
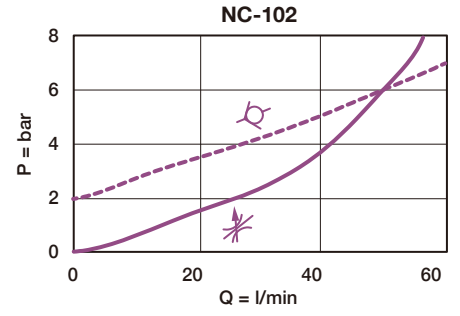
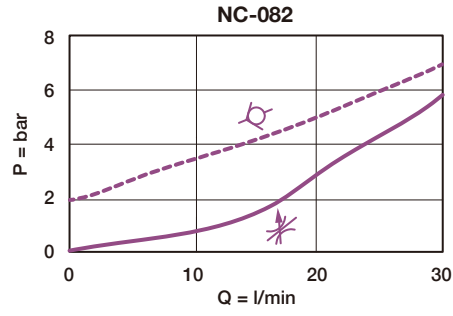
MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
NC-082	T082	30	300	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.11
NC-102	T102	50	300	40/50		0.14
NC-122	T122	80	300	40/50		0.26
NC-162	T162	150	300	40/50		0.39

PERFORMANCE CURVES

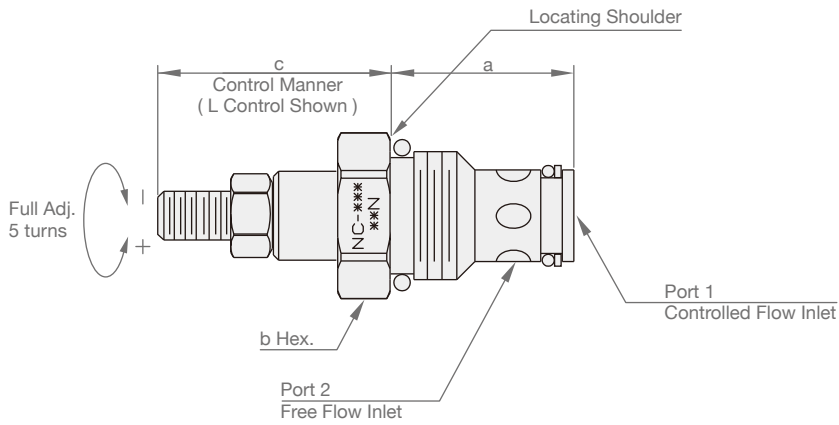
Typical Pressure Drop

- Free Flow, Port1 ~ Port2
- Fully Open, Port2 ~ Port1



DIMENSION

(UNIT : mm)

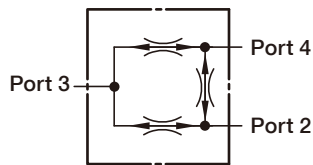


Model	a	b	c	
			L	K
NC-082	27.7	22.4	48	53
NC-102	31.8	25.4	51	56
NC-122	46.0	31.8	53	58
NC-162	44.5	38.1	59	64

CP



SYMBOLS



Flow Ratio:
Port 2 : Port 4 = 1:1

ORDER CODES

CP - **104** - **X** **C** **N**

① ② ③ ④ ⑤

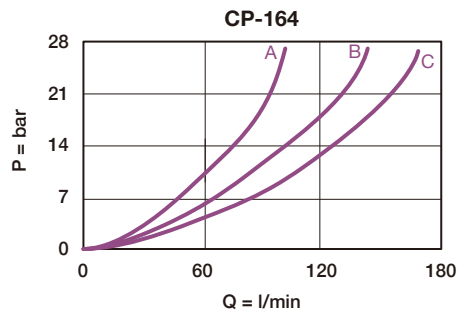
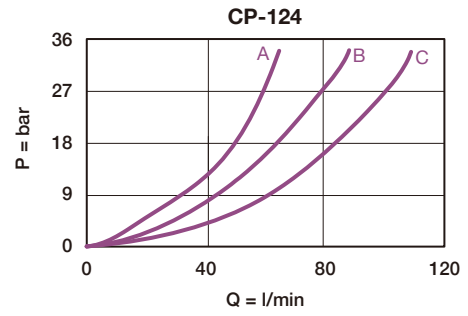
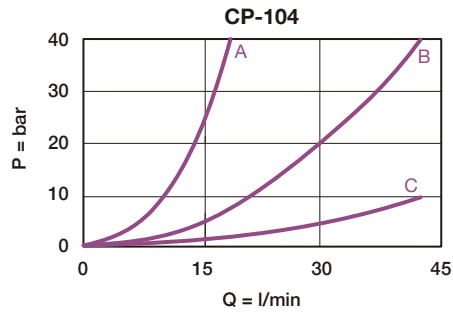
①	▶ Model Name	CP
②	▶ Valve Size & Cavity	104, 124, 164
③	▶ Control Manner	X unadjustable
④	▶ Capacity (l/min)	A CP-104: 7.6, CP-124: 38, CP-164: 91
		B CP-104: 23, CP-124: 53, CP-164: 114
		C CP-104: 45, CP-124: 90, CP-164: 150
⑤	▶ Material of Seal	N buna-N
		V viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
CP-104	T104	45	210	35/45	-35 ~ 100°C (-31 ~ 212°F)	0.11
CP-124	T124	90	210	45/55		0.23
CP-164	T164	150	210	60/70		0.37

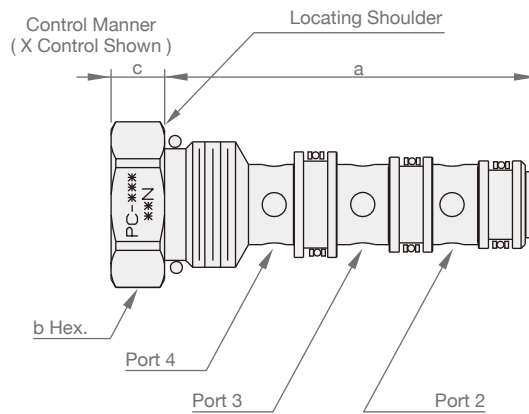
PERFORMANCE CURVES

► Typical Pressure Drop



DIMENSION

(UNIT : mm)

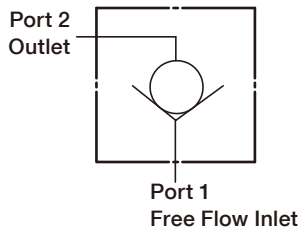


Model	a	b	c
			X
CP-104	64.8	25.4	7.9
CP-124	85.1	31.8	9.5
CP-164	105.0	38.1	12.7

CV



SYMBOLS



ORDER CODES

CV - **082** - **X** **A** **N**

1 2 3 4 5

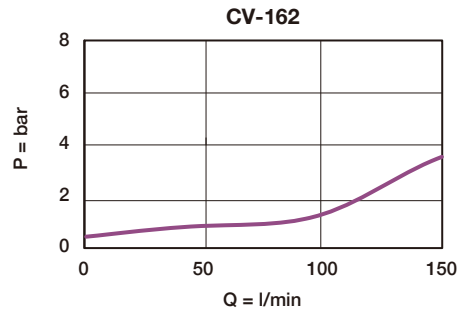
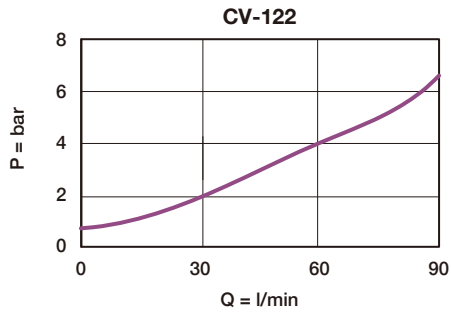
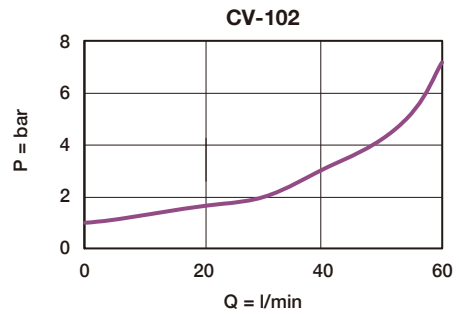
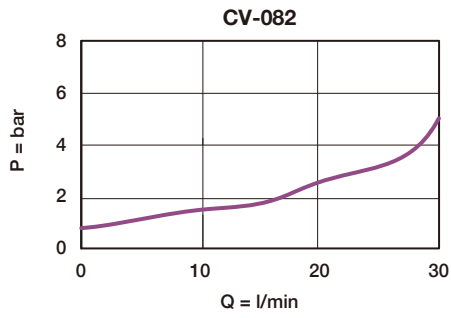
1	▶ Model Name	CV	
2	▶ Valve Size & Cavity	082, 102, 122, 162	
3	▶ Control Manner	X	unadjustable
4	▶ Cracking Pressure	A	0.3 bar
		C	2.0 bar
		E	5.0 bar
5	▶ Material of Seal	N	buna-N
		V	viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
CV-082	T082	30	300	40/50	-35 ~ 100°C (-31 ~ 212°F)	0.06
CV-102	T102	50	300	40/50		0.09
CV-122	T122	80	300	40/50		0.15
CV-162	T162	150	300	40/50		0.27

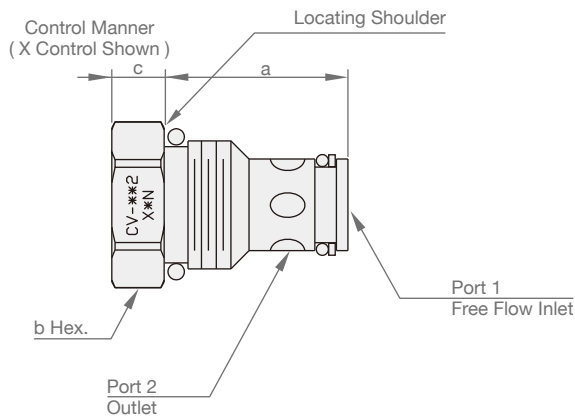
PERFORMANCE CURVES

► Typical Pressure Drop



DIMENSION

(UNIT : mm)

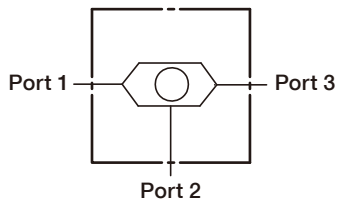


Model	a	b	c
			X
CV-082	27.7	22.4	7.9
CV-102	31.8	25.4	7.9
CV-122	46.0	31.8	9.5
CV-162	44.5	38.1	14.0

LS



SYMBOLS



ORDER CODES

LS - **083** - **X** X **N**

① ② ③ ④

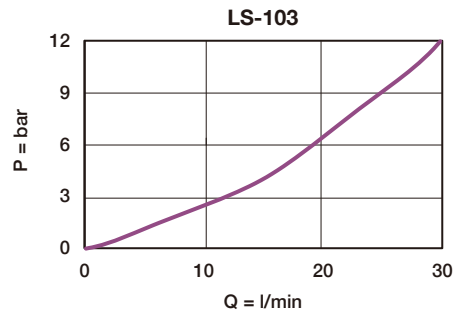
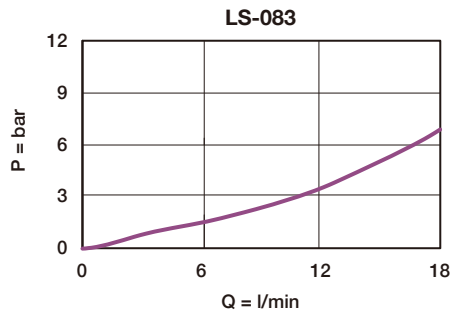
① ▶	Model Name	LS	
② ▶	Valve Size & Cavity	083, 103	
③ ▶	Control Manner	X	unadjustable
④ ▶	Material of Seal	N	buna-N
		V	viton

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Operational Temperature	Weight (kg)
LS-083	T083	15	240	30/40	-35 ~ 100°C (-31 ~ 212°F)	0.06
LS-103	T103	30	240	40/50		0.10

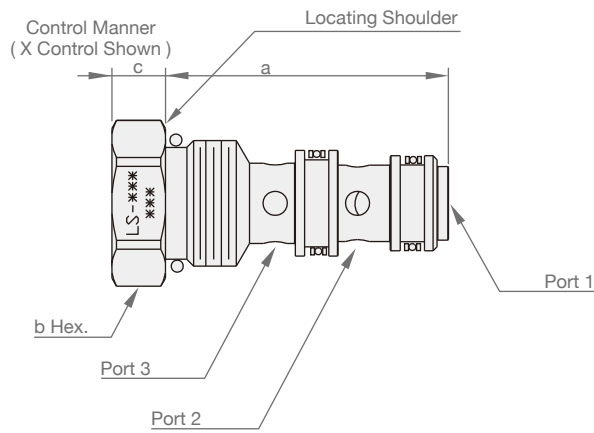
PERFORMANCE CURVES

► Typical Pressure Drop



DIMENSION

(UNIT : mm)

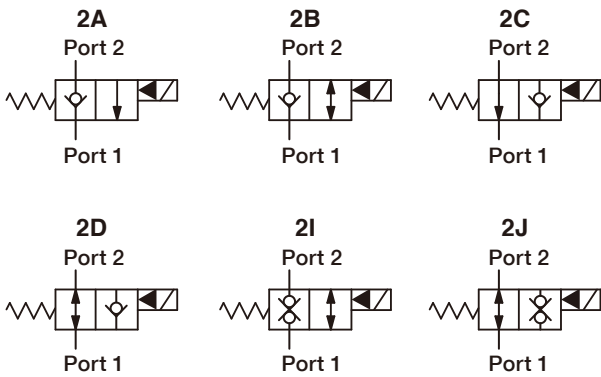


Model	a	b	c
			X
LS-083	42.2	22.4	8
LS-103	46.0	25.4	8

HS, JS, LS, PS-2



SYMBOLS



ORDER CODES

LS - **2A** - **16** - **A1**

1 2 3 4

1 ▶ Cavity	HS	T082
	JS	T102
	LS	T122
	PS	T162
2 ▶ Type of Valve	2A, 2B, 2C, 2D, 2I, 2J (Please refer to the symbol list.)	
	16, 19	
3 ▶ Tube Diameter	16, 19	
4 ▶ Power Source	A1	RAC110V
	A2	RAC220V
	D1	DC12V
	D2	DC24V

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Weight (kg)
HS-2A-16	T082	28	250	39/51	0.41
HS-2B-16	T082	28	250	39/51	0.41
HS-2C-16	T082	28	250	39/51	0.41
HS-2D-16	T082	30	250	39/51	0.41
HS-2J-16	T082	12	250	39/51	0.41
JS-2A-16	T102	50	250	39/51	0.43
JS-2B-16	T102	50	250	39/51	0.43
JS-2C-16	T102	50	250	39/51	0.43
JS-2D-16	T102	55	250	39/51	0.46
JS-2I-16	T102	20	250	39/51	0.45
HS-2J-16	T082	12	250	39/51	0.41

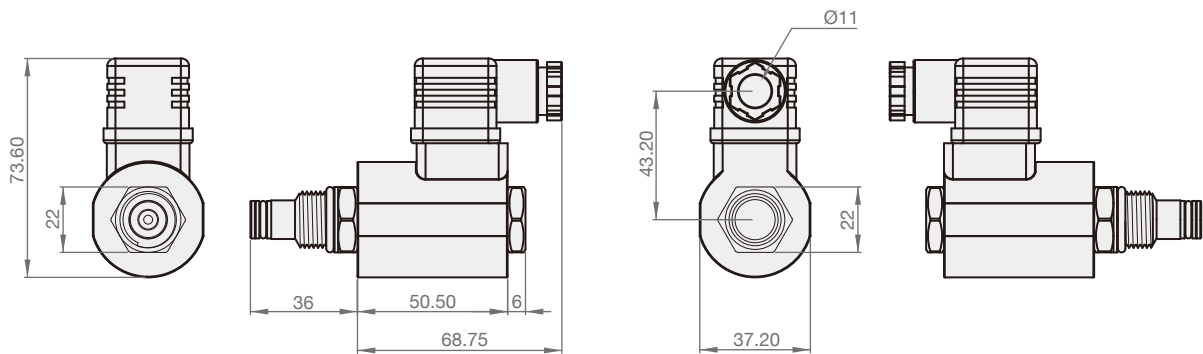
MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Weight (kg)
LS-2A-16	T122	100	250	39/51	0.53
LS-2B-16	T122	100	250	39/51	0.53
LS-2C-16	T122	100	250	39/51	0.56
LS-2D-16	T122	105	250	39/51	0.56
LS-2I-16	T122	40	250	39/51	0.56
PS-2A-19	T162	150	250	39/51	0.62
PS-2B-19	T162	150	250	39/51	0.62
PS-2C-19	T162	150	250	39/51	0.67
PS-2D-19	T162	150	250	39/51	0.67
PS-2I-19	T162	60	250	39/51	0.67

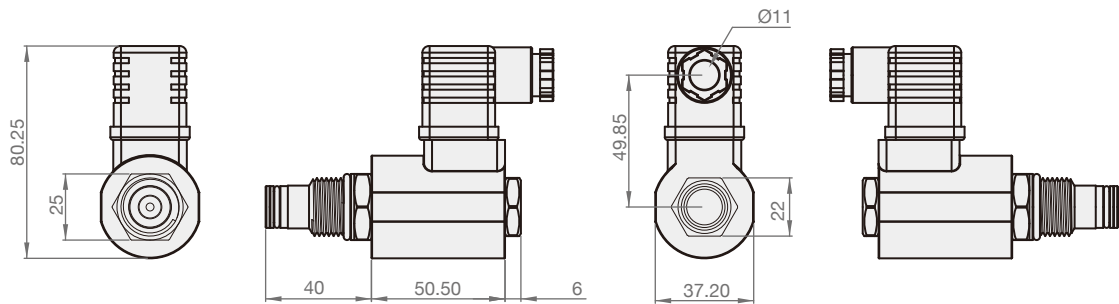
DIMENSION

(UNIT : mm)

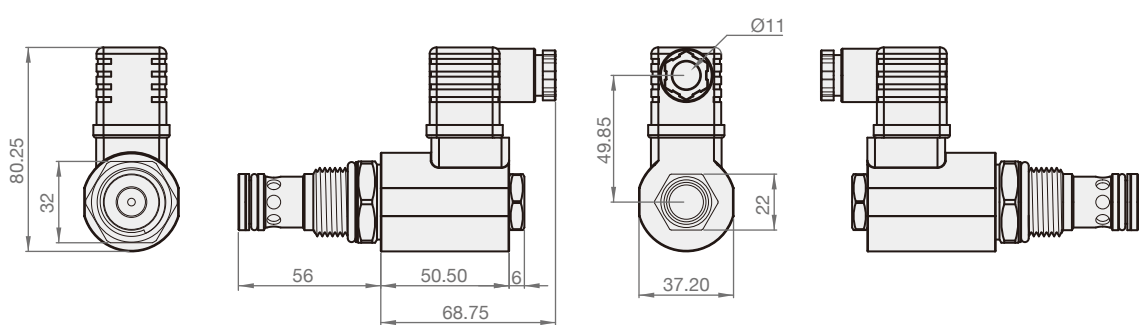
▶ HS-2*



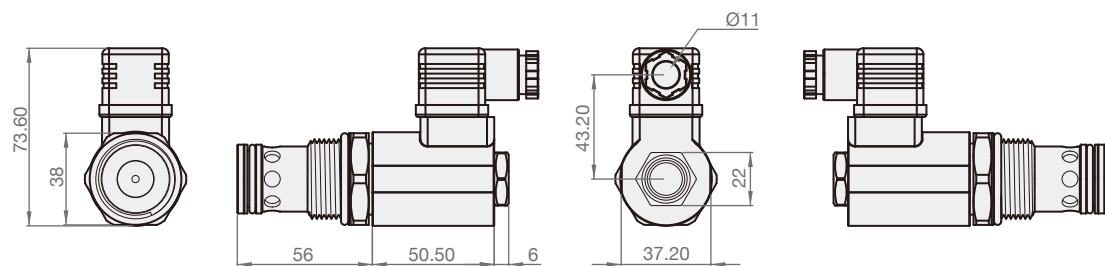
▶ JS-2*



▶ LS-2*



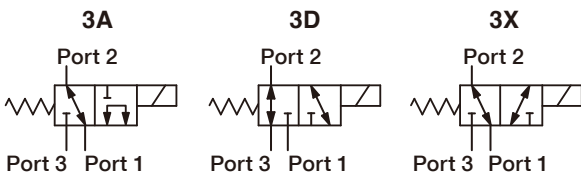
▶ PS-2*



HS-3



SYMBOLS



ORDER CODES

HS - **3A** - **16** - **D2**

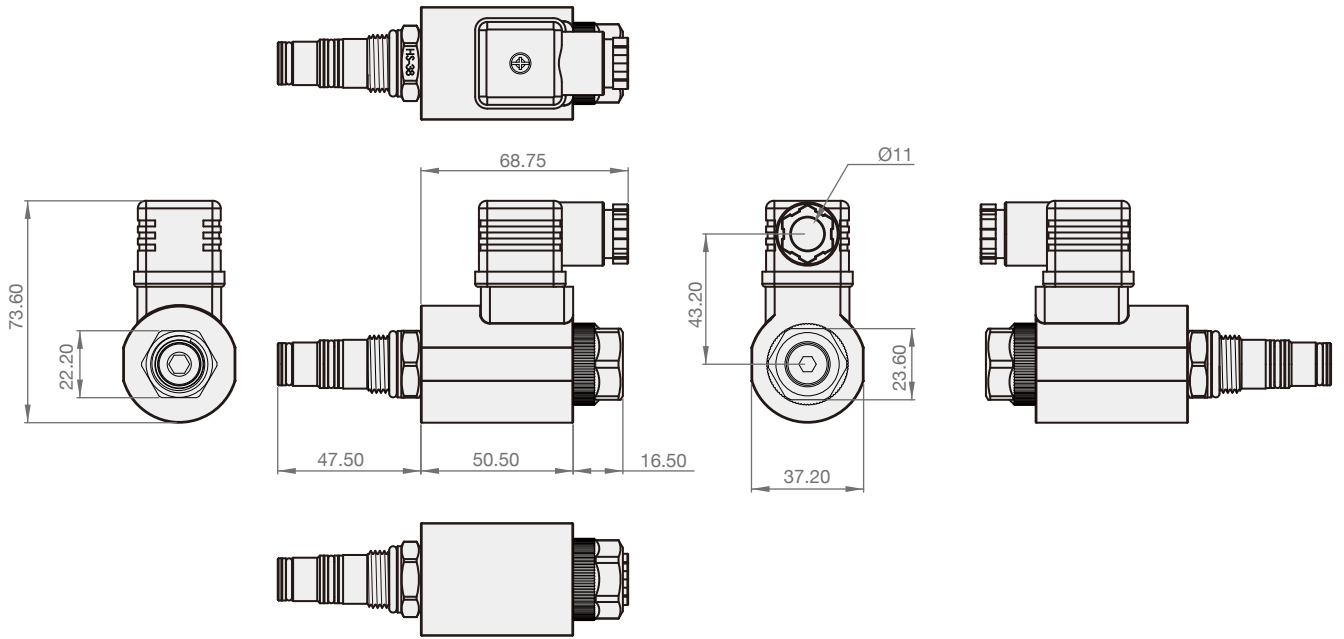
1 2 3 4

1	Cavity	HS	T082
2	Type of Valve	3A, 3D, 3X (Please refer to the symbol list.)	
3	Tube Diameter	16	
4	Power Source	A1	RAC110V
		A2	RAC220V
		D1	DC12V
		D2	DC24V

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Installation Torque (Nm)	Weight (kg)
HS-3A-16	T082	15	250	39/51	0.43
HS-3D-16	T082	11	250	39/51	0.43
HS-3X-16	T082	13	250	39/51	0.43

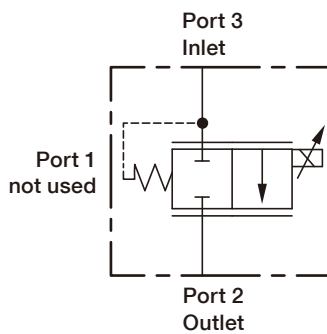
► HS-3*



PV-1033



SYMBOLS



ORDER CODES

PV - 103 3 - X B N - D 24

1 2 3 4 5 6 7 8

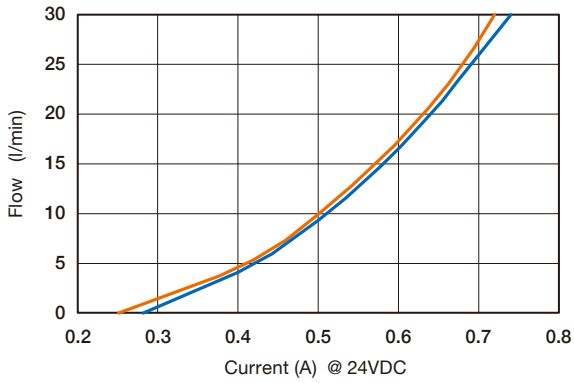
1	▶ Model Name	PV
2	▶ Cavity	103
3	▶ Type	3 normally closed
4	▶ Control Manner	X unadjustable
5	▶ Capacity	B 30 l/min
6	▶ Material of Seal	N buna-N V viton
7	▶ Connector (coil)	D ISO/DIN43650
8	▶ Voltage (coil)	12 12 VDC 24 24 VDC

MODEL SPEC.

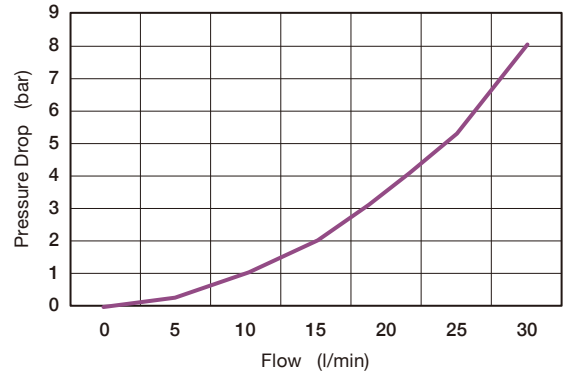
Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Leakage (cc/min)	Installation Torque (Nm)
PV-1033	T103	30	300	less than 150	35/38
Model	Hysteresis	Max. Current (mA)		Weight (kg)	
		12 VDC	24 VDC	Body	Coil
PV-1033	5%	1800	900	0.28	0.4

PERFORMANCE CURVES

► Flow vs. Current

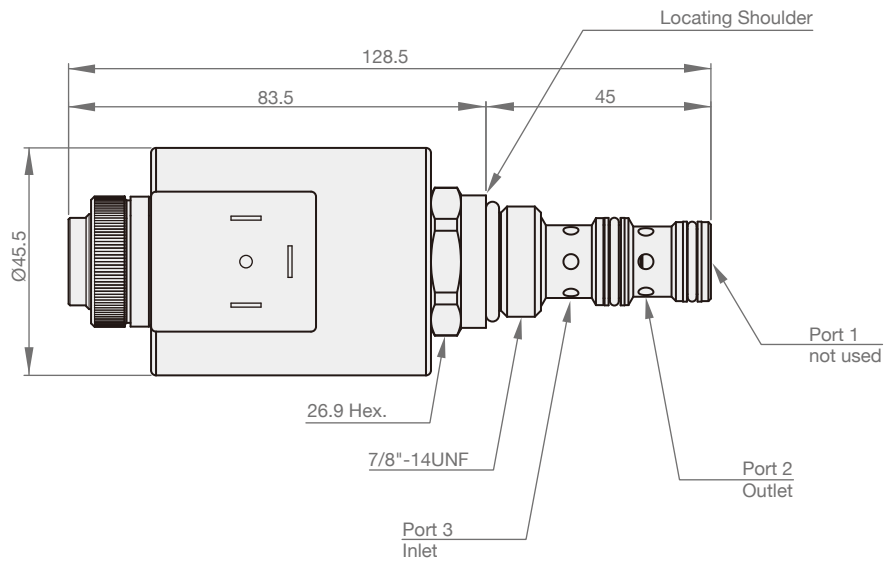


► Pressure Drop vs. Flow



DIMENSION

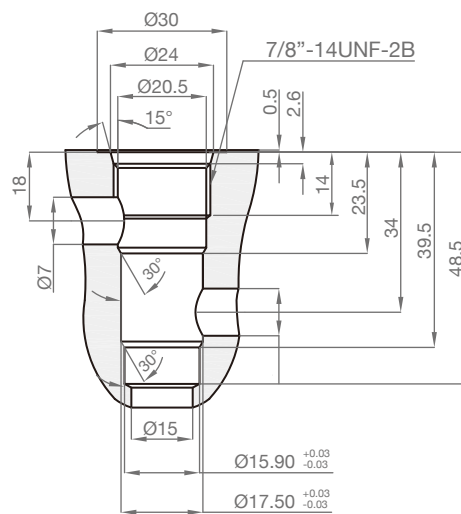
(UNIT : mm)



CAVITY TOOLING

(UNIT : mm)

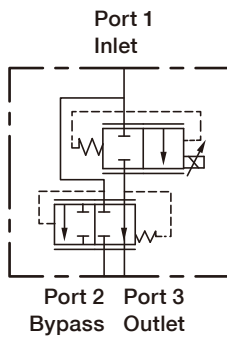
► T103



EVP-M33



SYMBOLS



ORDER CODES

EVP - **M33** - **X** **C** **N** - **D** **24**

1 2 3 4 5 6 7

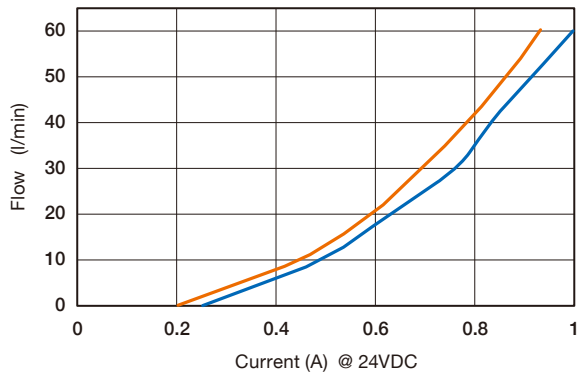
1	Model Name	EVP	
2	Cavity	M33	C332-3
3	Control Manner	X	unadjustable
4	Capacity	C	50 l/min
5	Material of Seal	N	buna-N
		V	viton
6	Connector (coil)	D	ISO/DIN43650
7	Voltage (coil)	12	12 VDC
		24	24 VDC

MODEL SPEC.

Model	Cavity	Capacity (l/min)	Max. Pressure (bar)	Leakage (cc/min)	Installation Torque (Nm)
EVP-M33	C332-3	50	270	less than 150	30/35
Model	Hysteresis	Max. Current (mA)		Weight (kg)	
		12 VDC	24 VDC	Body	Coil
EVP-M33	5%	1900	950	0.5	0.4

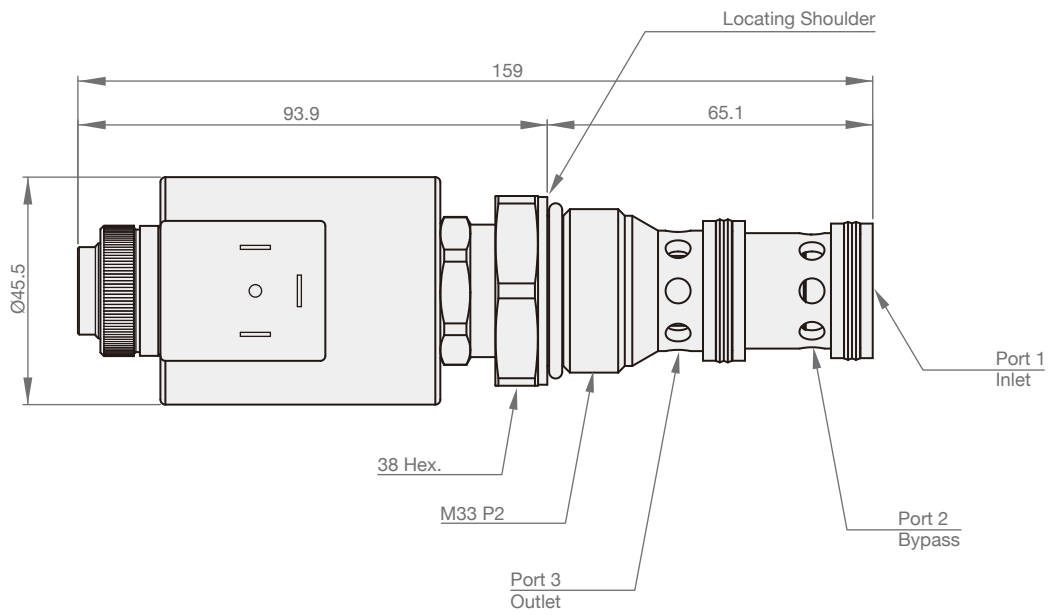
PERFORMANCE CURVES

► Flow vs. Current



DIMENSION

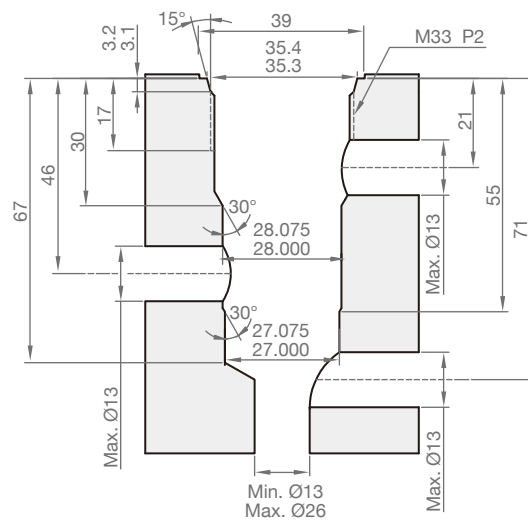
(UNIT : mm)



CAVITY TOOLING

(UNIT : mm)

► C332-3

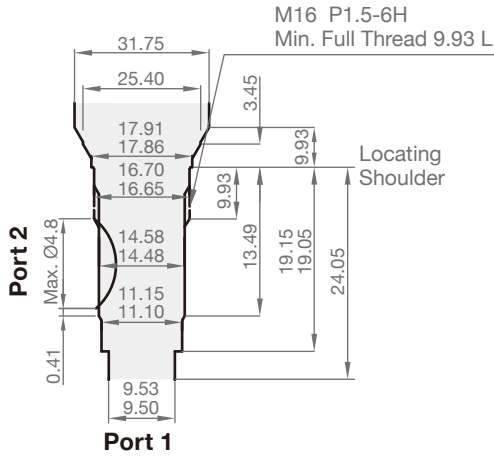


Cavities Tooling

2 Port Cavities Tooling

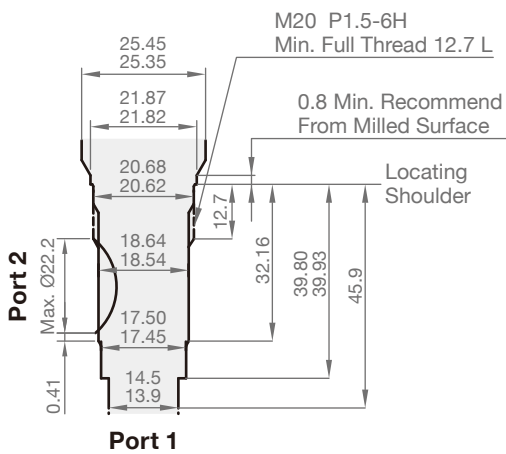
(UNIT : mm)

► T8A

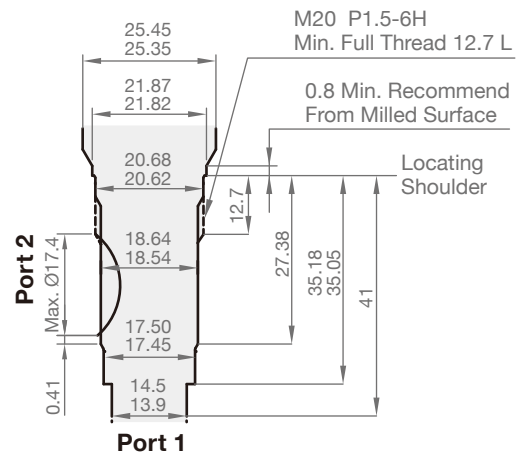


Size	Cavity
01	T8A
02	T10A, T13A
03	T3A, T5A
06	T16A
08	T18A

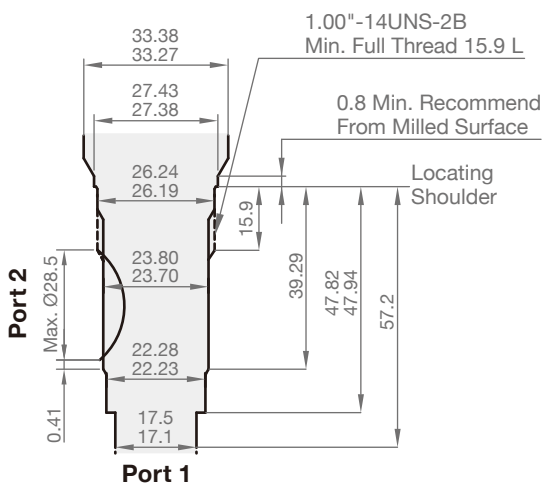
► T10A



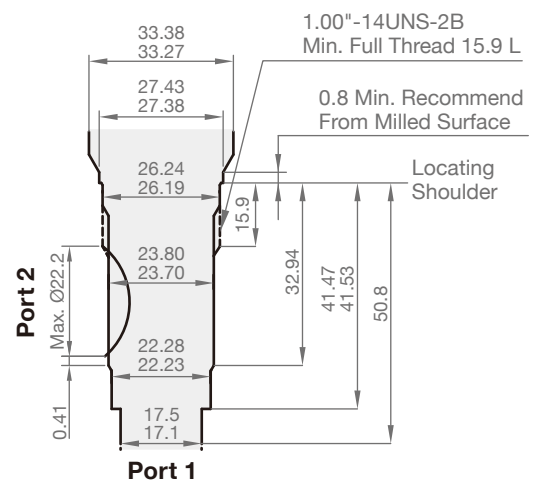
► T13A



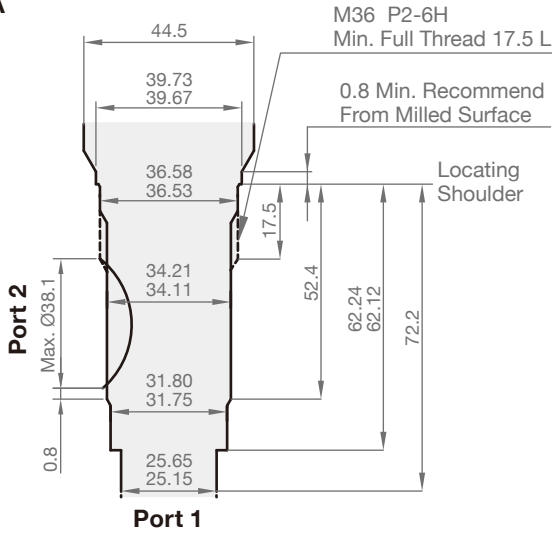
► T3A



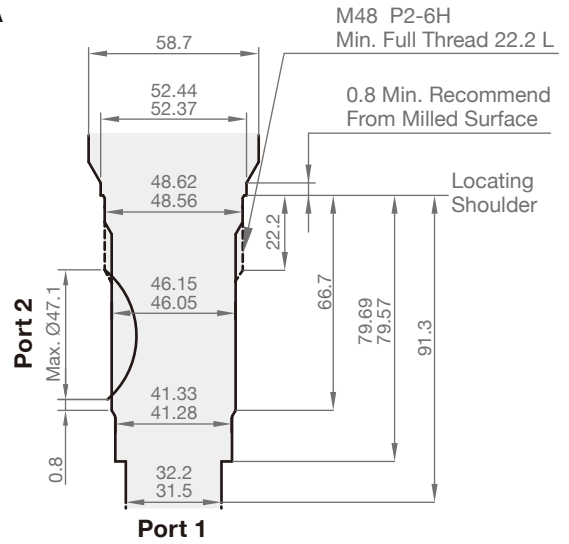
► T5A



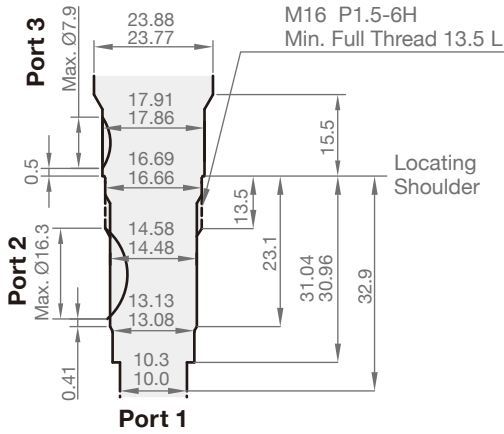
► T16A



► T18A

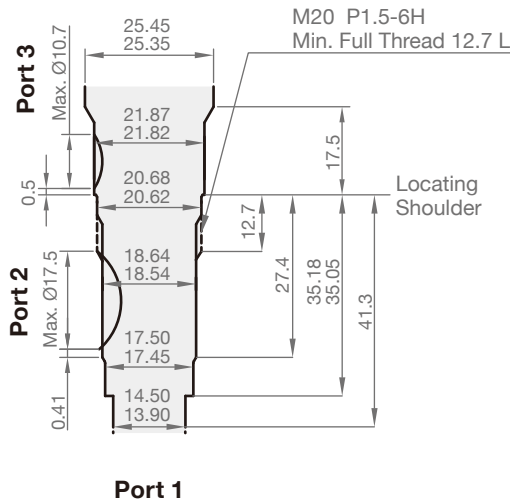


► T163A

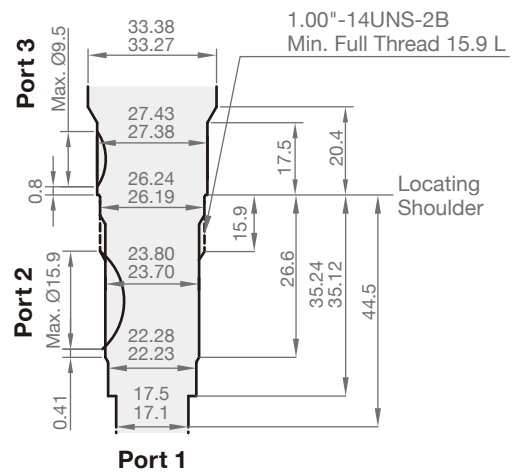


Size	Cavity
01	T163A
02	T11A
03	T2A
06	T17A
08	T19A

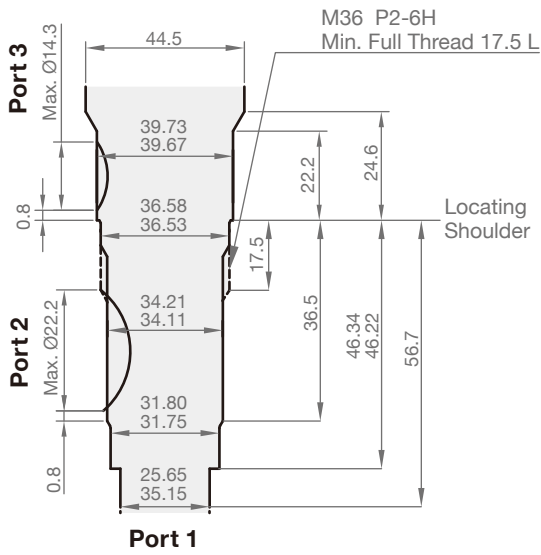
► T11A



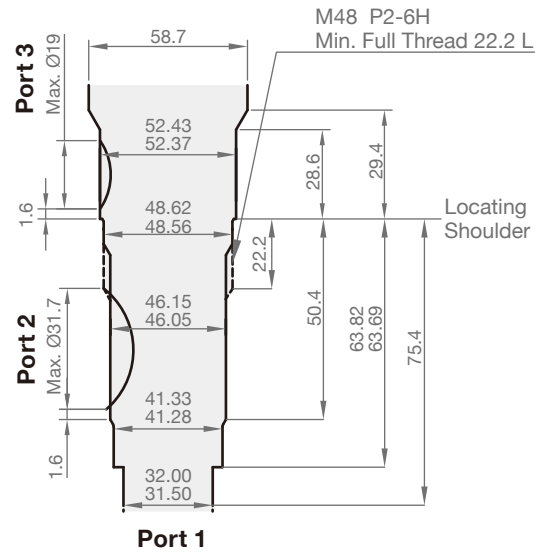
► T2A



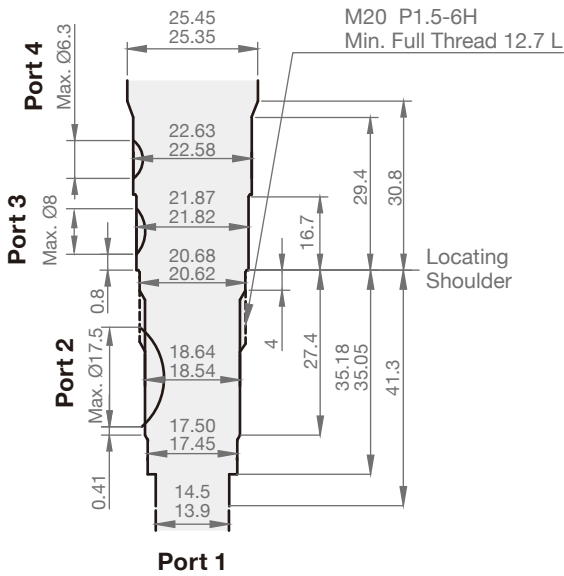
► T17A



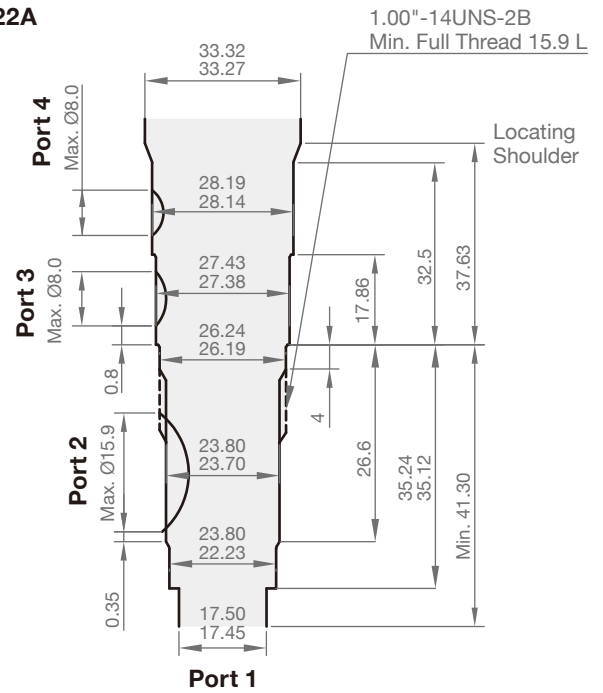
► T19A



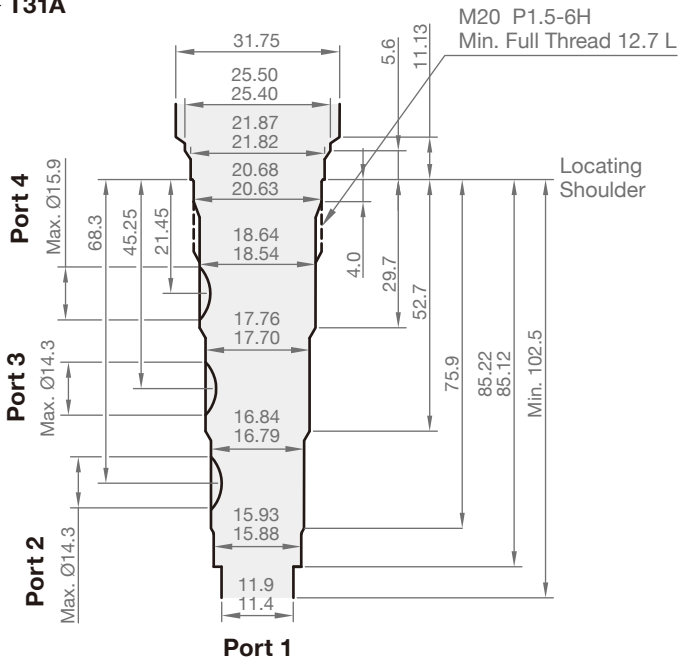
► T21A



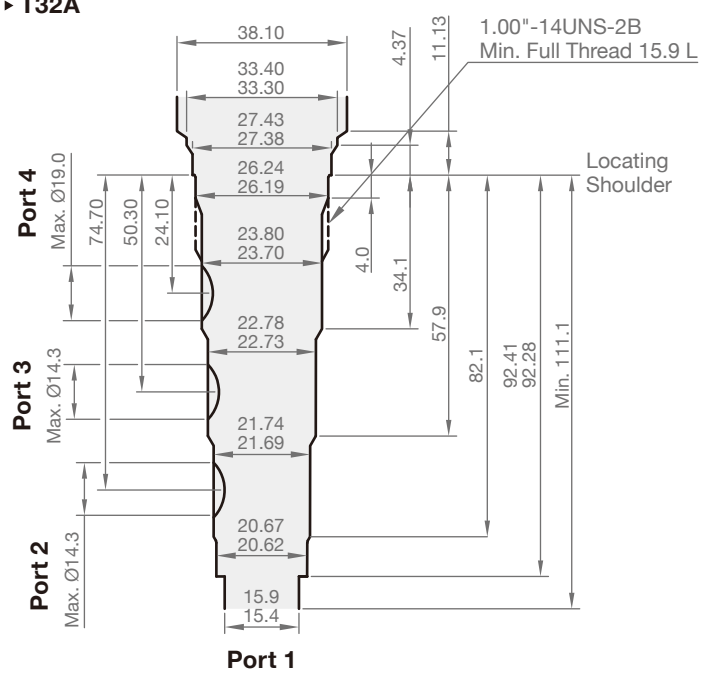
► T22A



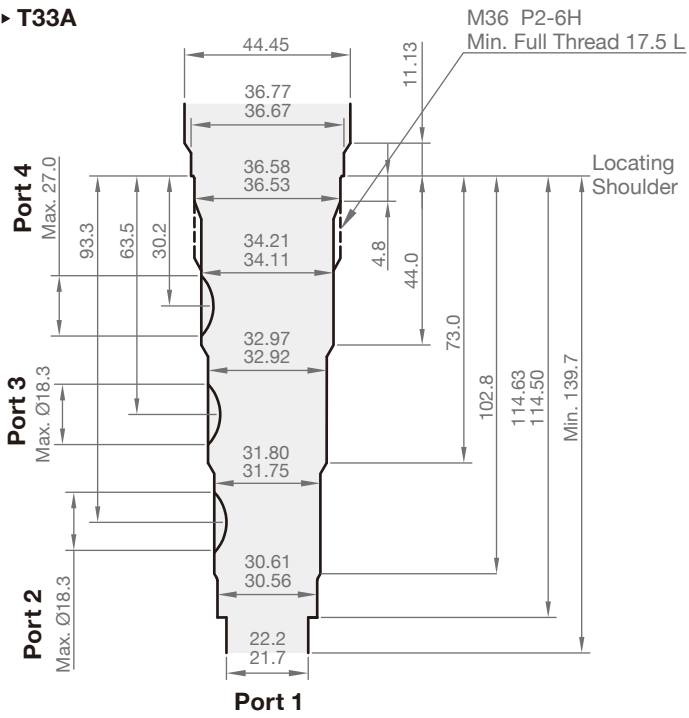
► T31A



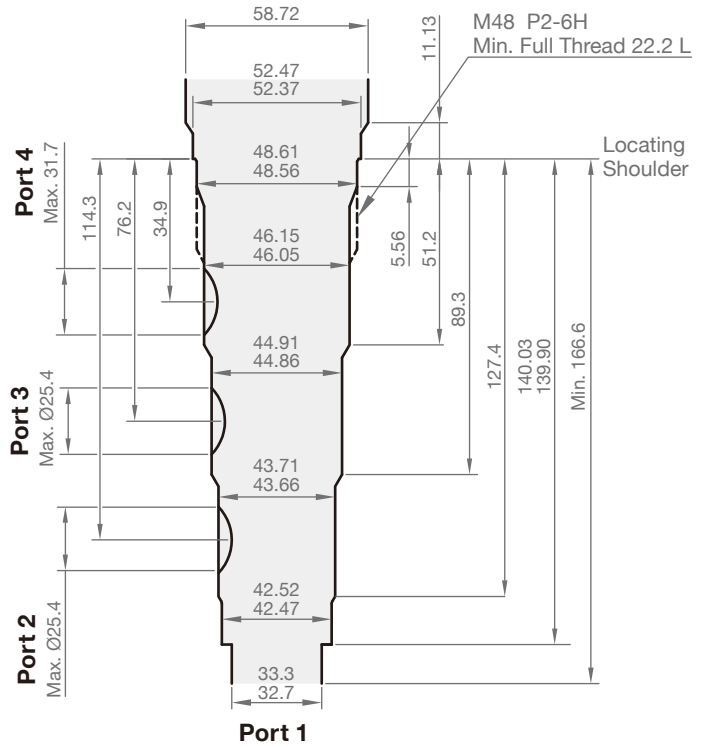
► T32A



► T33A



► T34A

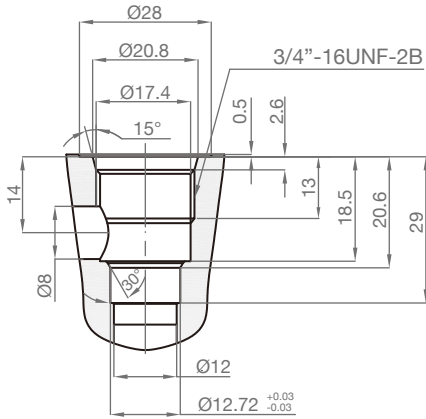


Cavities Tooling (SAE Cavity)

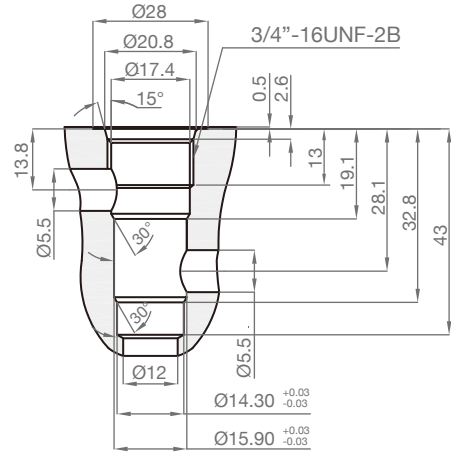
DIMENSION

(UNIT : mm)

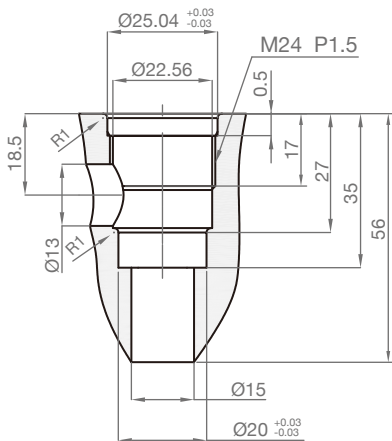
► T82



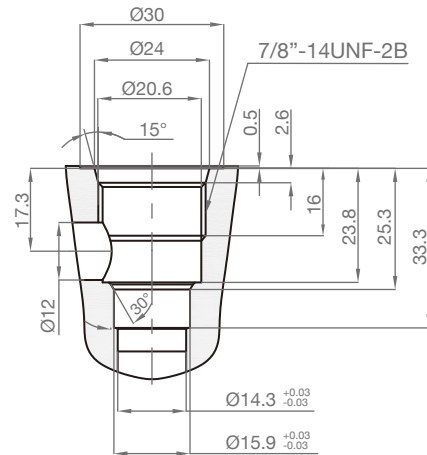
► T83



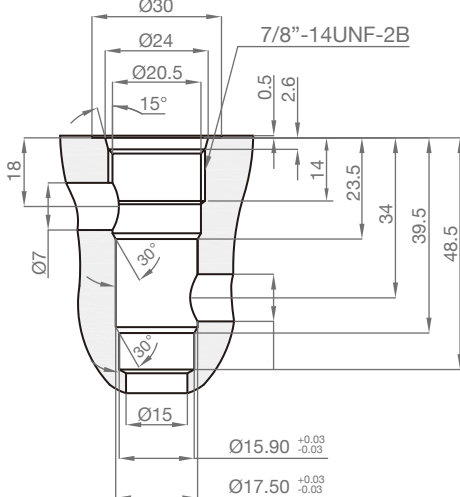
► T092



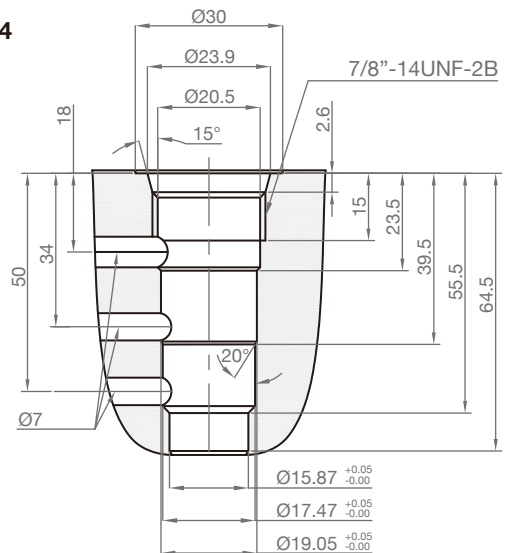
► T102



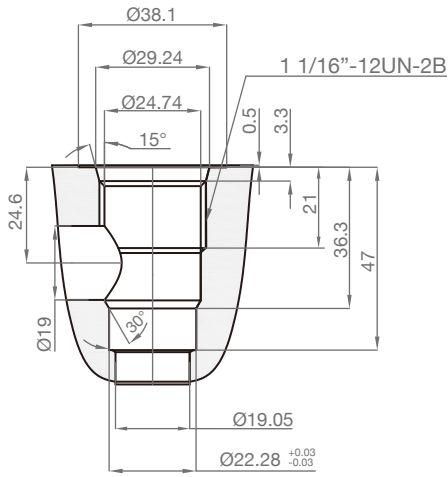
► T103



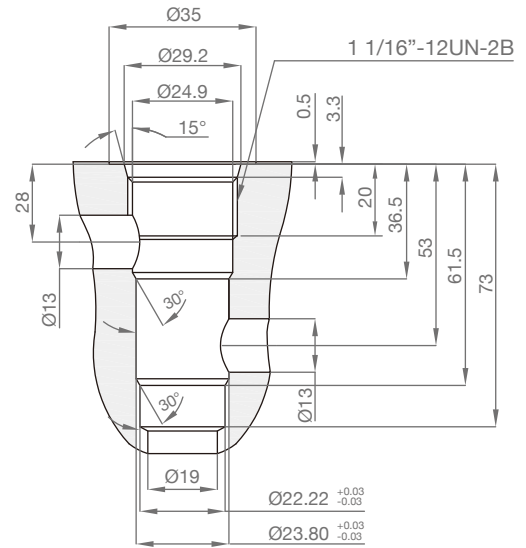
► T104



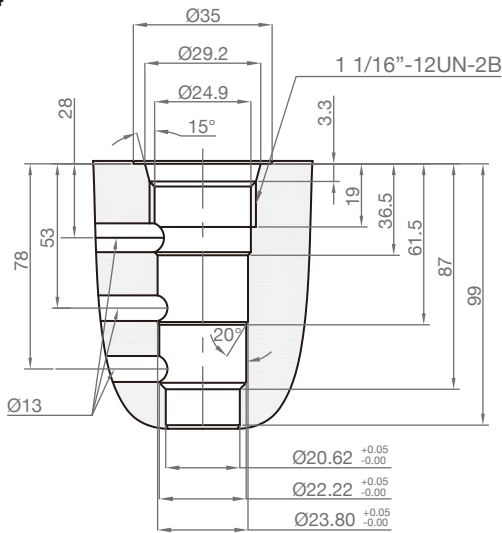
► T122



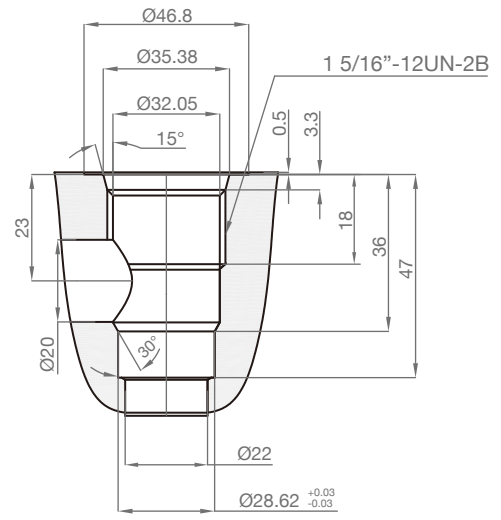
► T123



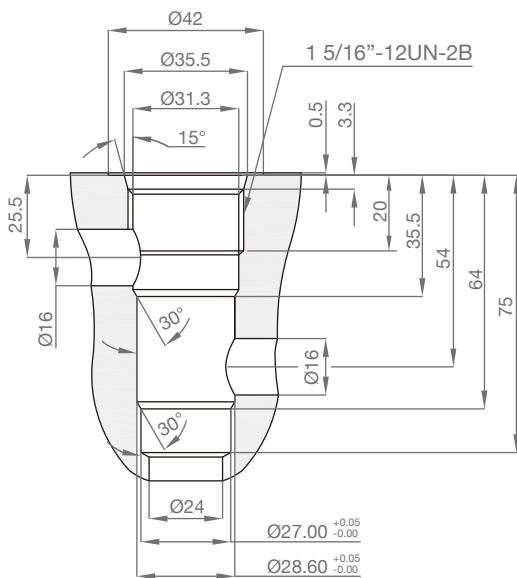
► T124



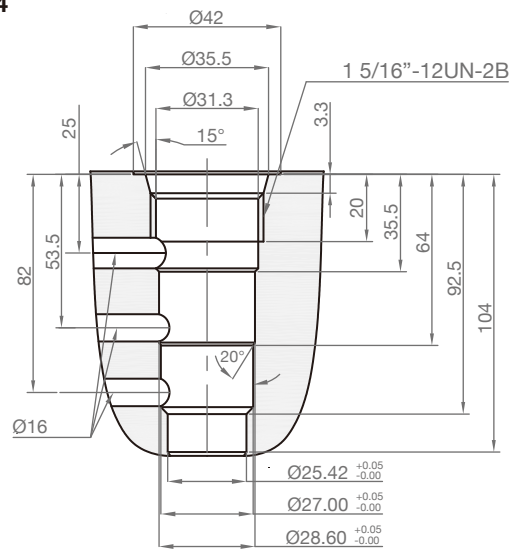
► T162



► T163



► T164



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