

Technical Information

CV

Check Valves

SH

Shuttle Valves

LM

Load/Motor Controls

FC

Flow Controls

PC

Pressure Controls

LE

Logic Elements

DC

Directional Controls

MV

Manual Valves

SV

Solenoid Valves

PV

Proportional Valves

CE

Coils & Electronics

BC

Bodies & Cavities

TD

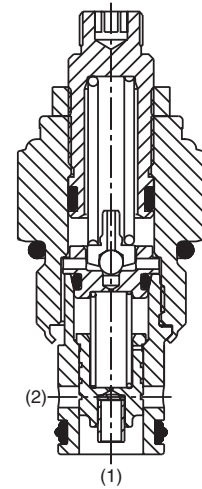
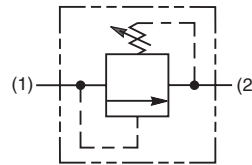
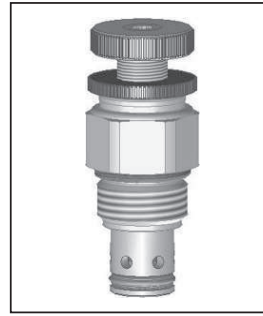
Technical Data

General Description

Pilot Operated Spool-Type Relief Valve. For addition information see Technical Tips on pages PC1-PC6.

Features

- Hardened, precision ground parts for durability
- Low profile adapter for minimal space requirements
- Fully guided poppet for more consistent reseal
- Steel adapters are coated with yellow zinc dichromate for protection from salt spray
- Polyurethane "D"-Ring eliminates backup rings and prevents hydrolysis
- Internal screening protects pilot spring from debris



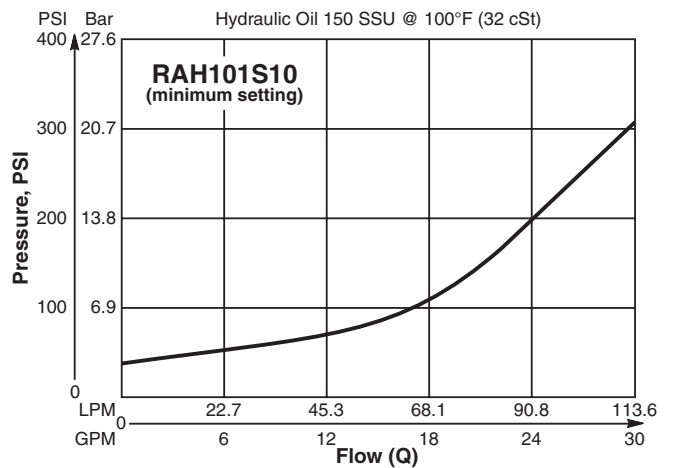
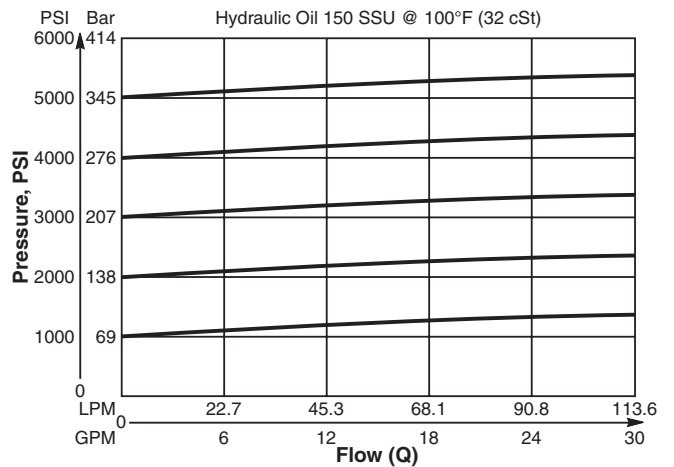
Specifications

Rated Flow	113 LPM (30 GPM)
Maximum Inlet Pressure	380 Bar (5500 PSI)
Maximum Pressure Setting	350 Bar (5000 PSI)
Maximum Tank Pressure	350 Bar (5000 PSI)
Reseat Pressure	90% of crack pressure
Leakage at 150 SSU (32 cSt)	82 cc/min. (5 cu. in./min.) @ 75% of crack pressure
Cartridge Material	All parts steel. All operating parts hardened steel.
Operating Temp. Range/Seals	-45°C to +93.3°C ("D"-Ring) (-50°F to +200°F) -31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)
Fluid Compatibility/Viscosity	Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)
Filtration	ISO Code 16/13, SAE Class 4 or better
Approx. Weight	.23 kg (.50 lbs.)
Cavity	C10-2 (See BC Section for more details)
Form Tool	Rougher None Finisher NFT10-2F

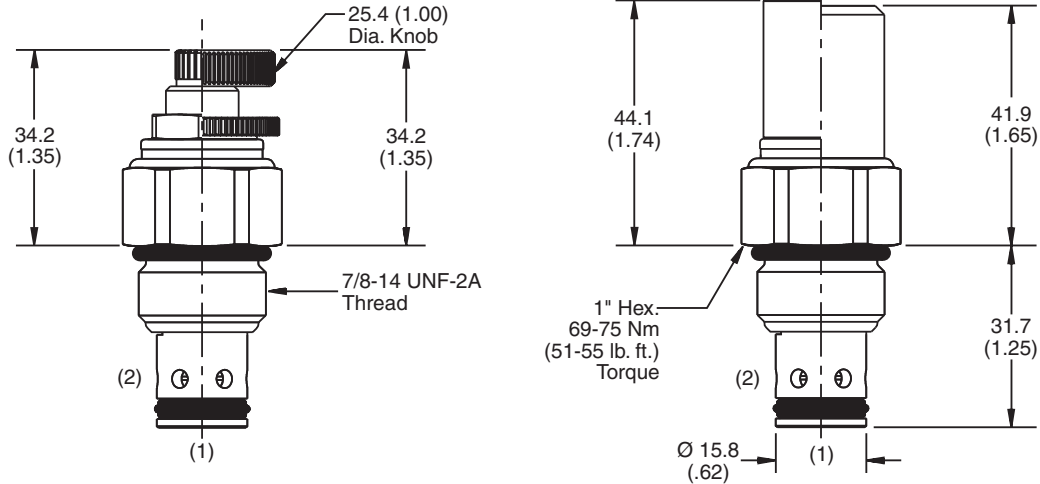
Performance Curves

Flow vs. Inlet Pressure

(Pressure rise through cartridge only)

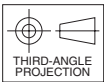


Dimensions Millimeters (Inches)

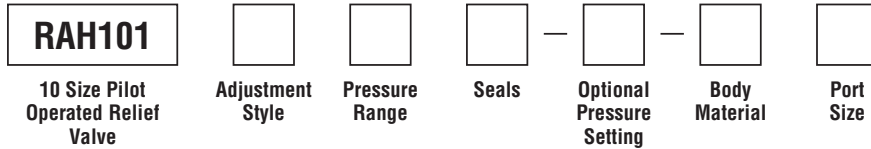


Screw/Knob Version

Fixed Cap/Tamper Resistant Version



Ordering Information



Code	Adjustment Style / Kit No.
F	Fixed style, preset at factory.
K	Knob Adjust (717784-10)
S	Screw Adjust
T	Tamper Resistant Cap (125407)

Code	Seals / Kit No.
Omit	"D"-Ring / (SK10-2)
N	Nitrile / (SK10-2N)
V	Fluorocarbon / (SK10-2V)

Code	Body Material
Omit	Steel
A	Aluminum

Code	Pressure Range
10	6.9 - 69 Bar (100 - 1000 PSI) Standard Setting: 34.5 Bar (500 PSI) @ crack pressure, approximately .95 LPM (.25 GPM)
20	6.9 - 138 Bar (100 - 2000 PSI) Standard Setting: 69 Bar (1000 PSI) @ crack pressure, approximately .95 LPM (.25 GPM)
30	13.8 - 207 Bar (200 - 3000 PSI) Standard Setting: 103.5 Bar (1500 PSI) @ crack pressure, approximately .95 LPM (.25 GPM)
50	13.8 - 345 Bar (200 - 5000 PSI) Standard Setting: 172.4 Bar (2500 PSI) @ crack pressure, approximately .95 LPM (.25 GPM)

Optional Pressure Setting
Pressure ± 10 i.e. 235 = 2350 PSI (Omit if standard setting is used) Setting Range: 100 to 5000 PSI All settings at crack pressure, approximately .95 LPM (.25 GPM)

Code	Port Size	Body Part No.
Omit	Cartridge Only	
4P	1/4" NPTF	(B10-2-*4P)
6P	3/8" NPTF	(B10-2-*6P)
8P	1/2" NPTF	(B10-2-*8P)
6T	SAE-6	(B10-2-*6T)
T6T	SAE-6	(B10-2-T6T)†
8T	SAE-8	(B10-2-*8T)
T8T	SAE-8	(B10-2-T8T)†
6B	3/8" BSPG	(B10-2-6B)†

* Add "A" for aluminum, omit for steel.
 † Steel body only.



Technical Information

General Description

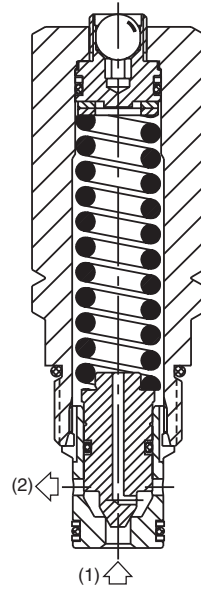
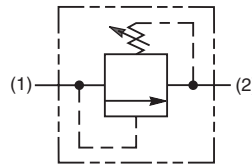
Direct Acting Poppet-Type Relief Valve. Pressure Equipment Directive (PED 97/23/EC) compliant to hazard category IV. For additional information see Technical Tips on pages PC1-PC6.

Features

- Fast response with good stability
- Compact space saving design
- Poppet type construction for lower leakage
- Full 420 Bar (6000 PSI) pressure capability
- Hardened working parts for maximum durability
- Tamperproof setting
- All external parts zinc plated

Specifications

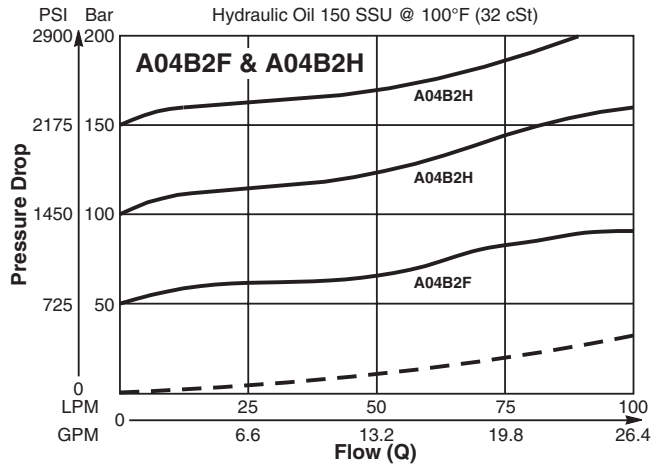
Rated Flow	100 LPM (26 GPM)
Maximum Inlet Pressure	FY - 2-100 Bar (29-1450 PSI) HY - 5-210 Bar (72-3000 PSI) PY - 5-420 Bar (72-6000 PSI)
Maximum Pressure Setting	420 Bar (6000 PSI)
Sensitivity: Pressure/Turn	FY - 11 Bar (165 PSI) HY - 21 Bar (305 PSI) PY - 44 Bar (630 PSI)
Leakage at 150 SSU (32 cSt)	5 drops/min. @ 100 Bar (1450 PSI)
Cartridge Material	All parts steel. All operating parts hardened steel.
Operating Temp. Range/Seals	-40°C to +93.3°C (Nitrile) (-40°F to +200°F) -31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)
Fluid Compatibility/Viscosity	Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)
Filtration	ISO Code 16/13, SAE Class 4 or better
Approx. Weight	0.25 kg (0.55 lbs.)
Cavity	C10-2 (See BC Section for more details)
Form Tool	Rougher None Finisher NFT10-2F



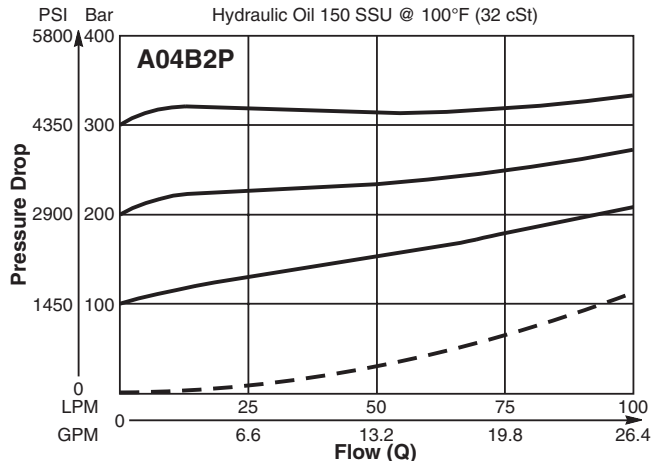
Performance Curves

(Pressure rise through cartridge only)

Flow vs. Inlet Pressure

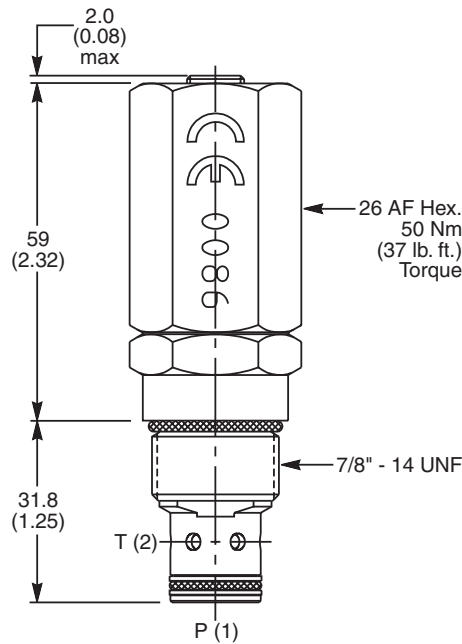


Flow vs. Inlet Pressure

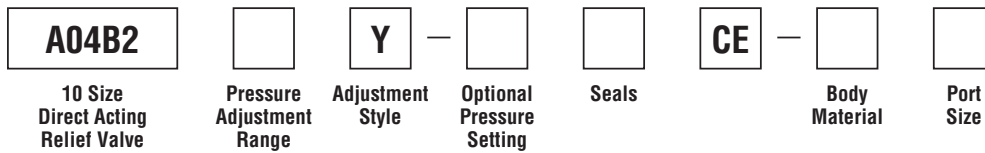


- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bore/ies & Cavities
- TD** Technical Data

Dimensions Millimeters (Inches)



Ordering Information



Code	Pressure Adjustment Range
F	2 - 100 Bar (29 - 1450 PSI)
H	5 - 210 Bar (72 - 3000 PSI)
P	5 - 420 Bar (72 - 6000 PSI)

Code	Seals / Kit No.
N	Nitrile, Buna-N (Std.) / (SK30503NP-1)
V	Fluorocarbon / (SK30503VP-1)

Code	Body Material
Omit	Steel
A	Aluminum

Code	Adjustment Style / Kit No.
Y	Non Adjustable Preset (Std.)

Optional Pressure Setting	
Setting must be specified (Bar)	

Code	Port Size	Body Part No.
Omit	Cartridge Only	
4P	1/4" NPTF	(B10-2-*4P)
6P	3/8" NPTF	(B10-2-*6P)
8P	1/2" NPTF	(B10-2-*8P)
6T	SAE-6	(B10-2-*6T)
T6T	SAE-6	(B10-2-T6T)†
8T	SAE-8	(B10-2-*8T)
T8T	SAE-8	(B10-2-T8T)†
6B	3/8" BSPG	(B10-2-6B)†

* Add "A" for aluminum, omit for steel.
 † Steel body only.

Technical Information

CV

Check Valves

SH

Shuttle Valves

LM

Load/Motor Controls

FC

Flow Controls

PC

Pressure Controls

LE

Logic Elements

DC

Directional Controls

MV

Manual Valves

SV

Solenoid Valves

PV

Proportional Valves

CE

Coils & Electronics

BC

Bodies & Cavities

TD

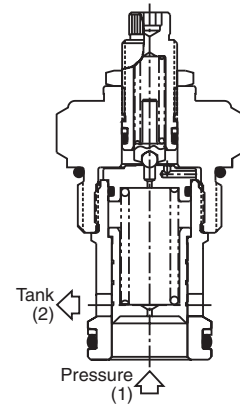
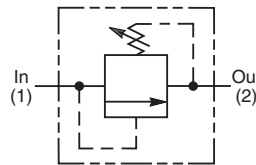
Technical Data

General Description

Pilot Operated Spool-Type Relief Valve. For additional information see Technical Tips on pages PC1-PC6.

Features

- Low override curve
- Ball-type pilot for added stability
- High accuracy - pilot operated design
- Hardened, precision ground parts for durability
- Compact size for reduced space requirements
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.



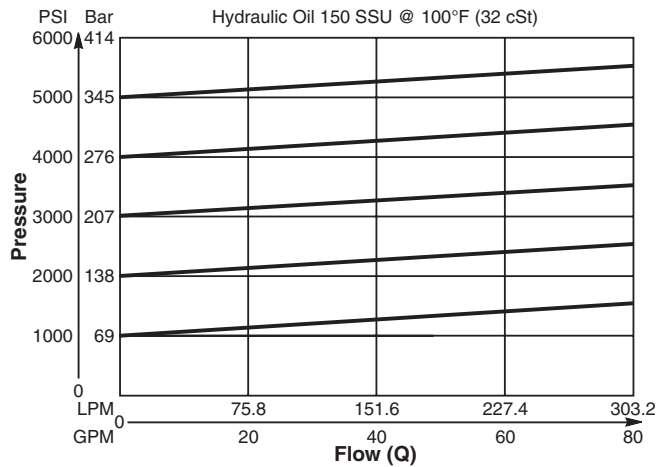
Specifications

Maximum Flow	302.8 LPM (80 GPM)
Maximum Inlet Pressure	380 Bar (5500 PSI)
Maximum Pressure Setting	350 Bar (5000 PSI)
Maximum Tank Pressure	350 Bar (5000 PSI)
Reseat Pressure	80% of crack pressure
Leakage at 150 SSU (32 cSt)	82 cc/min. (5 cu. in./min.) @ 75% of crack pressure
Cartridge Material	All parts steel. All operating parts hardened steel.
Operating Temp. Range (Ambient)	-40°C to +93.3°C (Nitrile) (-40°F to +200°F) -31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)
Fluid Compatibility/ Viscosity	Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)
Filtration	ISO Code 16/13, SAE Class 4 or better
Approx. Weight	0.9 kg (2.0 lbs.)
Cavity	C16-2 (See BC Section for more details)
Form Tool	Rougher None Finisher NFT16-2F

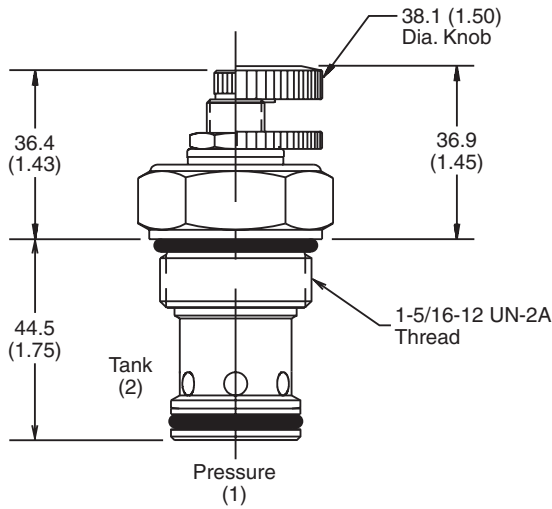
Performance Curve

Flow vs. Inlet Pressure

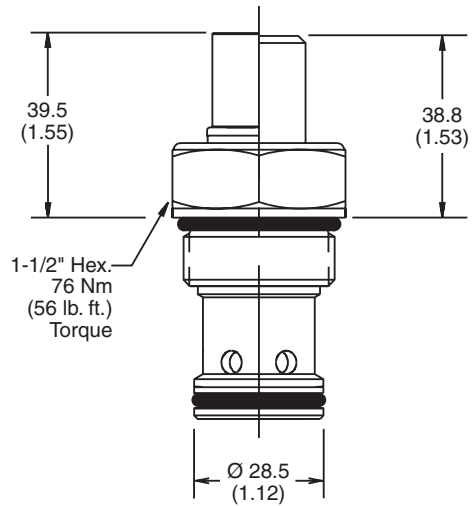
(Pressure rise through cartridge only)



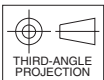
Dimensions Millimeters (Inches)



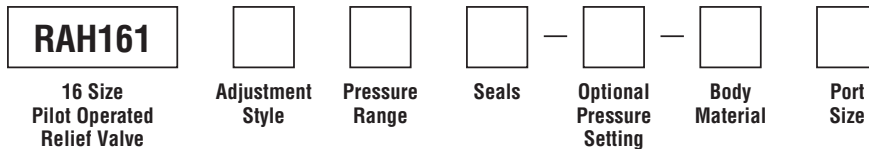
Screw/Knob Version



Fixed Cap/Tamper Resistant Version



Ordering Information



Code	Adjustment Style / Kit No.
F	Fixed style, preset at factory.
K	Knob Adjust (717784-15)
S	Screw Adjust
T	Tamper Resistant Cap (717785)

Code	Seals / Kit No.
Omit	Nitrile / (SK16-2)
V	Fluorocarbon / (SK16-2V)

Code	Body Material
Omit	Steel
A	Aluminum

Code	Pressure Range
10	6.9 - 69 Bar (100 - 1000 PSI) Standard Setting: 34.5 Bar (500 PSI) @ 37.5 LPM (10 GPM)
20	13.8 - 138 Bar (200 - 2000 PSI) Standard Setting: 69 Bar (1000 PSI) @ 37.5 LPM (10 GPM)
30	20.7 - 207 Bar (300 - 3000 PSI) Standard Setting: 103.5 Bar (1500 PSI) @ 37.5 LPM (10 GPM)
50	34.5 - 345 Bar (500 - 5000 PSI) Standard Setting: 172.4 Bar (2500 PSI) @ 37.5 LPM (10 GPM)

Optional Pressure Setting
Pressure ÷ 10 i.e. 235 = 2350 PSI (Omit if standard setting is used) Setting Range: 100 to 5000 PSI All settings at 37.5 LPM (10 GPM)

Code	Port Size	Body Part No.
Omit	Cartridge Only	
12P	3/4" NPTF	(B16-2-*12P)
16P	1" NPTF	(B16-2-*16P)
8T	SAE-8	(B16-2-*8T)
12T	SAE-12	(B16-2-*12T)
16T	SAE-16	(B16-2-*16T)
12B	3/4" BSPG	(B16-2-12B)†
16B	1" BSPG	(B16-2-*16B)

* Add "A" for aluminum, omit for steel.
 † Steel body only.

Technical Information

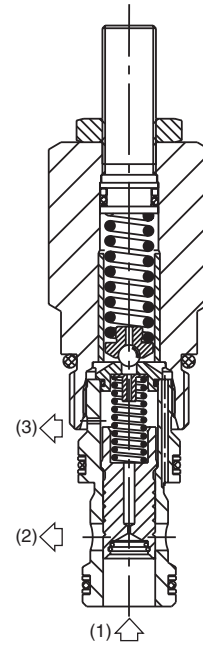
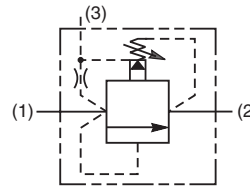
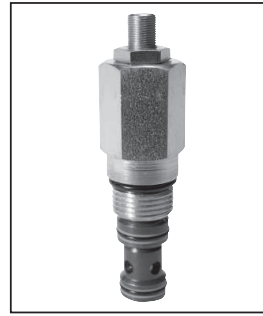
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bore/ies & Cavities
- TD** Technical Data

General Description

Pilot Operated, Spool-Type, Ventable Relief Valve. For additional information see Technical Tips on pages PC1-PC6.

Features

- High flow capacity
- Full tank line back pressure capability
- Excellent flow pressure characteristics for consistent pressure setting
- Ideal for pump relief and remote control or unloading via vent (port 3)
- Integral 250 micron pilot flow filter
- Hardened working parts for maximum durability
- Adjustable and tamperproof versions available
- All external parts zinc plated



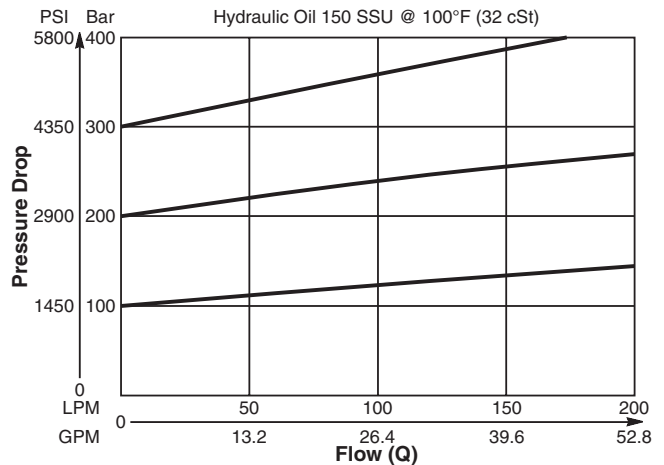
Specifications

Rated Flow	190 LPM (50 GPM)
Maximum Inlet Pressure	H - 10-210 Bar (145-3000 PSI) P - 10-420 Bar (145-6000 PSI)
Maximum Pressure Setting	420 Bar (6000 PSI)
Maximum Tank Pressure	420 Bar (6000 PSI)
Leakage at 150 SSU (32 cSt)	25 ml/min. @ 100 Bar (1450 PSI)
Cartridge Material	All parts steel. All operating parts hardened steel.
Operating Temp. Range/Seals	-40°C to +93.3°C (Nitrile) (-40°F to +200°F) -31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)
Fluid Compatibility/Viscosity	Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)
Filtration	ISO Code 16/13, SAE Class 4 or better
Approx. Weight	0.25 kg (0.55 lbs.)
Cavity	C10-3S (See BC Section for more details)
Form Tool	Rougher None Finisher

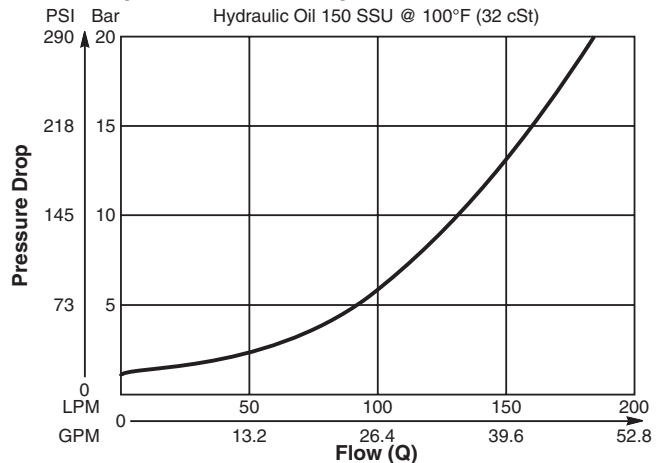
Performance Curves

(Pressure rise through cartridge only)

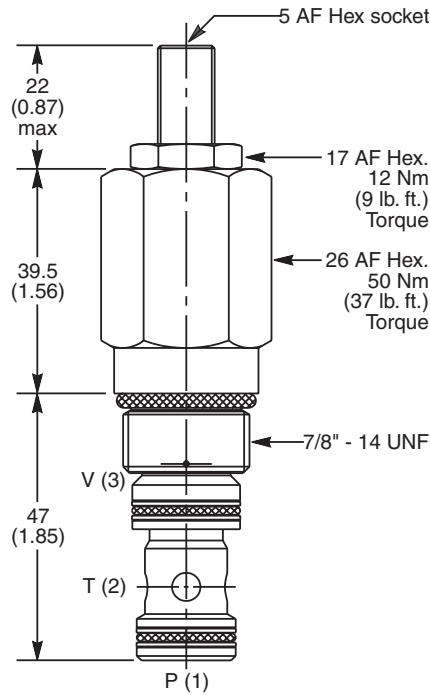
Flow vs. Inlet Pressure 1 to 2



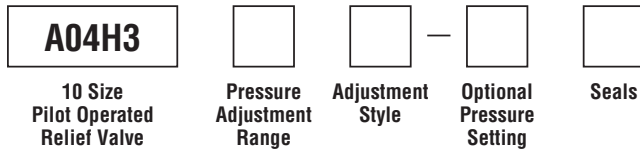
Vented Open Pressure Drop 1 to 2



Dimensions Millimeters (Inches)



Ordering Information



Code	Pressure Adjustment Range
H	10 - 210 Bar (145 - 3000 PSI)
P	10 - 420 Bar (145 - 6000 PSI)

Code	Adjustment Style / Kit No.
Z	Screw Adjust (Std.)
W	Knob Adjust
T	Tamper Resistant Cap (TC1130)

Optional Pressure Setting	
Specify setting if required (Bar)	
A04H3H Standard Setting: 100 Bar (1450 PSI) @ 15 LPM (4.0 GPM)	
A04H3P Standard Setting: 200 Bar (2900 PSI) @ 15 LPM (4.0 GPM)	

Code	Seals / Kit No.
N	Nitrile, Buna-N (Std.) / (SK30504N-1)
V	Fluorocarbon / (SK30504V-1)

Order Bodies Separately



Code	Porting
710	5/8" SAE (main) 3/8" SAE (aux)
711	3/4" BSP (main) 1/4" BSP (aux)

Code	Body Material
A	Aluminum
S	Steel

Technical Information

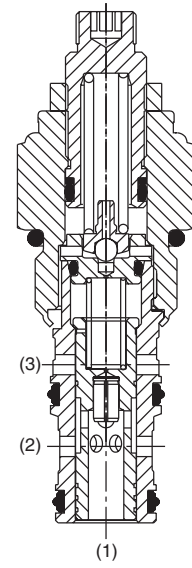
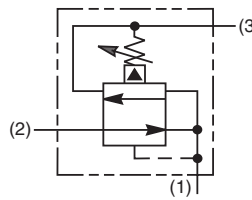
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bore/ies & Cavities
- TD** Technical Data

General Description

Pilot Operated Pressure Reducing/Relieving Valve. For additional information see Technical Tips on pages PC1-PC6.

Features

- Hardened, precision ground parts for durability
- Low profile adapter for minimal space requirements
- Fully guided poppet for more consistent reseal
- Steel adapters are coated with yellow zinc dichromate for protection from salt spray
- Polyurethane “D”-Ring eliminates backup rings and prevents hydrolysis
- Internal screening protects pilot spring from debris



Specifications

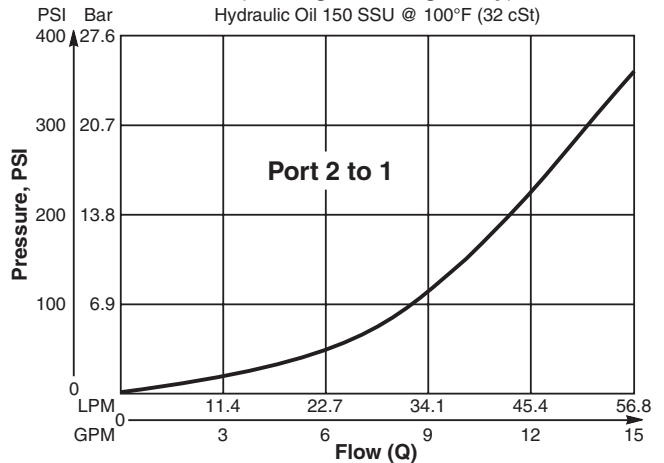
Rated Flow	56.3 LPM (15 GPM)
Maximum Inlet Pressure	380 Bar (5500 PSI)
Maximum Pressure Setting	350 Bar (5000 PSI)
Maximum Tank Pressure	350 Bar (5000 PSI)
Maximum Drain Flow	0.94 LPM (0.25 GPM)
Cartridge Material	All parts steel. All operating parts hardened steel.
Operating Temp. Range/Seals	-45°C to +93.3°C (“D”-Ring) (-50°F to +200°F) -31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)
Fluid Compatibility/Viscosity	Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)
Filtration	ISO Code 16/13, SAE Class 4 or better
Approx. Weight	.23 kg (0.5 lbs.)
Cavity	C10-3 (See BC Section for more details)
Form Tool	Rougher NTF10-3R Finisher NTF10-3F

Performance Curves

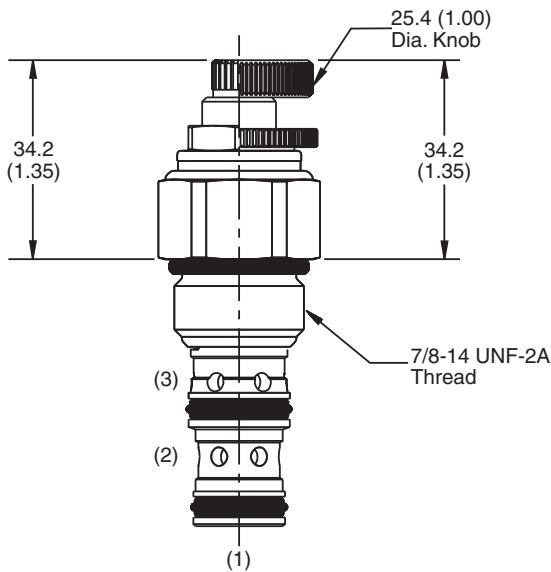
Flow vs. Regulated Pressure (Through cartridge only)



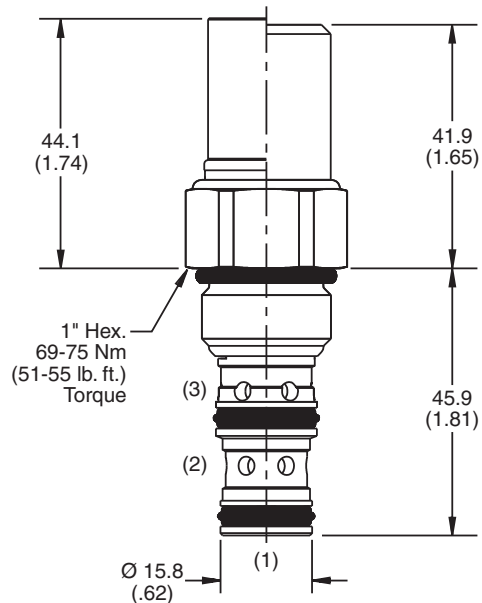
Pressure vs. Flow (Through cartridge only)



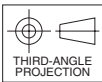
Dimensions Millimeters (Inches)



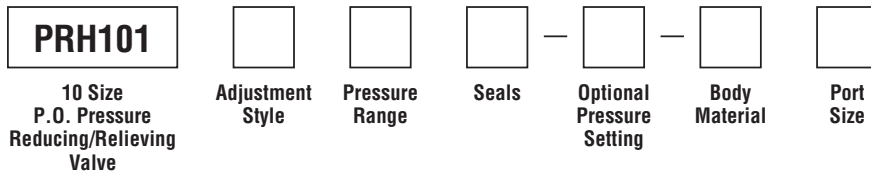
Screw/Knob Version



Fixed Cap/Tamper Resistant Version



Ordering Information



Code	Adjustment Style / Kit No.
F	Fixed style, preset at factory.
K	Knob Adjust (717784-10)
S	Screw Adjust
T	Tamper Resistant Cap (718083)

Code	Seals / Kit No.
Omit	"D"-Ring / (SK10-3)
N	Nitrile / (SK10-3N)
V	Fluorocarbon / (SK10-3V)

Code	Body Material
Omit	Steel
A	Aluminum

Code	Pressure Range
10	6.9 - 69 Bar (100 - 1000 PSI) Standard Setting: 34.5 Bar (500 PSI) @ crack pressure, approximately .95 LPM (.25 GPM)
20	6.9 - 138 Bar (100 - 2000 PSI) Standard Setting: 69 Bar (1000 PSI) @ crack pressure, approximately .95 LPM (.25 GPM)
30	13.8 - 207 Bar (200 - 3000 PSI) Standard Setting: 103.5 Bar (1500 PSI) @ crack pressure, approximately .95 LPM (.25 GPM)
50	13.8 - 345 Bar (200 - 5000 PSI) Standard Setting: 172.4 Bar (2500 PSI) @ crack pressure, approximately .95 LPM (.25 GPM)

Optional Pressure Setting
Pressure \div 10 i.e. 235 = 2350 PSI (Omit if standard setting is used) Setting Range: 100 to 5000 PSI All settings at crack pressure, approximately .95 LPM (.25 GPM)

Code	Port Size	Body Part No.
Omit	Cartridge Only	
4P	1/4" NPTF	(B10-3-*4P)
6P	3/8" NPTF	(B10-3-*6P)
8P	1/2" NPTF	(B10-3-*8P)
6T	SAE-6	(B10-3-*6T)
8T	SAE-8	(B10-3-*8T)
6B	3/8" BSPG	(B10-3-6B)†
8B	1/2" BSPG	(B10-3-*8P)

* Add "A" for aluminum, omit for steel.
 † Steel body only.

Technical Information

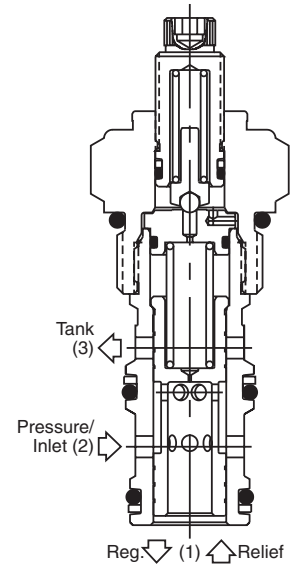
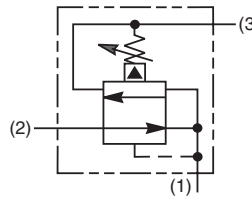
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bore/ies & Cavities
- TD** Technical Data

General Description

Pilot Operated Pressure Reducing/Relieving Valve. For additional information see Technical Tips on pages PC1-PC6.

Features

- Hardened, precision ground parts for durability
- Ball-type pilot for added stability
- Full capacity reducing/relieving
- Performs job of two separate valves in one
- All external parts have yellow zinc dichromate. This coating is ideal for salt spray applications.



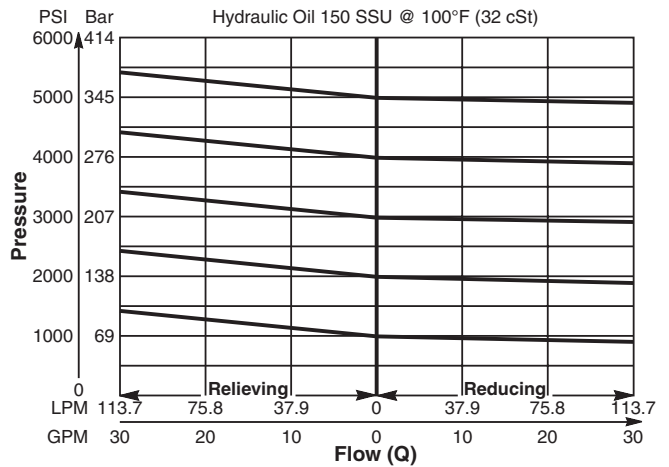
Specifications

Rated Flow	113.7 LPM (30 GPM)
Maximum Inlet Pressure	380 Bar (5500 PSI)
Maximum Pressure Setting	350 Bar (5000 PSI)
Maximum Tank Pressure	350 Bar (5000 PSI)
Maximum Drain Flow	0.94 LPM (0.25 GPM)
Cartridge Material	All parts steel. All operating parts hardened steel.
Operating Temp. Range/Seals	-40°C to +93.3°C (Nitrile) (-40°F to +200°F) -31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)
Fluid Compatibility/Viscosity	Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)
Filtration	ISO Code 16/13, SAE Class 4 or better
Approx. Weight	.27 kg (0.6 lbs.)
Cavity	C12-3 (See BC Section for more details)
Form Tool	Rougher NTF12-3R Finisher NTF12-3F

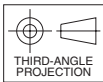
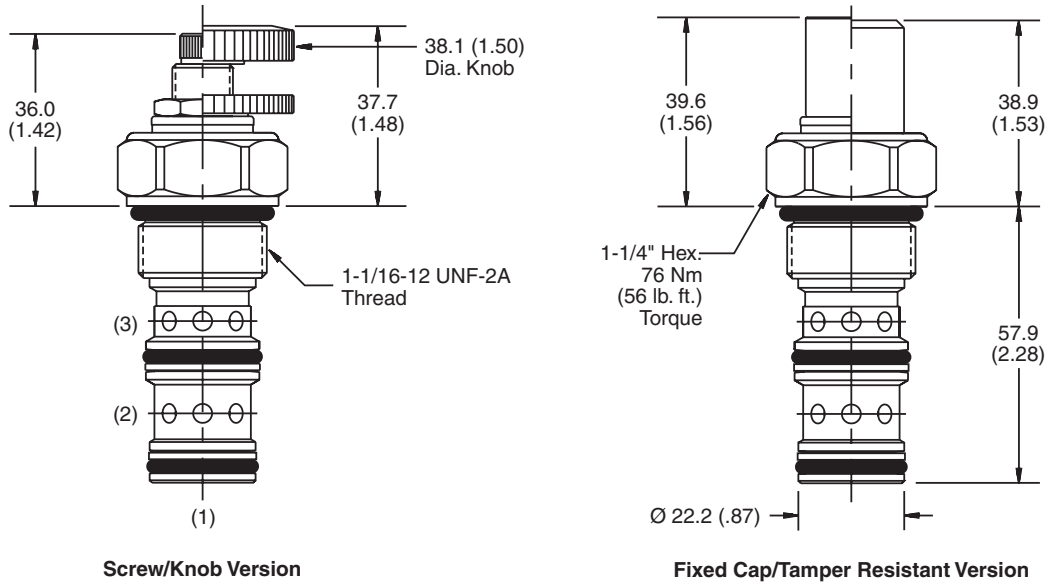
Performance Curve

Flow vs. Regulated Pressure

(Pressure rise through cartridge only)



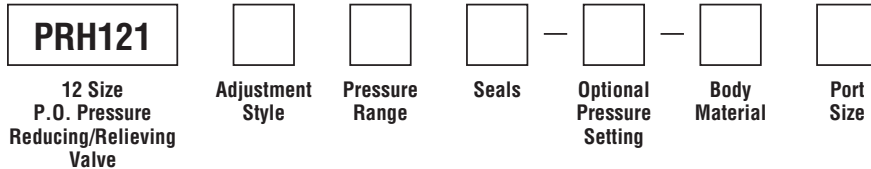
Dimensions Millimeters (Inches)



Screw/Knob Version

Fixed Cap/Tamper Resistant Version

Ordering Information



Code	Adjustment Style / Kit No.
F	Fixed style, preset at factory.
K	Knob Adjust (717784-15)
S	Screw Adjust
T	Tamper Resistant Cap (717785)

Code	Seals / Kit No.
Omit	Nitrile / (SK12-3)
V	Fluorocarbon / (SK12-3V)

Code	Body Material
Omit	Steel
A	Aluminum

Code	Pressure Range
10	6.9 - 69 Bar (100 - 1000 PSI) Standard Setting: 34.5 Bar (500 PSI) @ 11.3 LPM (3 GPM)
20	13.8 - 138 Bar (200 - 2000 PSI) Standard Setting: 69 Bar (1000 PSI) @ 11.3 LPM (3 GPM)
30	20.7 - 207 Bar (300 - 3000 PSI) Standard Setting: 103.5 Bar (1500 PSI) @ 11.3 LPM (3 GPM)
50	34.5 - 345 Bar (500 - 5000 PSI) Standard Setting: 172.4 Bar (2500 PSI) @ 11.3 LPM (3 GPM)

Optional Pressure Setting
Pressure \pm 10 i.e. 235 = 2350 PSI (Omit if standard setting is used) Setting Range: 100 to 5000 PSI All settings at 11.3 LPM (3 GPM)

Code	Port Size	Body Part No.
Omit	Cartridge Only	
8T	SAE-8	(B12-3-*8T)
12T	SAE-12	(B12-3-*12T)
8B	1/2" BSPG	(B12-3-8B)†

* Add "A" for aluminum, omit for steel.
 † Steel body only.



CV

Check Valves

SH

Shuttle Valves

LM

Load/Motor Controls

FC

Flow Controls

PC

Pressure Controls

LE

Logic Elements

DC

Directional Controls

MV

Manual Valves

SV

Solenoid Valves

PV

Proportional Valves

CE

Coils & Electronics

BC

Bodies & Cavities

TD

Technical Data

Technical Information

CV Check Valves
SH Shuttle Valves
LM Load/Motor Controls
FC Flow Controls
PC Pressure Controls
LE Logic Elements
DC Directional Controls
MV Manual Valves
SV Solenoid Valves
PV Proportional Valves
CE Coils & Electronics
BC Bore & Cavities
TD Technical Data

General Description

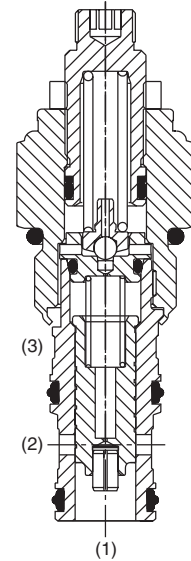
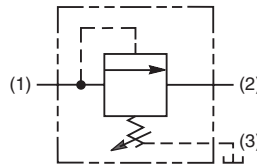
Pilot Operated Sequence Valve (Internally Piloted, Externally Drained). For additional information see Technical Tips on pages PC1-PC6.

Features

- Hardened, precision ground parts for durability
- Low profile adapter for minimal space requirements
- Fully guided poppet for more consistent reseal
- Steel adapters are coated with yellow zinc dichromate for protection from salt spray
- Polyurethane “D”-Ring eliminates backup rings and prevents hydrolysis
- Internal screening protects pilot spring from debris

Specifications

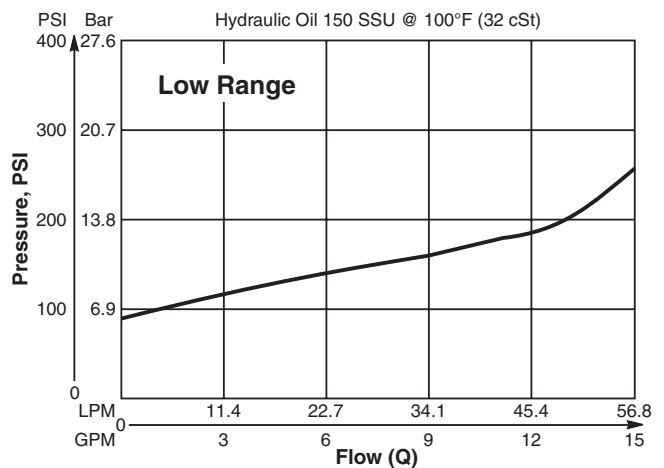
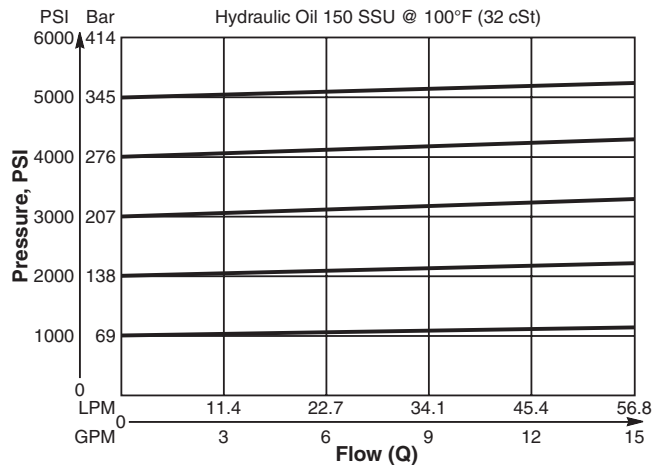
Rated Flow	56.3 LPM (15 GPM)
Maximum Inlet Pressure	380 Bar (5500 PSI)
Maximum Pressure Setting	350 Bar (5000 PSI)
Maximum Tank Pressure	350 Bar (5000 PSI)
Maximum Drain Flow (Port 3)	0.94 LPM (0.25 GPM)
Reseat Pressure	90% of crack pressure
Leakage at 150 SSU (32 cSt)	82 cc/min. (5 cu. in./min.) @ 210 Bar (3000 PSI)
Cartridge Material	All parts steel. All operating parts hardened steel.
Operating Temp. Range/Seals	-45°C to +93.3°C (“D”-Ring) (-50°F to +200°F) -31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)
Fluid Compatibility/Viscosity	Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)
Filtration	ISO Code 16/13, SAE Class 4 or better
Approx. Weight	.45 kg (1.0 lbs.)
Cavity	C10-3 (See BC Section for more details)
Form Tool	Rougher NTF10-3R Finisher NTF10-3F



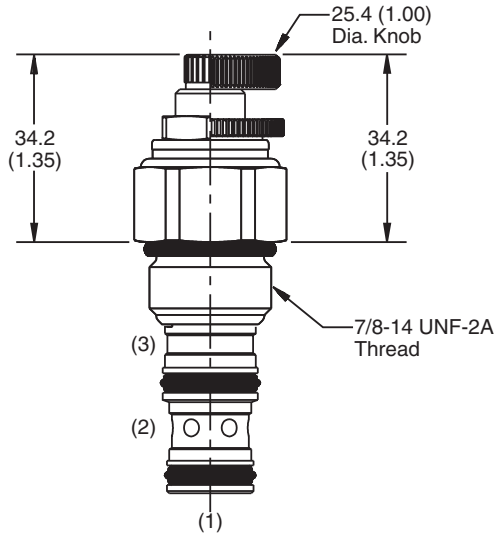
Performance Curves

Flow vs. Inlet Pressure

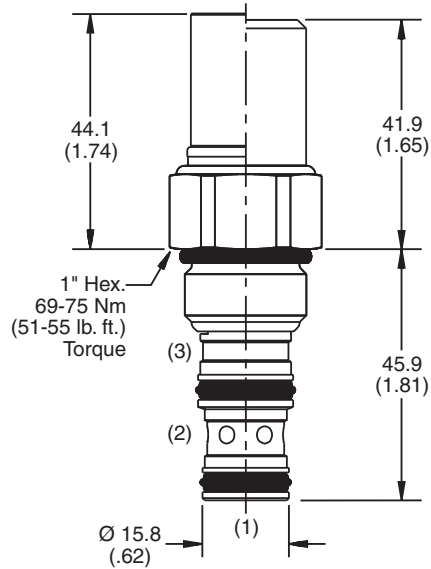
(Pressure rise through cartridge only)



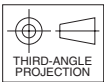
Dimensions Millimeters (Inches)



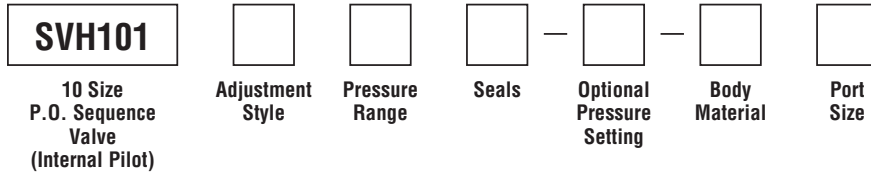
Screw/Knob Version



Fixed Cap/Tamper Resistant Version



Ordering Information



Code	Adjustment Style / Kit No.
F	Fixed style, preset at factory.
K	Knob Adjust (717784-10)
S	Screw Adjust
T	Tamper Resistant Cap (718083)

Code	Seals / Kit No.
Omit	"D"-Ring / (SK10-3)
N	Nitrile / (SK10-3N)
V	Fluorocarbon / (SK10-3V)

Code	Body Material
Omit	Steel
A	Aluminum

Code	Pressure Range
10	6.9 - 69 Bar (100 - 1000 PSI) Standard Setting: 34.5 Bar (500 PSI) @ crack pressure, approximately .95 LPM (.25 GPM)
20	6.9 - 138 Bar (100 - 2000 PSI) Standard Setting: 69 Bar (1000 PSI) @ crack pressure, approximately .95 LPM (.25 GPM)
30	13.8 - 207 Bar (200 - 3000 PSI) Standard Setting: 103.5 Bar (1500 PSI) @ crack pressure, approximately .95 LPM (.25 GPM)
50	13.8 - 345 Bar (200 - 5000 PSI) Standard Setting: 172.4 Bar (2500 PSI) @ crack pressure, approximately .95 LPM (.25 GPM)

Optional Pressure Setting
Pressure \pm 10 i.e. 235 = 2350 PSI (Omit if standard setting is used) Setting Range: 100 to 5000 PSI All settings at crack pressure, approximately .95 LPM (.25 GPM)

Code	Port Size	Body Part No.
Omit	Cartridge Only	
4P	1/4" NPTF	(B10-3-*4P)
6P	3/8" NPTF	(B10-3-*6P)
8P	1/2" NPTF	(B10-3-*8P)
6T	SAE-6	(B10-3-*6T)
8T	SAE-8	(B10-3-*8T)
6B	3/8" BSPG	(B10-3-6B)†
8B	1/2" BSPG	(B10-3-*8B)

* Add "A" for aluminum, omit for steel.
 † Steel body only.

Technical Information

CV

Check Valves

SH

Shuttle Valves

LM

Load/Motor Controls

FC

Flow Controls

PC

Pressure Controls

LE

Logic Elements

DC

Directional Controls

MV

Manual Valves

SV

Solenoid Valves

PV

Proportional Valves

CE

Coils & Electronics

BC

Bodies & Cavities

TD

Technical Data

General Description

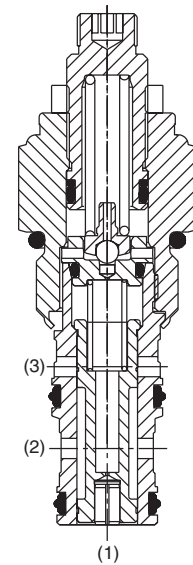
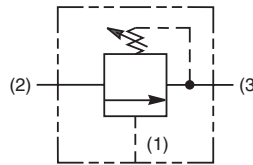
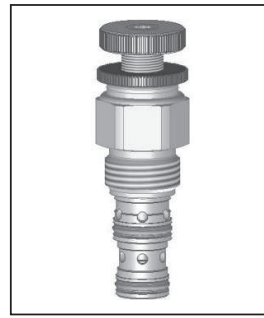
Pilot Operated Sequence Valve (Externally Piloted, Internally Vented). For additional information see Technical Tips on pages PC1-PC6.

Features

- Hardened, precision ground parts for durability
- Low profile adapter for minimal space requirements
- Fully guided poppet for more consistent reseal
- Steel adapters are coated with yellow zinc dichromate for protection from salt spray
- Polyurethane “D”-Ring eliminates backup rings and prevents hydrolysis
- Internal screening protects pilot spring from debris

Specifications

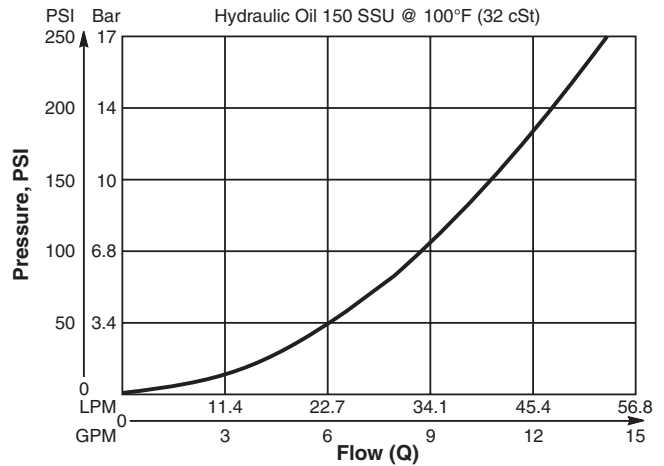
Rated Flow	56.3 LPM (15 GPM)
Maximum Inlet Pressure	380 Bar (5500 PSI)
Maximum Pressure Setting	350 Bar (5000 PSI)
Maximum Tank Pressure	350 Bar (5000 PSI)
Maximum Drain Flow	See maximum drain flow chart (Lower right)
Reseat Pressure	90% of crack pressure
Leakage at 150 SSU (32 cSt)	82 cc/min. (5 cu. in./min.) @ 210 Bar (3000 PSI)
Cartridge Material	All parts steel. All operating parts hardened steel.
Operating Temp. Range/Seals	-45°C to +93.3°C (“D”-Ring) (-50°F to +200°F) -31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)
Fluid Compatibility/Viscosity	Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)
Filtration	ISO Code 16/13, SAE Class 4 or better
Approx. Weight	.45 kg (1.0 lbs.)
Cavity	C10-3 (See BC Section for more details)
Form Tool	Rougher NTF10-3R Finisher NTF10-3F



Performance Curve

Flow vs. Inlet Pressure

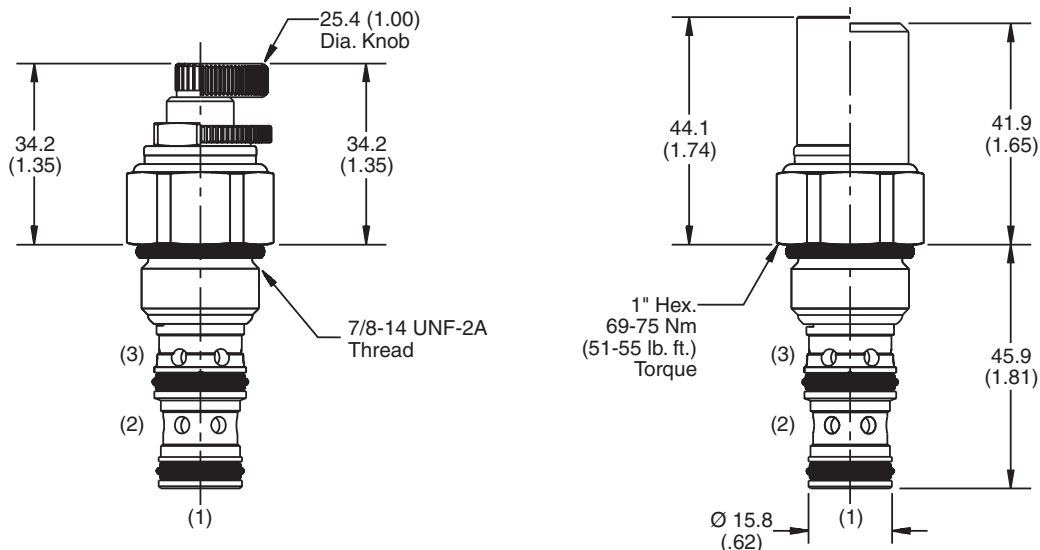
(Pressure rise through cartridge only)



Maximum Drain Flow

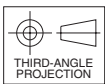
P _{PILOT} - P _{SETTING}	Drain Flow
6.9 Bar (100 PSI)	0.34 LPM (0.09 GPM)
35 Bar (500 PSI)	0.76 LPM (0.20 GPM)
69 Bar (1000 PSI)	1.08 LPM (0.29 GPM)
138 Bar (2000 PSI)	1.53 LPM (0.40 GPM)
207 Bar (3000 PSI)	1.87 LPM (0.50 GPM)

Dimensions Millimeters (Inches)

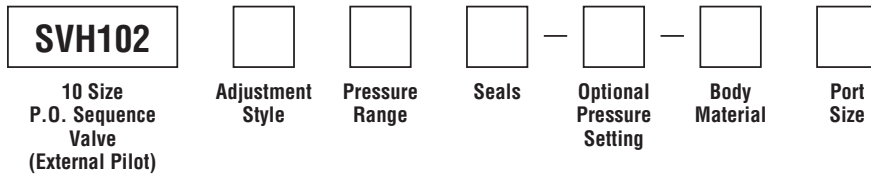


Screw/Knob Version

Fixed Cap/Tamper Resistant Version



Ordering Information



Code	Adjustment Style / Kit No.
F	Fixed style, preset at factory.
K	Knob Adjust (717784-10)
S	Screw Adjust
T	Tamper Resistant Cap (718083)

Code	Seals / Kit No.
Omit	"D"-Ring / (SK10-3)
N	Nitrile / (SK10-3N)
V	Fluorocarbon / (SK10-3V)

Code	Body Material
Omit	Steel
A	Aluminum

Code	Pressure Range
10	6.9 - 69 Bar (100 - 1000 PSI) Standard Setting: 34.5 Bar (500 PSI) @ crack pressure, approximately .95 LPM (.25 GPM)
20	6.9 - 138 Bar (100 - 2000 PSI) Standard Setting: 69 Bar (1000 PSI) @ crack pressure, approximately .95 LPM (.25 GPM)
30	13.8 - 207 Bar (200 - 3000 PSI) Standard Setting: 103.5 Bar (1500 PSI) @ crack pressure, approximately .95 LPM (.25 GPM)
50	13.8 - 345 Bar (200 - 5000 PSI) Standard Setting: 172.4 Bar (2500 PSI) @ crack pressure, approximately .95 LPM (.25 GPM)

Optional Pressure Setting
Pressure ± 10 i.e. 235 = 2350 PSI (Omit if standard setting is used) Setting Range: 100 to 5000 PSI All settings at crack pressure, approximately .95 LPM (.25 GPM)

Code	Port Size	Body Part No.
Omit	Cartridge Only	
4P	1/4" NPTF	(B10-3-*4P)
6P	3/8" NPTF	(B10-3-*6P)
8P	1/2" NPTF	(B10-3-*8P)
6T	SAE-6	(B10-3-*6T)
8T	SAE-8	(B10-3-*8T)
6B	3/8" BSPG	(B10-3-6B)†
8B	1/2" BSPG	(B10-3-*8B)

* Add "A" for aluminum, omit for steel.
 † Steel body only.



CV

Check Valves

SH

Shuttle Valves

LM

Load/Motor Controls

FC

Flow Controls

PC

Pressure Controls

LE

Logic Elements

DC

Directional Controls

MV

Manual Valves

SV

Solenoid Valves

PV

Proportional Valves

CE

Coils & Electronics

BC

Bodies & Cavities

TD

Technical Data

Technical Information

CV

Check Valves

SH

Shuttle Valves

LM

Load/Motor Controls

FC

Flow Controls

PC

Pressure Controls

LE

Logic Elements

DC

Directional Controls

MV

Manual Valves

SV

Solenoid Valves

PV

Proportional Valves

CE

Coils & Electronics

BC

Bodies & Cavities

TD

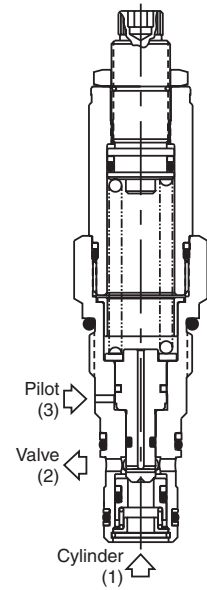
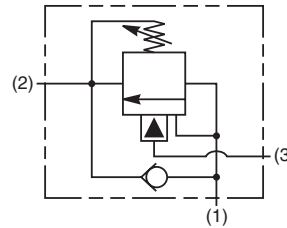
Technical Data

General Description

Cartridge Style Counterbalance Valve.
For additional information see Technical Tips on pages LM1-LM4.

Features

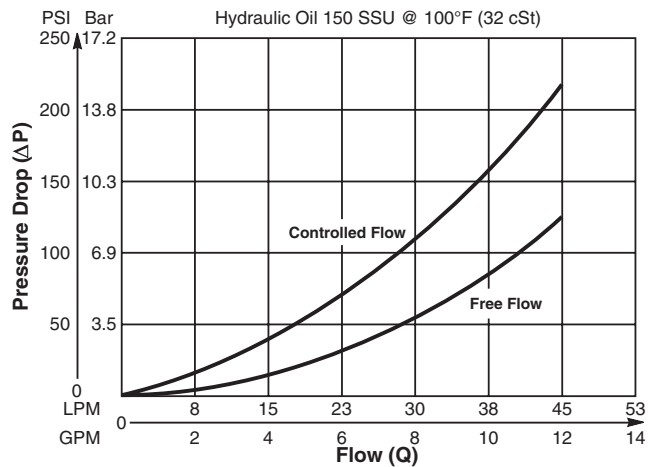
- Sealed spool type design for improved stability and accuracy as well as low leakage
- Low leakage poppet-type check valve for reliable load holding
- All external parts have yellow zinc dichromate finish.
- Parker cartridge design for ease of installation and maintenance
- Compact size for reduced space requirements



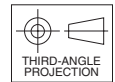
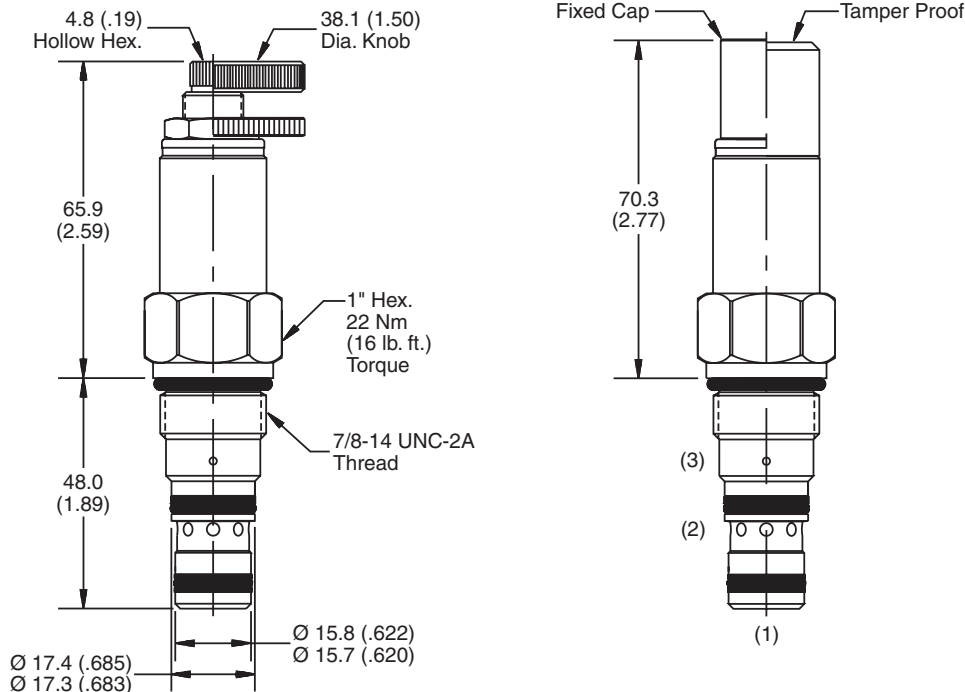
Specifications

Rated Flow	45 LPM (12 GPM)
Maximum Inlet Pressure	380 Bar (5500 PSI) - Steel 210 Bar (3000 PSI) - Aluminum
Maximum Setting Pressure	350 Bar (5000 PSI) - Steel 210 Bar (3000 PSI) - Aluminum
Leakage at 150 SSU (32 cSt)	5 drops/min. (.33 cc/min.) @ 80% of thermal crack pressure
Cartridge Material	All parts steel. All operating parts hardened steel.
Operating Temp. Range/Seals	-40°C to +93.3°C (Nitrile) (-40°F to +200°F) -31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)
Fluid Compatibility/Viscosity	Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)
Filtration	ISO Code 16/13, SAE Class 4 or better
Approx. Weight	.23 kg (0.5 lbs.)
Cavity	C10-3 (See BC Section for more details)
Form Tool	Rougher NFT10-3R Finisher NFT10-3F

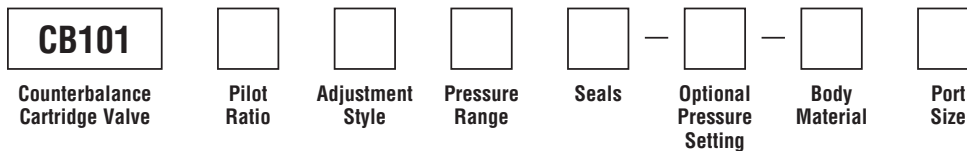
Performance Curve
Flow vs. Pressure Drop
(Through cartridge only)



Dimensions Millimeters (Inches)



Ordering Information



Code	Pilot Ratio
A	3:1
B	4.5:1
C	7:1

Code	Pressure Range
10	20.7 - 90 Bar (300 - 1300 PSI) Standard Setting: 138 Bar (2000 PSI) 69 Bar (1000 PSI) @ 11.3 LPM (3 GPM)
20	69 - 172.4 Bar (1000 - 2500 PSI) Standard Setting: 138 Bar (2000 PSI) @ 11.3 LPM (3 GPM)
30	138 - 350 Bar (2000 - 5000 PSI) Standard Setting: 210 Bar (3000 PSI) @ 11.3 LPM (3 GPM)

Code	Seals / Kit No.
Omit	Nitrile / (SK10-3N)
V	Fluorocarbon / (SK10-3V)

Code	Body Material
Omit	Steel
A	Aluminum

Code	Adjustment Style/Kit No.
F	Fixed style, preset at factory.
K	Knob Adjust (717784-10)
S	Screw Adjust
T	Tamper Resistant Cap (717785)

Optional Pressure Setting
Pressure \pm 10 i.e. 235 = 2350 PSI Setting Range: 300 to 5000 PSI All settings at 11.3 LPM (3 GPM)

Code	Port Size	Body Part No.
Omit	Cartridge Only	
6T	SAE-6	(B10-3-*6T)
8T	SAE-8	(B10-3-*8T)
6B	3/8" BSPG	(B10-3-6B)†
8B	1/2" BSPG	(B10-3-*8B)

* Body is available in steel or aluminum.
 † Steel body only.

Technical Information

Load Control Valve

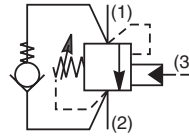
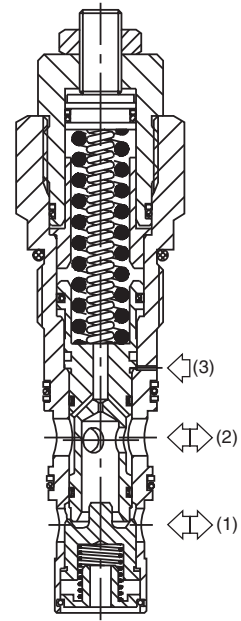
Series E2A060, E2B060, E2H060, E2J060

General Description

Threaded Cartridge Style Counterbalance Valve. Pilot assisted, designed for motion control applications. For additional information see Technical Tips on pages LM1-LM4.

Features

- Poppet construction for minimal leakage
- Incorporates direct acting relief valve for overload protection
- Includes reverse check valve within body, saving space and minimizing installation cost
- Excellent control and very good stability
- Four pilot ratios available, 1.75:1, 3:1, and 5:1 for cylinders and 8:1 for motor control
- Hardened working parts for maximum durability
- Adjustable and tamper resistant versions also available
- All external parts zinc plated

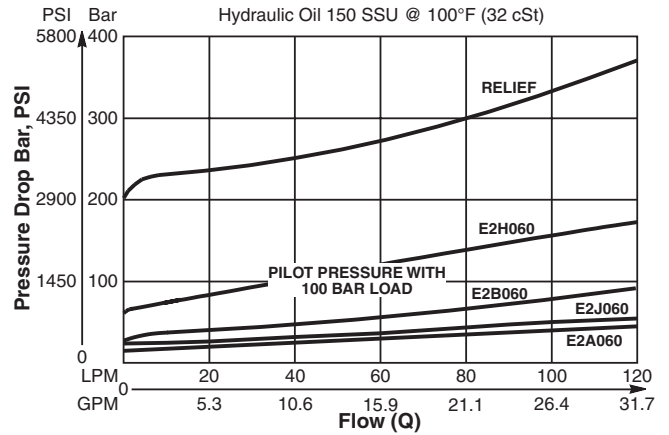


Specifications

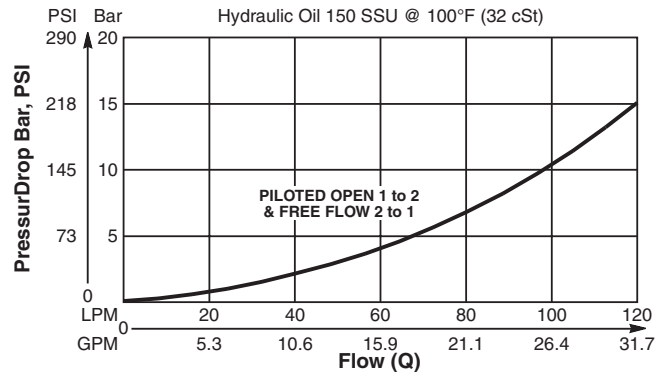
Rated Flow	120 LPM (32 GPM)
Pressure	50 - 350 Bar (725 - 5000 PSI)
Sensitivity: Pressure/Turn	44 Bar (640 PSI)
Pilot Ratio	E2A060 - 8 : 1 E2B060 - 3 : 1 E2H060 - 1.75 : 1 E2J060 - 5 : 1
Cartridge Material	All parts steel. All operating parts hardened steel.
Operating Temp. Range/Seals	-40°C to +93.3°C (Nitrile) (-40°F to +200°F) -31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)
Fluid Compatibility/Viscosity	Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)
Filtration	ISO Code 16/13, SAE Class 4 or better
Approx. Weight	0.54 kg (1.19 lbs.)
Cavity	3C (See BC Section for more details)

Performance Curves

Relief & Pilot Performance 1 to 2

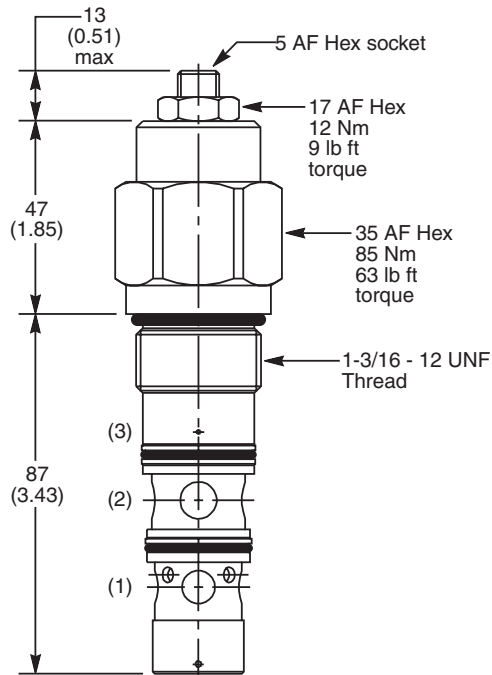


Pressure Drop vs Flow



- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bore/ies & Cavities
- TD** Technical Data

Dimensions Millimeters (Inches)



Ordering Information

E2		060			
Load Control Valve	Pilot Ratio		Adjustment Style	Cracking Pressure	Seals

Code	Pilot Ratio
A	8 : 1
B	3 : 1
H	1.75 : 1
J	5 : 1

Code	Cracking Pressure
	Omit for no setting (Standard)* Specify setting if required

**Standard valve is set to crack at 215 Bar (3120 PSI). Valve to be set to 1.3 times maximum load induced pressure.*

Code	Adjustment Style / Kit No.
Z	Screw Adjust (Standard)
T	Tamper Resistant (TC1125)

Code	Seals / Kit No.
N	Nitrile, Buna-N (Std.) / (SK30008N-1)
V	Fluorocarbon / (SK30008V-1)

Order Bodies Separately

LB10		
Line Body	Porting	Body Material

Code	Porting
039	3/4" BSP (main) 1/4" BSP (aux)
069	1" SAE (main) 1/4" SAE (aux)
034	3/4" BSP Dual Cavity
234	3/4" SAE Dual Cavity

Code	Body Material
A	Aluminum
S	Steel