



INDUSTRIAL HYDRAULIC CARTRIDGE VALVES

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TSV6-08-2 NCRP

2-Way, 2-Position, Normally closed
Poppet-type Solenoid Valve



DESCRIPTION

A solenoid operated, 2-way, 2-position, normally closed, poppet-type cartridge valve with reverse flow energized.

OPERATION

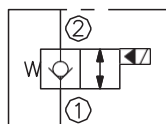
When de-energized, the valve acts as a check valve, allowing flow from ① to ②, while blocking flow from ② to ①.

When energized, the poppet lifts to open the ② to ① flow path. In this mode, flow is also allowed from ① to ②.

Operation of Manual Override Option

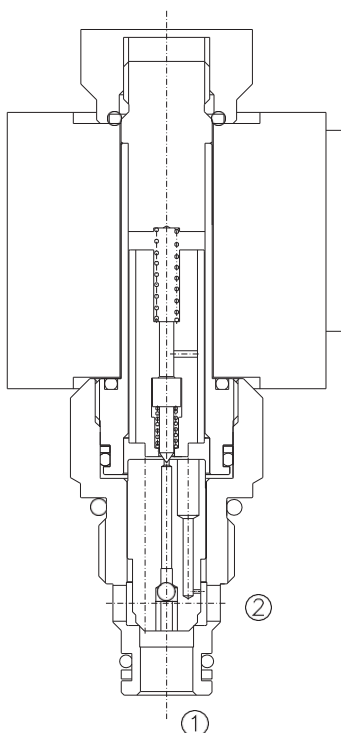
To override, push button in, twist counterclockwise 180° and release. In this position, the valve will remain open in a detented condition. To return to normal operation, push button in, twist clockwise 180° and release. Override will be detented in this position.

SYMBOL

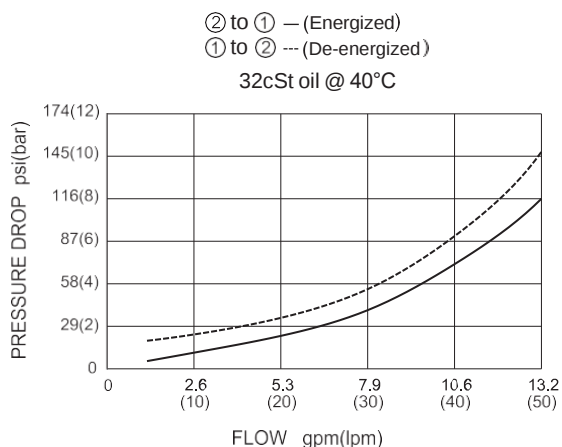


SPECIFICATIONS

Max. Operating Pressure	350bar
Flow	See PRESSURE DROP VS. FLOW graph.
Internal Leakage	3 drops/min max. at 350bar
Temperature	-40°F to +212°F (-40°C to +100°C)
Coil Duty Rating	Continuous from 85% to 115% of nominal voltage
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	08-2
Housing Material	Steel & Ductile iron rated to 350bar



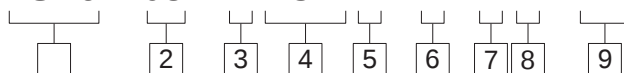
PRESSURE DROP VS. FLOW





TO ORDER

TSV6 – 08 – 2 NCR P – * – * * – * *

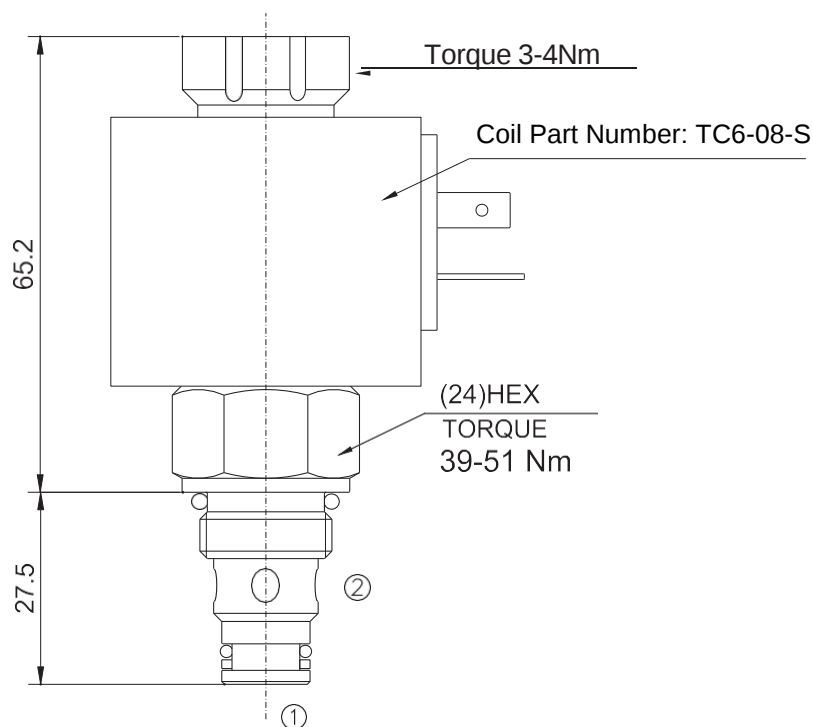


1 Function TSV6=Solenoid Valve	5 Type P=Poppet	8 Coil Connector Type D= Double Lead ER= Deutsch Connector(Water-proof Coil) H= Hirschmann
2 Size 08=08 Size	6 Manual Override Options Omit=None M=Manual Override	9 Port Size Omit=None 6T=SAE 6 3G=G 3/8
3 Flow Path 2=2-Way	7 Coil Voltage 1=12 VDC 2=24 VDC 3=110 VAC 4=220 VAC	
4 Style NCR=Normally Closed, Reverse Flow Energized		

INSTALLATION DIMENSIONS

Coil Must Be Installed With Letter Up

Unit=Millimeters



TSV6-10-2 NCRP

2-Way, 2-Position, Normally closed
Poppet-type Solenoid Valve



DESCRIPTION

A solenoid operated, 2-way, 2-position, normally closed, poppet-type cartridge valve with reverse flow energized.

OPERATION

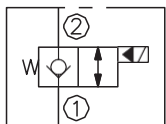
When de-energized, the valve acts as a check valve, allowing flow from ① to ②, while blocking flow from ② to ①.

When energized, the poppet lifts to open the ② to ① flow path. In this mode, flow is also allowed from ① to ②.

Operation of Manual Override Option

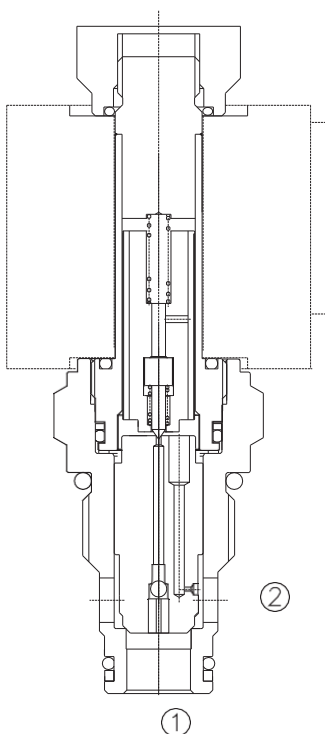
To override, push button in, twist counterclockwise 180° and release. In this position, the valve will remain open in a detented condition. To return to normal operation, push button in, twist clockwise 180° and release. Override will be detented in this position.

SYMBOL

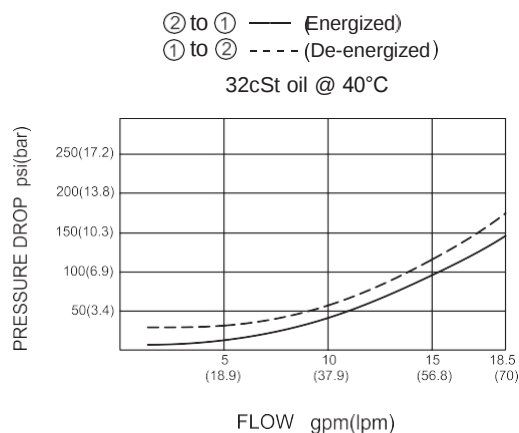


SPECIFICATIONS

Max. Operating Pressure	350bar
Flow	See PRESSURE DROP VS.FLOW graph.
Internal Leakage	3 drops/min max. at 350bar
Temperature	-40°F to +212°F (-40°C to +100°C)
Coil Duty Rating	Continuous from 85% to 115% of nominal voltage
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt
Cavity	10-2
Housing Material	Steel & Ductile iron rated to 350Bar



PRESSURE DROP VS.FLOW





TO ORDER

TSV6 – 10 – 2 NCR P – * – * * – * *

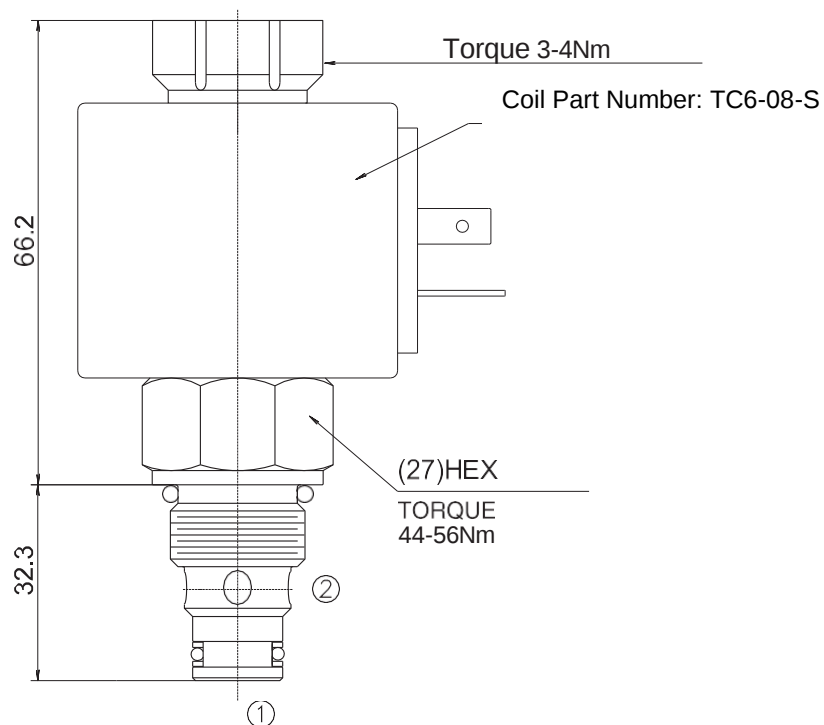


1 Function TSV6=Solenoid Valve	5 Type P=Poppet	8 Coil Connector Type D= Double Lead ER= Deutsch Connector(Water-proof Coil) H= Hirschmann
2 Size 10=10 Size	6 Manual Override Options Omit=None M=Manual Override	9 Port Size Omit=None 8T=SAE 8 4G=G 1/2
3 Flow Path 2=2-Way	7 Coil Voltage 1=12 VDC 2=24 VDC 3=110 VAC 4=220 VAC	
4 Style NCR=Normally Closed, Reverse Flow Energized		

INSTALLATION DIMENSIONS

Coil Must Be Installed With Letter Up

Unit=Millimeters



TSV6-08-2 NORP

2-Way,2-Position,Normally open
Poppet-type Solenoid Valve



DESCRIPTION

A solenoid operated, 2-way, 2-position, normally open, poppet-type cartridge valve with reverse flow de-energized.

OPERATION

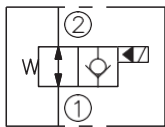
When de-energized, the poppet lifts to open flow from ② to ① ; Flow is also open from ① to ② .

When energized ,the cartridge acts as a check valve, allowing flow from ① to ② , while blocking flow from ② to ① , after overcoming the solenoid force.

Operation of Manual Override Option

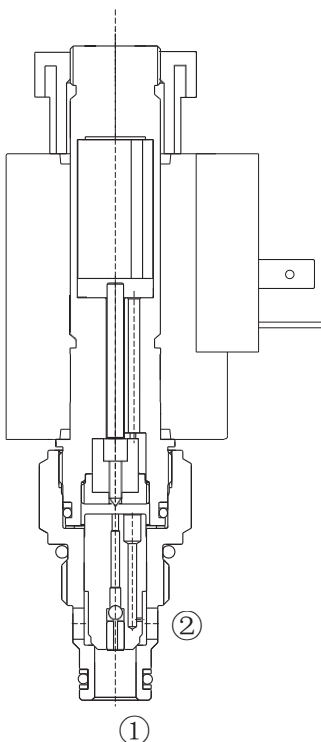
To override, push button in to activate. To return to normal valve function, release button.

SYMBOL

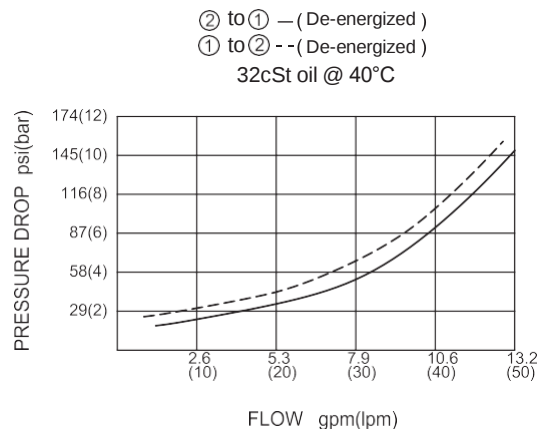


SPECIFICATIONS

Max.Operating Pressure	350bar
Flow	See PRESSURE DROP VS.FLOW graph.
Internal Leakage	3 drops/min max. at 350bar
Temperature	-40°F to +212°F(-40°C to +100°C)
Coil Duty Rating	Continuous from 85% to 115% of nominal voltage
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	08-2
Housing Material	Steel & Ductile iron rated to 350bar



PRESSURE DROP VS.FLOW





TO ORDER

TSV6 – 08 – 2 NOR P – * – * * – * *

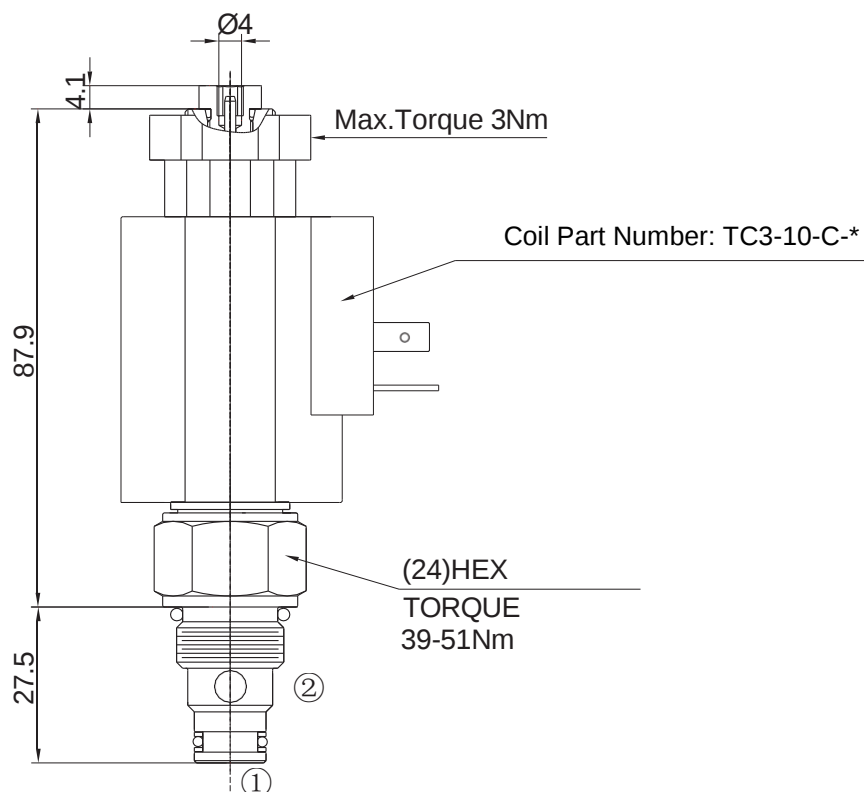


1 Function TSV6=Solenoid Valve	7 Coil Voltage 1=12 VDC 2=24 VDC 3=110 VAC 4=220 VAC 7=48 VDC 8=24 VAC 9=72 VDC	9 Port Size Omit=None 6T=SAE 6 3G=G 3/8
2 Size 08=08 Size		
3 Flow Path 2=2-Way		
4 Style NOR=Normally Open, Reverse Flow De-energized	8 Coil Connector Type D= Double Lead H= Hirschmann B= Double Spade ER= Deutsch Connector (Water-proof Coil) S= Single Lead	
5 Type P=Poppet		
6 Manual Override Options Omit=None M=Manual Override		

INSTALLATION DIMENSIONS

Coil Must Be Installed With Letter Up

Unit=Millimeters



TSV6-10-2 NORP

2-Way, 2-Position, Normally opened, Solenoid Valve



DESCRIPTION

A solenoid operated, 2-way, 2-position, normally open, poppet-type cartridge valve with reverse flow de-energized.

OPERATION

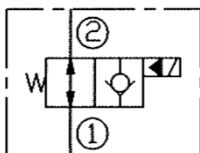
When de-energized, the poppet lifts to open flow from ② to from ① ; Flow is also open from ① to ② .

When energized, the cartridge acts as a check valve, allowing flow from ① to ② , while blocking flow from ② to ① , after overcoming the solenoid force.

Operation of Manual Override Option

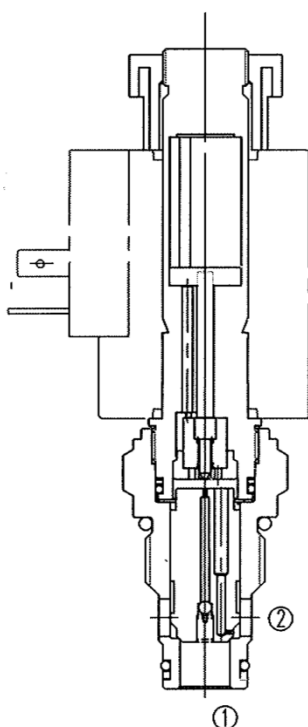
To override, push button in to activate. To return to normal valve function, release button.

SYMBOL

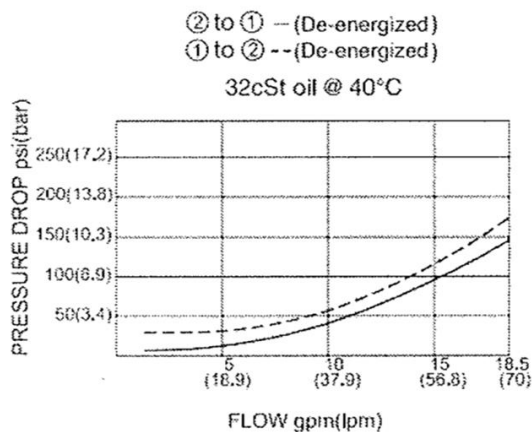


SPECIFICATIONS

Max. Operating Pressure	350bar
Flow Rate	See PRESSURE DROP VS.FLOW graph.
Internal Leakage	3 drops/min ; max. at 350 bar
Temperature	-13°F to +212°F (-25°C to +100°C)
Coil Duty Rating	Continuous from 85% to 115% of nominal voltage
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	10-2
Body Material	Steel & Ductile iron rated to 350bar



PRESSURE DROP VS. FLOW





TO ORDER

TSV6 – 08 – 2 NOR P – * – * * – * *



1 Function

TSV6=Solenoid Valve

2 Size

10=10 Size

3 Flow Path

2=2-Way

4 Style

NOR=Normally Open, Reverse
Flow De-energized

5 Type

P=Poppet

6 Manual Override Options

Blank=None
M=Manual Override

7 Coil Voltage

1=12 VDC
2=24 VDC
3=110 VAC
4=220 VAC

9 Port Size

Blank=None
8T=SAE 8
3G=G 3/8
4G=G 1/2

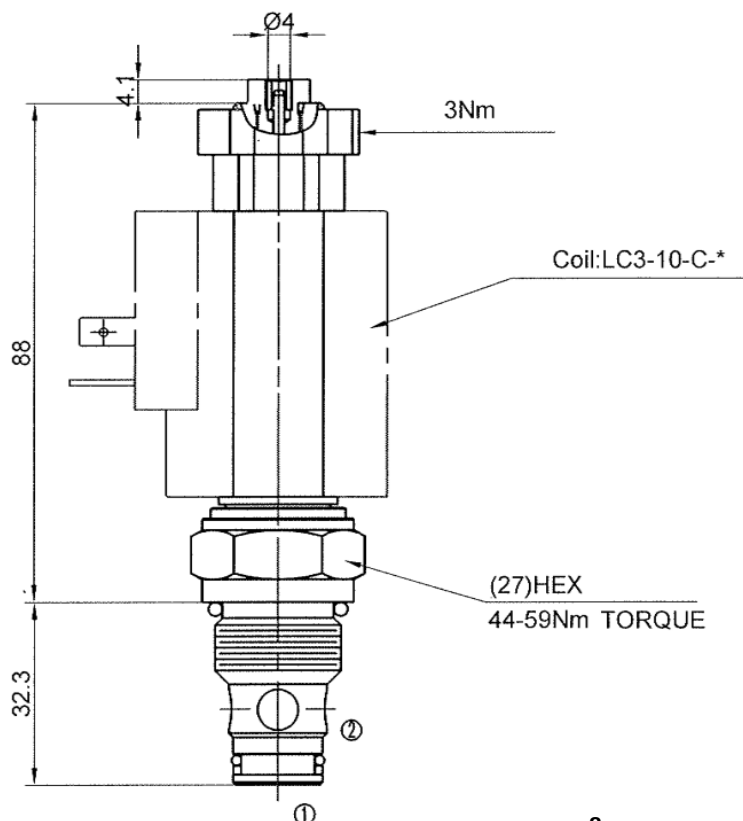
8 Coil Connector Type

D= Double Lead
H= Hirschmann
ER= Deutsch Connector
(Water-proof Coil)
S= Single Lead

INSTALLATION DIMENSIONS

Coil Must Be Installed With Letter Up

Unit=Millimeters



TSV6-08-2 NCSP

2-Way,2-Position,Bi-directional
Normally closed,Poppet-type
Solenoid Valve



DESCRIPTION

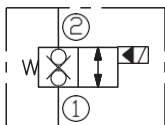
A solenoid operated, 2-way, 2-position, normally closed, poppet-type bi-directional cartridge valve.

OPERATION

When de-energized, the valve blocks flow in both directions. When energized, the poppet shifts to allow flow in either direction.

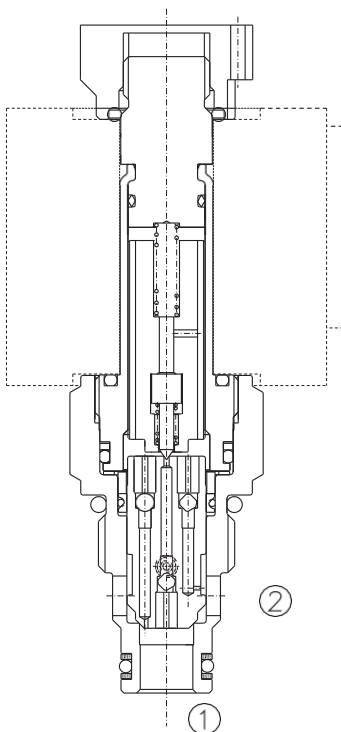
To override, push button in, twist counterclockwise 180° and release. In this position, the valve will remain open in a detented condition. To return to normal operation, push button in, twist clockwise 180° and release. Override will be detented in this position.

SYMBOL

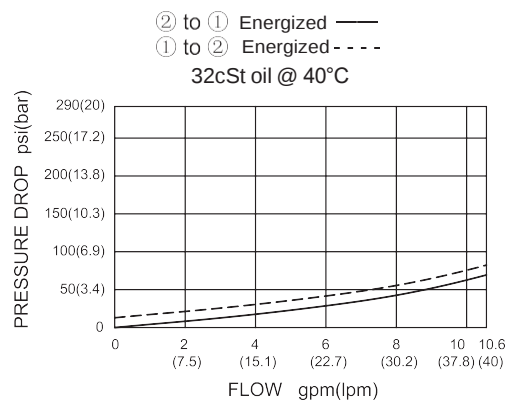


SPECIFICATIONS

Max.Operating Pressure	350bar
Flow	See PRESSURE DROP VS.FLOW graph.
Internal Leakage	5 drops/min max. at 350 bar
Temperature	-40°F to +212°F(-40°C to +100°C)
Coil Duty Rating	Continuous from 85% to 115% of nominal voltage
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	08-2
Housing Material	Steel & Ductile iron rated to 350bar



PRESSURE DROP VS.FLOW





TO ORDER

TSV6 – 08 – 2 NC SP – * – * * – * *

1 2 3 4 5 6 7 8 9

1 Function
TSV6=Solenoid Valve

2 Size
08=08 Size

3 Flow Path
2=2-Way

4 Style
NC=Normally Closed

5 Type
SP=Poppet

6 Manual Override Options
Omit=None
M=Manual Override

7 Coil Voltage
1=12 VDC
2=24 VDC
3=110 VAC
4=220 VAC

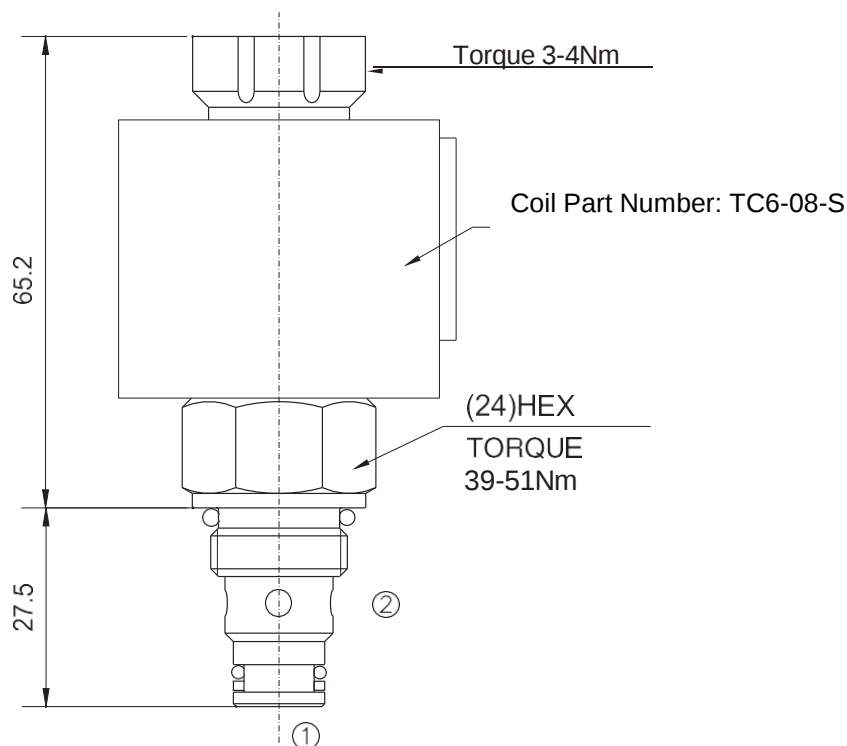
8 Coil Connector Type
D= Double Lead
H= Hirschmann
ER= Deutsch Connector(Water-proof Coil)

9 Port Size
Omit=None
6T=SAE 6
3G=G 3/8

INSTALLATION DIMENSIONS

Coil Must Be Installed With Letter Up

Unit=Millimeters



TSV6-10-2 NCSP

2-Way,2-Position,Bi-directional Normally closed,Poppet-type Solenoid Valve



DESCRIPTION

A solenoid operated, 2-way, 2-position, normally closed, poppet-type bi-directional cartridge valve.

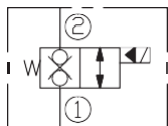
OPERATION

When de-energized, the valve blocks flow in both directions. When energized, the poppet shifts to allow flow in either direction.

Operation of Manual Override Option

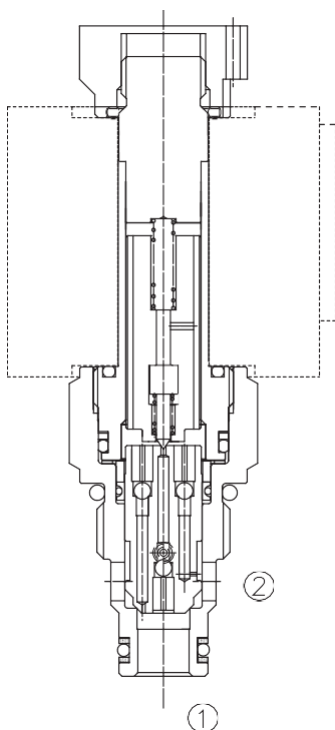
To override, push button in, twist counterclockwise 180° and release. In this position, the valve will remain open in a detented condition. To return to normal operation, push button in, twist clockwise 180° and release. Override will be detented in this position.

SYMBOL

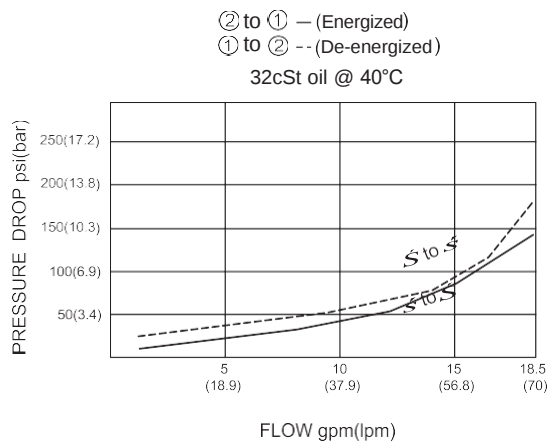


SPECIFICATIONS

Max.Operating Pressure	350bar
Flow	See PRESSURE DROP VS.FLOW graph.
Internal Leakage	5 drops/min max. at 350 bar
Temperature	-40°F to +212°F(-40°C to +100°C)
Coil Duty Rating	Continuous from 85% to 115% of nominal voltage
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	10-2
Housing Material	Steel & Ductile iron rated to 350bar



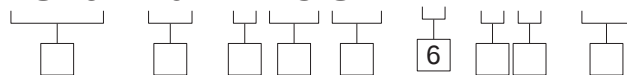
PRESSURE DROP VS.FLOW





TO ORDER

TSV6 – 10 – 2 NC SP – * – * * – * *



1 Function
TSV6=Solenoid Valve

2 Size
10=10 Size

3 Flow Path
2=2-Way

4 Style
NC=Normally Closed

5 Type
SP=Poppet

6 Manual Override Options
Omit=None
M=Manual Override

7 Coil Voltage
1=12 VDC
2=24 VDC
3=110 VAC
4=220 VAC

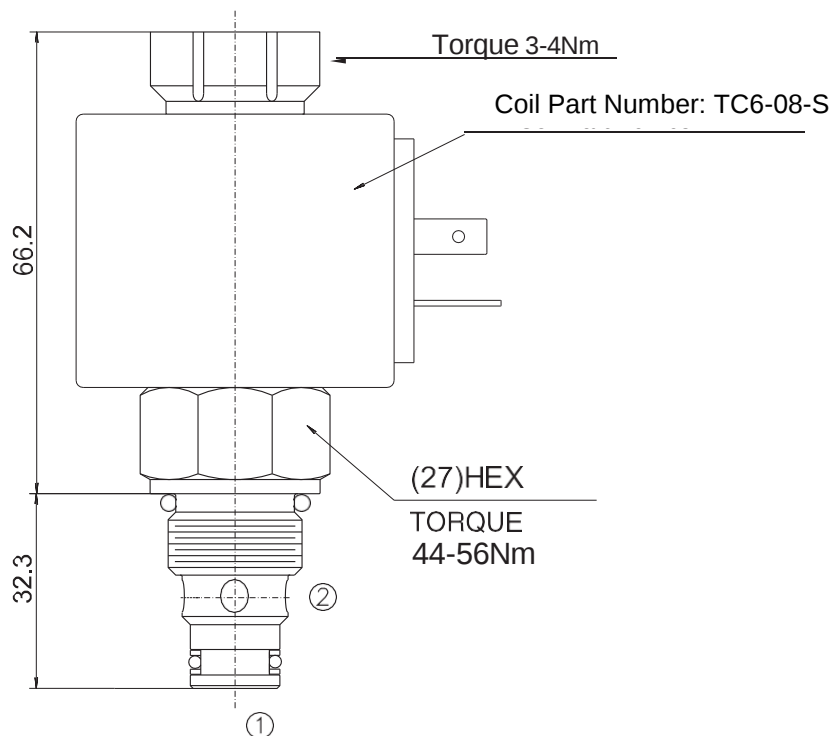
8 Coil Connector Type
D= Double Lead
H= Hirschmann
ER= Deutsch Connector(Water-proof Coil)

9 Port Size
Omit=None
8T=SAE 8
4G=G 1/2

INSTALLATION DIMENSIONS

Coil Must Be Installed With Letter Up

Unit=Millimeters



TSV6-08-2 NOSP

2-Way,2-Position,Bi-directional Normally open,Poppet-type Solenoid Valve



DESCRIPTION

A solenoid operated, 2-way, 2-position, normally open, poppet-type bi-directional cartridge valve.

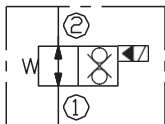
OPERATION

When de-energized, the poppet allows flow in both directions. When energized, the valve blocks flow in both directions.

Operation of Manual Override Option

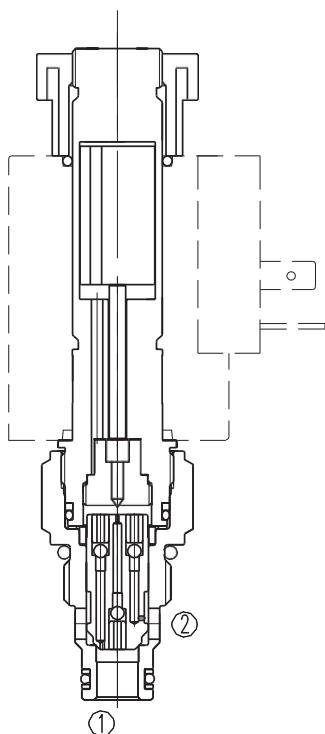
To override, push button in to activate. To return to normal valve function, release button.

SYMBOL

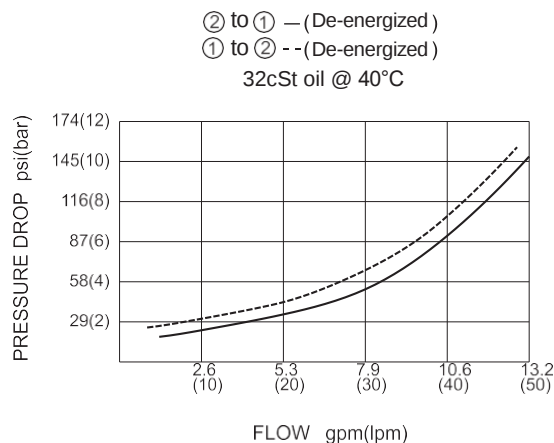


SPECIFICATIONS

Max.Operating Pressure	350bar
Flow	See PRESSURE DROP VS.FLOW graph.
Internal Leakage	5 drops/min max. at 350 bar
Temperature	-40°F to +212°F(-40°C to +100°C)
Coil Duty Rating	Continuous from 85% to 115% of nominal voltage
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	08-2
Housing Material	Steel & Ductile iron rated to 350bar



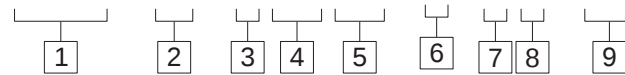
PRESSURE DROP VS.FLOW





TO ORDER

TSV6 – 08 – 2 NO SP – * – * * – * *

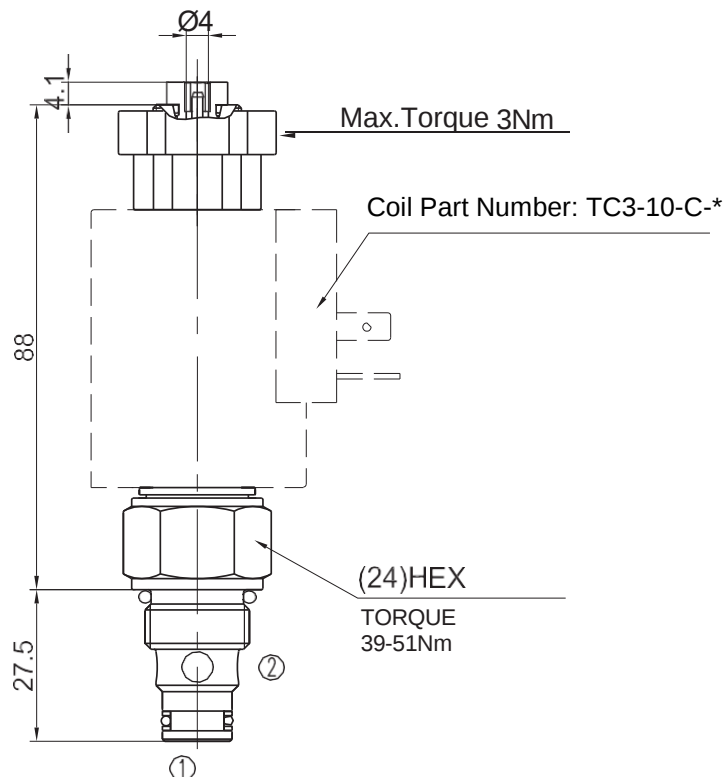


1 Function TSV6=Solenoid Valve	7 Coil Voltage 1=12 VDC 2=24 VDC 3=110 VAC 4=220 VAC 7=48 VDC 8=24 VAC 9=72 VDC	9 Port Size Omit=None 6T=SAE 6 3G=G 3/8
2 Size 08=08 Size		
3 Flow Path 2=2-Way		
4 Style NO=Normally Open	8 Coil Connector Type D= Double Lead H= Hirschmann S= Single Lead ER= Deutsch Connector(Water-proof Coil) B= Double Spade	
5 Type SP=Poppet		
6 Manual Override Options Omit=None M=Manual Override		

INSTALLATION DIMENSIONS

Coil Must Be Installed With Letter Up

Unit=Millimeters



TSV6-10-2 NOSP

2-Way,2-Position,Bi-directional Normally open,Poppet-type Solenoid Valve



DESCRIPTION

A solenoid operated, 2-way, 2-position, normally open, poppet-type bi-directional cartridge valve.

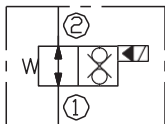
OPERATION

When de-energized, the poppet allows flow in both directions. When energized, the valve blocks flow in both directions.

Operation of Manual Override Option

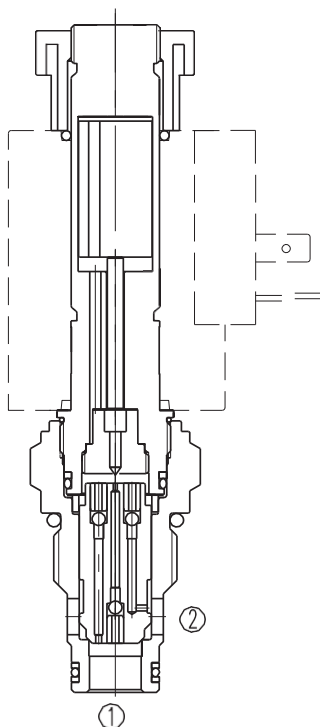
To override, push button in to activate. To return to normal valve function, release button.

SYMBOL

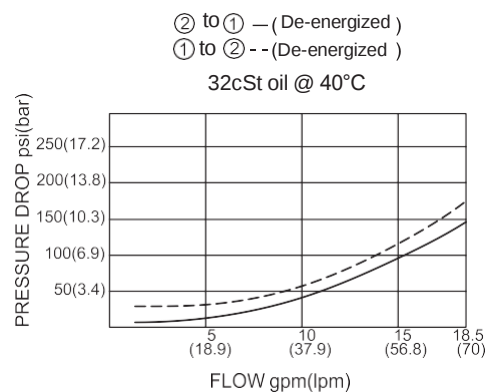


SPECIFICATIONS

Max.Operating Pressure	350bar
Flow	See PRESSURE DROP VS.FLOW graph.
Internal Leakage	5 drops/min max. at 350 bar
Temperature	-40°F to +212°F(-40°C to +100°C)
Coil Duty Rating	Continuous from 85% to 115% of nominal voltage
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	10-2
Housing Material	Steel & Ductile iron rated to 350bar



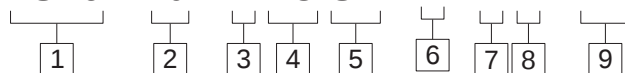
PRESSURE DROP VS.FLOW





TO ORDER

TSV6 – 10 – 2 NO SP – * – * * – * *

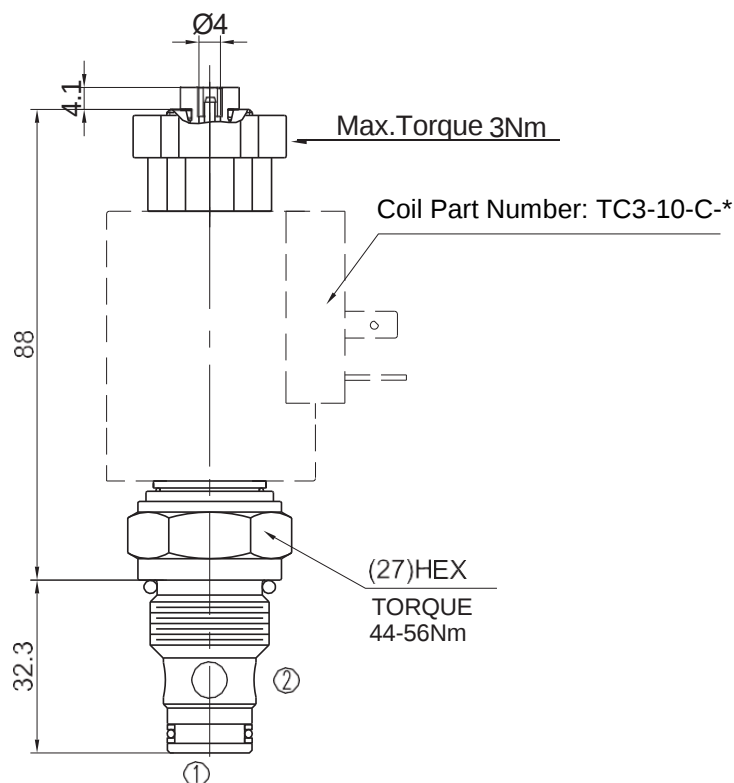


1 Function TSV6=Solenoid Valve	7 Coil Voltage 1=12 VDC 2=24 VDC 3=110 VAC 4=220 VAC 7=48 VDC 8=24 VAC 9=72 VDC	9 Port Size Omit=None 8T=SAE 8 4G=G 1/2
2 Size 10=10 Size		
3 Flow Path 2=2-Way		
4 Style NO=Normally Open	8 Coil Connector Type D= Double Lead H= Hirschmann S= Single Lead ER= Deutsch Connector(Water-proof Coil) B= Double Spade	
5 Type SP=Poppet		
6 Manual Override Options Omit=None M=Manual Override		

INSTALLATION DIMENSIONS

Coil Must Be Installed With Letter Up

Unit=Millimeters



TCV-08-P

Check valve



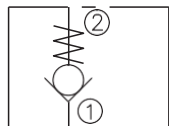
DESCRIPTION

A cartridge-style poppet-type check valve

OPERATION

Pressure at ① overcomes the spring-bias poppet and allows free flow from ① to ②. Flow in the opposite direction, from ② to ①, is blocked by the poppet.

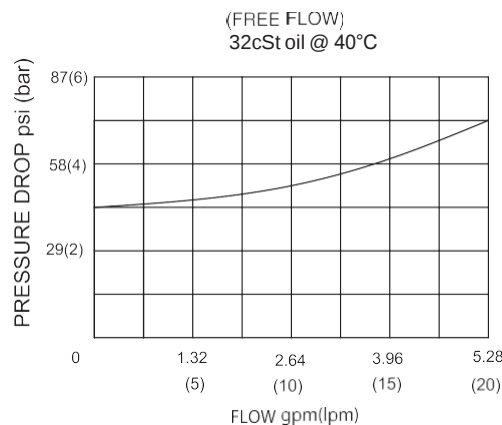
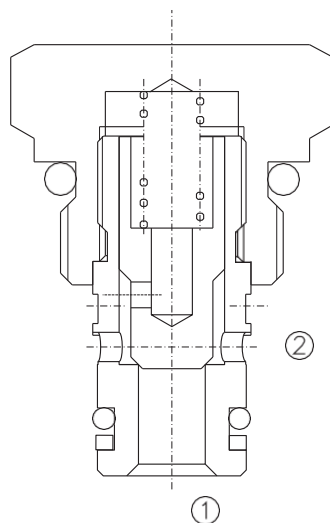
SYMBOL



SPECIFICATIONS

Operating Pressure:	250bar
Flow:	See PRESSURE DROP VS.FLOW graph.
Internal Leakage:	2 drops/min. max. at 250bar
Crack Pressures:	0.3=0.3bar 0.7=0.7bar 2.1=2.1bar 3.0=3.0bar 4.1=4.1bar 6.9=6.9bar
Temperature:	-40°F to +250°F(-40°C to +120°C)
Fluids:	Mineral-based fluids with viscosities of 7.4 to 420 cSt
Cavity:	08-2
Body Material:	6061-T6 aluminum alloy rated to 207bar, Steel & Ductile iron rated to 350bar

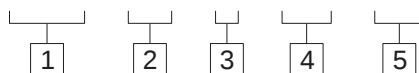
PRESSURE DROP VS.FLOW





TO ORDER

TCV - 08 - P - * * - * *



1 **Function**
TCV= Check Valve

2 **Size**
08=08

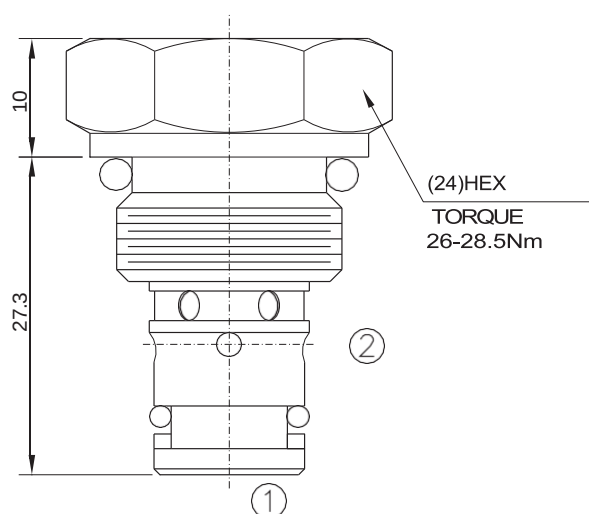
3 **Type**
P= Poppet

4 **Cracking Pressure**
0.3=0.3bar
0.7=0.7bar
2.1=2.1bar
3.0=3.0bar
4.1=4.1bar
6.9=6.9bar

5 **Body Porting**
Blank=None
4T=SAE4
6T=SAE6
2G=G 1/4
3G=G 3/8

INSTALLATION DIMENSIONS

Unit=Millimeters



TCV-10-P

Check Valve



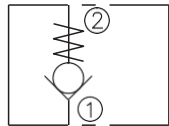
DESCRIPTION

A cartridge-style poppet-type check valve

OPERATION

Pressure at ① overcomes the spring-bias poppet and allows free flow from ① to ② . Flow in the opposite direction, from ② to ① ,is blocked by the poppet.

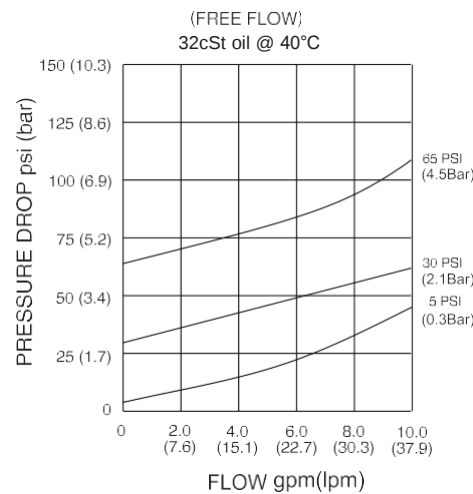
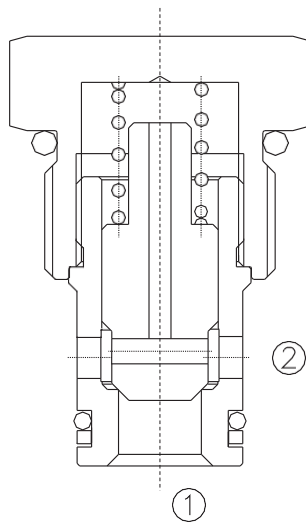
SYMBOL



SPECIFICATIONS

Operating Pressure	350bar
Flow	See PRESSURE DROP VS.FLOW graph.
Internal Leakage	2 drops/min max. at 350bar
Cracking Pressure	0.3=0.3bar 0.7=0.7bar 2.1=2.1bar 4.5=4.5bar 6.9=6.9bar
Temperature	-40°F to +250°F(-40°C to +120°C)
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	10-2
Housing Material	Steel & Ductile iron rated to 350bar

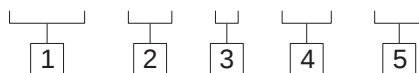
PRESSURE DROP VS.FLOW





TO ORDER

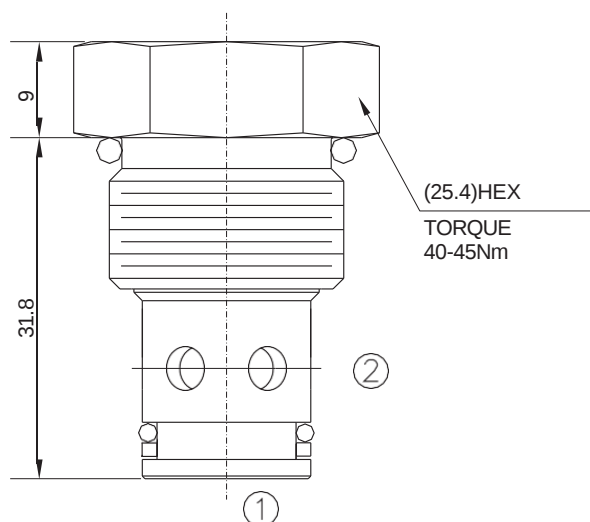
TCV - 10 - P - * * - * *



1 Function TCV=Check Valve	3 Type P=Poppet	5 Port Size Omit=None 6T=SAE6 8T=SAE8 3G=G 3/8 4G=G 1/2
2 Size 10=10 Size	4 Cracking Pressure 0.3=0.3bar 0.7=0.7bar 2.1=2.1bar 4.5=4.5bar 6.9=6.9bar	

INSTALLATION DIMENSIONS

Unit=Millimeters



TCV-16-P

Check Valve



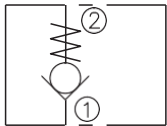
DESCRIPTION

A cartridge-style poppet-type check valve

OPERATION

Pressure at ① overcomes the spring-bias poppet and allows free flow from ① to ② . Flow in the opposite direction, from ② to ① ,is blocked by the poppet.

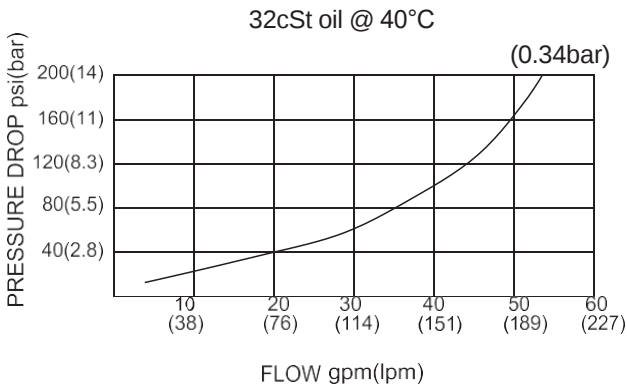
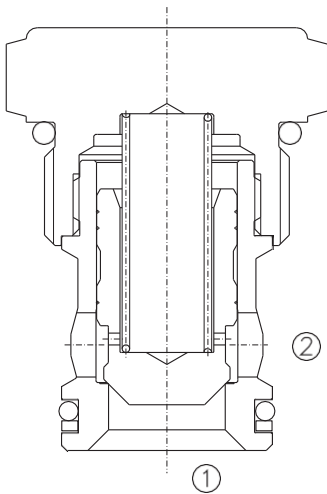
SYMBOL



SPECIFICATIONS

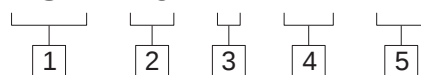
Operating Pressure	350bar
Flow	See PRESSURE DROP VS.FLOW graph.
Internal Leakage	5 drops/min max. at 350bar
Cracking Pressure	0.34=0.34bar 1.7=1.7bar 4.5=4.5bar 6.9=6.9bar
Temperature	-40°F to +250°F(-40°C to +120°C)
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	16-2
Housing Material	Steel & Ductile iron rated to 350bar

PRESSURE DROP VS.FLOW



TO ORDER

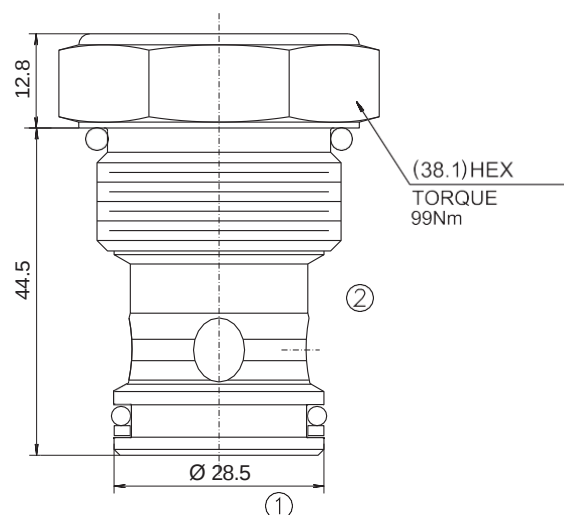
TCV - 16 - P - * * - * *



1 Function TCV=Check Valve	3 Type P=Poppet	5 Port Size Omit=None 16T=SAE16 6G=G 3/4 8G=G 1
2 Size 16=16 Size	4 Cracking Pressure 0.34=0.34bar 1.7=1.7bar 4.5=4.5bar 6.9=6.9bar	

INSTALLATION DIMENSIONS

Unit=Millimeters



TCV-08-B

Check Valve



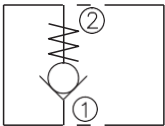
DESCRIPTION

A cartridge-style ball-type check valve

OPERATION

Pressure at ① overcomes the spring-bias ball and allows free flow from ① to ② .
Flow in the opposite direction, from ② to ① ,is blocked by the ball.

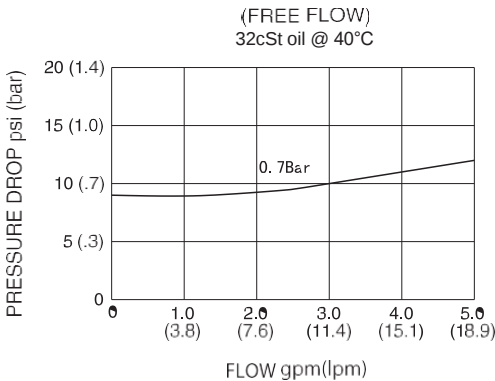
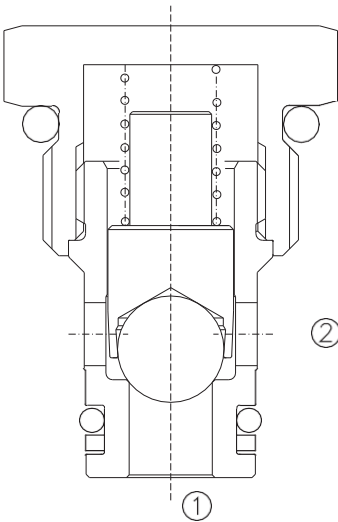
SYMBOL



SPECIFICATIONS

Operating Pressure	250bar
Flow	See PRESSURE DROP VS.FLOW graph.
Internal Leakage	2 drops/min max. at 250bar
Cracking Pressure	0.3=0.3bar 0.7=0.7bar 2.1=2.1bar 6.9=6.9bar
Temperature	-40°F to +250°F(-40°C to +120°C)
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	08-2
Housing Material	6061-T6 aluminum alloy rated to 207bar, Steel & Ductile iron rated to 350bar

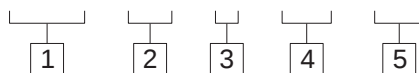
PRESSURE DROP VS.FLOW





TO ORDER

TCV - 08 - B - * * - * *



1 Function
TCV=Check Valve

2 Size
08=08 Size

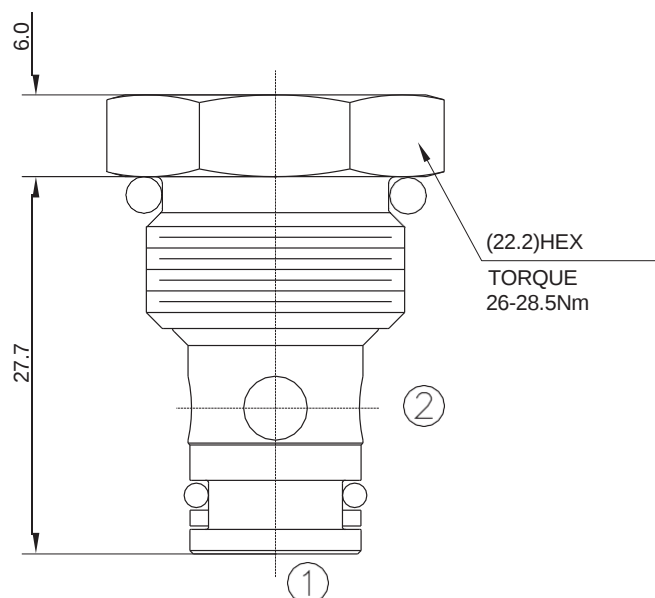
3 Type
B=Ball

4 Cracking Pressure
0.3=0.3bar
0.7=0.7bar
2.1=2.1bar
6.9=6.9bar

5 Port Size
Omit=None
4T=SAE4
6T=SAE6
2G=G 1/4
3G=G 3/8

INSTALLATION DIMENSIONS

Unit=Millimeters



TCV-10-B

Check Valve



DESCRIPTION

A cartridge-style ball-type check valve

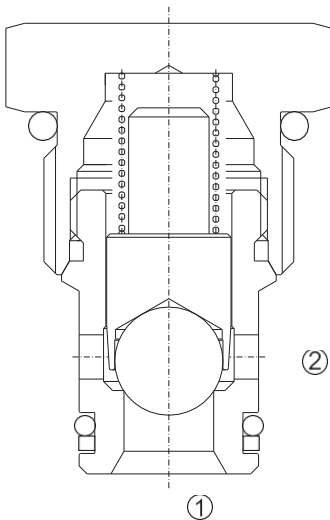
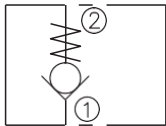
OPERATION

Pressure at ① overcomes the spring-bias ball and allows free flow from ① to ② .
Flow in the opposite direction, from ② to ① ,is blocked by the ball.

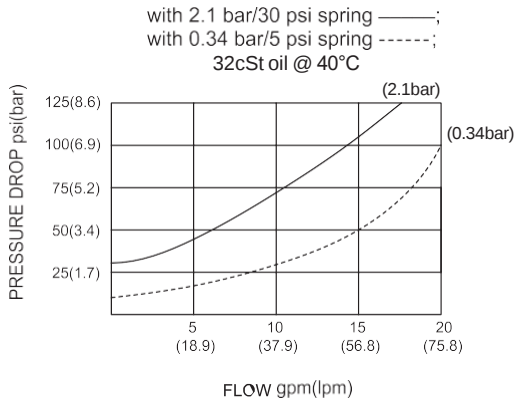
SPECIFICATIONS

Operating Pressure	250bar
Flow	See PRESSURE DROP VS.FLOW graph.
Internal Leakage	2 drops/min max. at 250bar
Cracking Pressure	0.34=0.34bar 1.0=1.0bar 2.1=2.1bar 2.8=2.8bar 4.8=4.8bar 6.9=6.9bar 13.6=13.6bar 20.4=20.4bar
Temperature	-40°F to +250°F(-40°C to +120°C)
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	10-2
Housing Material	6061-T6 aluminum alloy rated to 207bar, Steel & Ductile iron rated to 350bar

SYMBOL



PRESSURE DROP VS.FLOW





TO ORDER

TCV - 10 - B - * * - * *

┌───┐
1

┌───┐
2

┌───┐
3

┌───┐
4

┌───┐
5

1 Function
TCV=Check Valve

2 Size
10=10 Size

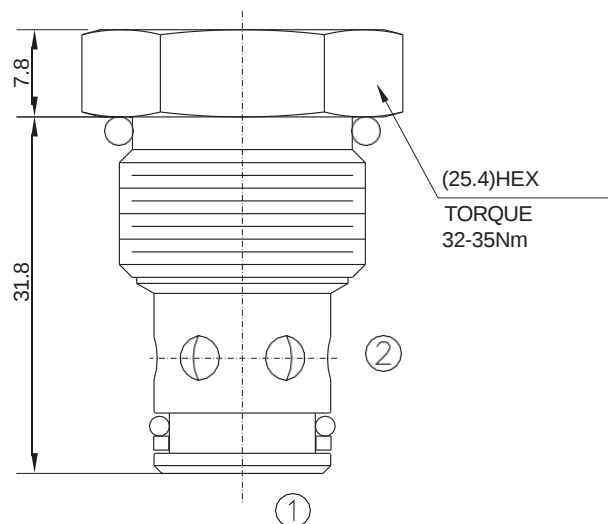
3 Type
B=Ball

4 Cracking Pressure
 0.34=0.34bar
 1.0=1.0bar
 2.1=2.1bar
 2.8=2.8bar
 4.8=4.8bar
 6.9=6.9bar
 13.6=13.6bar
 20.4=20.4bar

5 Port Size
 Omit=None
 6T=SAE6
 8T=SAE8
 3G=G 3/8
 4G=G 1/2

INSTALLATION DIMENSIONS

Unit=Millimeters



TDPC-08

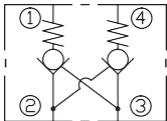
Dual Pilot-operated Check Valve



DESCRIPTION

A cartridge-style dual pilot-operated check valve

SYMBOL

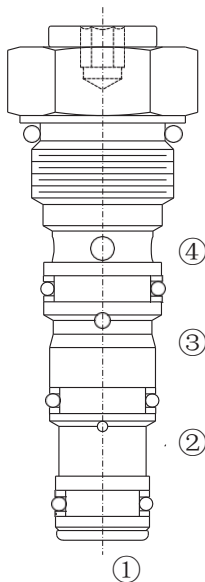


OPERATION

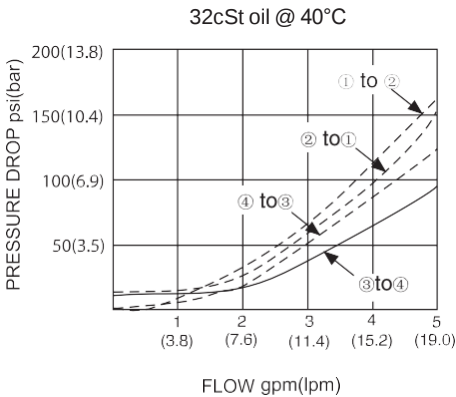
The valve will block flow from ① to ② , and from ④ to ③ . Flow is allowed in the opposite direction when pressure is applied to port ② and/or ③ . The valve has a 2.5:1 pilot ratio, so at least 40 percent of the load pressure at port ① or ④ is required at the pilot lines (port ③ or ②)to open the flow passage to allow flow from port ① or ④ .

SPECIFICATIONS

Operating Pressure	207bar
Flow	See PRESSURE DROP VS.FLOW graph.
Check Valve Leakage	2 drops/min. at 207bar
Cracking Pressure	0.4=0.4bar 3.4=3.4bar
Pilot Ratio	2.5:1
Temperature	-40°F to +250°F(-40°C to +120°C)
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	08-4
Housing Material	6061-T6 aluminum alloy rated to 207bar, Steel & Ductile iron rated to 350bar



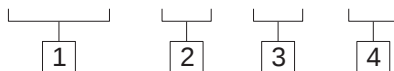
PRESSURE DROP VS.FLOW





TO ORDER

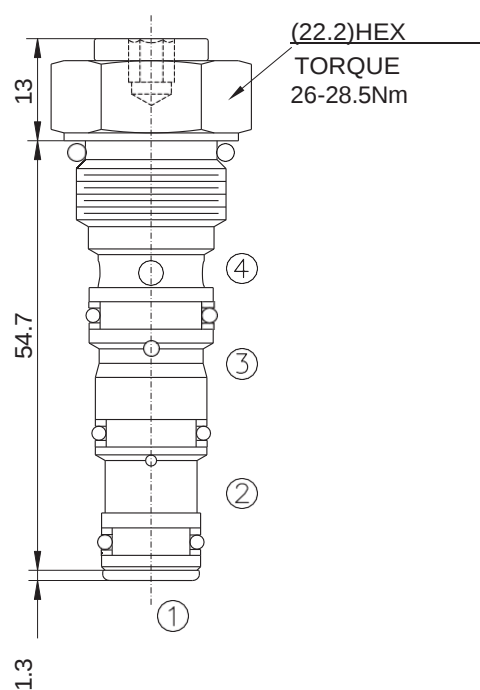
TDPC - 08 - * * - * *



1 Function TDPC=Dual Pilot-operated Cartridge Check Valve	3 Cracking Pressure 0.4=0.4bar 3.4=3.4bar	4 Port Size Omit=None 4T=SAE4 6T=SAE6 2G=G 1/4 3G=G 3/8
2 Size 08=08 Size		

INSTALLATION DIMENSIONS

Unit=Millimeters



TDPC-10

Dual Pilot-operated Check Valve



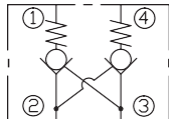
DESCRIPTION

A cartridge-style dual pilot-operated check valve

OPERATION

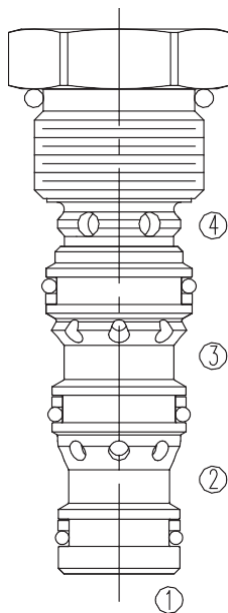
The valve will block flow from ① to ② , and from ④ to ③ . Flow is allowed in the opposite direction when pressure is applied to port ② and/or ③ . The valve has a 3:1 pilot ratio, so at least 1/3 of the load pressure at port ① or ④ is required at the pilot lines (port ③ or ②)to open the flow passage to allow flow from port ① or ④ .

SYMBOL

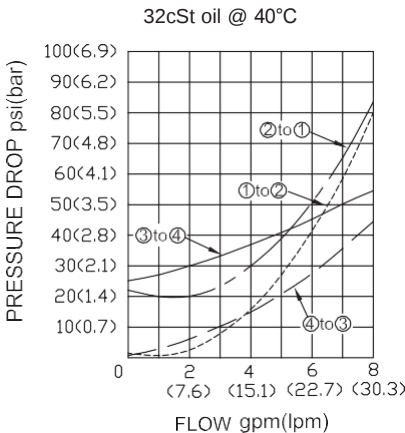


SPECIFICATIONS

Operating Pressure	240bar
Flow	See PRESSURE DROP VS.FLOW graph.
Check Valve Leakage	2 drops/min max. at 240bar
Cracking Pressure	1.7=1.7bar
Pilot Ratio	3:1
Temperature	-40°F to +250°F(-40°C to +120°C)
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	10-4
Housing Material	6061-T6 aluminum alloy rated to 207bar, Steel & Ductile iron rated to 350bar



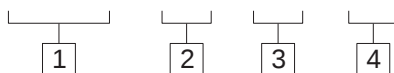
PRESSURE DROP VS.FLOW





TO ORDER

TDPC - 10 - * * - * *



1 Function
TDPC=Dual Pilot-operated
Cartridge Check Valve

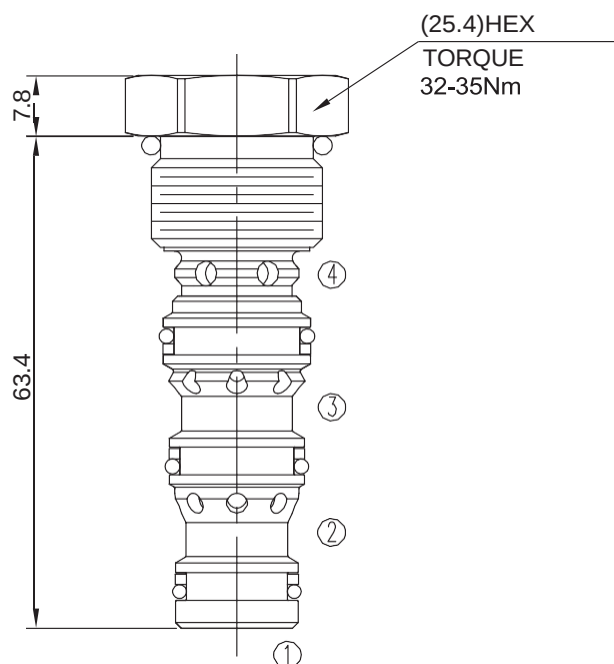
2 Size
10=10 Size

3 Cracking Pressure
1.7=1.7bar

4 Port Size
Omit=None
6T=SAE6
8T=SAE8
2G=G 1/4
3G=G 3/8

INSTALLATION DIMENSIONS

Unit=Millimeters



TNRV-08

Direct-acting Relief Valve



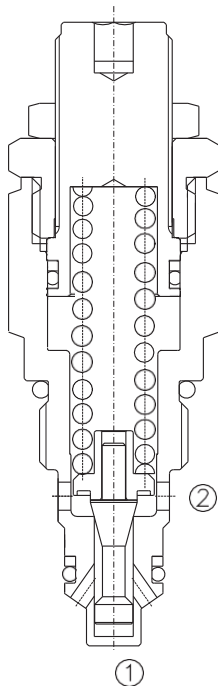
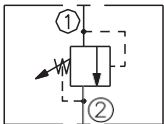
DESCRIPTION

A cartridge-style direct-acting poppet-type relief valve

OPERATION

The valve prevents flow from ① to ② until the set Cracking Pressure at ① is achieved. The poppet then unseats allowing flow from ① to ② protecting the circuit from over pressurization.

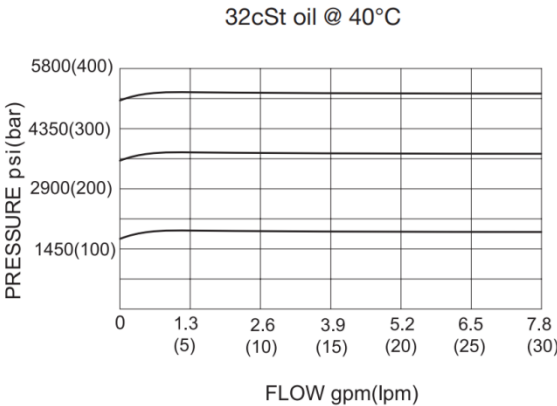
SYMBOL



SPECIFICATIONS

Operating Pressure	350bar
Flow	See PRESSURE DROP VS. FLOW graph.
Internal Leakage	5 drops/min max. to 80% of nominal setting
Reseat Pressure	80% of cracking pressure (cracking pressure at 0.95 lpm /0.25 gpm)
Standard Spring Ranges	20 to 125 bar; preset: 69 bar 40 to 180 bar; preset:138 bar 50 to 240 bar; preset:172 bar 180 to 350 bar; preset:207 bar
Temperature	-40°F to +250°F(-40°C to +120°C)
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	08-2
Housing Material	Steel & Ductile iron rated to 350bar

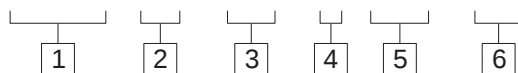
PRESSURE DROP VS.FLOW





TO ORDER

TNRV -08 - * * - * / ** - * ***



1 Function
TNRV=Direct-acting Relief Valve

2 Size
08=08 Size

3 Spring Ranges
18=290-1800psi(20-125bar)
Preset:1000psi(69bar)
26=580-2600psi(40-180bar)
Preset:2000psi(138bar)
35=725-3500psi(50-240bar)
Preset:2500psi(172bar)
50=2600-5000psi(180-350bar)
Preset:3000psi(207bar)

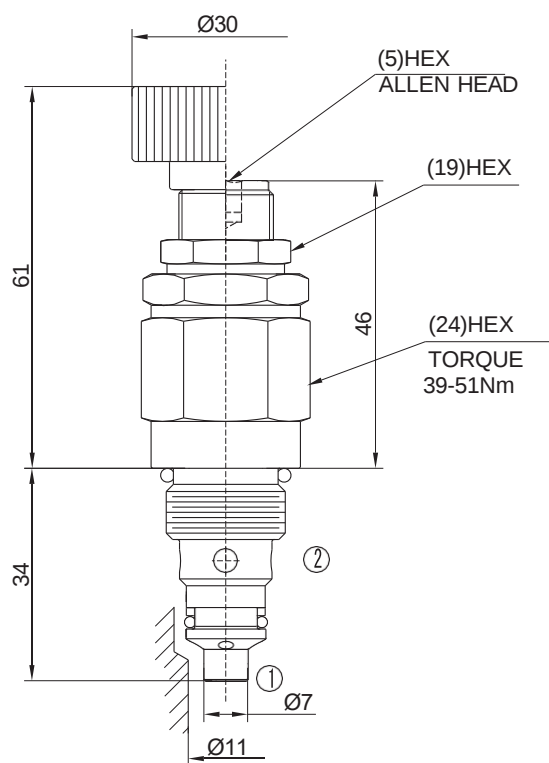
4 Adjustment
K=30mm Dia Knob
Omit= 5mm Hex Allen Head

5 Optional Pressure Setting
Omit=Standard Setting
Example:0200=200bar

6 Port Size
Omit=None
4T=SAE4
6T=SAE6
2G=G 1/4
3G=G 3/8

INSTALLATION DIMENSIONS

Unit=Millimeters



During installation, pilot drill Ø11mm is required with min. depth of 34mm

TNRV-10

Direct-acting Relief Valve



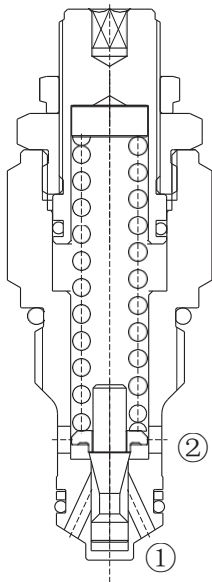
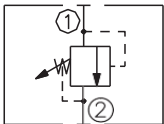
DESCRIPTION

A cartridge-style, direct-acting poppet-type relief valve

OPERATION

The valve prevents flow from ① to ② until the set Cracking Pressure at ① is achieved. The poppet then unseats allowing flow from ① to ② protecting the circuit from over pressurization.

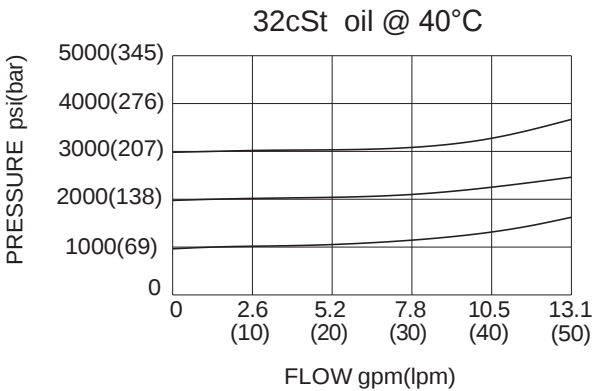
SYMBOL



SPECIFICATIONS

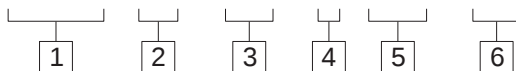
Max.Operating Pressure	350bar
Flow	See PRESSURE DROP VS.FLOW graph.
Internal Leakage	5 drops/min max. to 80% of nominal setting
Reseat Pressure	80% of cracking pressure(cracking pressure at 0.95lpm/0.25gpm)
Standard Spring Ranges	25 to 120 bar; preset: 69bar
	40 to 200 bar; preset: 138bar
	200 to 350 bar; preset: 207bar
Temperature	-40°F to +250°F(-40°C to +120°C)
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	10-2
Housing Material	Steel & Ductile iron rated to 350barr

PRESSURE DROP VS.FLOW



TO ORDER

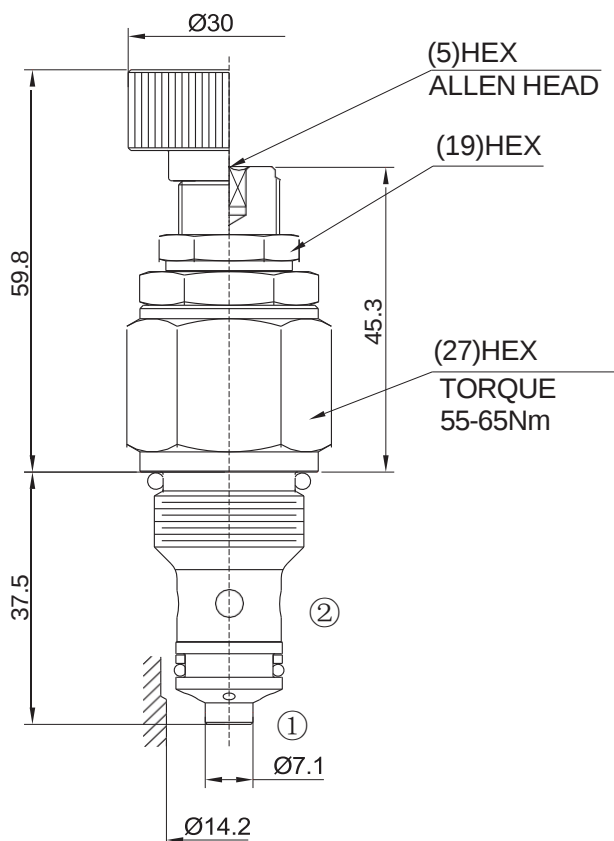
TNRV -10 - * * - * / ** - * ***



1 Function TNRV=Direct-acting Relief Valve	4 Adjustment K=30mm Dia Knob Omit= 5mm Hex Allen Head	6 Port Size Omit=None 6T=SAE6 8T=SAE8 3G=G 3/8 4G=G 1/2
2 Size 10=10 Size	5 Optional Pressure Setting Omit=Standard Setting Example:0200=200bar	
3 Spring Ranges 18=360-1740psi(25-120bar) Preset:1000psi(69bar) 29=580-2900psi(40-200bar) Preset:2000psi(138bar) 50=2900-5000psi(200-350bar) Preset:3000psi(207bar) Factory pressure setting established at 5L/min;		

INSTALLATION DIMENSIONS

Unit=Millimeters



During installation pilot drill Ø14.2mm is required with min.depth of 38mm

TDRV6-08

Direct-acting Differential Area
Relief Valve



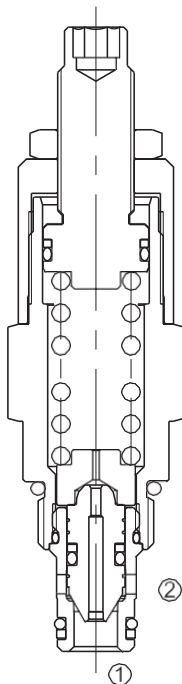
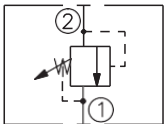
DESCRIPTION

A cartridge-style direct-acting differential area poppet-type relief valve

OPERATION

The valve blocks flow from ② to ① until sufficient pressure is present at ② to force the poppet from its seat.

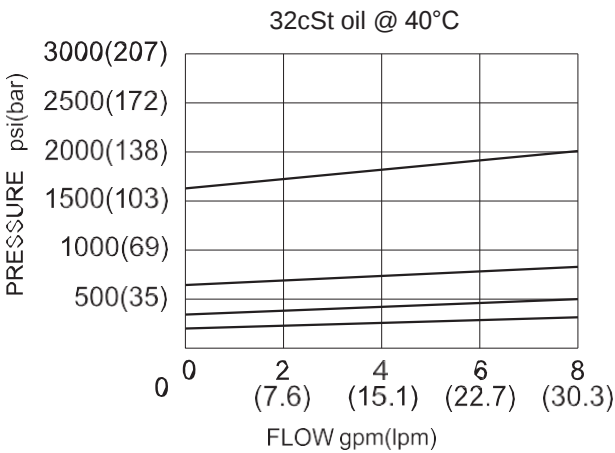
SYMBOL



SPECIFICATIONS

Operating Pressure	250bar
Flow	See PRESSURE DROP VS. FLOW graph.
Internal Leakage	5 drops/min max. to 80% of nominal setting
Reseat Pressure	80% of cracking pressure (cracking pressure at 0.95 lpm /0.25 gpm)
Standard Spring Ranges	3.45 to 27.59 bar, preset:13.8bar 10.34 to 48.3 bar, preset: 24bar 17.24 to 89.6 bar, preset: 45bar 17.24 to 227.59 bar; preset:114bar
Temperature	-40°F to +250°F(-40°C to +120°C)
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	08-2
Housing Material	6061-T6 aluminum alloy rated to 207bar, Steel & Ductile iron rated to 350bar

PRESSURE DROP VS.FLOW





TO ORDER

TDRV6 - 08 - * * - * / ** - * ***



1 Function

TDRV6=Direct-acting
Differential Area Poppet-type
Relief Valve

2 Size

08=08 Size

3 Spring Ranges

4=50-400psi(3.45-27.59bar)
Preset:200psi(13.8bar)
7=150-700psi(10.34-48.3bar)
Preset:350psi(24bar)
13=250-1300psi(17.24-89.6bar)
Preset:650psi(45bar)
26=250-3300psi(17.24-227.59Bar)
Preset:1650psi(114bar)

4 Adjustment

K=1-1/2" Dia Knob
Omit=1/4" Hex Allen Head

5 Optional Pressure Setting

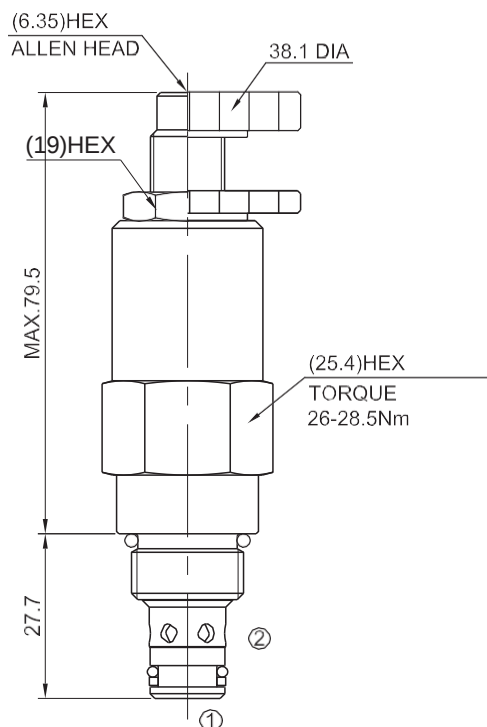
Omit=Standard Setting
Example:0150=150bar

6 Port Size

Omit=None
6T=SAE6
8T=SAE8
2G=G 1/4
3G=G 3/8

INSTALLATION DIMENSIONS

Unit=Millimeters



TDRV6-10

Direct-acting Differential Area
Relief Valve



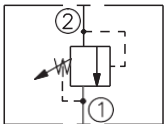
DESCRIPTION

A cartridge-style direct-acting differential area poppet-type relief valve

OPERATION

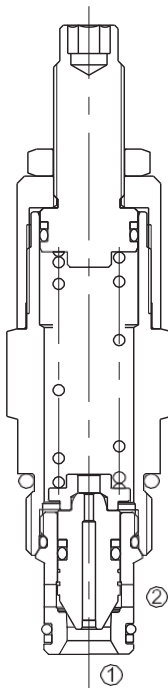
The valve blocks flow from ② to ① until sufficient pressure is present at ② to force the poppet from its seat.

SYMBOL

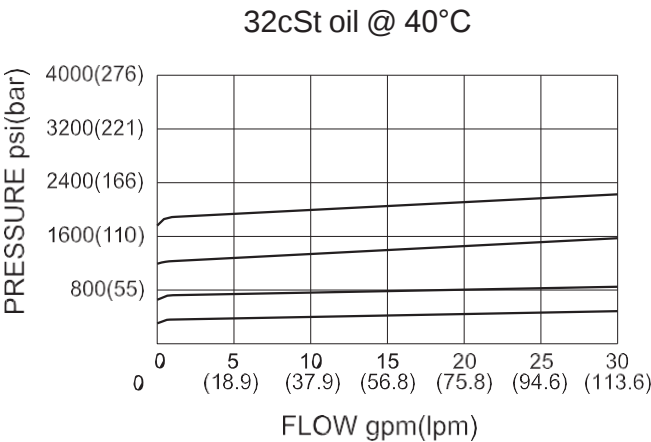


SPECIFICATIONS

Operating Pressure	240bar
Flow	See PRESSURE DROP VS. FLOW graph.
Internal Leakage	5 drops/min max. to 80% of nominal setting
Reseat Pressure	80% of cracking pressure (cracking pressure at 0.95 lpm /0.25 gpm)
Standard Spring Ranges	10.34 to 41.38 bar, preset: 21bar 10.34 to 89.66 bar, preset: 45bar 17.24 to 165.52 bar, preset: 83bar 17.24 to 241.38 bar, preset:121bar
Temperature	-40°F to +250°F(-40°C to +120°C)
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	10-2
Housing Material	6061-T6 aluminum alloy rated to 207bar, Steel & Ductile iron rated to 350bar



PRESSURE DROP VS.FLOW





TO ORDER

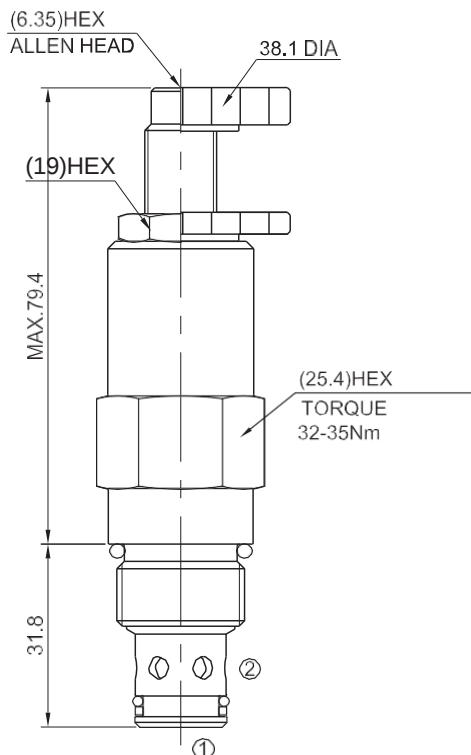
TDRV6 - 10 - * * - * / ** - * ***

1
2
3
4
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6

1 Function TDRV6 =Direct-acting Differential Area Poppet-type Relief Valve	3 Spring Ranges 6=150-600psi(10.34-41.38bar) Preset:300psi(21bar) 13=150-1300psi(10.34-89.66bar) Preset:650psi(45bar) 25=250-2400psi(17.24-165.52bar) Preset:1200psi(83bar) 35=250-3500psi(17.24-241.38Bar) Preset:1750psi(121bar)	5 Optional Pressure Setting Omit=Standard Setting Example:0150=150bar
2 Size 08=08 Size	4 Adjustment K=1-1/2"Dia Knob Omit = 1/4" Hex Allen Head	6 Port Size Omit=None 6T=SAE6 8T=SAE6 6T=SAE8 3G=G 3/8 4G=G 1/2

INSTALLATION DIMENSIONS

Unit=Millimeters



TDRV8-10

Direct-acting Differential Area
Relief Valve



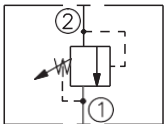
DESCRIPTION

A cartridge-style direct-acting differential area poppet-type relief valve

OPERATION

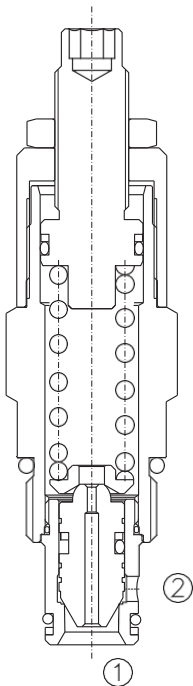
The valve blocks flow from ② to ① until sufficient pressure is present at ② to force the poppet from its seat.

SYMBOL

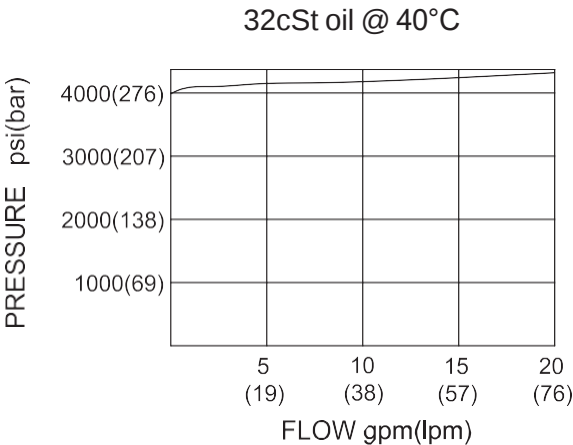


SPECIFICATIONS

Operating Pressure	350bar
Flow	See PRESSURE DROP VS. FLOW graph.
Internal Leakage	5 drops/min max. to 80% of nominal setting
Reseat Pressure	85% of cracking pressure (cracking pressure at 0.95 lpm /0.25 gpm)
Standard Spring Ranges	38 to 350 bar, preset: 175bar
Temperature	-40°F to +250°F(-40°C to +120°C)
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	10-2
Housing Materia	Steel & Ductile iron rated to 350bar



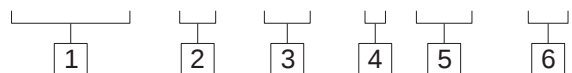
PRESSURE DROP VS.FLOW





TO ORDER

TDRV8 - 10 - * * - * / ** - * ***



1 Function

TDRV8=Direct-acting
Differential Area
Poppet-type Relief Valve

2 Size

10=10 Size

3 Spring Ranges

50=550-5000psi(38-350bar)
Preset:2540psi(175bar)

4 Adjustment

K= 1-1/2"Dia Knob
Omit = 1/4" Hex Allen Head

5 Optional Pressure Setting

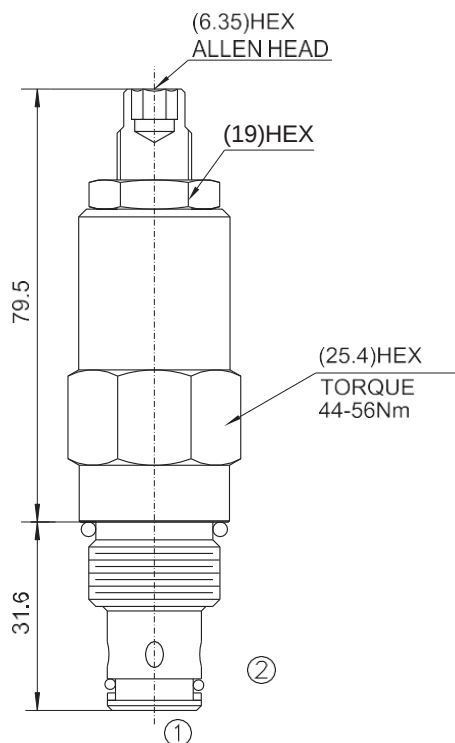
Omit=Standard Setting
Example:0150=150bar

6 Port Size

Omit=None
6T=SAE6
8T=SAE8
3G=G 3/8
4G=G 1/2

INSTALLATION DIMENSIONS

Unit=Millimeters



TPSRV2-08

Pilot-operated Relief Valve



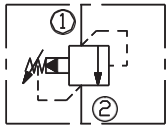
DESCRIPTION

A cartridge-style pilot-operated spool-type relief valve

OPERATION

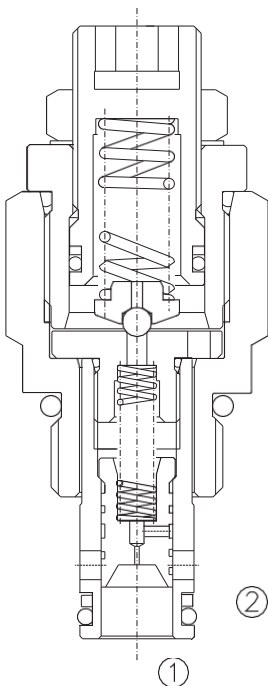
The valve prevents flow from ① to ② until pressure at ① exceeds the set Cracking Pressure and opens the pilot section. The pilot flow creates a pressure differential across the spool which causes the valve to open allowing flow from ① to ② protecting the circuit from over pressurization. This cartridge relief valve offers a smooth transition in response to a load change in a hydraulic circuit.

SYMBOL

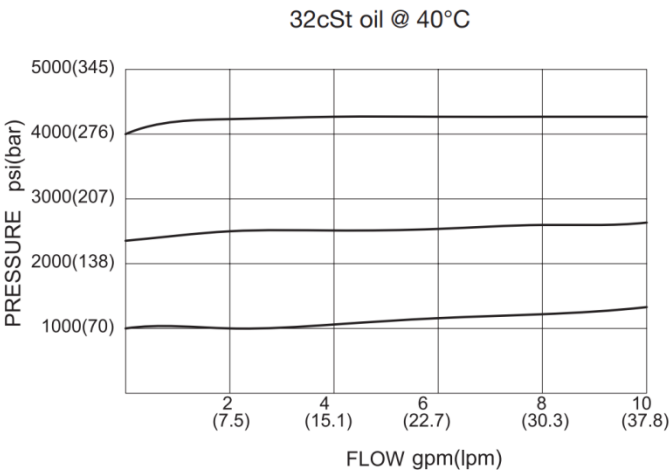


SPECIFICATIONS

Max.Operating Pressure	350bar
Flow	See PRESSURE DROP VS. FLOW graph.
Internal Leakage	82cc/min max. to 90% of nominal setting pressure
Standard Spring Ranges	3.45bar to 103.5bar, preset: 31bar 3.45bar to 207bar, preset: 65.5bar 3.45bar to 350bar, preset: 103bar
Temperature	-40°F to +250°F(-40°C to +120°C)
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	08-2
Housing Material	Steel & Ductile iron rated to 350bar



PRESSURE DROP VS.FLOW





TO ORDER

TPSRV2 – 08 – * * / **** – * *

1

2

3

4

5

1 Function

TPSRV2=Pilot-operated
Spool-type Relief Valve

2 Size

08=08 Size

3 Spring Ranges

15=50-1500psi(3.5-103.5bar)

Preset:450psi(31bar)

30=50-3000psi(3.5-207bar)

Preset:950psi(65.5bar)

50=50-5000psi(3.5-350bar)

Preset:1500psi(103bar)

5 Port Size

Omit=None

4T=SAE4

6T=SAE6

2G=G 1/4

3G=G 3/8

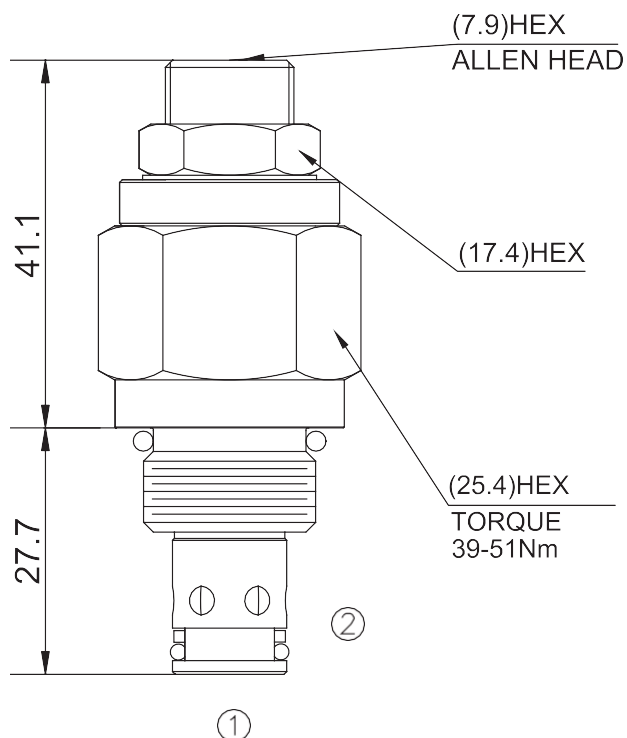
4 Optional Pressure Setting

Omit=Standard Setting

Example:0150=150Bar

INSTALLATION DIMENSIONS

Unit=Millimeters



TPSRV2-10

Pilot-operated Relief Valve



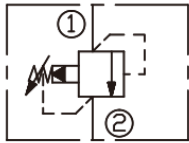
DESCRIPTION

A cartridge-style pilot-operated spool-type relief valve

OPERATION

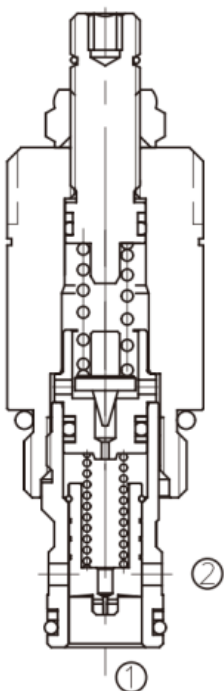
The valve prevents flow from ① to ② until pressure at ① exceeds the set crack pressure and opens the pilot section. The pilot flow creates a pressure differential across the spool which causes the valve to open allowing flow from ① to ② protecting the circuit from over pressurization.

SYMBOL

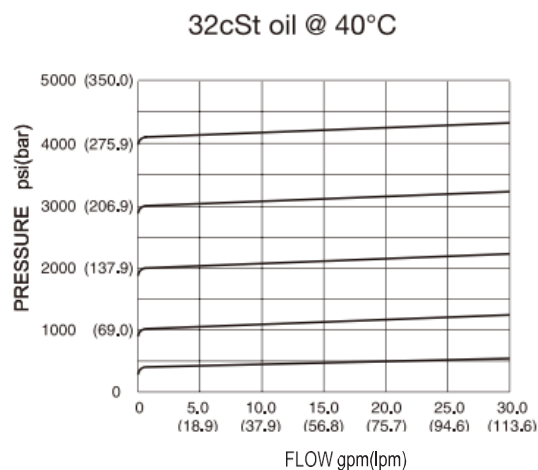


SPECIFICATIONS

Max.Operating Pressure	420 bar
Max.Pressure Admitted	210 bar
Flow	See PRESSURE DROP VS. FLOW graph.
Internal Leakage	82cc/min max. to 80% of nominal setting
Standard Spring Ranges	7 bar to 55 bar, preset: 47 bar 35 bar to 140 bar, preset: 48 bar 70 bar to 280 bar, preset: 88 bar 140 bar to 420 bar, preset: 140 bar
Temperature	-40°F to +250°F(-40°C to +120°C)
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	10-2
Housing Material	Steel & Ductile iron rated to 350bar



PRESSURE DROP VS.FLOW





TO ORDER

TPSRV2 – 10 – * * – * / * * * * – * * –

1

2

3

4

5

6

1 Function

TPSRV2=Pilot-operated
Spool-type Relief Valve

2 Size

10=10 Size

3 Spring Ranges

8=100-800psi (7-55 bar)
Preset:680psi(47bar)
20=500-2000psi(35-140bar)
Preset:696psi(48bar)
40=1000-4000psi(70-280bar)
Preset:1275psi(88bar)
60=2000-6000psi(140-420bar)
Preset:2000psi(140bar)

4 Seal Kits

Blank=O (for O-ring seals)

5 Setting In Bar

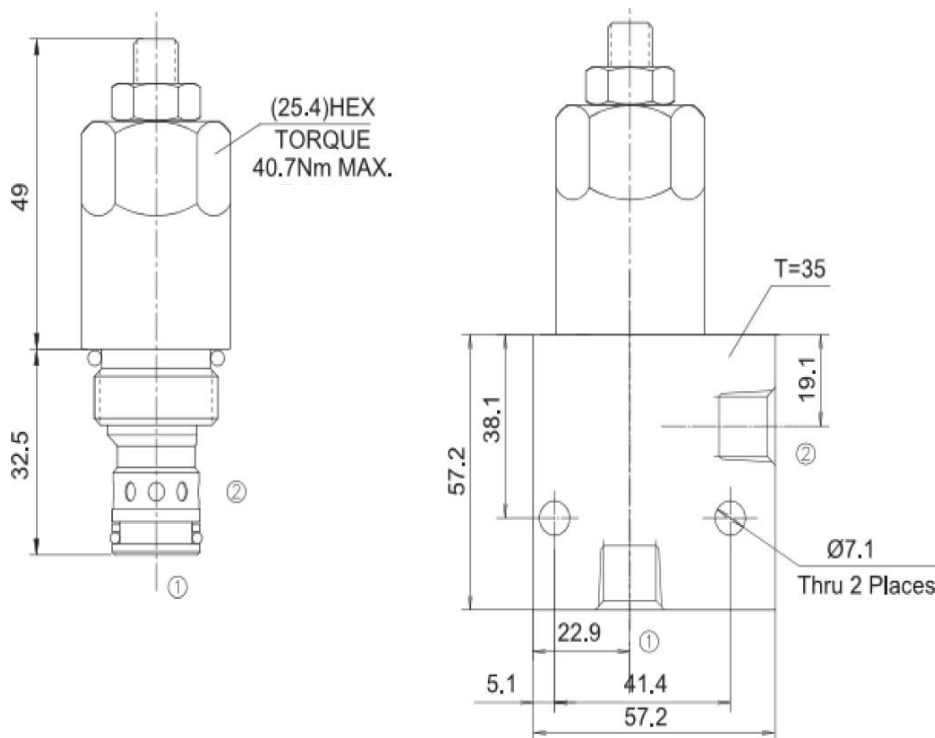
Blank=Preset
Example:0250=250Bar

6 Body Porting

Blank=None
6T=SAE6
8T =SAE8
3G= G 3/8
4G=G 1/2

INSTALLATION DIMENSIONS

Unit=Millimeters



TPSRV2-12

Pilot-operated Relief Valve



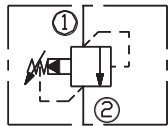
DESCRIPTION

A cartridge-style pilot-operated spool-type relief valve

OPERATION

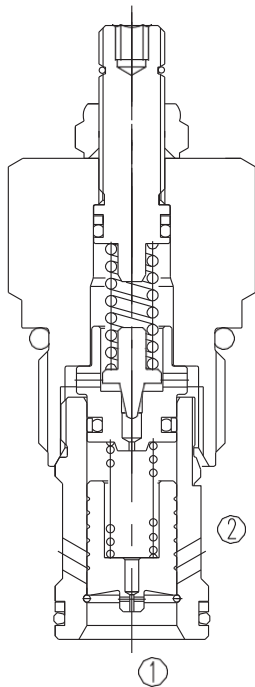
The valve prevents flow from ① to ② until pressure at ① exceeds the set crack pressure and opens the pilot section. The pilot flow creates a pressure differential across the spool which causes the valve to open allowing flow from ① to ② protecting the circuit from over pressurization.

SYMBOL

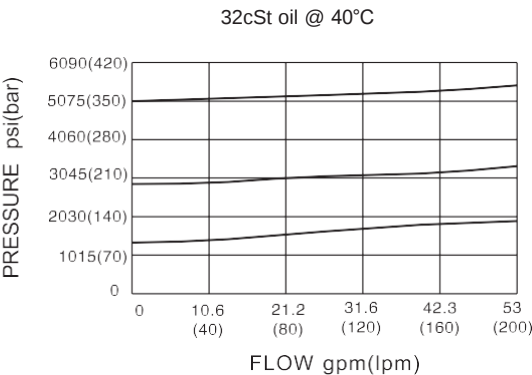


SPECIFICATIONS

Max.Operating Pressure:	Port①: 420bar
Max.Pressure Admitted:	Port②: 140bar
Flow:	See PRESSURE DROP VS. FLOW graph.
Internal Leakage:	170 cc/min. max. to 80% of nominal setting
Reseat Pressure:	85% of crack pressure (crack pressure at 0.95 lpm /0.25 gpm)
Standard Spring Ranges:	35 to 140 bar; preset :100 bar 70 to 280 bar; preset :200 bar 140 to 420 bar: preset: 210 bar
Temperature:	-40°F to +250°F(-40°C to +120°C)
Fluids:	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity:	12-2
Body Material:	Steel & Ductile iron rated to 350bar

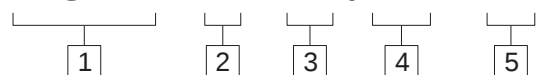


PRESSURE DROP VS.FLOW



TO ORDER

TPSRV2 - 12 - * * / ** - * ***



1 Function

TPSRV2= Pilot-Operated
Spool-type Relief Valve

2 Size

12=12

3 Spring Ranges

20=500-2000psi(35-140bar)

Preset:1450psi(100bar)

40=1000-4000psi(70-280bar)

Preset:2900psi(200bar)

60=2000-6000psi(140-420bar)

Preset:3000psi(210bar)

4 Setting In Bar

Blank= Preset

Example:0200=200bar

5 Body Porting

Blank= None

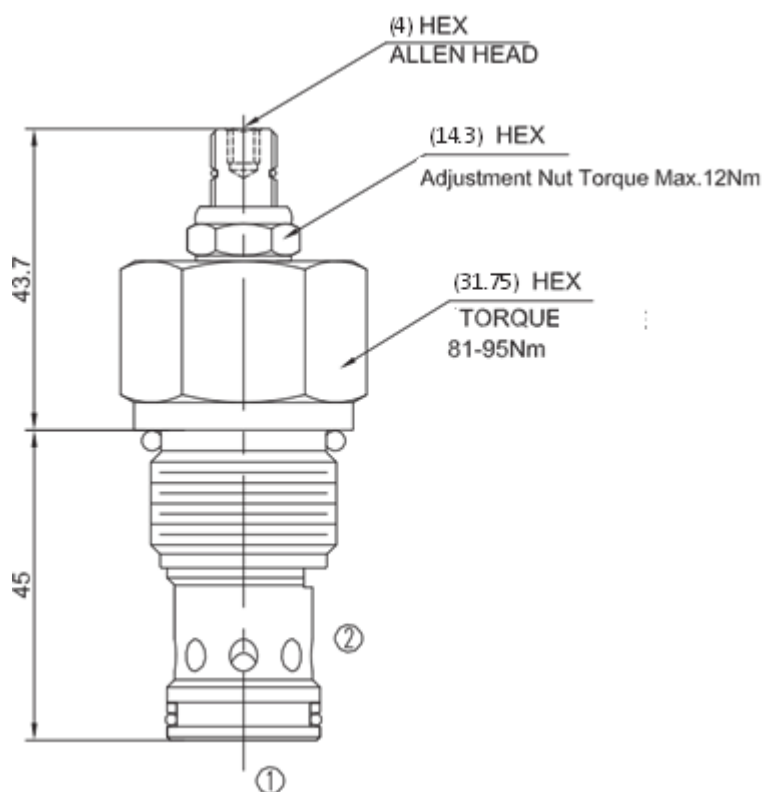
10T=SAE10

12T=SAE12

6G=G 3/4

8G=G 1

INSTALLATION DIMENSIONS



Unit=Millimeters

TPSRV2-16

Pilot-operated Relief Valve



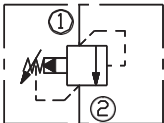
DESCRIPTION

A cartridge-style pilot-operated spool-type relief valve

OPERATION

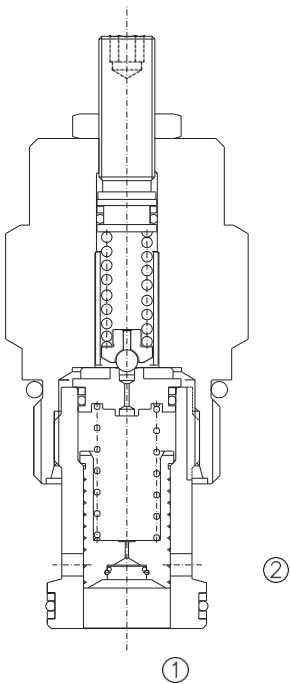
The valve prevents flow from ① to ② until pressure at ① exceeds the set Cracking Pressure and opens the pilot section. The pilot flow creates a pressure differential across the spool which causes the valve to open allowing flow from ① to ② protecting the circuit from over pressurization.

SYMBOL

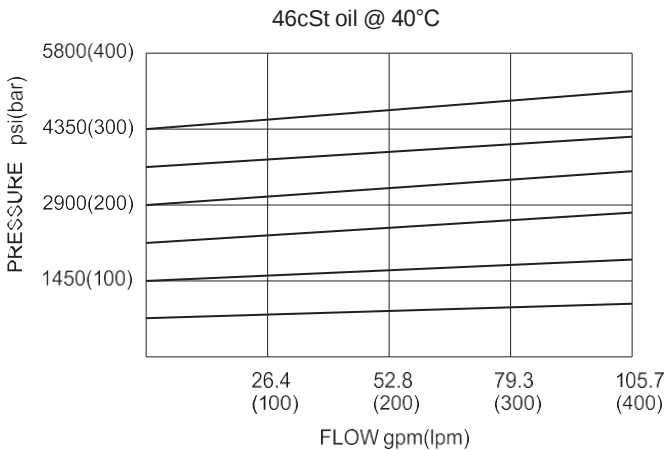


SPECIFICATIONS

Max.Operating Pressure	Port①: 420bar
Max.Pressure Admitted	Port②: 140bar
Flow	See PRESSURE DROP VS. FLOW graph.
Internal Leakage	82 cc/min max. to 80% of nominal setting
Reseat Pressure	85% of cracking pressure(cracking pressure at 0.95 lpm /0.25 gpm)
Standard Spring Ranges	10-210bar Preset:100bar; 10-420bar :200bar;
Temperature	-40°F to +250°F(-40°C to +120°C)
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	16-2
Housing Material	Steel & Ductile iron rated to 350bar



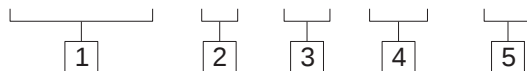
PRESSURE DROP VS.FLOW





TO ORDER

TPSRV2 - 16 - * * / ** - * ***



1 Function

TPSRV2=Pilot-operated
Spool-type Relief Valve

2 Size

16=16 Size

3 Spring Ranges

30=145-3000psi(10-210bar)
Preset:1450psi(100bar)
60=145-6000psi(10-420bar)
Preset:2900psi(200bar)

4 Optional Pressure Setting

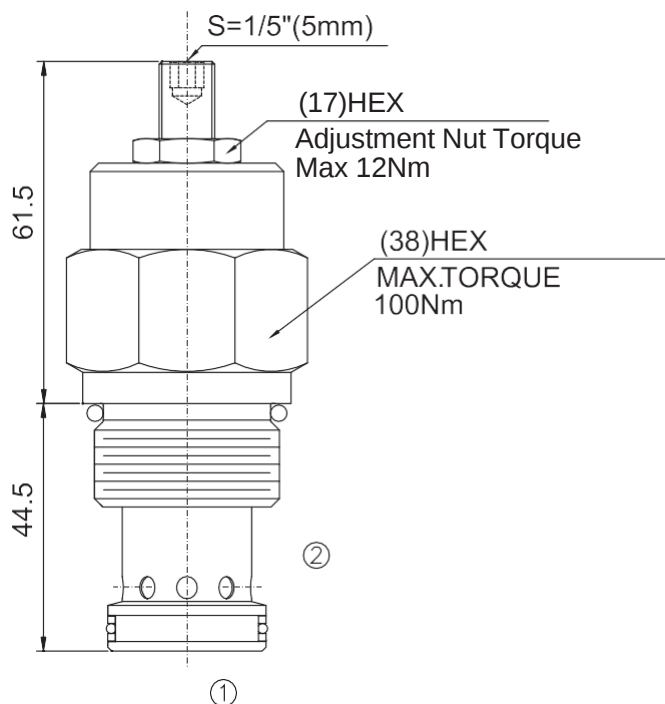
Omit=Standard Setting
Example:0250=250bar

5 Port Size

Omit=None
12T=SAE12
16T=SAE16
6G=G 3/4
8G=G 1

INSTALLATION DIMENSIONS

Unit=Millimeters



TNV2-08

Needle Valve



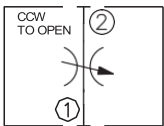
DESCRIPTION

A cartridge-style manually-adjustable needle valve

OPERATION

The valve varies flow restriction by adjusting needle in or out and will shut off when fully closed. These valves will meter flow in either direction.

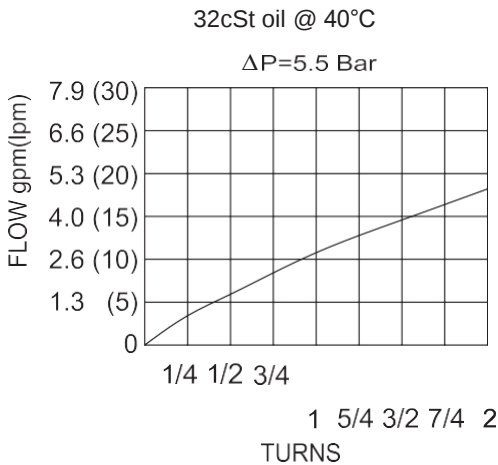
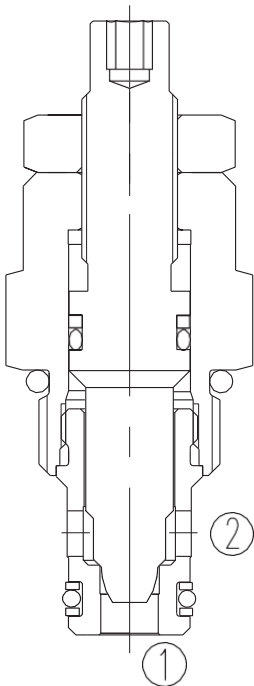
SYMBOL



SPECIFICATIONS

Operating Pressure	250bar
Flow	See FLOW CHARACTERISTICS chart
Internal Leakage	3 drops/min max. at 250 bar
Temperature	-40°F to +250°F (-40°C to +120°C)
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	08-2
Housing Material	6061-T6 aluminum alloy rated to 207bar, Steel & Ductile iron rated to 350bar

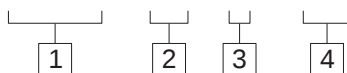
PRESSURE DROP VS.FLOW





TO ORDER

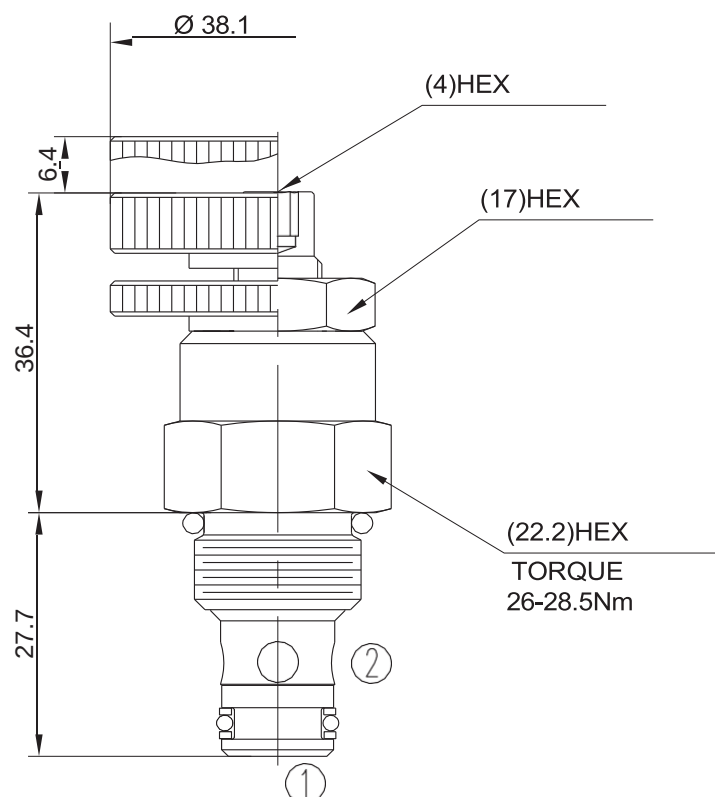
TNV2 - 08 - * - * *



1 Function TNV2=Manually-adjustable Needle Valve	2 Size 08=08 Size	4 Port Size Omit=None 4T=SAE4 6T=SAE6 2G=G 1/4 3G=G 3/8
	3 Adjustment K=1-1/2" Dia Knob Omit=1/4" Hex Allen Head	

INSTALLATION DIMENSIONS

Unit=Millimeters



TNV2-10

Needle Valve



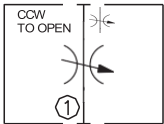
DESCRIPTION

A cartridge-style manually-adjustable needle valve

OPERATION

The valve varies flow restriction by adjusting needle in or out and will shut off when fully closed. These valves will meter flow in either direction.

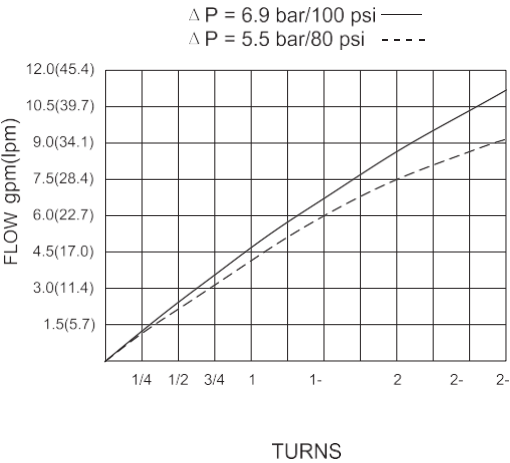
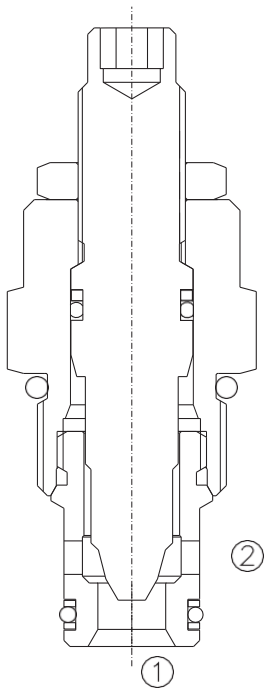
SYMBOL



SPECIFICATIONS

Operating Pressure	250bar
Flow	See PRESSURE DROP VS. FLOW graph.
Internal Leakage	3 drops/min max. at 250 bar
Temperature	-40°F to +250°F (-40°C to +120°C)
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	10-2
Housing Material	6061-T6 aluminum alloy rated to 207bar, Steel & Ductile iron rated to 350bar

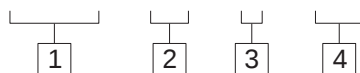
PRESSURE DROP VS.FLOW





TO ORDER

TNV2 - 10 - * - * *



1 Function
TNV2=Manually-adjustable Needle Valve

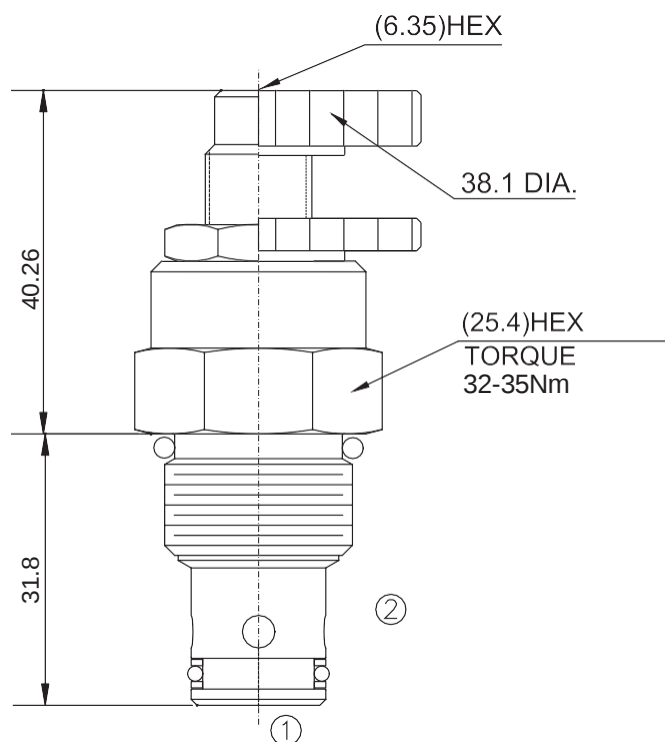
2 Size
10=10 Size

3 Adjustment
K=1-1/2" Dia Knob
Omit=1/4" Hex Allen Head

4 Port Size
Omit=None
6T=SAE6
8T=SAE8
3G=G 3/8
4G=G 1/2

INSTALLATION DIMENSIONS

Unit=Millimeters



TFC-08

Flow Control With Reverse
Flow Check



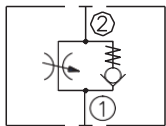
DESCRIPTION

A cartridge-style adjustable flow control valve with reverse flow check

OPERATION

The valve varies flow restriction by adjusting needle in or out. Flow is metered from ② to ①. Free reverse flow is from ① to ②

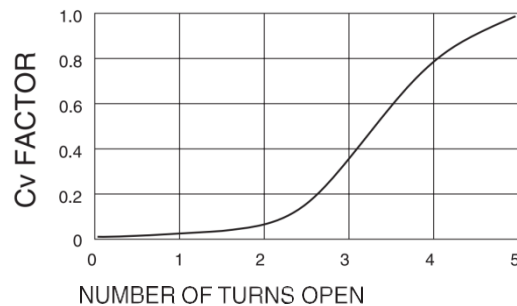
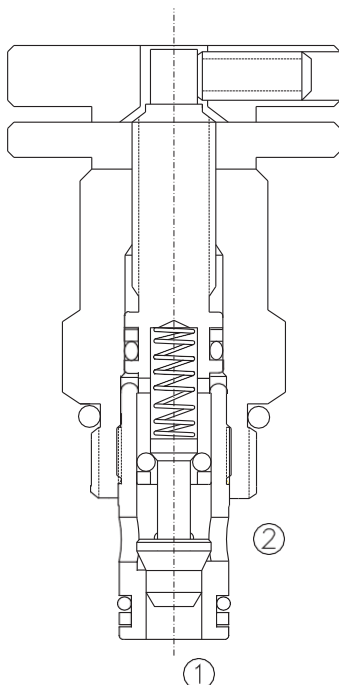
SYMBOL



SPECIFICATIONS

Max.Operating Pressure	250bar
Flow	See PRESSURE DROP VS.FLOW graph.
Internal Leakage	3 drops/min max. at shut-off
Temperature	-40°F to +250°F(-40°C to +120°C)
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	08-2
Housing Material	6061-T6 aluminum alloy rated to 207bar, Steel & Ductile iron rated to 350bar

PRESSURE DROP VS.FLOW



$$\text{FLOW IN GPM} = \frac{C_v \sqrt{P_1 - P_2}}{\sqrt{G_f}}$$

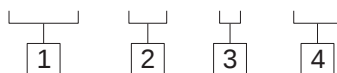
Cv = Flow Coefficient
P1 = Inlet Pressure (psi)
P2 = Outlet Pressure (psi)

Gf = specific gravity of
medium at operating
temperature in F.°



TO ORDER

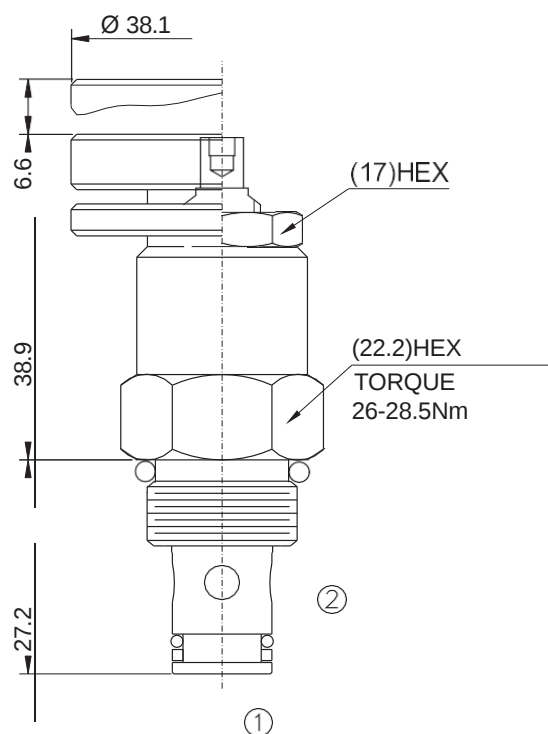
TFC - 08 - * - * *



1 Function TFC=Adjustable Cartridge Flow Control Valve	3 Adjustment K=1-1/2" Dia Knob Omit=4mm Hex Allen Head	4 Port Size Omit=None 4T=SAE4 6T=SAE6 2G=G 1/4 3G=G 3/8
2 Size 08=08 Size		

INSTALLATION DIMENSIONS

Unit=Millimeters



TFC-10

Flow Control With Reverse
Flow Check



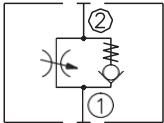
DESCRIPTION

A cartridge-style adjustable flow control valve with reverse flow check

OPERATION

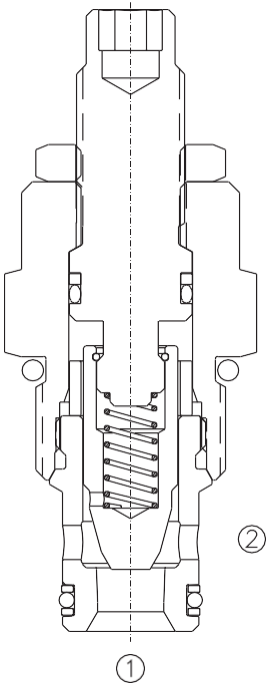
The valve varies flow restriction by adjusting needle in or out. Flow is metered from ② to ① . Free reverse flow is from ① to ②

SYMBOL

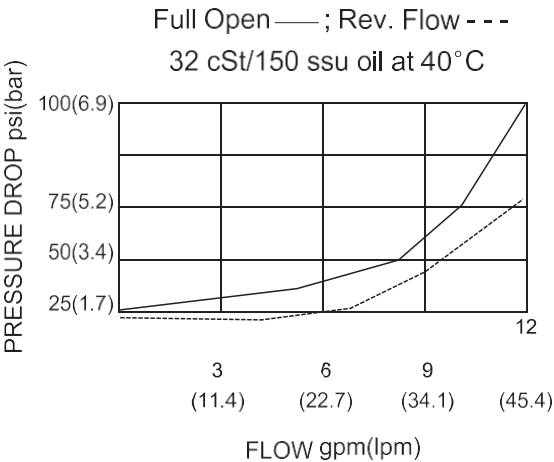


SPECIFICATIONS

Max.Operating Pressure	250bar
Flow	See PRESSURE DROP VS.FLOW graph.
Internal Leakage	3 drops/min max. at shut-off
Temperature	-40°F to +250°F(-40°C to +120°C)
Fluids	Mineral-based fluids with viscosities of 7.4 to 420 cSt.
Cavity	10-2
Housing Material	6061-T6 aluminum alloy rated to 207bar, Steel & Ductile iron rated to 350bar



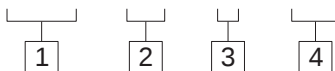
PRESSURE DROP VS.FLOW





TO ORDER

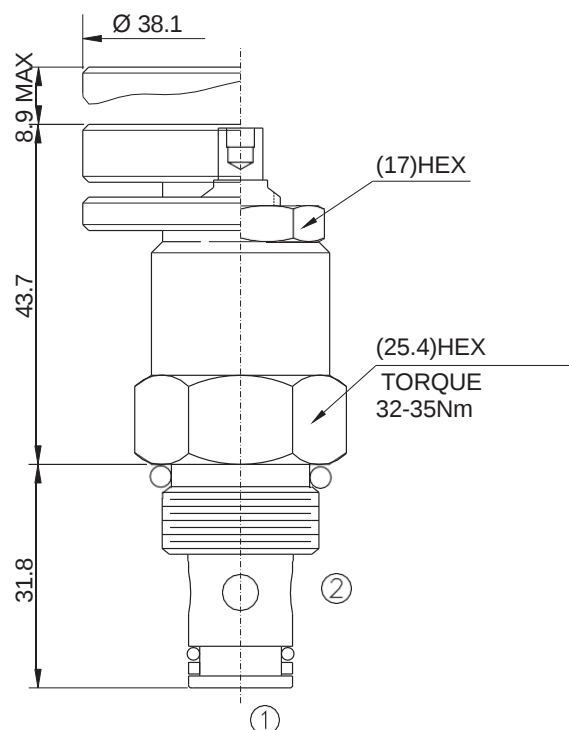
TFC - 10 - * - * *



1 Function TFC=Adjustable Cartridge Flow Control Valve	3 Adjustment K=1-1/2"Dia Knob Omit=1/4" Hex Allen Head	4 Port Size Omit=None 6T=SAE6 8T=SAE8 3G=G 3/8 4G=G 1/2
2 Size 10=10 Size		

INSTALLATION DIMENSIONS

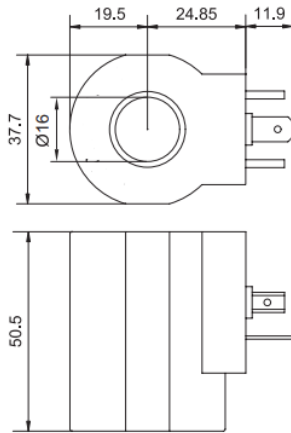
Unit=Millimeters



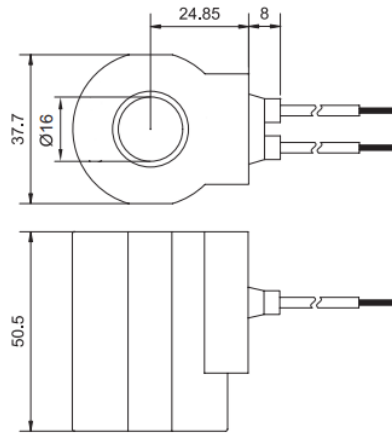
SOLENOID COIL DATA

Coil Must Be Installed With Letter Up

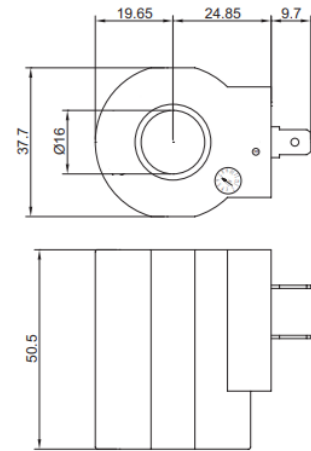
Unit=Millimeter



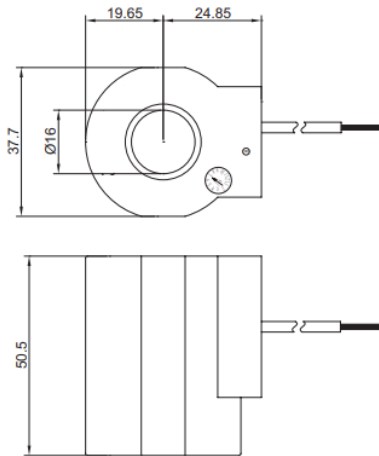
HIRSCHMAN



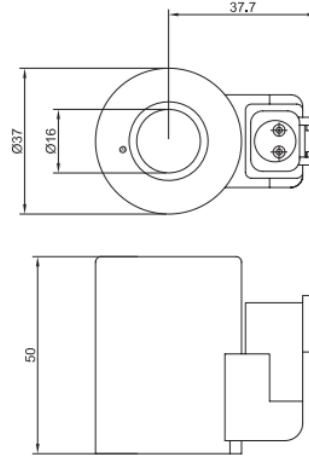
DOUBLE LEADS



DOUBLE SPADE



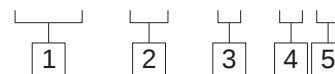
SINGLE LEAD



Model:SC-10-C-*ER (22W)
Deutsch Connector
(Water-proof Coil)

TO ORDER

TC3 - 10 - C - * *



1 Function
TC3=Solenoid Coil

2 Size
10=10 Size

3 Shape
C=Cylindrical

4 Coil Voltage
1=12 VDC RED LEAD
2=24 VDC BLUE LEAD
3=110VAC BLACK LEAD
4=220VAC YELLOW LEAD
9=72 VDC

5 Coil Connector Type
D= Double Lead
H= Hirschmann

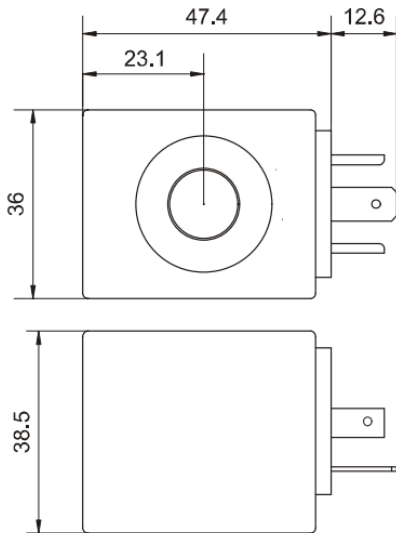
Voltage (V)	Power (W)	Resistance (Ω)±7%[Ta=20-25°C]
12VDC	26	5.5
24VDC	26	22.1
110VAC	26	—
220VAC	26	—
72VDC	26	199



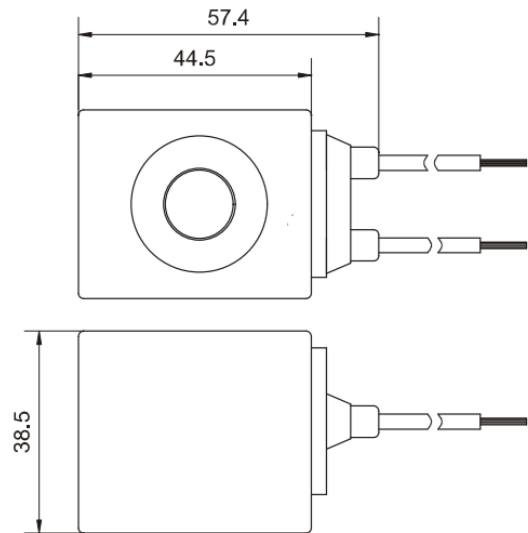
SOLENOID COIL DATA

Coil Must Be Installed With Letter Up

Unit:Milimeters



Model:TC6-08-S-*H
HIRSCHMAN



Model:TC6-08-S-*D
DOUBLE LEADS

TO ORDER

