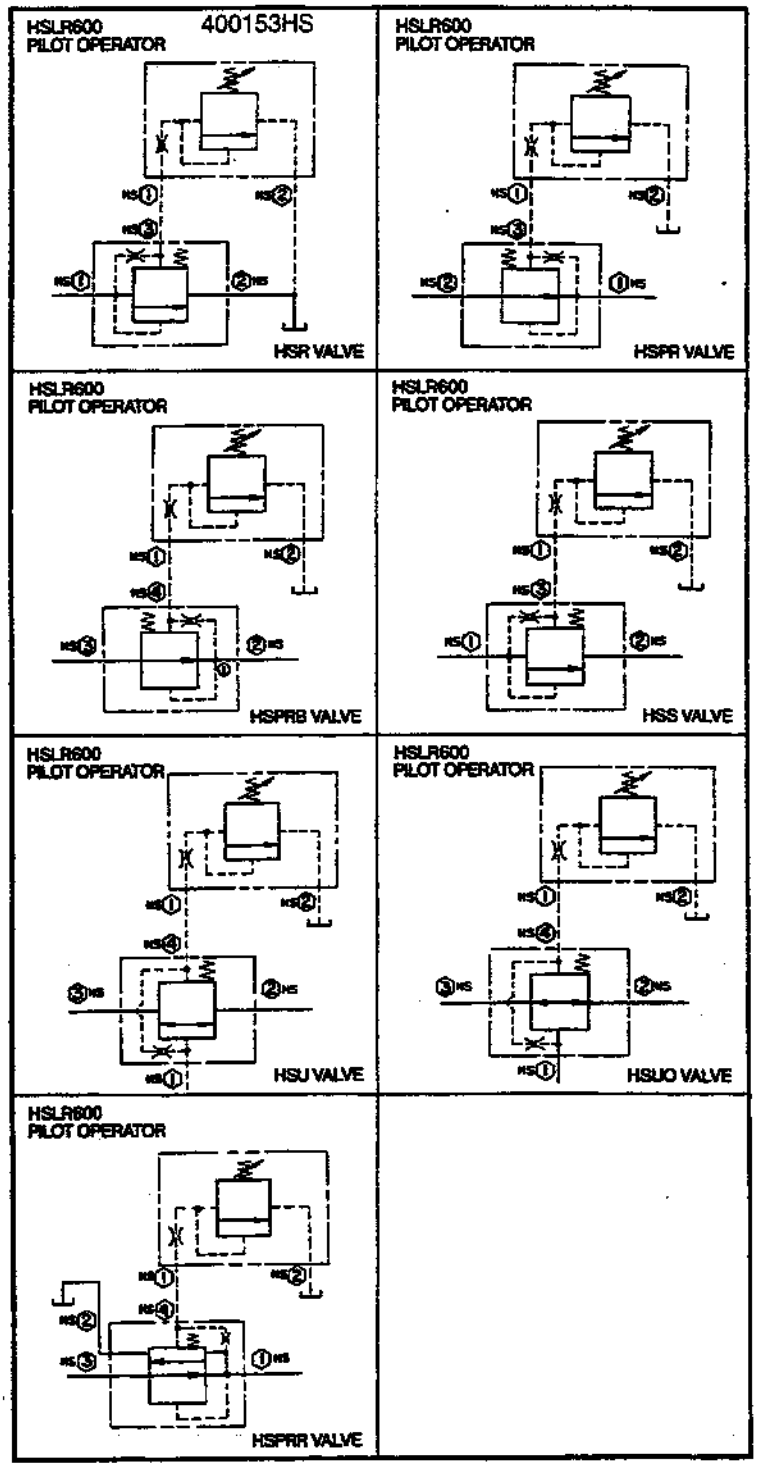
INDEX TO SCREW-IN
PRESSURE CONTROL CARTRIDGE VALVES
(DS 82550 - DS 82790)

Data Sheet

Pilot Adjustors

Pilot Operator Circuits



Application

For increased sensitivity, smoothness of operation, broadness of range and ease of adjustments, many times it is advantageous to use a smaller (pilot) relief valve to operate a large pressure control valve. (See DS 82550-B1.1 & DS 82550-B2.1A for information on the HSLR403-P & HSLR602-P pilot valves).

Operation

The compound ASA symbols shown are for pilot operated pressure control valves. That is--they show both the pilot valve and the larger pressure control valve.

Features

HSLR relief valves are available with several pressure adjustors. The standard knob, tamper resistant option, tamper proof option and internal adjustor option are shown on the reverse side of this sheet.

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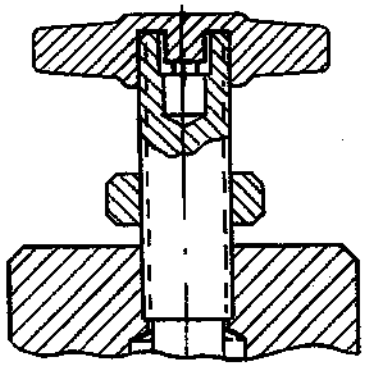
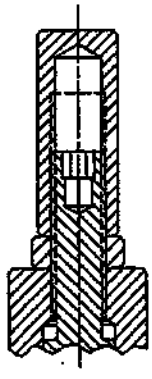
DS 82550-1B

Data Sheet

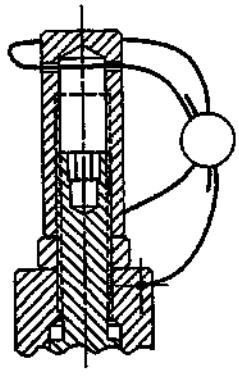
Pilot Adjustors



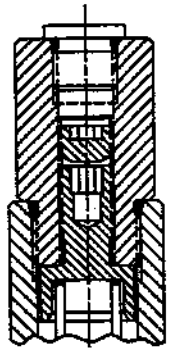
Standard Knob



TR
Tamper Resistant Option



TP
Tamper Proof Option



I
Internal Adjustor Option

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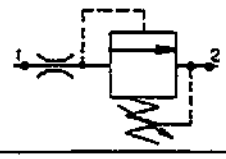
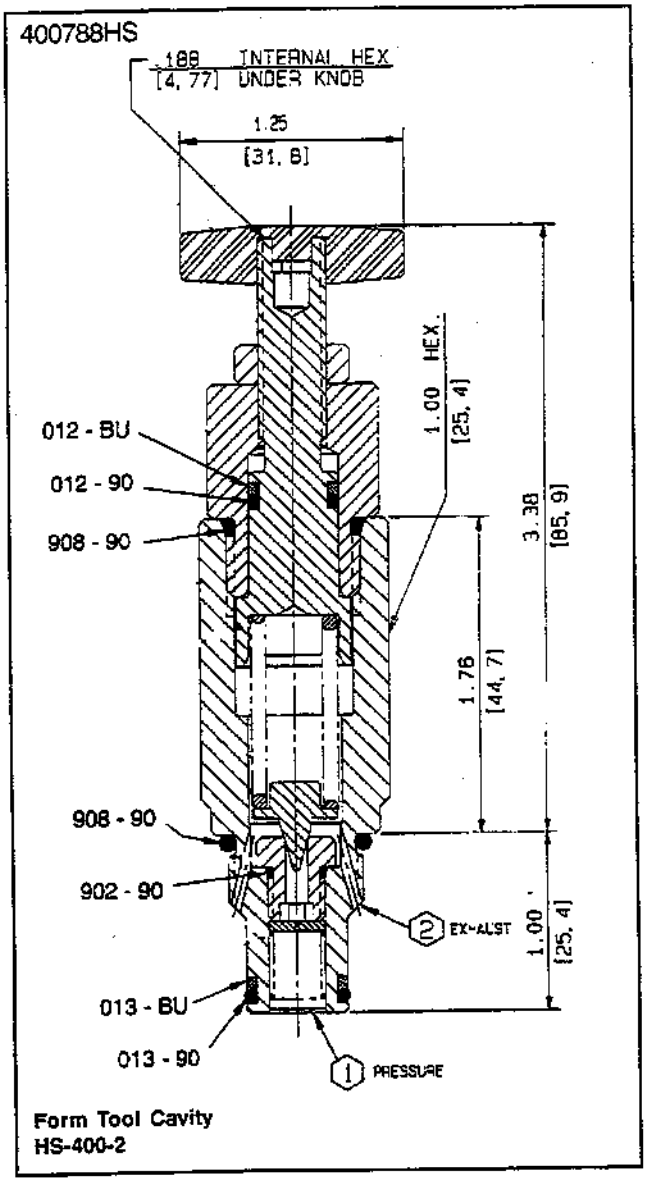
VALVE, SCREW-IN CARTRIDGE

HSLR403-P

ENGINEERING | 1



Data Sheet — **Relief Valve, Direct Acting**



Form Tool Cavity
HS-400-2

Application

The HSLR is a flow adjustable relief valve used for pilot control of relief, pressure reducing, sequence, or any other type of pressure control valve.

Operation

Inlet pressure (at port 1) passes thru a stability orifice in the center of the valve. When pressure on the exposed face of the poppet exceeds that of the adjustable spring tension, holding the poppet on the seat, the valve opens and allows flow from port 1 to port 2. When pressure drops, the poppet re-seats and flow stops.

Features

HSLR relief valves are available with several orifice sizes and springs so you can tailor the valve to your needs. The cartridge valve is constructed of steel parts and operating parts are hardened and ground as required. Cartridge is designed for ease of service or field repair. Available with tamper resistant or tamper proof adjusting screws.

Specifications

Rated flow to – 2.5 gpm (9,45 lpm)
Maximum operating pressure—
5000 psi (345 bar)
Adjustable pressure range – Depends on pressure range selected – see How to Order
Maximum shut-off leakage at rated pressure – 3 drops per minute
Viscosity range – 27-300 SSU at 100°F
35-2000 SSU at 100°F
Seal—Viton
Operating temperature— -40°F to 350°F
(-39,6°C to 175°C)
Filtration – Maintain SAE Class 6, ISO 18/15
Seal kit – HSSK-400-A

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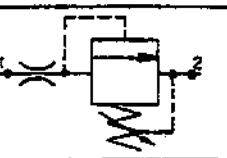

Data Sheet — Relief Valve, Direct Acting

How To Order

Screw-In Cartridge Only

HSLR403-P - ____ - ____ - ____

	Pressure Range	
	psi	bar
07	50-700	3,4-48,0
20	50-2000	3,4-138
35	50-3500	3,4-241
50	50-5000	3,4-345

	Orifice Diameter	
	in.	mm
0	No. disk	No. disk
2	.026	0,66
3	.032	0,81
4	.040	1,02
5	.055	1,40
6	.062	1,57

Option	
Blank	None
TR	Tamper resistant
TP-_*__	Tamper proof
I-	Internal Adj.

*Tamper proof to be specified as "TP——" (followed by the pressure the valve is to be set at while passing the full allowable volume thru the specified orifice). Use "0000", when the valve is to be furnished with loose wire and seal, so valve can be set in the field.

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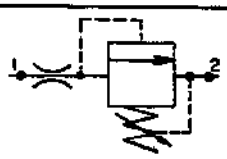
Oilgear

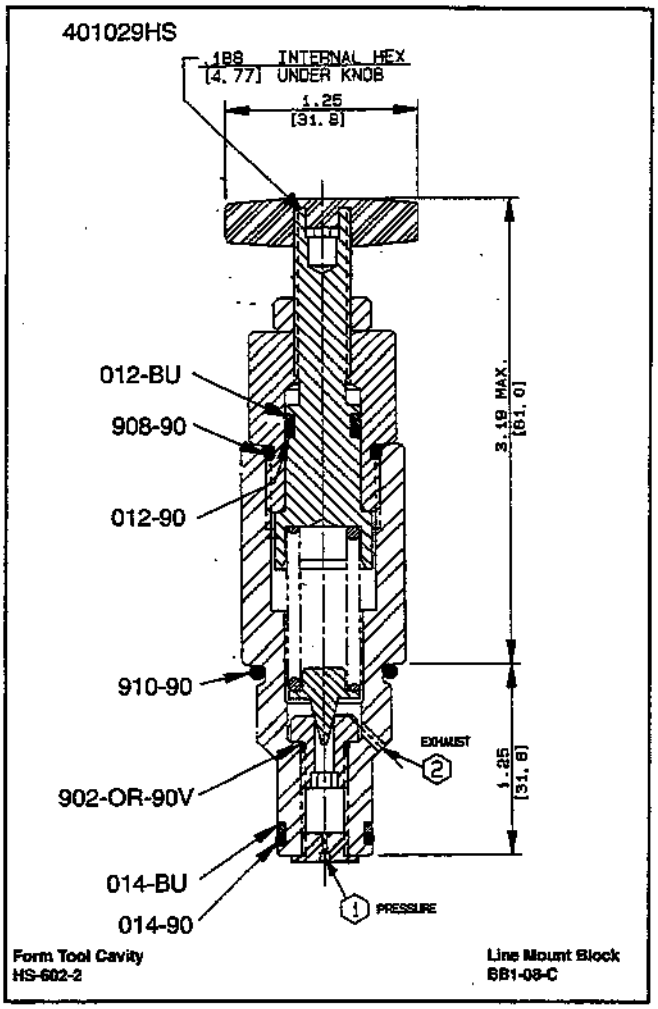
VALVE, SCREW-IN CARTRIDGE

HSLR603-P

ENGINEERING | 1



Data Sheet — **Relief Valve, Direct Acting**



Application

The HSLR is a low flow adjustable relief valve used for pilot control of relief, pressure reducing, sequence, or any other type of pressure controlled valve.

Operation

Inlet pressure (at port 1) passes thru a stability orifice in the center of the valve. When pressure on the exposed face of the poppet exceeds that of the adjustable spring tension, holding the poppet on the seat, the valve opens and allows flow from port 1 to port 2. When pressure drops, the poppet re-seats and flow stops.

Features

HSLR relief valves are available with several orifice sizes and springs so you can tailor the valve to your needs. The cartridge valve is constructed of steel parts and operating parts are hardened and ground as required. Cartridge is designed for ease of service or field repairs. Available with tamper resistant or tamper proof adjusting screws.

Specifications

Rated flow to—2.5 gpm (9,45 lpm)
Maximum operating pressure—5000 psi (345 bar)
Adjustable pressure range—Depends on pressure range selected—see How to Order
Maximum shut-off leakage at rated pressure—3 drops per minute
Viscosity range—27-30 SSU at 100°F
35-2000 SSU at 100°F
Seals—Viton
Operating temperature—-40°F to 350°F (-39,6°C to 175°C)
Filtration—Maintain SAE Class 6, ISO 18/15
Seal kit—HSSK-600-D

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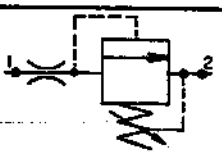
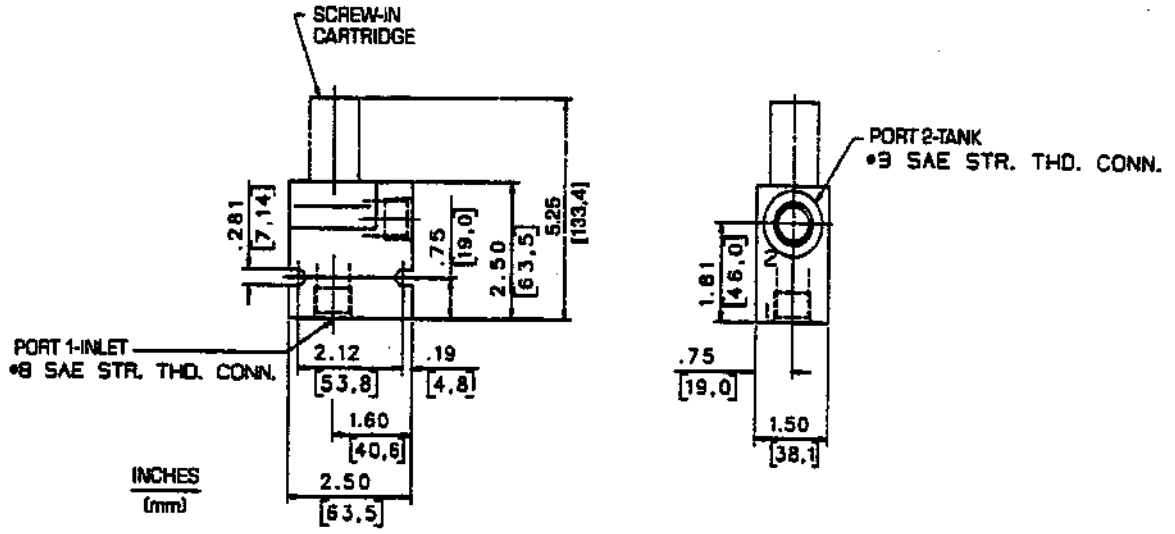
DS 82550-B2.1A



Data Sheet — Relief Valve, Direct Acting

Line Mount Specifications

HSLR603-P/BB1-08-C



How To Order

Screw-In Cartridge Only

HSLR603-P - _____ - _____ - _____

Pressure Range		
	psi	bar
07	50-700	3,4-48,0
20	50-2000	3,4-138
35	50-3500	3,4-241
50	50-5000	3,4-345

Orifice Diameter		
	in.	mm
0	No. disk	No. disk
3	.032	0,81
4	.040	1,02
5	.055	1,40
6	.062	1,57

see DS 82550-1B

Option	
Blank	None
TR	Tamper resistant
TP-_ _ _*	Tamper proof
I-	Internal Adj.

*Tamper proof option to be specified as "TP-____" (followed by the pressure the valve is to be set at while passing the full allowable volume thru the specified orifice). Use "0000," when the valve is to be furnished with loose wire and seal, so valve can be set in the field.

Cartridge With Line Mount Block

HSLR603-P_-___-___ /BB1-08-C

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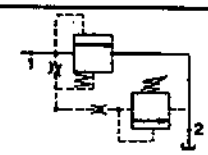
Oilgear

VALVE, SCREW-IN CARTRIDGE

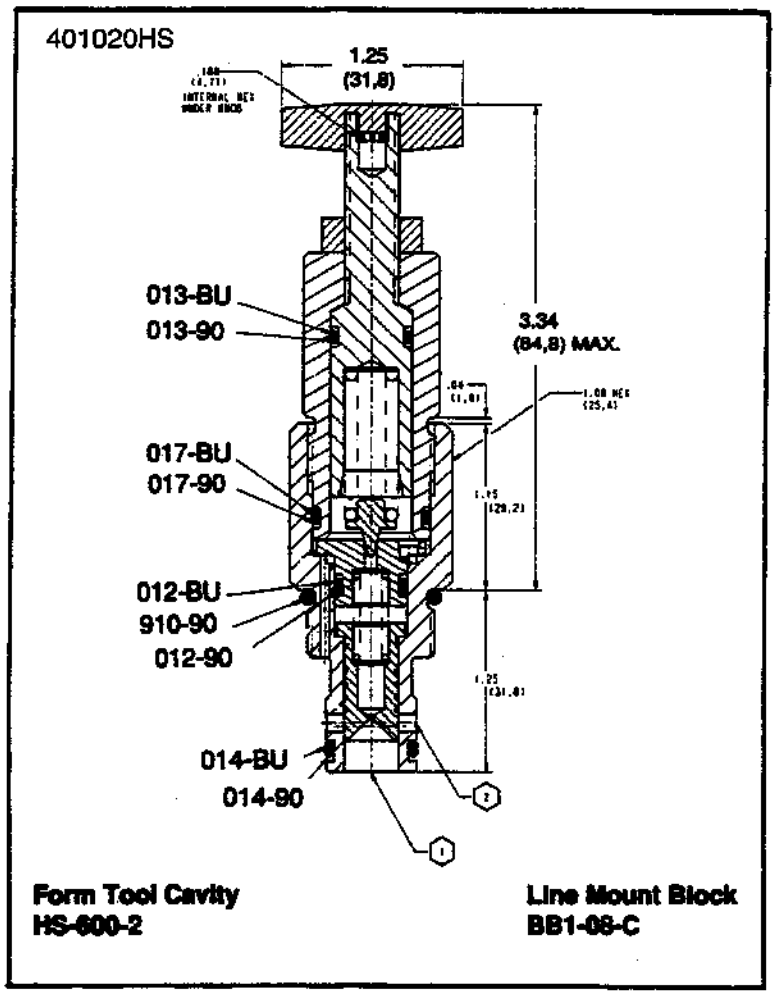
10 USGPM △100 PSI
(37,9 LPM △6,9 Bar)

HSR601-P

ENGINEERING | 1



Data Sheet — **Pilot Relief Valve**



Application

The HSR piloted relief valve is a fast acting valve designed for continuous duty applications to regulate system maximum pressure consistently and smoothly.

Operation

Inlet pressure is ported thru orifices in the center of the valve to the adjustable pilot relief valve (in upper portion of body). When inlet pressure exceeds this valve (spring) setting, the poppet opens and pressure on top side of the (lower) main spool is relieved, a pressure imbalance then exists across the main spool and port 1 pressure raises the main spool to allow flow to port 2.

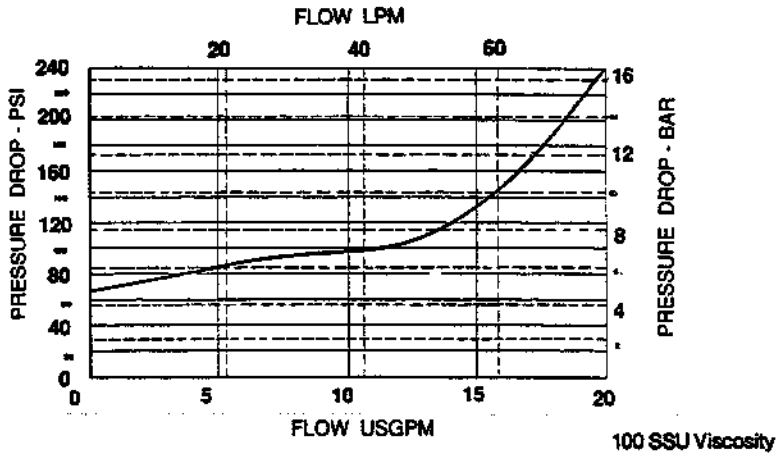
Features

The HSR Cartridge Valve is constructed of steel parts and operating parts are hardened and ground as required. Cartridge is designed for easy service and field repair.

Specifications

Rated flow - 10 USgpm (37,9 lpm)
Maximum operating pressure - 5000 psi (345 bar)
Adjustable pressure range - Depends on pressure range
selected - see How To Order
Viscosity range - 27-2000 SSU at 100°F
Seals - Viton
Operating temperature - 40°F to 350°F (-39,6°C to 175°C)
Filtration - Maintain SAE Class 6, ISO 18/15
Seal kit - HSSK-600-AM

Performance Curve



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DS 82560-B3.2

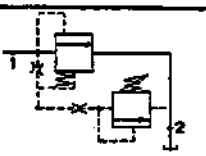
Oilgear

VALVE, SCREW-IN CARTRIDGE

10 USGPM △100 PSI
(37,9 LPM △6,9 Bar)

HSR601-P

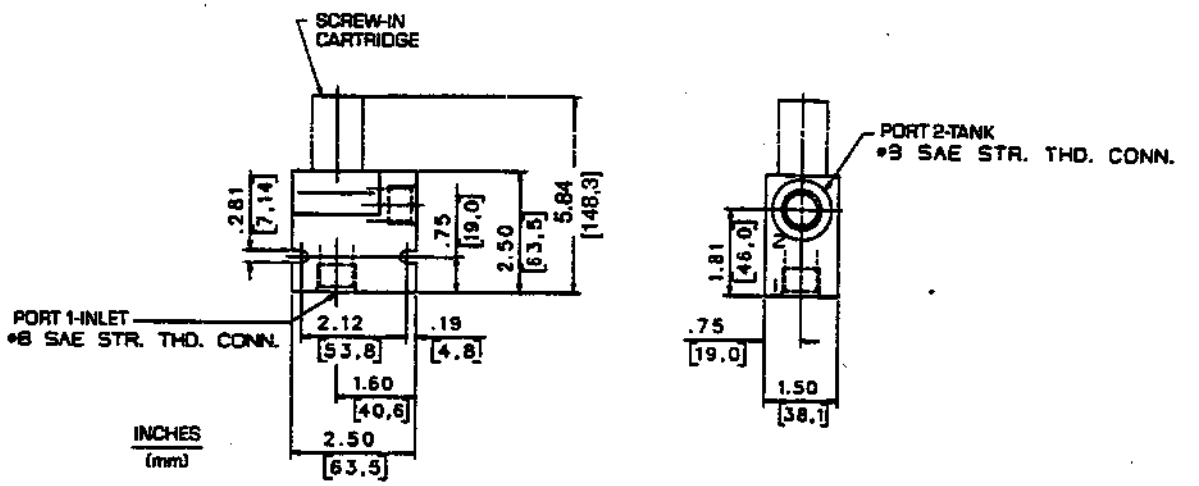
ENGINEERING | 2



Data Sheet — Pilot Relief Valve

Line Mount Specifications

HSR601-P/BB1-08-C



How To Order

Screw-In Cartridge Only

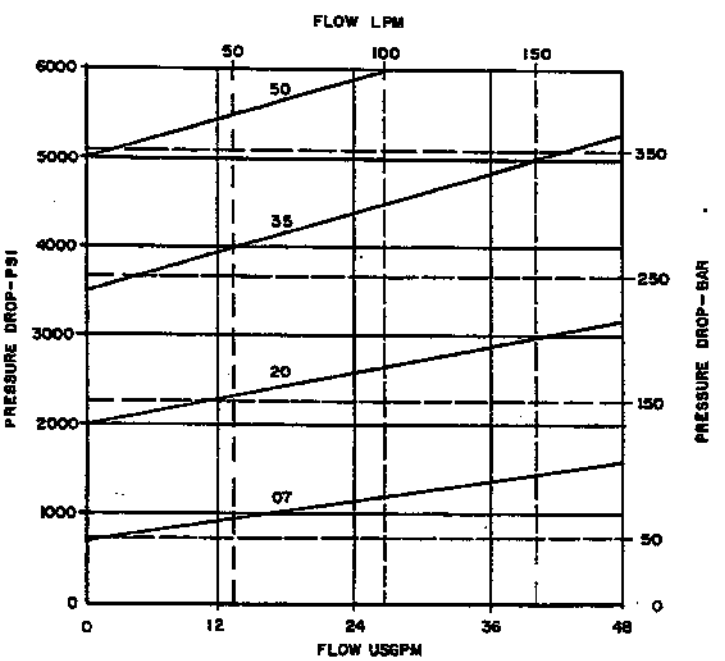
HSR601-P-___

	Pressure Range	
	psi	bar
07	50-700	3,4 - 48,0
20	50-2000	3,4 - 138,0
35	50-3500	3,4 - 241,0
50	50-5000	3,4 - 345,0

Cartridge With Line Mount Block

HSR601-P-__/BB1-08-C

Performance Curves



Reissued: Nov., 1995
DS 82560-B3.2

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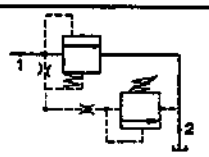
Oilgear

VALVE, SCREW-IN CARTRIDGE

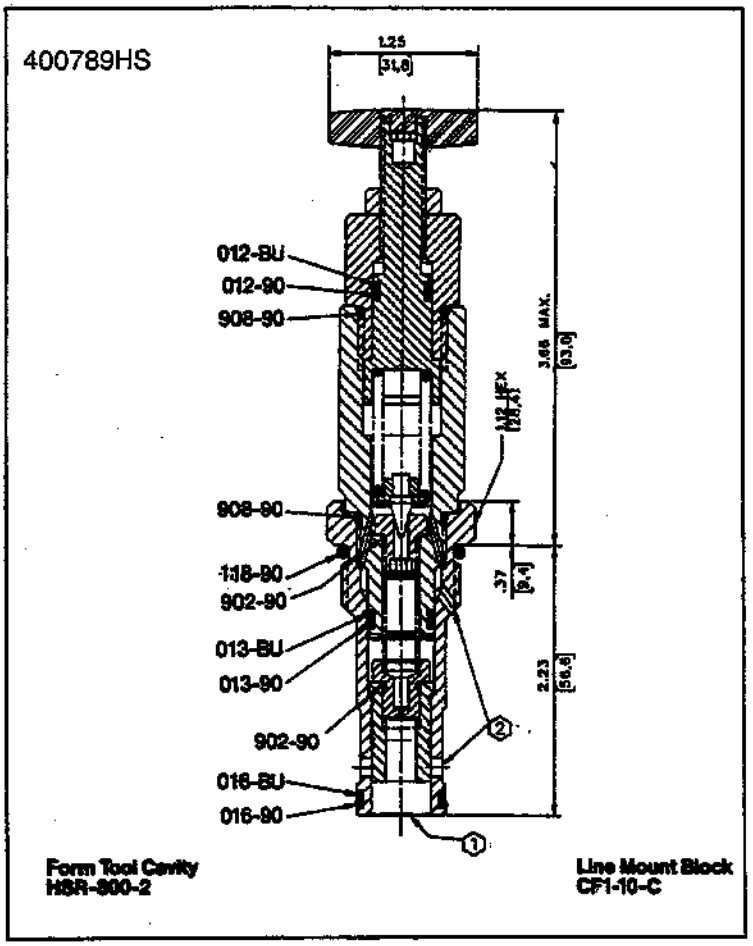
35USGPM△100PSI
(132,7 LPM △ 6,9 Bar)

HSR802-P

ENGINEERING | 1



Data Sheet — **Piloted Relief Valve**



Application

The HSR piloted relief valve is a fast acting valve designed for continuous duty applications to regulate system maximum pressure consistently and smoothly.

Operation

Inlet pressure is ported thru orifces in the center of the valve to the adjustable pilot relief valve (in upper portion of body). When inlet pressure exceeds this valve setting, pressure on top side of main spool is relieved, a pressure inbalance then exists (across the main spool) and port 1 pressure raises the main spool to allow flow to Port 2.

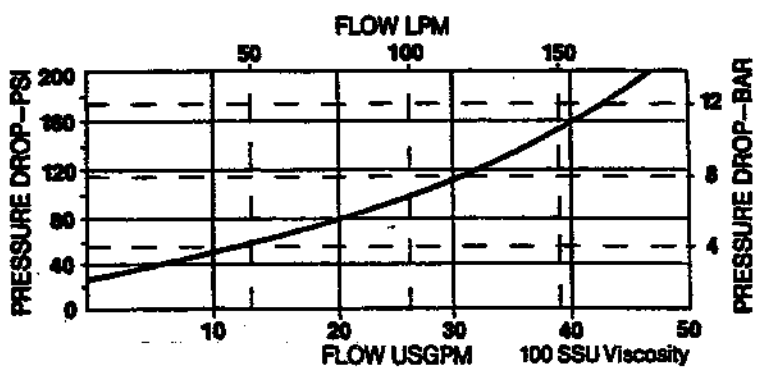
Features

HSR Cartridge valve is constructed of steel parts and operating parts are hardened and ground as required. Cartridge is designed for easy service and field repair.

Specifications

Rated flow—35 USgpm (132,7 lpm)
Maximum operating pressure—
5000 psi (345 bar)
Adjustable pressure range—Depends on pressure range selected—see How to Order
Viscosity range—27-30 SSU at 100°F
35-2000 SSU at 100°F
Seals—Viton
Operating temperature—-40°F to 350°F
(-39,6°C to 175°C)
Filtration—Maintain SAE Class 6, ISO 18/15
Seal kit—HSSK-800-E

Performance Curves



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DS 82560-B3.3

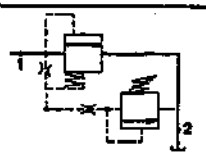
Oilgear

VALVE, SCREW-IN CARTRIDGE

35 USGPM Δ 100 PSI
(132,7 LPM Δ 6,9 Bar)

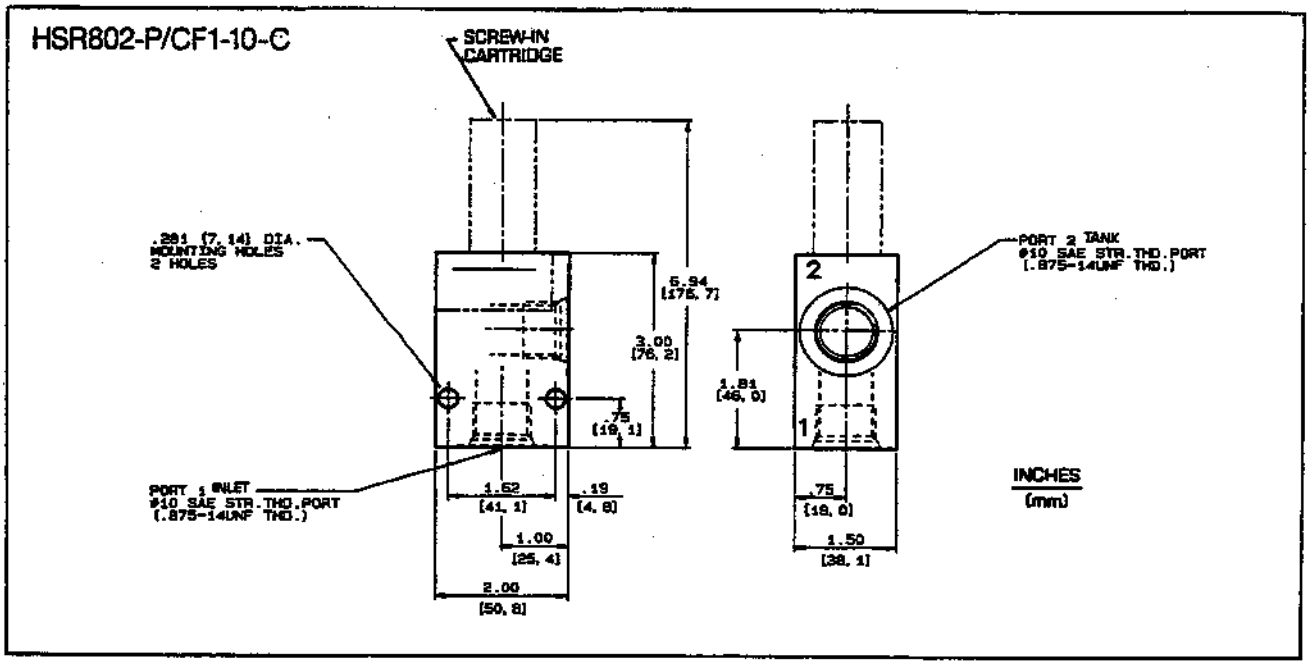
HSR802-P

ENGINEERING | 2



Data Sheet — Piloted Relief Valve

Line Mount Specifications



How To Order

Screw-in Cartridge Only

HSR802-P-____ ——

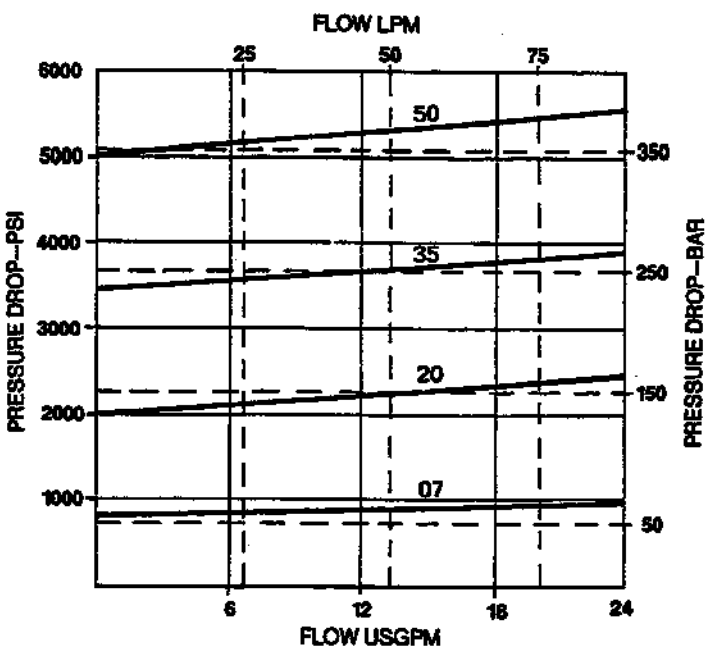
NOTE: All adjusting screw options on DS 82550-1B are available for this valve.

	Pressure Range	
	psi	bar
07	50- 700	3,5-48,0
20	50-2000	
35	50-3500	3,5-241,0
50	50-5000	3,5-345,0

Cartridge With Line Mount Block

HSR802-P-____/CF1-10-C

Performance Curves



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DS 82560-B3.3

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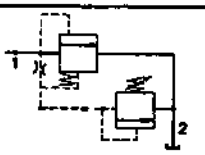
Oilgear

VALVE, SCREW-IN CARTRIDGE

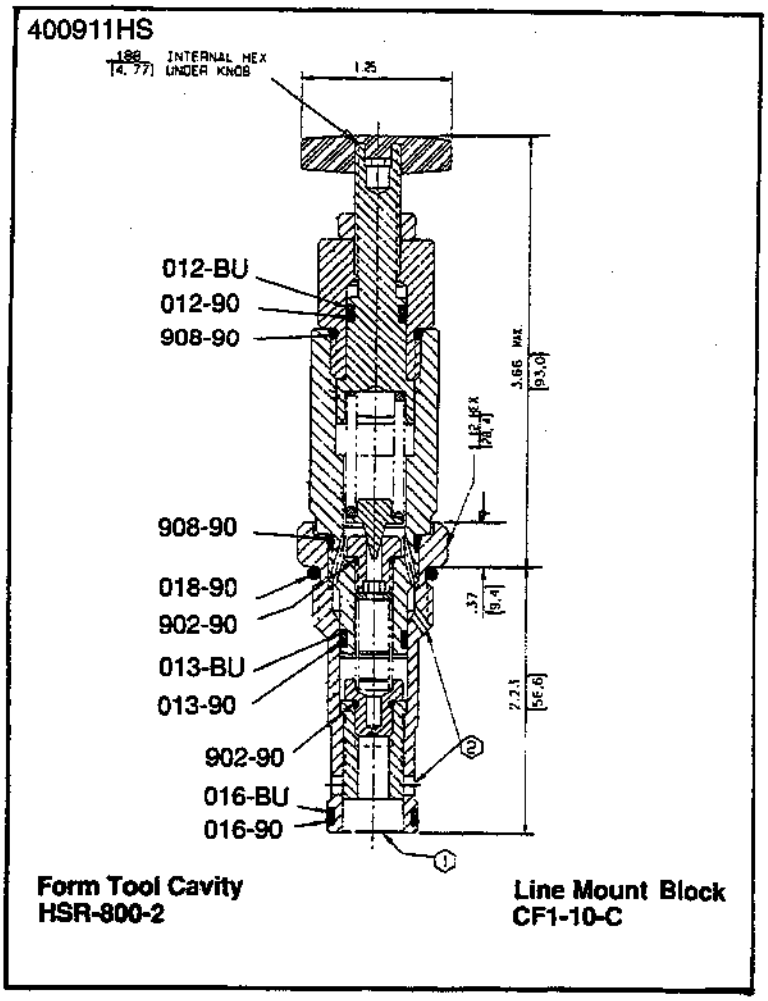
35 USGPM △100 PSI
(132,7 LPM △6,9 Bar)

HSRS802-P

ENGINEERING | 1



Data Sheet — **Piloted "Spike" Relief Valve**



Application

The HSRS piloted relief valve is a fast acting valve designed to prevent high pressure spikes, that can occur with slower acting valves, and regulate system maximum pressure consistently.

Operation

Inlet pressure is ported thru an orifice (lower, main spool) to the pilot relief valve (in upper portion of body). When inlet pressure exceeds the pilot valve setting, pressure on top side of main spool is relieved. A pressure imbalance then exists (across the main spool) and Port 1 pressure raises the main spool to allow flow to Port 2.

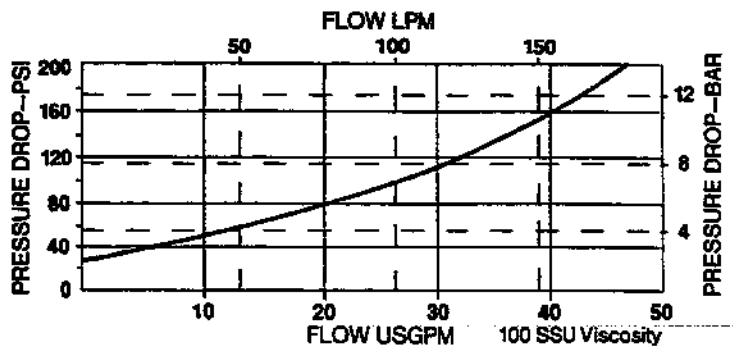
Features

HSRS cartridge valve is constructed of steel parts and operating parts are hardened and ground as required. Cartridge is designed for easy service and field repair.

Specifications

Rated flow - 35 USgpm (137,9 lpm)
Maximum operating pressure - 5000 psi (345 bar)
Adjustable pressure range - Depends on pressure range selected - see How To Order
Viscosity range - 27-2000 SSU at 100°F
Seals - Viton
Operating temperature - 40°F to 350°F (-39,6°C to 175°C)
Filtration - Maintain SAE Class 6, ISO 18/15
Seal kit - HSSK-800-E

Performance Curves



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Milwaukee, WI USA 53219

Reissued: Nov., 1995

DS 82560-B3.35

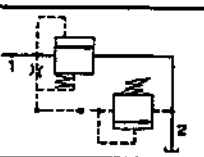
Oilgear

VALVE, SCREW-IN CARTRIDGE

35 USGPM △100 PSI
(132,7 LPM △6,9 Bar)

HSRS802-P

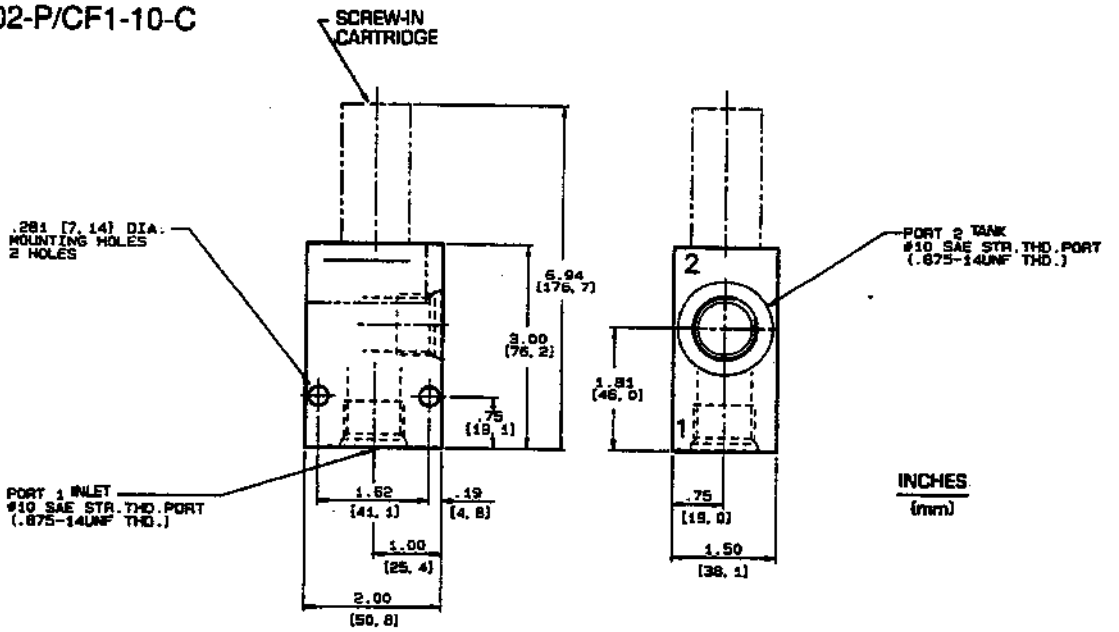
ENGINEERING | 2



Data Sheet — Piloted "Spike" Relief Valve

Line Mount Specifications

HSRS802-P/CF1-10-C



How To Order

Screw-In Cartridge Only

HSRS802-P-___-___

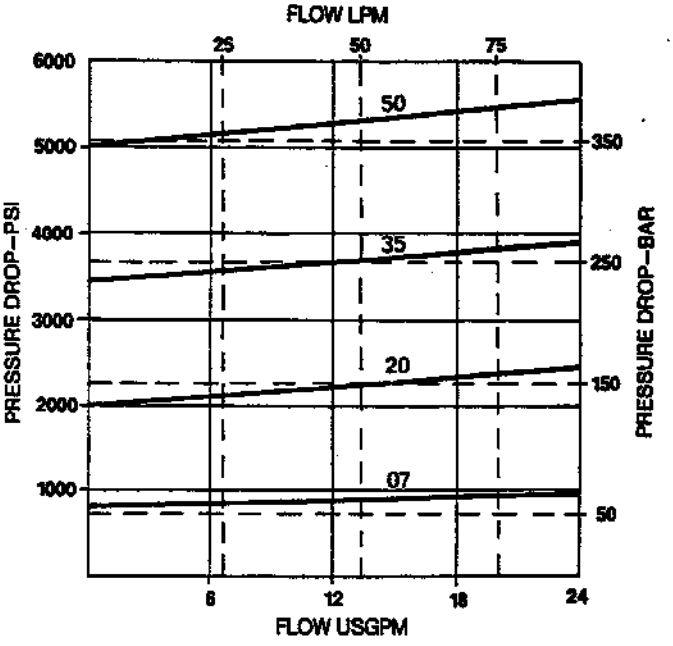
Adjustor Options - see - DS 82550-1B

	PRESSURE RANGE	
	psi	bar
07	50- 700	3,5-48,0
20	50-2000	3,5-138,0
35	50-3500	3,5-241,0
50	50-5000	3,5-345,0

Cartridge With Line Mount Block

HSRS802-P-__-__/CF1-10-C

Performance Curves



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DS 82560-B3.35

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2300 So. 51st. Street
Milwaukee, WI USA 53219

Telephone: (414) 327-1700
Fax: (414) 327-0532

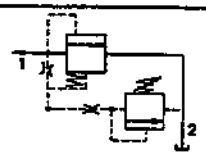
Oilgear

VALVE, SCREW-IN CARTRIDGE

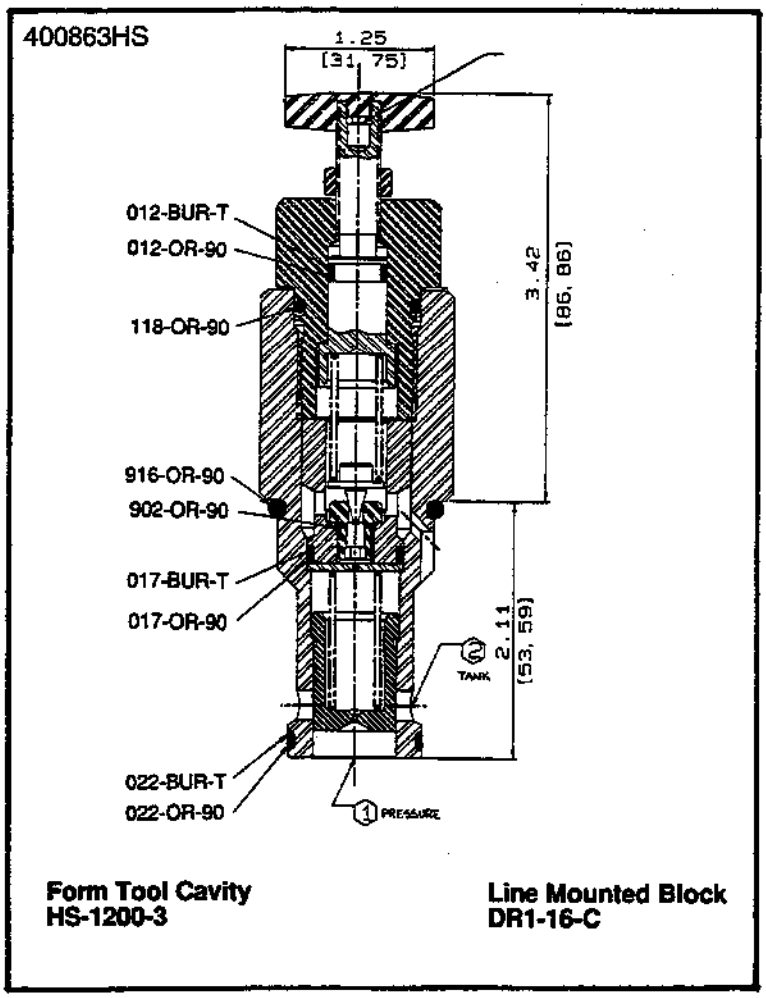
35 USGPM Δ100 PSI
(132 LPM Δ 6,9 Bar)

HSR1201-P

ENGINEERING | 1



Data Sheet — **Piloted Relief Valve**



Form Tool Cavity
HS-1200-3

Line Mounted Block
DR1-16-C

Application

The HSR piloted relief valve is a fast acting valve designed for continuous duty applications to regulate system maximum pressure consistently and smoothly.

Operation

Inlet pressure is ported thru orifices in the center of the valve to the adjustable pilot relief valve (in upper portion of body). When inlet pressure exceeds this valve setting, pressure on top side of main spool is relieved, a pressure imbalance then exists (across the main spool) and port 1 pressure raises the main spool to allow flow to port 2.

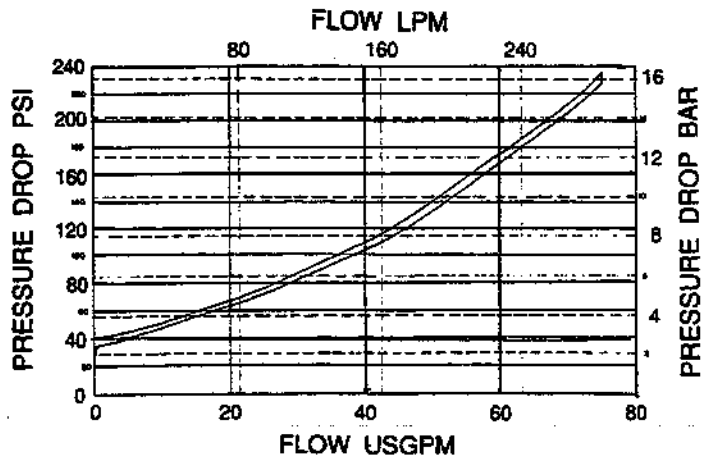
Features

HSR Cartridge Valve is constructed of steel parts and operating parts are hardened and ground as required. Cartridge is designed for easy service and field repair.

Specifications

Rated flow to - 35 US gpm (132 lpm)
Maximum operating pressure - 5000 psi (345 bar)
Adjustable pressure range - Depends on pressure range selected - see How To Order
Viscosity range - 27-2000 SSU at 100°F
Seals - Viton
Operating temperature -40°F to 350°F (-39,6°C to 175°C)
Filtration Maintain SAE Class 6, ISO 18/5
Seal Kit - HSSK-1200-P

Performance Curves



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OILGEAR
2300 So. 51st. Street
Milwaukee, WI USA 53219

Reissued: Nov., 1995

DS 82560-B3.51

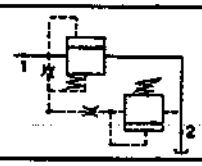
Oilgear

VALVE, SCREW-IN CARTRIDGE

35 USGPM Δ 100 PSI
(132 LPM Δ 6,9 Bar)

HSR1201-P

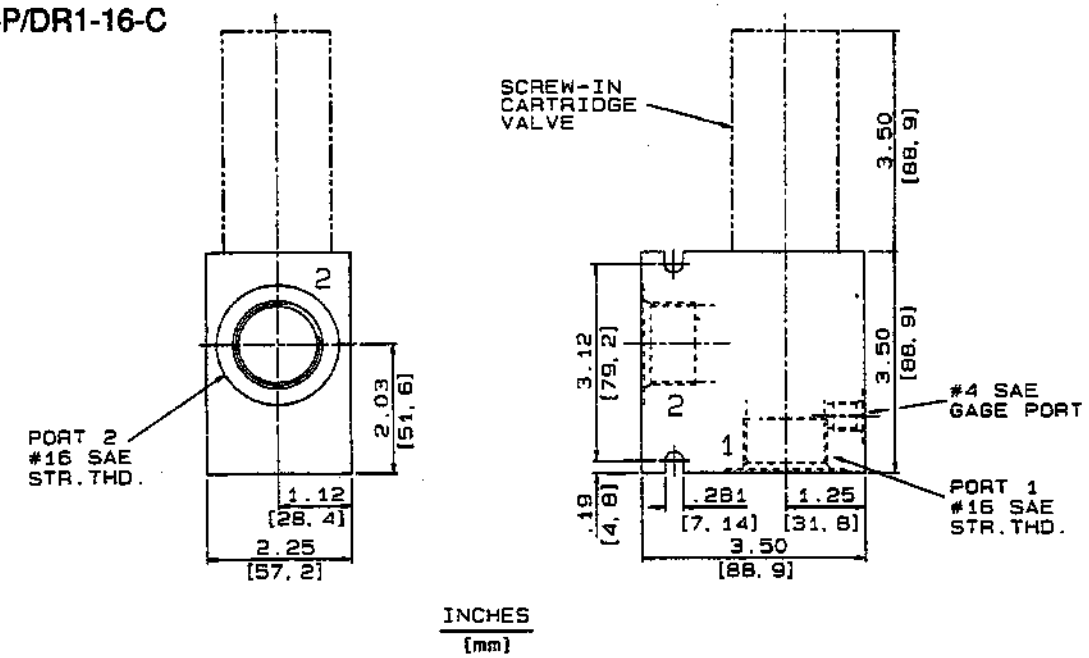
ENGINEERING | 2



Data Sheet — Piloted Relief Valve

Line Mounted Specifications

HSR1201-P/DR1-16-C



How To Order

Screw-In Cartridge Only

HSR1201-P- ___ - ___

Pressure PSI	Range Bar
07	100 - 700	6,9 - 48,0
20	100 - 2000	6,9 - 138,0
35	100 - 3500	6,9 - 241,0
50	100 - 5000	6,9 - 345,0

OPTIONS	
TP	Tamper Proof
TR	Tamper Resistant
Blank	Non Req.d.

NOTE: All adjusting screw options on DS-82550-1B are available for this valve

Cartridge With Line Mount Block

HSR1201-P-__-__/DR1-16-C

OILGEAR
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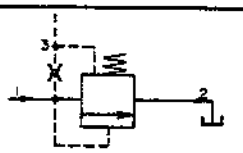
VALVE, SCREW-IN CARTRIDGE

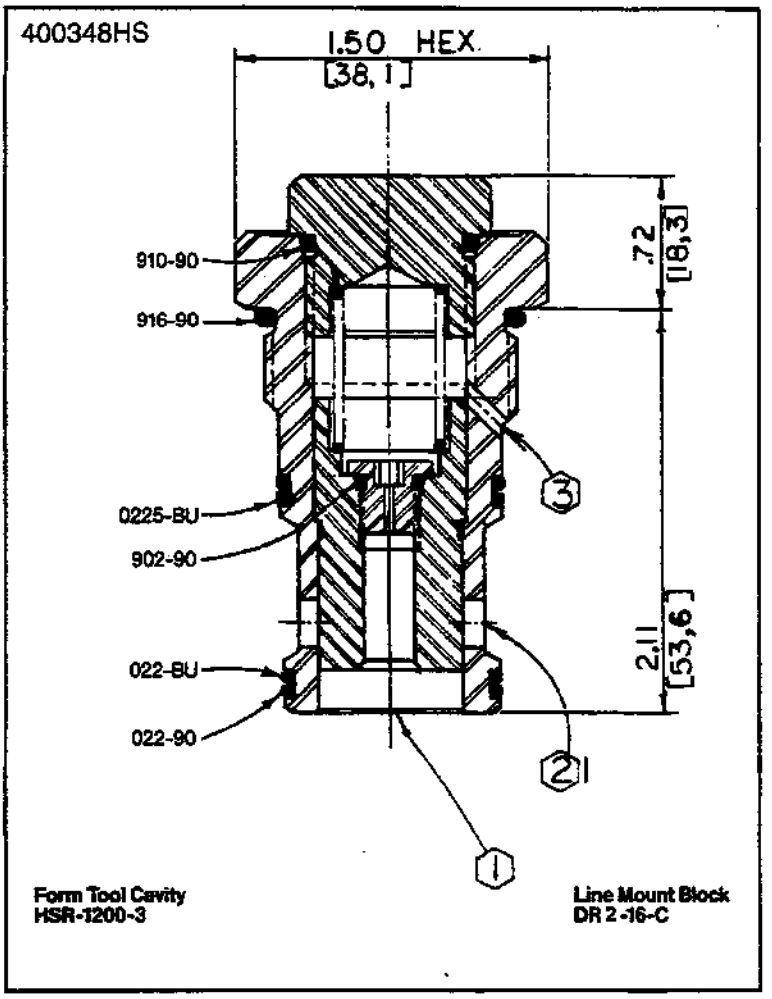
62 USGPM Δ 100 PSI
(235 LPM Δ 6,9 Bar)

HSR1201

ENGINEERING | 1



Data Sheet — **Relief Valve For Pilot Operation**



Application

This HSR cartridge is a fast acting relief valve when controlled by a HSLR pilot operator. The cartridge is designed for continuous duty applications to regulate system maximum pressure continuously and smoothly.

Operation

A HSLR pilot relief valve must be connected via port 3 to top (spring side) of the main spool. When inlet pressure (ported through the valve) exceeds the pilot setting, pressure on top side of the spool is relieved, a pressure imbalance then exists across the main spool and port 1 pressure raises the spool to allow flow to port 2.

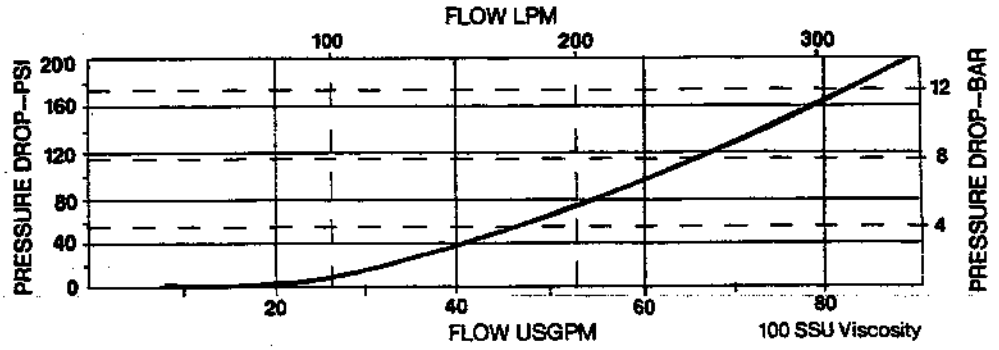
Features

HSR cartridge valve is constructed of steel parts and operating parts are hardened and ground as required. Cartridges are designed for easy service or field repair. Multiple pressure ranges, proportional pressure, and vent operation are available thru use of standard pilot control modules.

Specifications

Rated flow to—62 USgpm (235,0 lpm)
Maximum operating pressure—
5000 psi (345 bar)
Adjustable pressure range—Depends on pressure range selected—see HSLR Pilot Valve, DS 82550-B2.1A
Seals—Viton
Operating temperature— -40°F to 350°F (-39,6°C to 175°C)
Filtration—Maintain SAE Class 6, ISO 18/15
Seal kit—HSSK-1200-C

Performance Curves



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OILGEAR
2300 So. 51st. Street
Milwaukee, WI USA 53219

Reissued: Nov., 1995

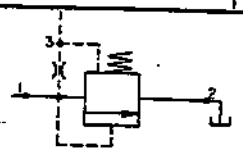
DS 82570-B3.5A

Oilgear

VALVE, SCREW-IN CARTRIDGE

62 USGPM Δ 100 PSI
(235 LPM Δ 6,9 Bar)

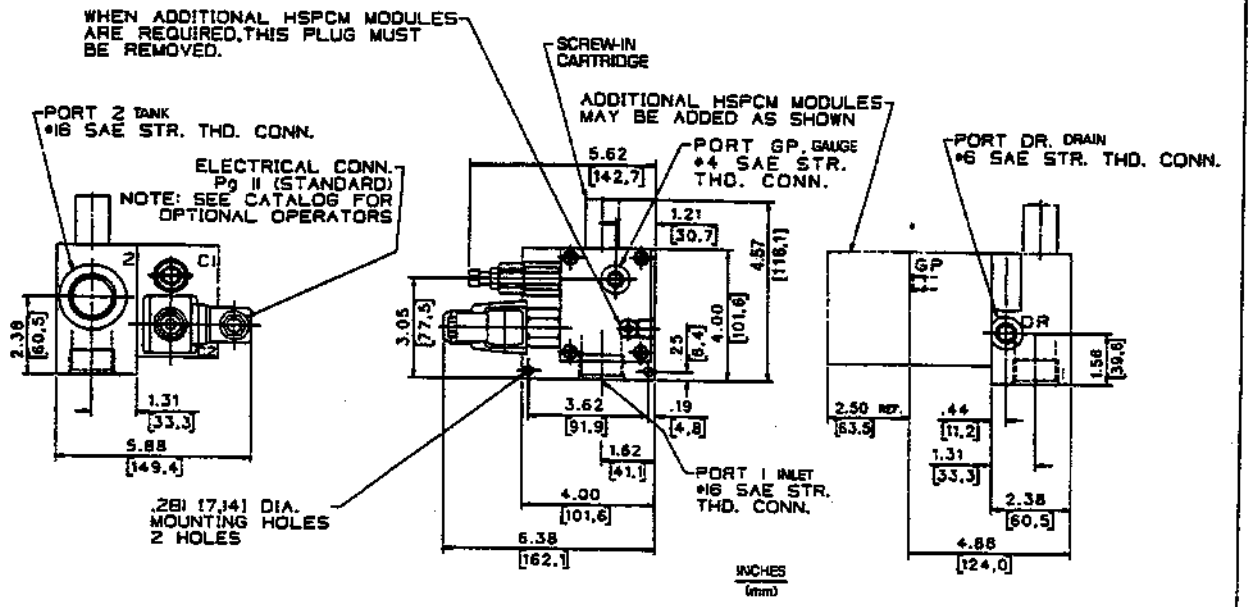
HSR1201



Data Sheet — **Relief Valve For Pilot Operation**

Line Mount Specifications

HSR1201/DR2-16-C



How To Order

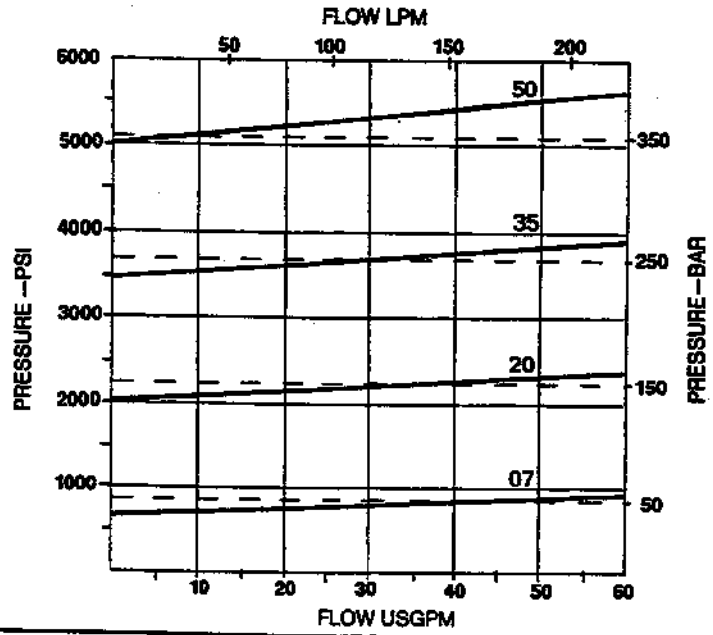
Screw-In Cartridge Only

HSR1201

Cartridge With Line Mount Block

HSR1201/DR2-16-C *

*Line Mount Blocks shown include Pilot Control Modules (PCM). See Pages 3 and 4 for "How To Order" Line Mount Blocks with Pilot Control Modules.



Reissued: Nov., 1995
DS 82570-B3.5A

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Fax: (414) 327-0532

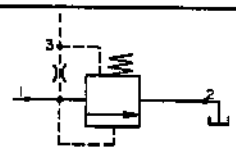
Oilgear

VALVE, SCREW-IN CARTRIDGE

62 USGPM △ 100 PSI
(235 LPM △ 6,9 Bar)

HSR1201

ENGINEERING 3



Data Sheet — **Relief Valve For Pilot Operation**

Cartridge Must Have Pilot Control Module

This cartridge valve requires pilot logic to offer added flexibility in providing maximum pressure consistently and smoothly. At least one pilot control module must be added to the valve.

Typical HSR1201 How To Order Example

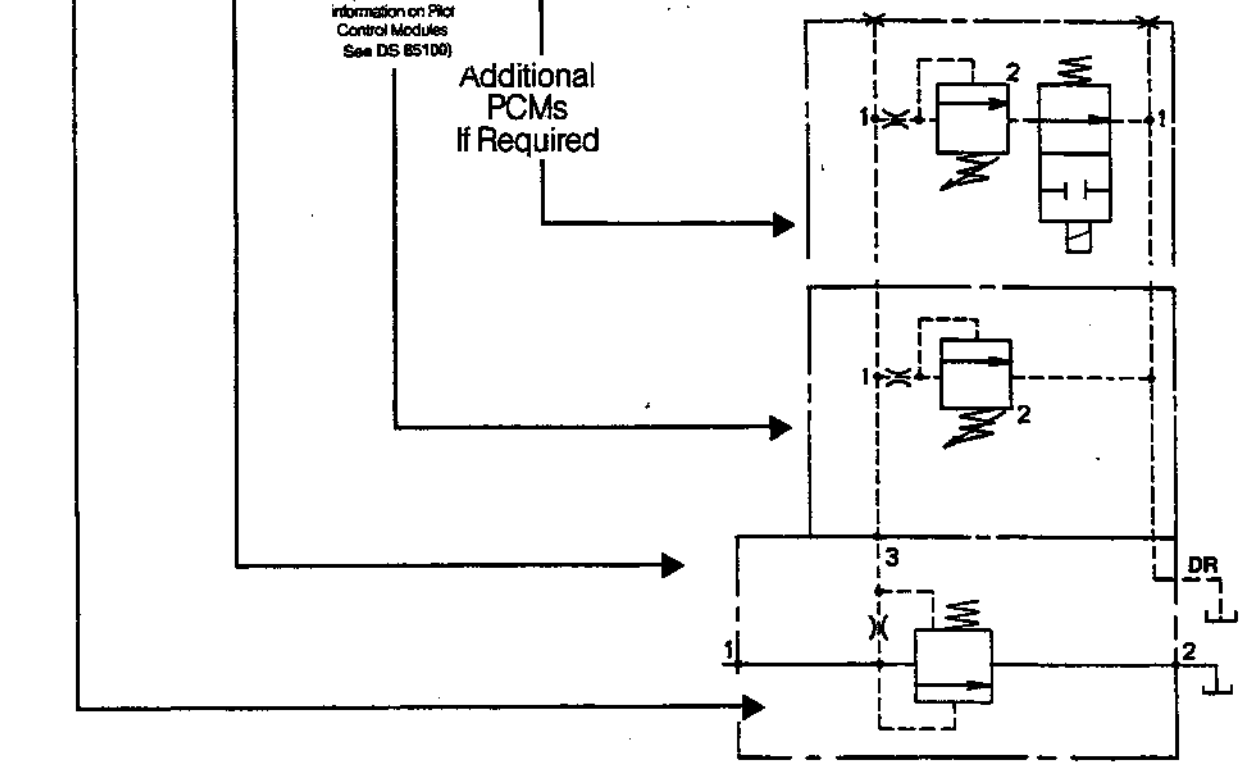
HSR1201 / DR2-16-C / 1-35-4-C / Optional

Cartridge

Line Mount Block

Pilot Control Module (PCM)
(For detailed information on Pilot Control Modules See DS 85100)

Additional PCMs If Required



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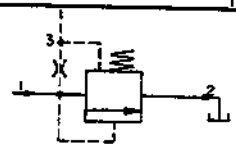
DS 82570-B3.5A

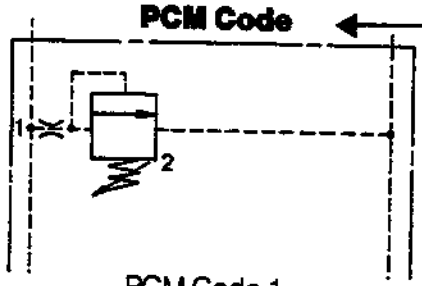


Data Sheet — Relief Valve For Pilot Operation

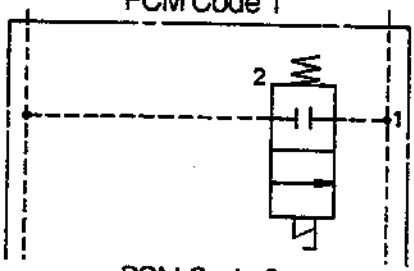
How To Order

Typical PCM How To Order Example: / 1 - 35 - 4 - 0W - C

PCM Code



PCM Code 1



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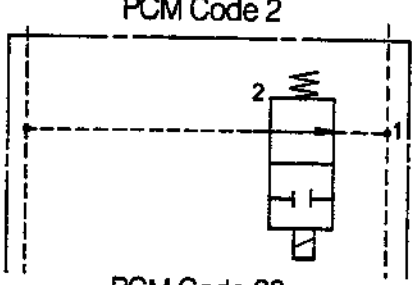

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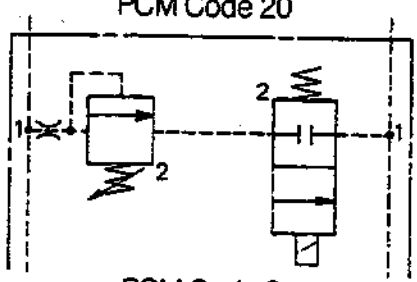
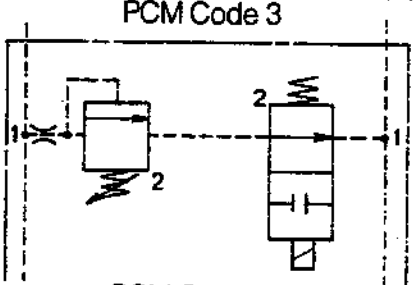


PCM Code 3



PCM Code 30

Pressure Range
07 = 50- 700 psi (3,4- 48,0 bar)
20 = 50-2000 psi (3,4-138,0 bar)
35 = 50-3500 psi (3,4-241,0 bar)
50 = 50-5000 psi (3,4-345,0 bar)

Orifice Diameter
4 = .040 Diameter (Standard)
See DS 85100 for special applications

Solenoid Voltage (if required)
0 = 115 V.A.C./60 HZ. or 110 V.A.C./50 HZ. Solenoid
1 = 230 V.A.C./60 HZ. or 220 V.A.C./50 HZ. Solenoid
2 = 12 V.D.C. Solenoid
3 = 24 V.D.C. Solenoid
Other voltages are available, consult factory

Electrical Connector (if required)
S = Cable connector w/o indicator light (standard)
L = Cable connector with indicator light
R = .500 NPTF connector w/o indicator light
W = .500 NPTF connector w/indicator light
C = Three pin Brad Harrison/DIN 43650 connector w/mating plug

Block Material
C = Nodular Iron (standard)

See DS 85100 for additional information on pilot controls.

OILGEAR
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Telephone: (414) 327-1700
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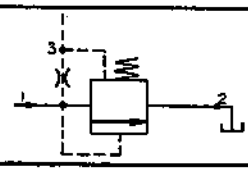
VALVE, SCREW-IN CARTRIDGE

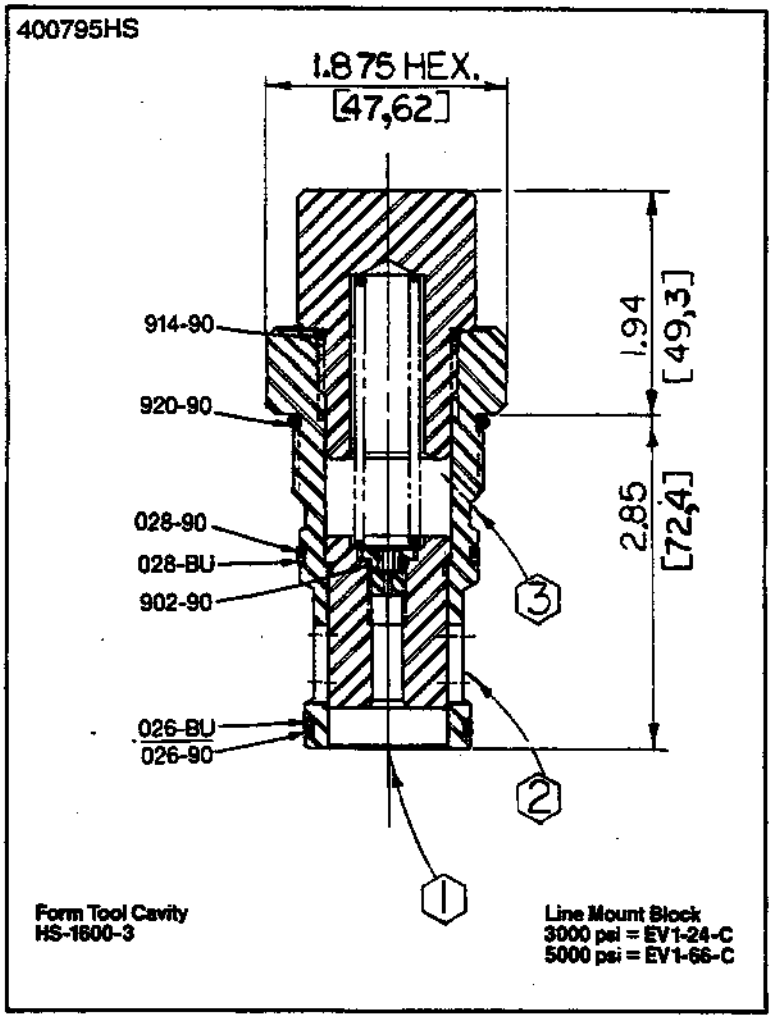
112 USGPM Δ 100 PSI
(424,5 LPM Δ 6,9 Bar)

HSR1601

ENGINEERING | 1



Data Sheet — **Relief Valve For Pilot Operation**



Application

This HSR cartridge is a fast acting relief valve when controlled by a HSLR pilot operator. The cartridge is designed for continuous duty applications to regulate system maximum pressure continuously and smoothly.

Operation

A HSLR pilot relief valve must be connected via port 3 to top (spring side) of the main spool. When inlet pressure (ported through the valve) exceeds the pilot setting, pressure on top side of the spool is relieved, a pressure imbalance then exists across the main spool and port 1 pressure raises the spool to allow flow to port 2.

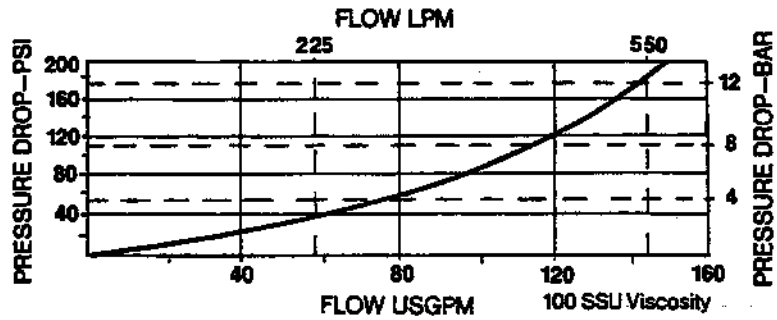
Features

HSR cartridge valve is constructed of steel parts and operating parts are hardened and ground as required. Cartridges are designed for easy service or field repair. Multiple pressure ranges, proportional pressure, and vent operation are available thru use of standard pilot control modules.

Specifications

Rated flow to—112 USgpm (424,5 lpm)
Maximum operating pressure—
5000 psi (345 bar)
Adjustable pressure range—Depends on pressure range selected—see HSLR Pilot Valve, DS 82550-B2.1A
Seals—Viton
Operating temperature— -40°F to 350°F (-39,6°C to 175°C)
Filtration—Maintain SAE Class 6, ISO 18/15
Seal kit—HSSK-1600-C

Performance Curve



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Reissued: Nov., 1995

DS 82570-B3.6

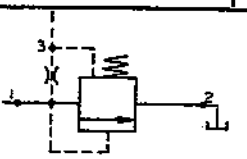
Oilgear

VALVE, SCREW-IN CARTRIDGE

112 USGPM △ 100 PSI
(424,5 LPM △ 6,9 Bar)

HSR1601

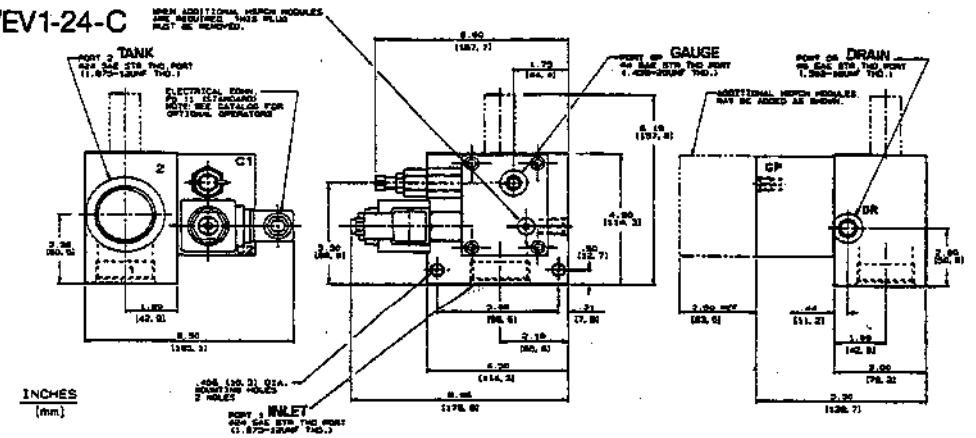
ENGINEERING | 2



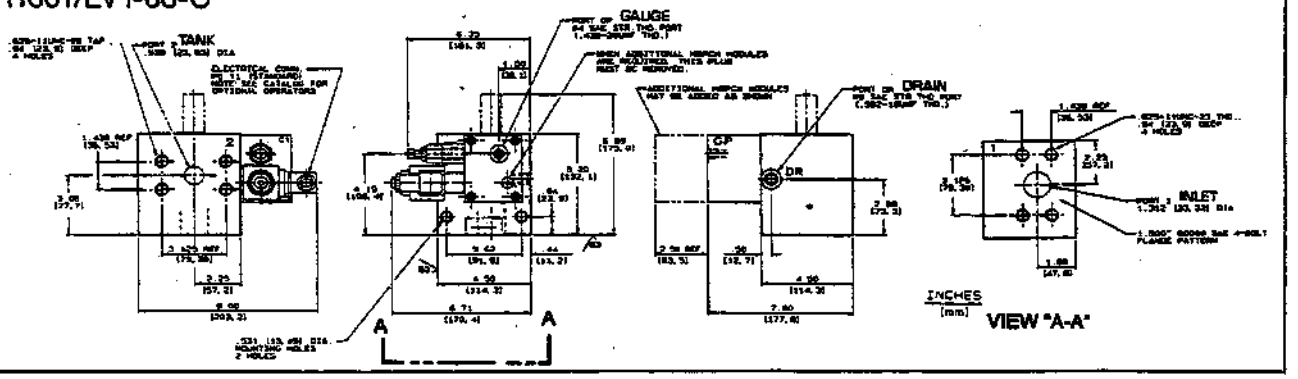
Data Sheet — **Relief Valve For Pilot Operation**

Line Mount Specifications

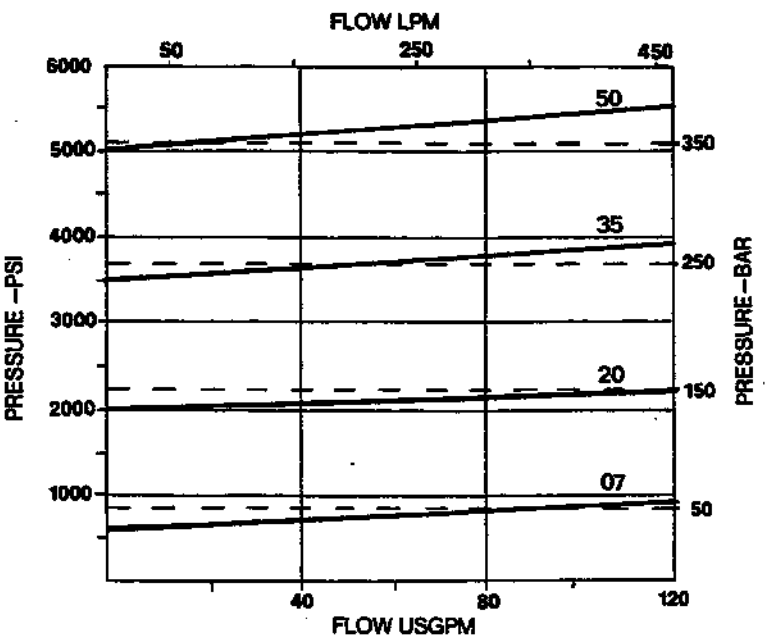
HSR1601/EV1-24-C



HSR1601/EV1-66-C



Performance Curve



How To Order

Screw-In Cartridge Only

HSR1601

Cartridge With Line Mount Block

3000 psi (207 bar) service pressure
HSR1601/EV1-24-C*

5000 psi (345 bar) service pressure
HSR1601/EV1-66-C*

*Line Mount Blocks shown include Pilot Control Modules (PCM). See Pages 3 and 4 for "How To Order" Line Mount Blocks with Pilot Control Modules.

Reissued: Nov., 1995
DS 82570-B3.6

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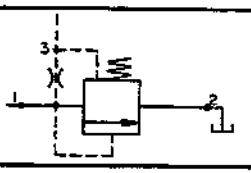
Oilgear

VALVE, SCREW-IN CARTRIDGE

112 USGPM △ 100 PSI
(424,5 LPM △ 6,9 Bar)

HSR1601

ENGINEERING 3



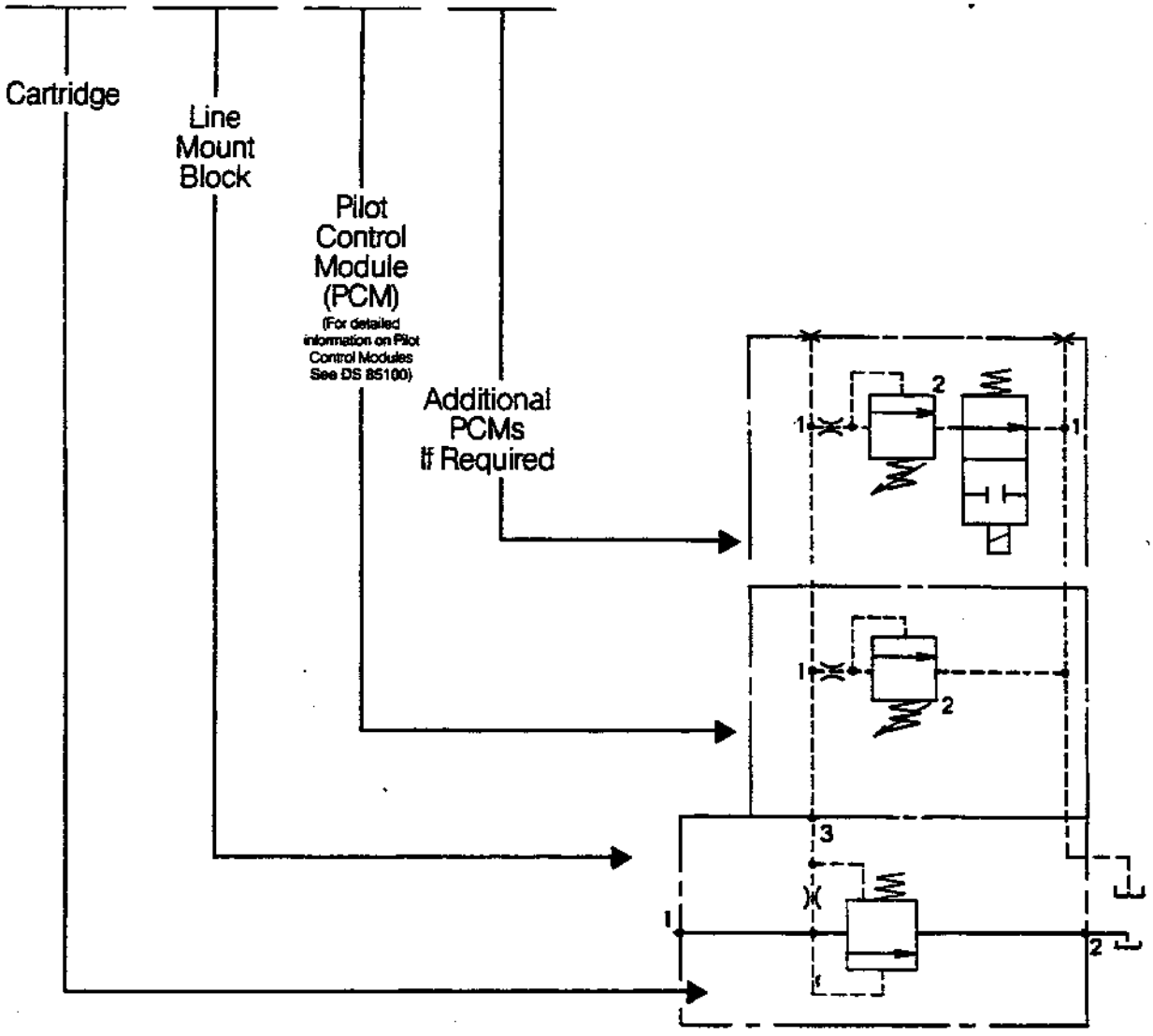
Data Sheet — **Relief Valve For Pilot Operation**

Cartridge Must Have Pilot Control Module

This cartridge valve requires pilot logic to offer added flexibility in providing maximum pressure consistently and smoothly. At least one pilot control module must be added to the valve.

Typical HSR1601 How To Order Example

HSR1601 / EV1-24-C / 1-35-4-C / Optional



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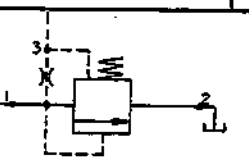
Reissued: Nov., 1995

DS 82570-B3.6

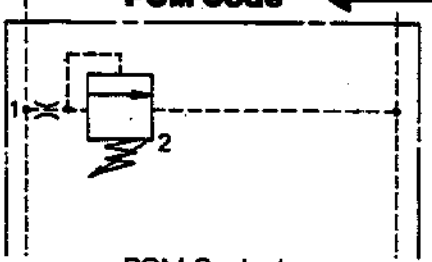


Data Sheet — Relief Valve For Pilot Operation

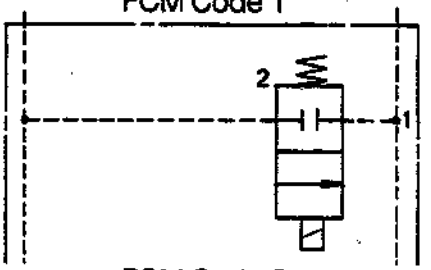
How To Order

Typical PCM How To Order Example: /30 - 35 - 4 - 0W - C

PCM Code



PCM Code 1



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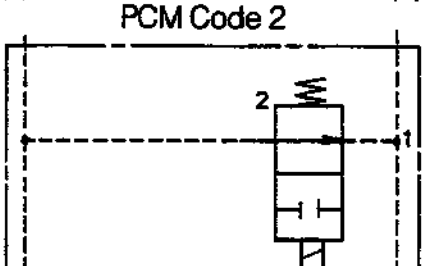
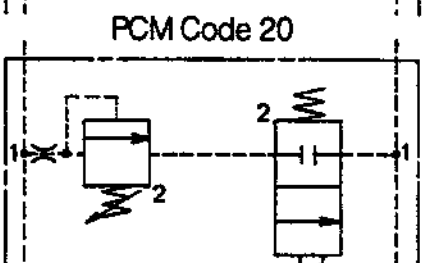
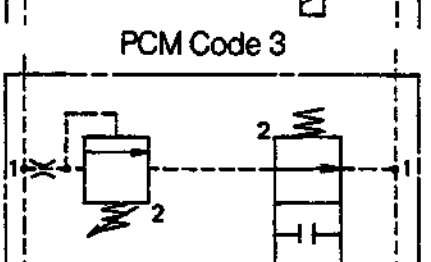


PCM Code 20



PCM Code 3



PCM Code 30

Pressure Range
07 = 50- 700 psi (3,4- 48,0 bar)
20 = 50-2000 psi (3,4-138,0 bar)
35 = 50-3500 psi (3,4-241,0 bar)
50 = 50-5000 psi (3,4-345,0 bar)

Orifice Diameter
4 = .040 Diameter (Standard)
See DS 85100 for special applications

Solenoid Voltage (if required)
0 = 115 V.A.C./60 HZ. or 110 V.A.C./50 HZ. Solenoid
1 = 230 V.A.C./60 HZ. or 220 V.A.C./50 HZ. Solenoid
2 = 12 V.D.C. Solenoid
3 = 24 V.D.C. Solenoid
Other voltages are available, consult factory

Electrical Connector (if required)
S = Cable connector w/o indicator light (standard)
L = Cable connector with indicator light
R = .500 NPTF connector w/o indicator light
W = .500 NPTF connector w/indicator light
C = Three pin Brad Harrison/DIN 43650 connector w/mating plug

Block Material
C = Nodular Iron (standard)

See DS 85100 for additional information on pilot controls.

OILGEAR
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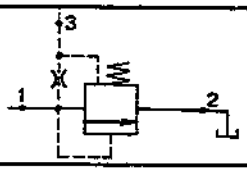
Telephone: (414) 327-1700
Fax: (414) 327-0532

VALVE, SCREW-IN CARTRIDGE

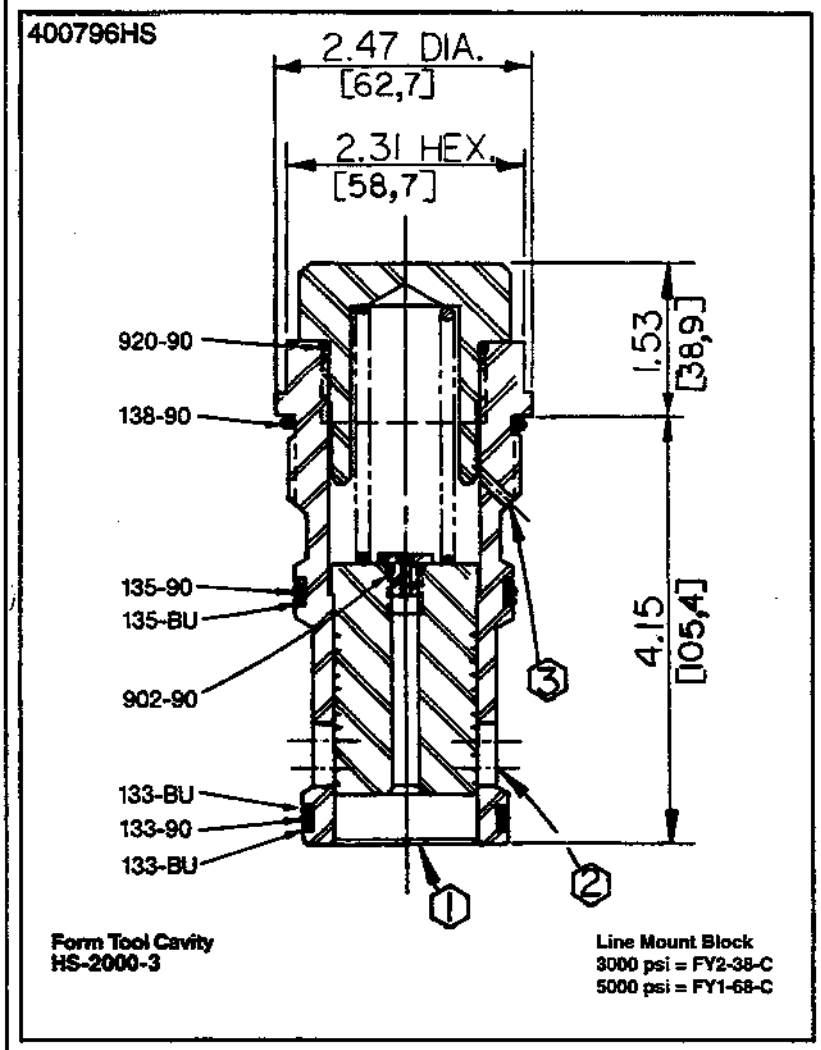
220 USGPM Δ 100 PSI
(833,8 LPM Δ 6,9 Bar)

HSR2001

ENGINEERING | 1



Data Sheet — **Relief Valve for Pilot Operation**



Application

This HSR cartridge is a fast acting relief valve when controlled by a HSLR pilot operator. The cartridge is designed for continuous duty applications to regulate system maximum pressure continuously and smoothly.

Operation

A HSLR pilot relief valve must be connected via port 3 to top (spring side) of the main spool. When inlet pressure (ported through the valve) exceeds the pilot is relieved, a pressure imbalance then exists across the main spool and port 1 pressure raises the spool to allow flow to port 2.

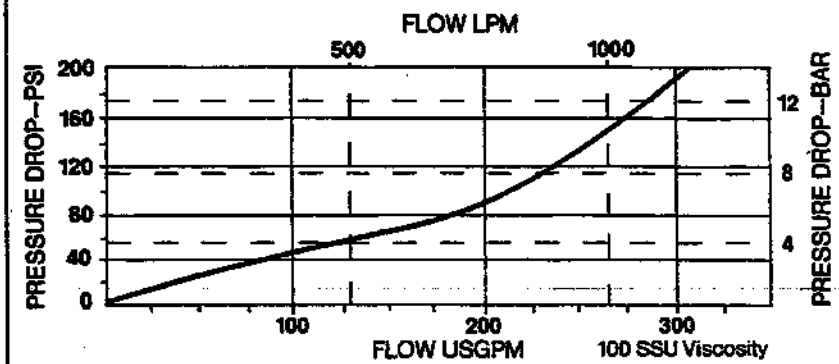
Features

HSR cartridge valve is constructed of steel parts and operating parts are hardened and ground as required. Cartridges are designed for easy service or field repair. Multiple pressure ranges, proportional pressure, and vent operation are available thru use of standard pilot control modules.

Specifications

Rated flow to—220 USgpm (833,8 lpm)
Maximum operating pressure—
5000 psi (345 bar)
Adjustable pressure range—Depends on pressure range selected—see HSLR Pilot Valve, DS 82550-B2.1A
Seals—Viton
Operating temperature— -40°F to 350°F
(-39,6°C to 175°C)
Filtration—Maintain SAE Class 6, ISO 18/15
Seal kit—HSSK-1600-C

Performance Curve



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DS 82570-B3.7A

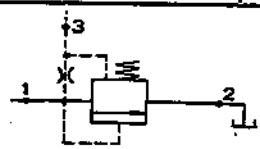
Oilgear

VALVE, SCREW-IN CARTRIDGE

220 USGPM △ 100 PSI
(833,8 LPM △ 6,9 Bar)

HSR2001

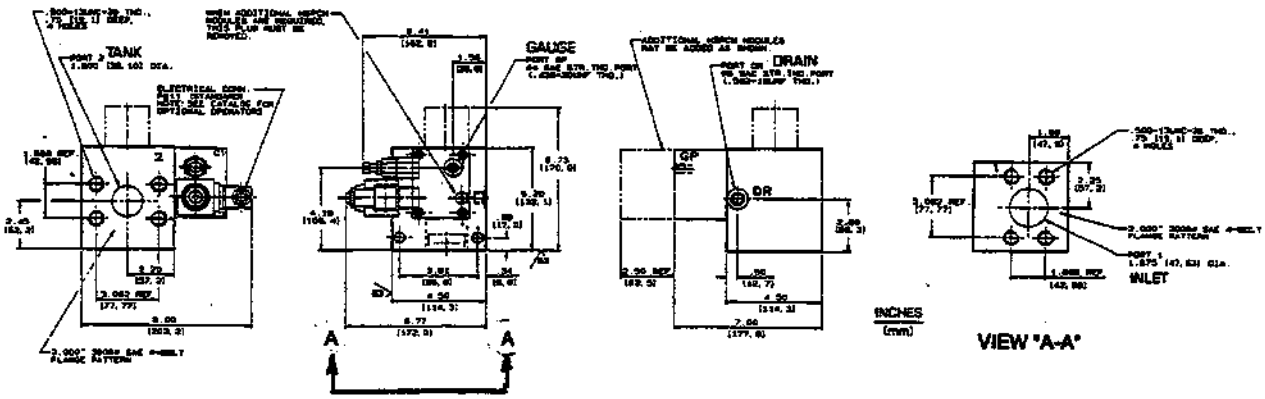
ENGINEERING | 2



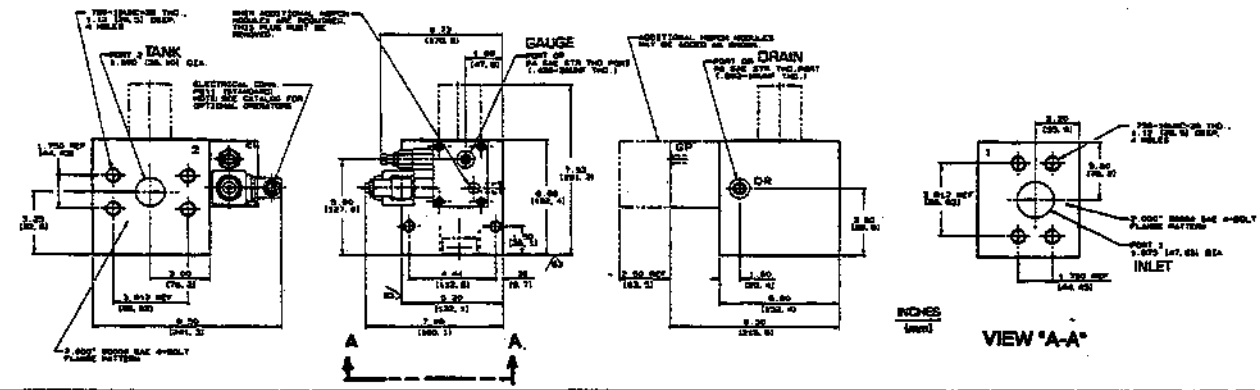
Data Sheet — **Relief Valve for Pilot Operation**

Line Mount Specifications

HSR2001/FY2-38-C



HSR2001/FY1-68-C



How To Order

Screw-In Cartridge Only

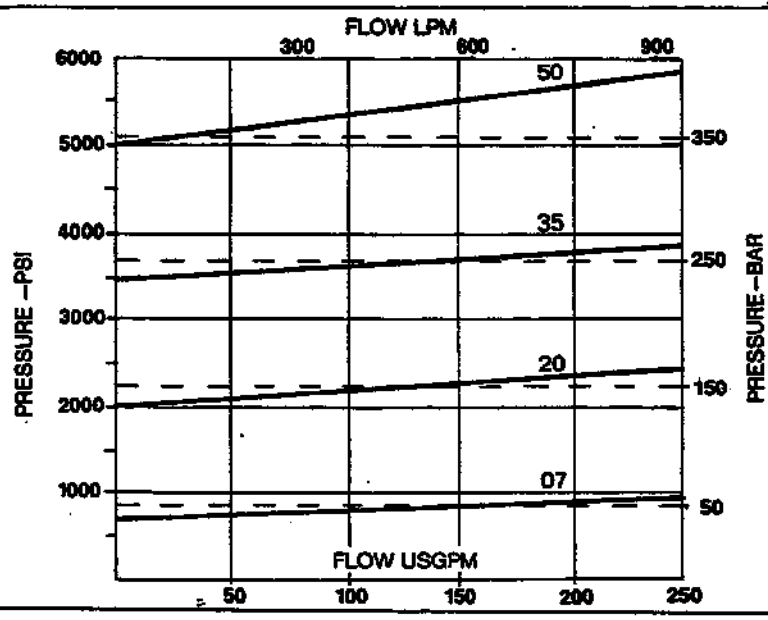
HSR2001

Cartridge With Line Mount Block

3000 psi (207 bar) service pressure
HSR2001/FY2-38-C*

5000 psi (345 bar) service pressure
HSR2001/FY1-68-C*

*Line Mount Blocks shown include Pilot Control Modules (PCM). See Pages 3 and 4 for "How To Order" Line Mount Blocks with Pilot Control Modules.



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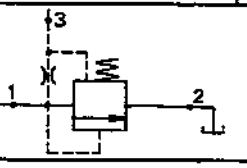


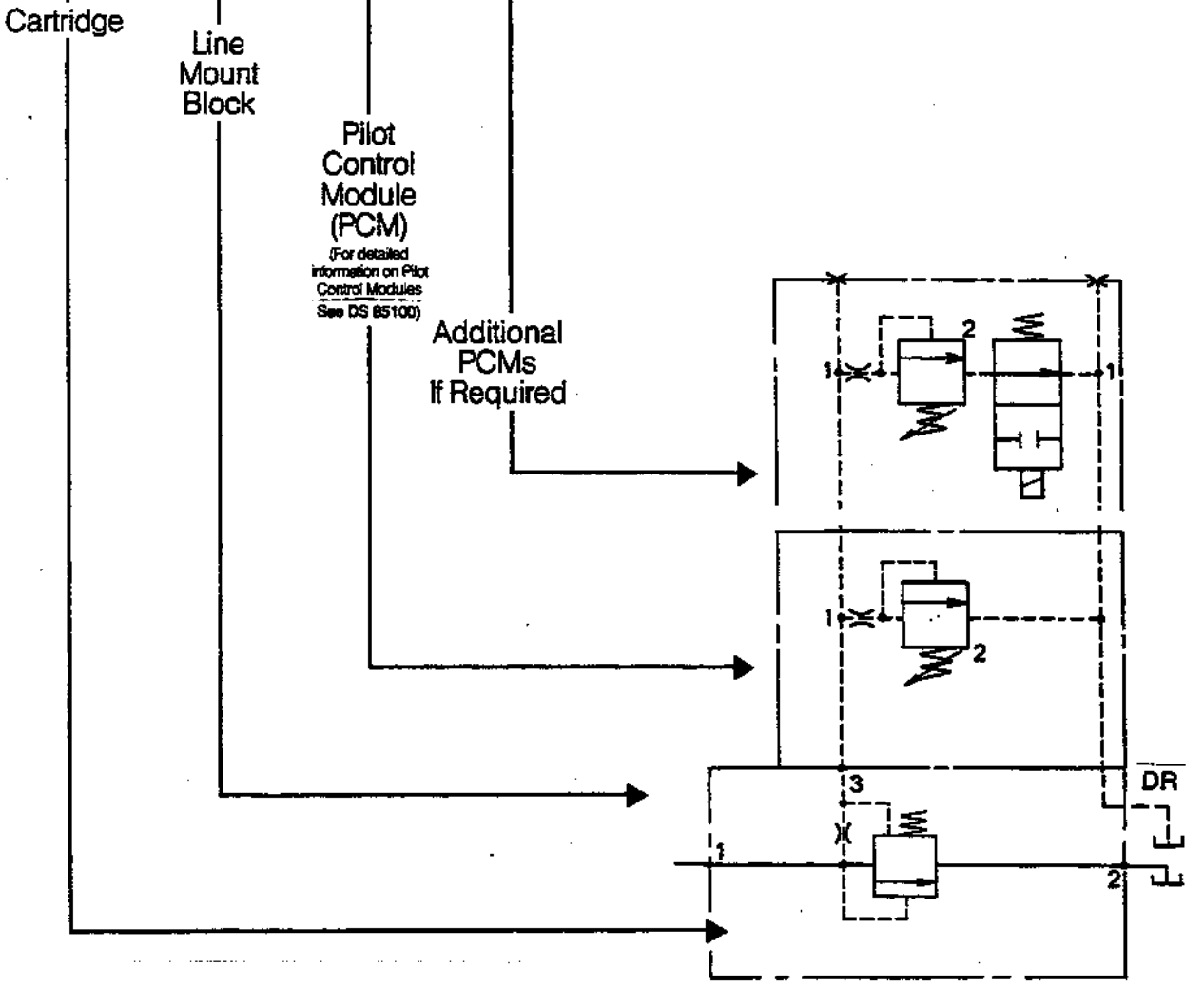
Data Sheet — Relief Valve for Pilot Operation

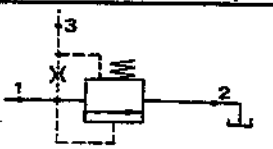
Cartridge Must Have Pilot Control Module

This cartridge valve requires pilot logic to offer added flexibility in providing maximum pressure consistently and smoothly. At least one pilot control module must be added to the valve.

Typical HSR2001 How To Order Example

HSR2001 / FY2-38-C / 1-38-4-C / Optional



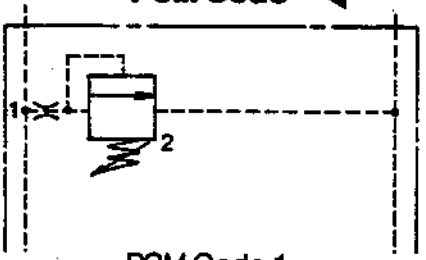


Data Sheet — Relief Valve for Pilot Operation

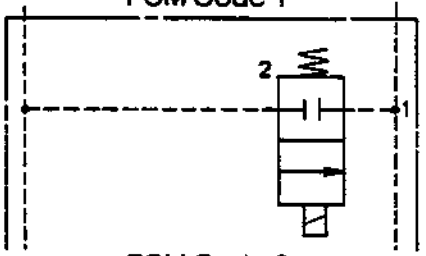
How To Order

Typical PCM How To Order Example: / 1 - 35 - 4 - 0W - C

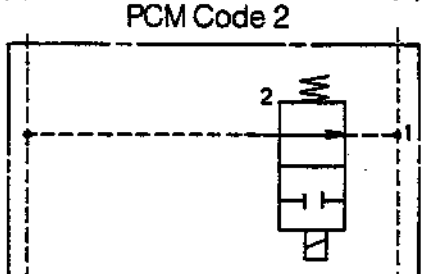
PCM Code



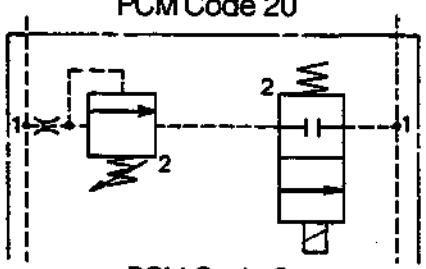
PCM Code 1



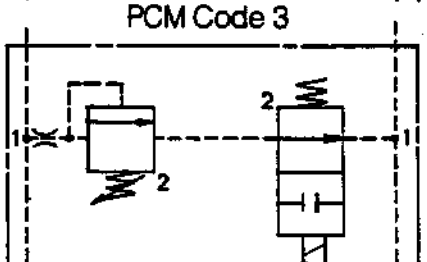
PCM Code 2



PCM Code 20



PCM Code 3



PCM Code 30

Pressure Range
07 = 50- 700 psi (3,4- 48,0 bar)
20 = 50-2000 psi (3,4-138,0 bar)
35 = 50-3500 psi (3,4-241,0 bar)
50 = 50-5000 psi (3,4-345,0 bar)

Orifice Diameter
4 = .040 Diameter (Standard)
See DS 85100 for special applications

Solenoid Voltage (if required)
0 = 115 V.A.C./60 HZ. or 110 V.A.C./50 HZ. Solenoid
1 = 230 V.A.C./60 HZ. or 220 V.A.C./50 HZ. Solenoid
2 = 12 V.D.C. Solenoid
3 = 24 V.D.C. Solenoid
Other voltages are available, consult factory

Electrical Connector (if required)
S = Cable connector w/o indicator light (standard)
L = Cable connector with indicator light
R = .500 NPTF connector w/o indicator light
W = .500 NPTF connector w/indicator light
C = Three pin Brad Harrison/DIN 43650 connector w/mating plug

Block Material
C = Nodular Iron (standard)

See DS 85100 for additional information on pilot controls.

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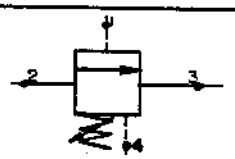
VALVE, SCREW-IN CARTRIDGE

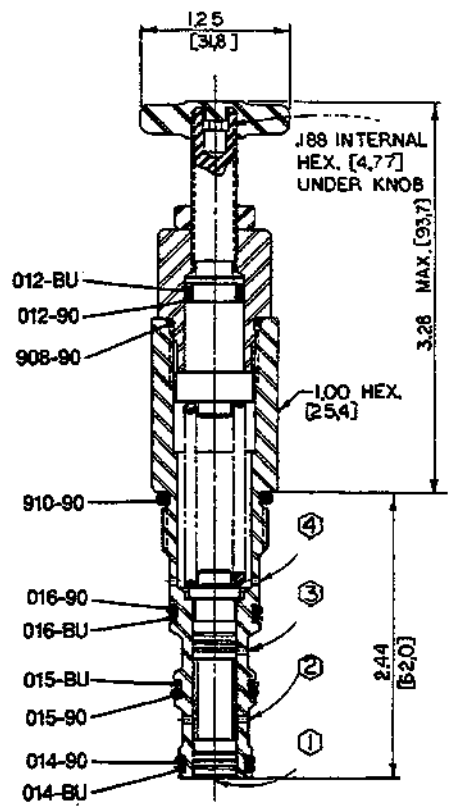
HSDPR601

ENGINEERING | 1



Data Sheet — **Differential Pressure Relief Valve**

400196HS



Form Tool Cavity
HS-600-4

Line Mount Block
BD1-08-C

Application

The HSDPR valve can be used as a pilot control valve to monitor differential loads.

Operation

Inlet is port 2 and outlet is port 3. A screw is used to adjust the compression on the valve spring. If there is no pressure at pilot port 4, the valve opens when pressure at port 1 exceeds the spring setting [example–spring set at 500 psi (34,5 bar)], valve opens when pressure at port 1 is 500 psi (34,5 bar). If there is pressure at both port 1 and 4, the valve opens when the pressure differential (between ports 1 and 4) exceeds the spring setting (example–spring set for 500 psi (34,5 bar), 1000 psi (69 bar) present at port 4–valve starts to open when pressure at port 1 exceeds 1525 psi (105,2 bar).

Features

HSDPR relief valves are available with several springs so you can select the one that best fits your needs. The cartridge is constructed of steel parts and all operating parts are hardened as required. Cartridge is designed for ease of service and field repair.

Specifications

Maximum working pressure–
2400 psi (165,5 bar)
Adjustable pressure range–Depends on pressure range selected–see "How To Order."
Seals–Viton
Operating temperature–-40°F to 350°F (-39,6°C to 175°C)
Filtration–Maintain SAE Class 6, ISO 18/15
Seal kit–HSSK-600-P

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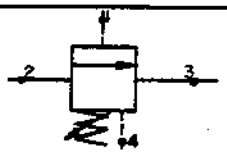
Oilgear

VALVE, SCREW-IN CARTRIDGE

HSDPR601

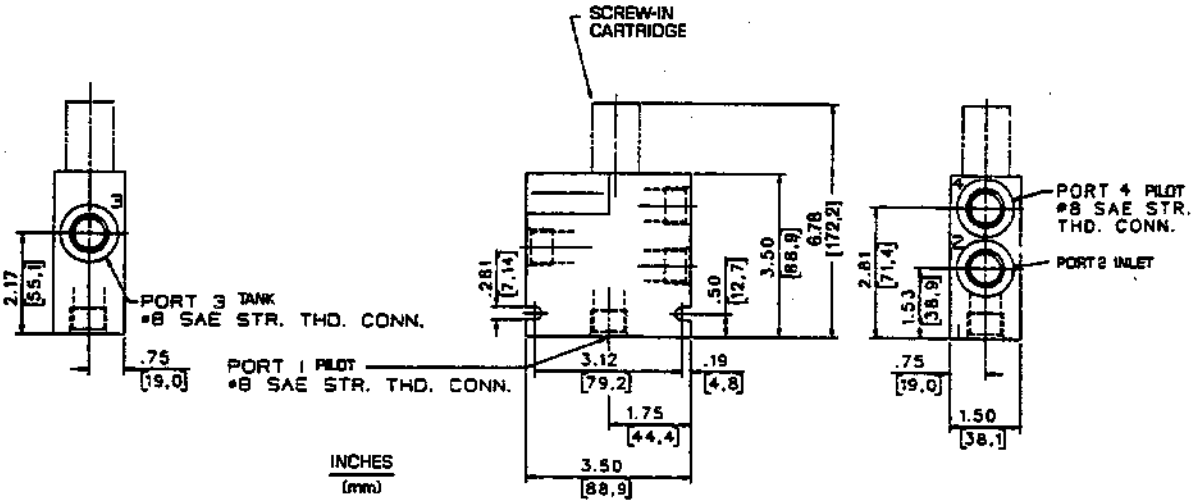
ENGINEERING | 2



Data Sheet — Differential Pressure Relief Valve

Line Mount Specifications

HSDPR601/BD1-08-C



How To Order

Screw-In Cartridge Only

HSDPR601-___

	Pressure Differential	
	psi	bar
2	50- 200	3,4- 13,8
6	100- 600	6,9- 41,4
12	200-1200	13,8- 82,8
24	400-2400	27,6-165,5

Cartridge With Line Mount Block

HSDPR601-__/BD1-08-C

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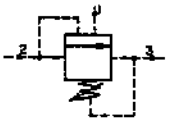
VALVE, SCREW-IN CARTRIDGE

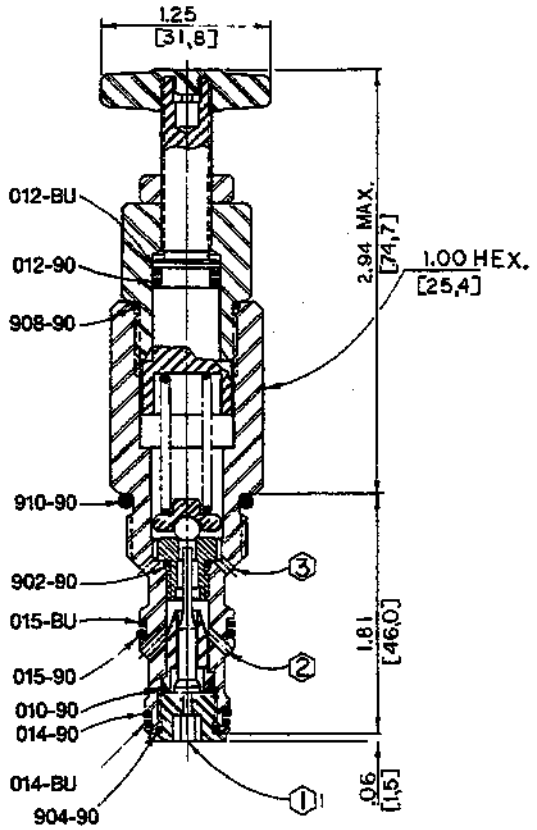
HSAUR601

ENGINEERING | 1



Data Sheet — **Accumulator Unloading Relief Valve**

400246HS



Form Tool Cavity
HS-600-3

Line Mount Block
BC1-08-C

Application

The HSAUR valve is used with a HSP (poppet) valve, and a HSC (check) valve to unload the pump and maintain a preset pressure in an accumulator system.

Operation

See typical system on back page. While the accumulator is being charged the HSAUR valve is in the closed position, the poppet of the HSP valve is balanced and blocks flow thru that valve, the HSC check valve opens and allows the pump to deliver fluid to the accumulator and system. When system and accumulator are fully charged, pressure at port 2 of the HSAUR valve pushes the ball off it's seat while pressure at port 1 pushes the pin up against the ball. When the ball is off it's seat the vent port of the HSP valve is open to drain allowing the poppet valve to open and unloading the pump delivery directly to the reservoir. The differential ratio between the ball seat and pin diameter dictates the reseat pressure percentage. NOTE: The HSAUR valve should not be used without HSP and HSC valves which must be sized to match pump delivery.

Features

Several maximum pressure and reseat pressure ratios are offered in each adjustable (spring) range. The cartridge is constructed of steel parts and all operating parts are hardened. Cartridge is designed for ease of service and field repair.

Specifications

Maximum operating pressure—
5000 psi (345 bar)
Adjustable pressure range—See "How To Order"
Viscosity range—27-30 SSU at 100°F
35-2000 SSU at 100°F
Seals—Viton
Operating temperature—-40°F to 350°F (-39,6°C to 175°C)
Filtration—Maintain SAE Class 6, ISO 18/15
Seal kit—HSSK-600-Q

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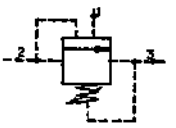
Oilgear

VALVE, SCREW-IN CARTRIDGE

HSAUR601

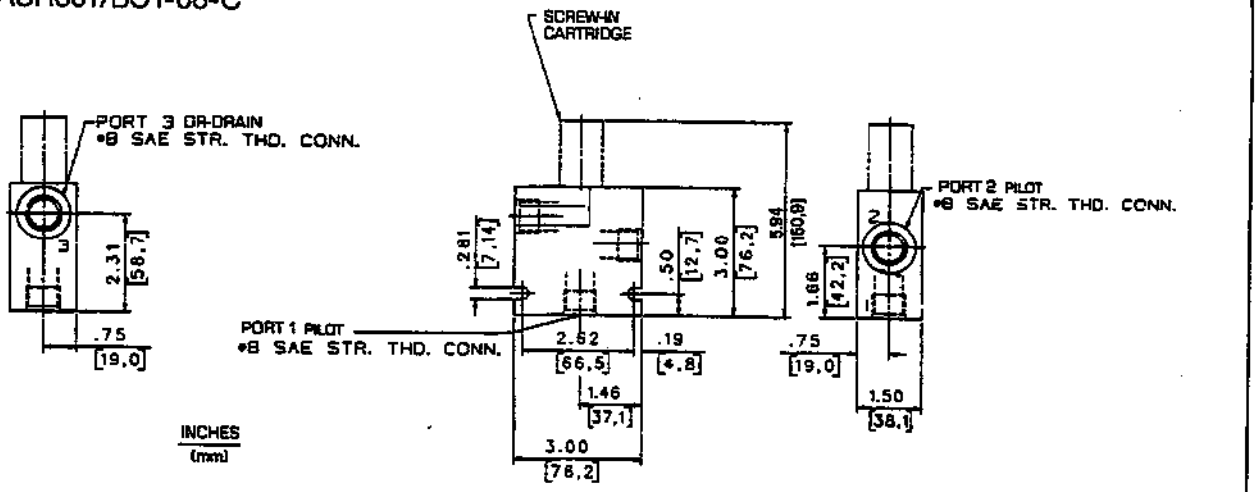
ENGINEERING | 2



Data Sheet — **Accumulator Unloading Relief Valve**

Line Mount Specifications

HSAUR601/BC1-08-C



How To Order

Screw-In Cartridge Only

HSAUR601-___

Normal Reseat Pressure as a Percentage of Unloading Pressure Setting						
		33%	22%	17%	12%	9%**
Maximum Unloading	psi bar	1000 69,0	880 60,7	820 56,6	770 53,1	750 51,7
Order Code		A	B	C	D	E
Maximum Unloading	psi bar	2500 172,4	2300 158,6	2000 137,9	1900 131,0	1750 120,7
Order Code		F	G	H	I	J
Maximum Unloading	psi bar	4600 317,2	4100 282,8	3850 265,5	3600 248,3	3400 234,5
Order Code		K	L	M	N	O

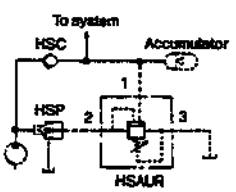
*Valve is rated for a maximum of 5000 psi

**The 9% reseat valve is not recommended at very low pressures. As an example, 9% of 400 psi = 36 psi (2,5 bar) which results in a reseat pressure of 364 which would cause the pump to go on and off rapidly—9% of 4500 psi (310,3 bar) = 405 psi (27,9 bar) resulting in a reseat pressure of 4095 psi (282,4 bar) a reasonable differential pressure.

Cartridge With Line Mount Block

HSAUR601-__/BC1-08-C

Typical accumulator system using HSAUR unloading valve and HSP poppet valve to un-load pump.



Typical System

Reissued: Nov., 1995
DS 82591-B6.1

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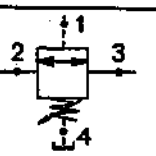
Oilgear

VALVE, SCREW-IN CARTRIDGE

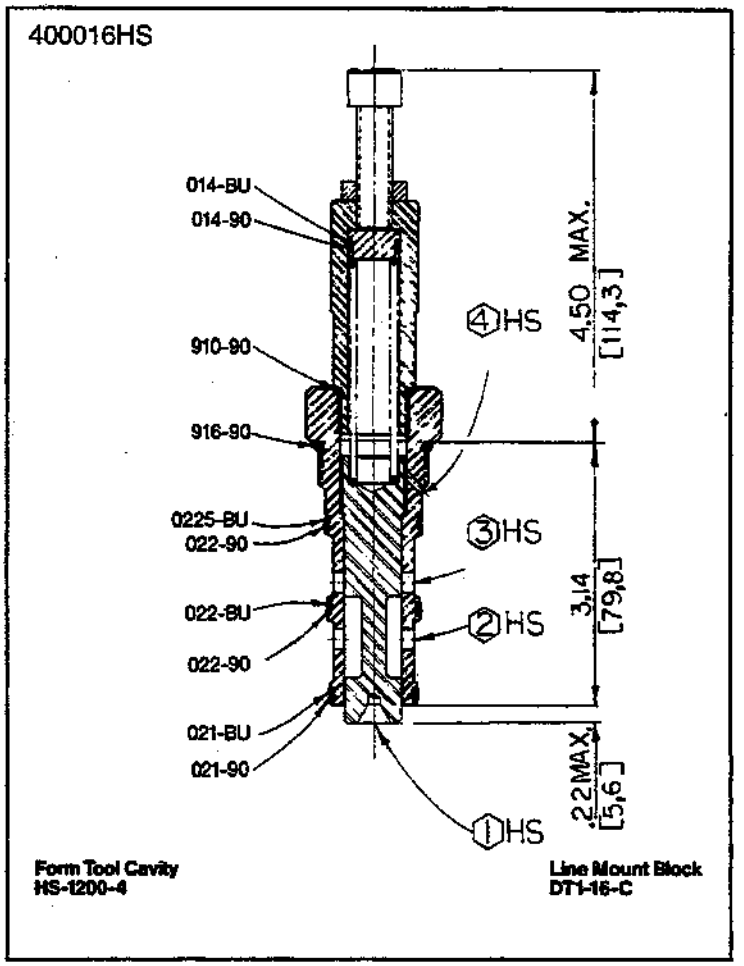
39 USGPM △ 100 PSI
(147,9 LPM △ 6,9 Bar)

HSU1200-DA

ENGINEERING | 1



Data Sheet — **Direct Acting External Operated N.C. Sequence Valve**



Application

The HSU-DA sequence valve connects primary and secondary system branches after the pressure requirements in a third branch has been satisfied. This valve can be circuited to be operated by multiple pressure settings.

Operation

As the pressure at port 1 overcomes the spring resistance it moves the main spool to connect ports 2 and 3. Because the spring chamber is connected (separately) to drain, back pressure at operating ports will not affect the pressure setting.

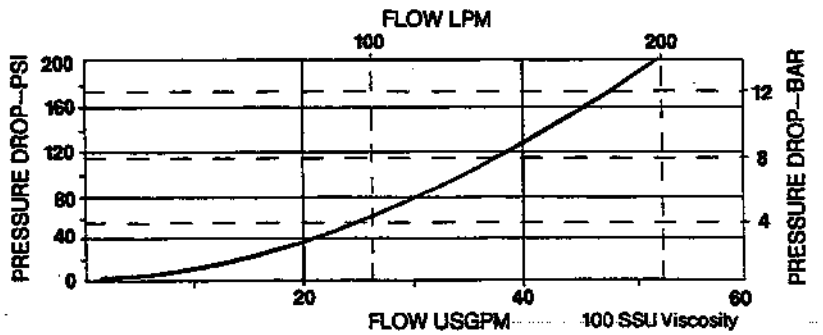
Features

Direct acting for fast accurate response, several pressure ranges available, constructed of steel parts, operating parts are hardened and ground as required. Cartridge is designed for easy service and field repair.

Specifications

Rated flow to—39 USgpm (147,9 lpm)
Maximum operating pressure—
5000 psi (345 bar)
Adjustable pressure range—See "How To Order"
Viscosity range—27-30 SSU at 100°F
35-2000 SSU at 100°F
Seals—Viton
Operating temperature—-40°F to 350°F
(-39,6°C to 175°C)
Filtration—Maintain SAE Class 6, ISO 18/15
Seal kit—HSSK-1200-D

Performance Curve



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Reissued: Nov., 1995

DS-82650-B8.4

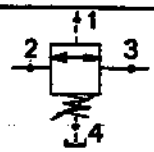
Oilgear

VALVE, SCREW-IN CARTRIDGE

39 USGPM △ 100 PSI
(147,9 LPM △ 6,9 Bar)

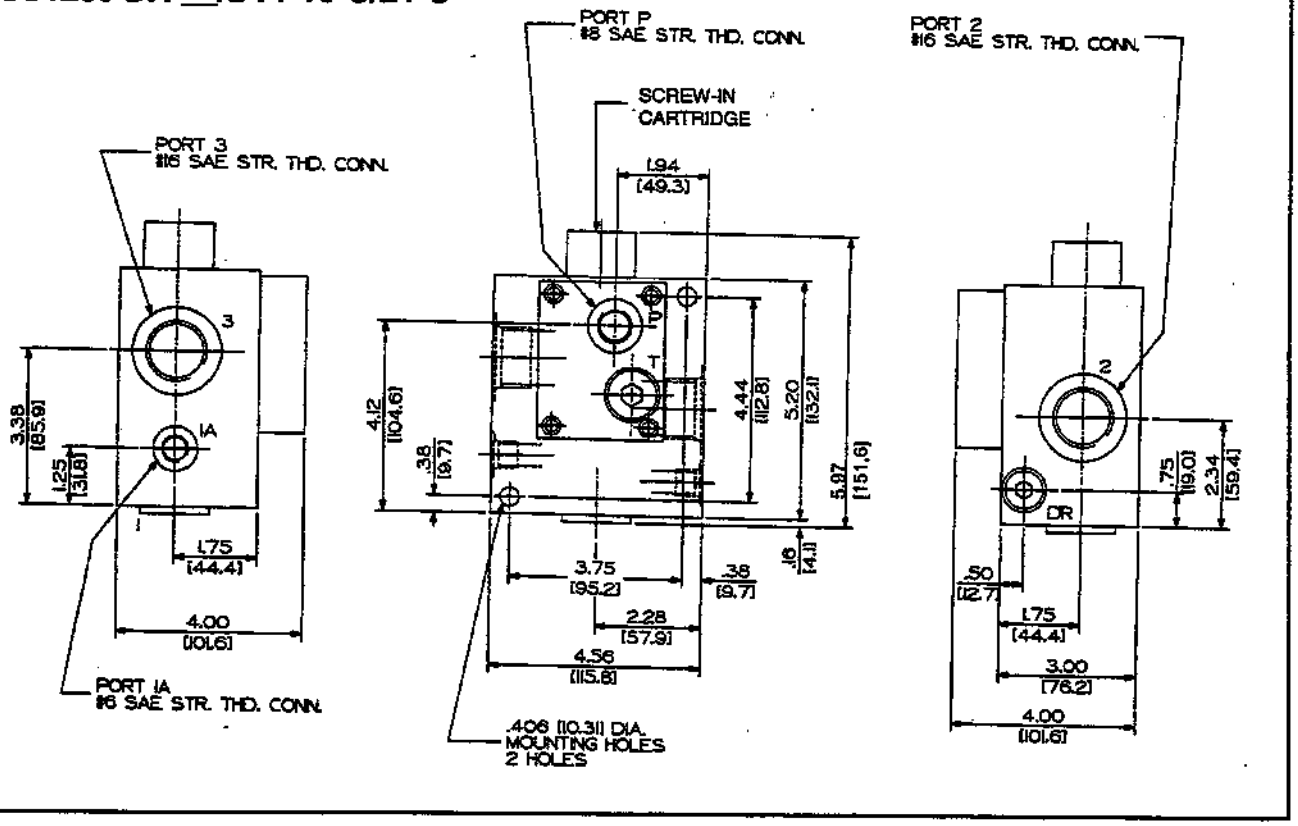
HSU1200-DA

ENGINEERING | 2



Data Sheet — **Direct Acting External Operated N.C. Sequence Valve**

HSU1200-DA-__/DT1-16-C/21-C



How To Order

Screw-in Cartridge Only

HSU1200-DA-__

	Pressure Range	
	psi	bar
06	25- 60	1,7- 4,1
1	50-100	3,5- 6,9
2	120-200	8,3-13,8
3	185-300	12,8-20,7

Cartridge with Line Mount Block

HSU1200-DA-__/DT1-16-C/21-C

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DS-82650-B8.4

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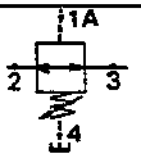
Oilgear

VALVE, SCREW-IN CARTRIDGE

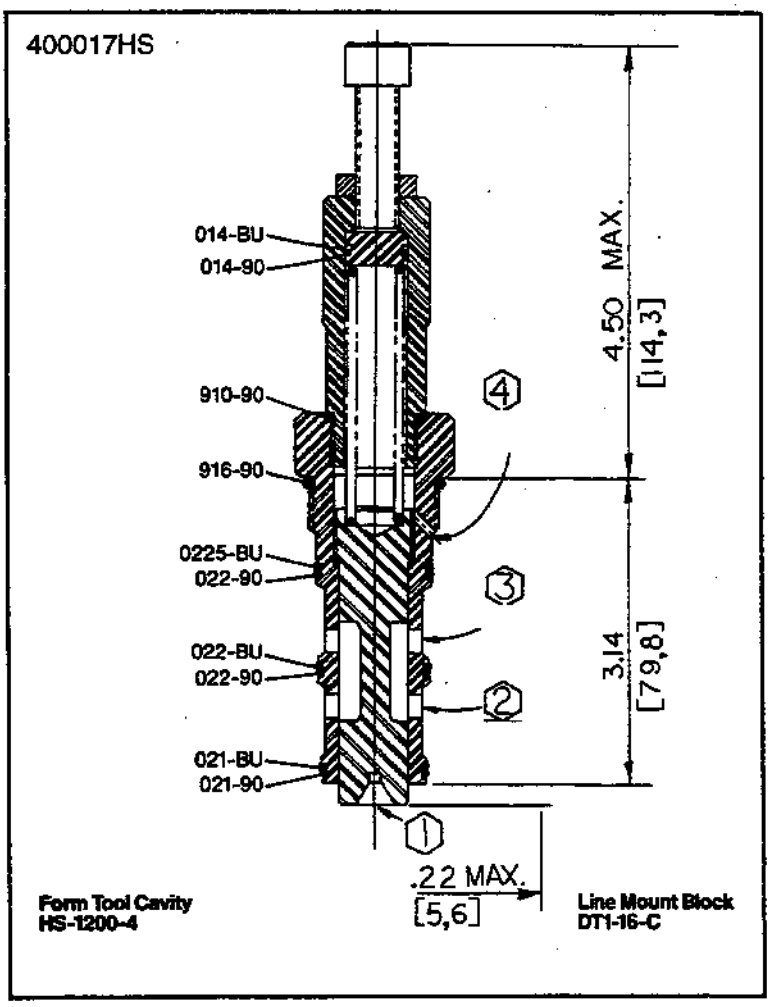
39 USGPM △ 100 PSI
(147,8 LPM △ 6,9 Bar)

HSUO1200-DA

ENGINEERING | 1



Data Sheet Direct Acting External, Operated Normally Open, Sequence Valve



Application

The HSUO-DA sequence valve disconnects primary and secondary system branches after the pressure requirement in a third branch has been satisfied.

Operation

As the pressure at port 1 overcomes the spring resistance, it moves the main spool to block port from 3. Because the spring chamber is connected (separately) to drain, back pressure at operating ports will not alter resistance.

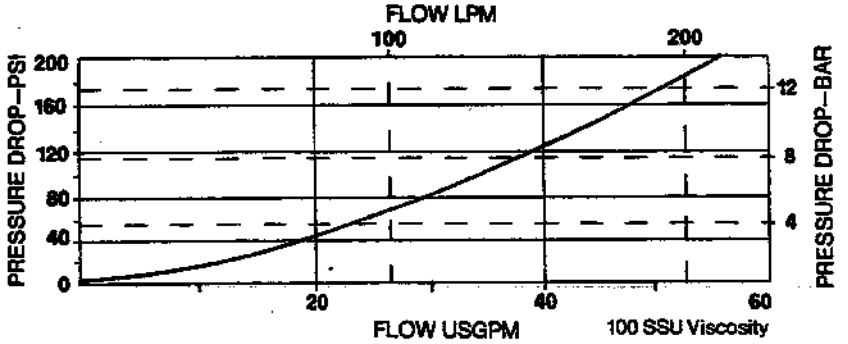
Features

Direct acting for fast accurate response, several pressure ranges available, constructed of steel parts, operating parts are hardened and ground as required. Cartridge is designed for easy service and field repair.

Specifications

Rated flow to—57 USgpm △ 200 psi
(215,8 lpm △ 13,8 bar)
Maximum operating pressure—
5000 psi (345 bar)
Adjustable pressure range—See "How To Order"
Viscosity range—27-30 SSU at 100°F
35-2000 SSU at 100°F
Seals—Viton
Operating temperature—-40°F to 350°F
(-39,6°C to 175°C)
Filtration—Maintain SAE Class 6, ISO 18/15
Seal kit—HSSK-1200-D

Performance Curve



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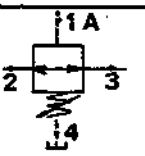
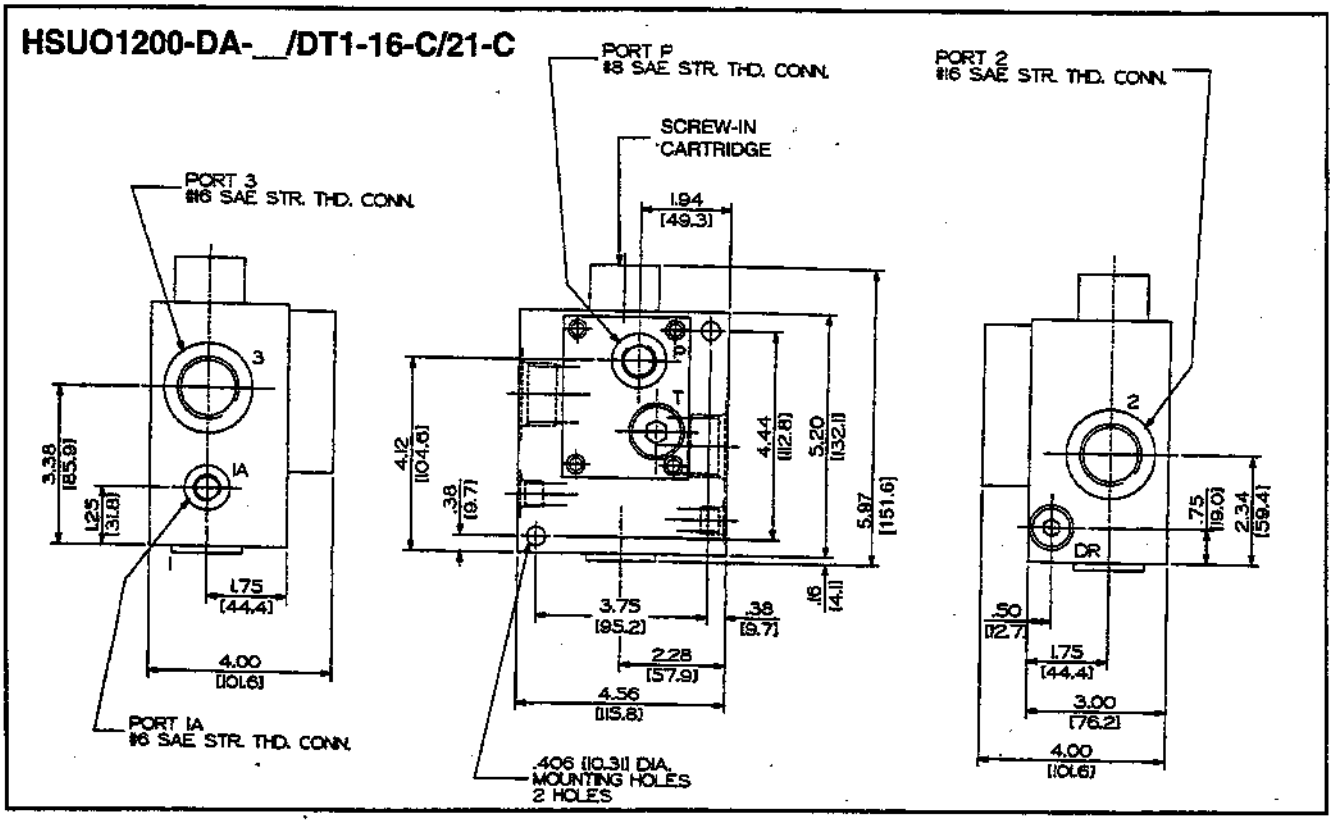
DS 82650-B9.4



Data Sheet Direct Acting External, Operated Normally Open, Sequence Valve

Line Mount Specifications



How To Order

Screw-In Cartridge Only

HSUO1200-DA-__

	Pressure Range	
	psi	bar
06	25- 60	1,7- 4,1
1	50-100	3,5- 6,9
2	120-200	8,3-13,8
3	185-300	12,8-20,7

Cartridge With Line Mount Block

HSUO1200-DA-__/DT1-16-C/21-C

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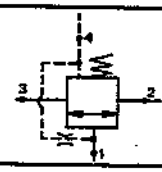
Oilgear

VALVE, SCREW-IN CARTRIDGE

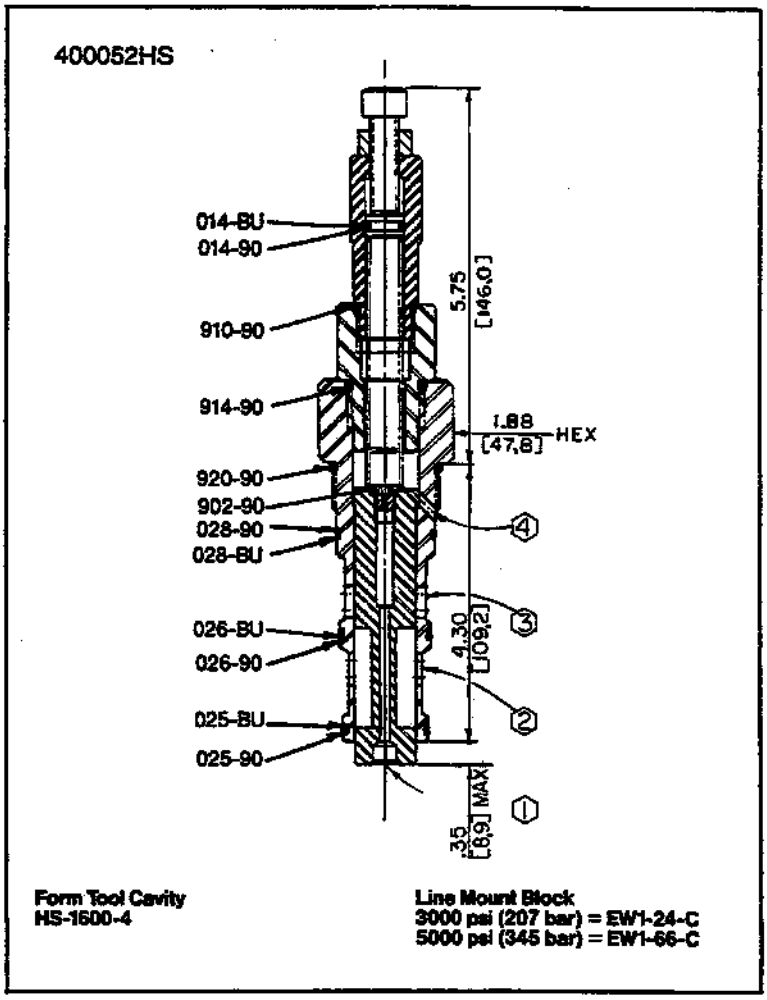
84 USGPM Δ 100 PSI
(318,4 LPM Δ 6,9 Bar)

HSU1600

ENGINEERING | 1



Data Sheet — **Normally Closed Sequence Valve for Pilot Operation**



Application

When operated by a HSLR pilot operator, the HSU sequence valve connects primary and secondary system branches after the pressure requirement in a third branch has been satisfied. This valve can be circuited to be operated by multiple pressure settings.

Operation

A HSLR pilot relief valve must be connected via port 4 to top (spring side) of the main spool and pressure must be connected to port 1 to operate the relief valve which pilots the sequence valve to connect ports 2 and 3. When inlet pressure (ported through the valve) exceeds the pilot setting, pressure on top side of the spool is relieved, a pressure imbalance then exists across the main spool and port 1 pressure raises the spool to allow flow between ports 2 and 3.

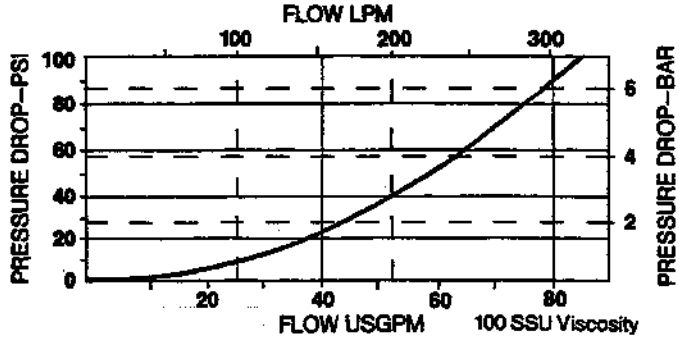
Features

A trim adjustment is provided to vary the cracking and reseat pressure. The cartridge is constructed of steel parts and operating parts are hardened and ground as required. Cartridge is designed for easy service or field repair.

Specifications

Rated flow to- 84 USgpm (318,4 lpm)
Maximum operating pressure—
5000 psi (345 bar)
Adjustable pressure range— See HSLR Pilot Valve DS 82550-B1.1A & B2.1A
Viscosity range - 27- 30 SSU at 100°F
35 - 2000 SSU at 100°F
Seals—Viton
Operating temperature- -40°F to 350°F (-39,6°C to 175°C)
Filtration— Maintain SAE Class 6, ISO 18/15
Seal kit- HSSK-1600D

Performance Curve



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DS 82651-B8.5

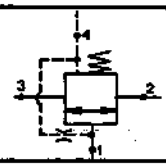
Oilgear

VALVE, SCREW-IN CARTRIDGE

84 USGPM △ 100 PSI
(318,4 LPM △ 6,9 Bar)

HSU1600

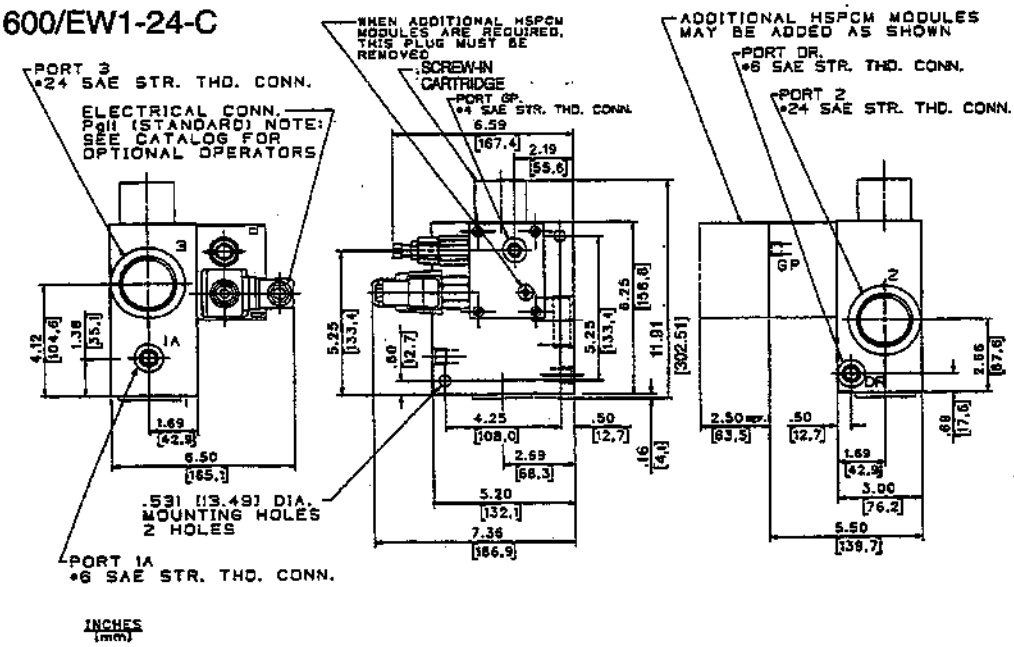
ENGINEERING | **2**



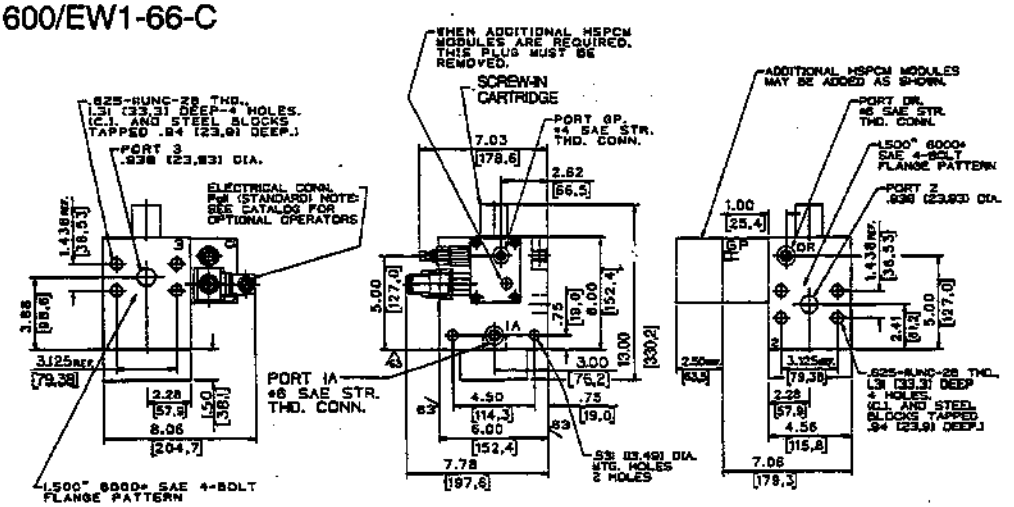
Data Sheet **Normally Closed Sequence Valve for Pilot Operation**

Line Mount Specifications

HSU1600/EW1-24-C



HSU1600/EW1-66-C



How To Order

Screw-In Cartridge Only

HSU1600

Cartridge With Line Mount Block

HSU1600/EW1-24-C*
3000 psi (207 bar) service pressure

HSU1600/EW1-66-C*
5000 psi (345 bar) service pressure

*Line Mount Blocks shown include Pilot Control Modules (PCM). See Pages 3 and 4 for "How To Order" Line Mount Blocks with Pilot Control Modules.

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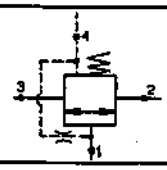
Oilgear

VALVE, SCREW-IN CARTRIDGE

84 USGPM Δ 100 PSI
(318,4 LPM Δ 6,9 Bar)

HSU1600

ENGINEERING | 3



Data Sheet — Normally Closed Sequence Valve for Pilot Operation

Cartridge Must Have Pilot Control Module

This cartridge valve requires pilot logic to offer added flexibility in providing maximum pressure consistently and smoothly. At least one pilot control module must be added to the valve.

Typical HSU1600 How To Order Example

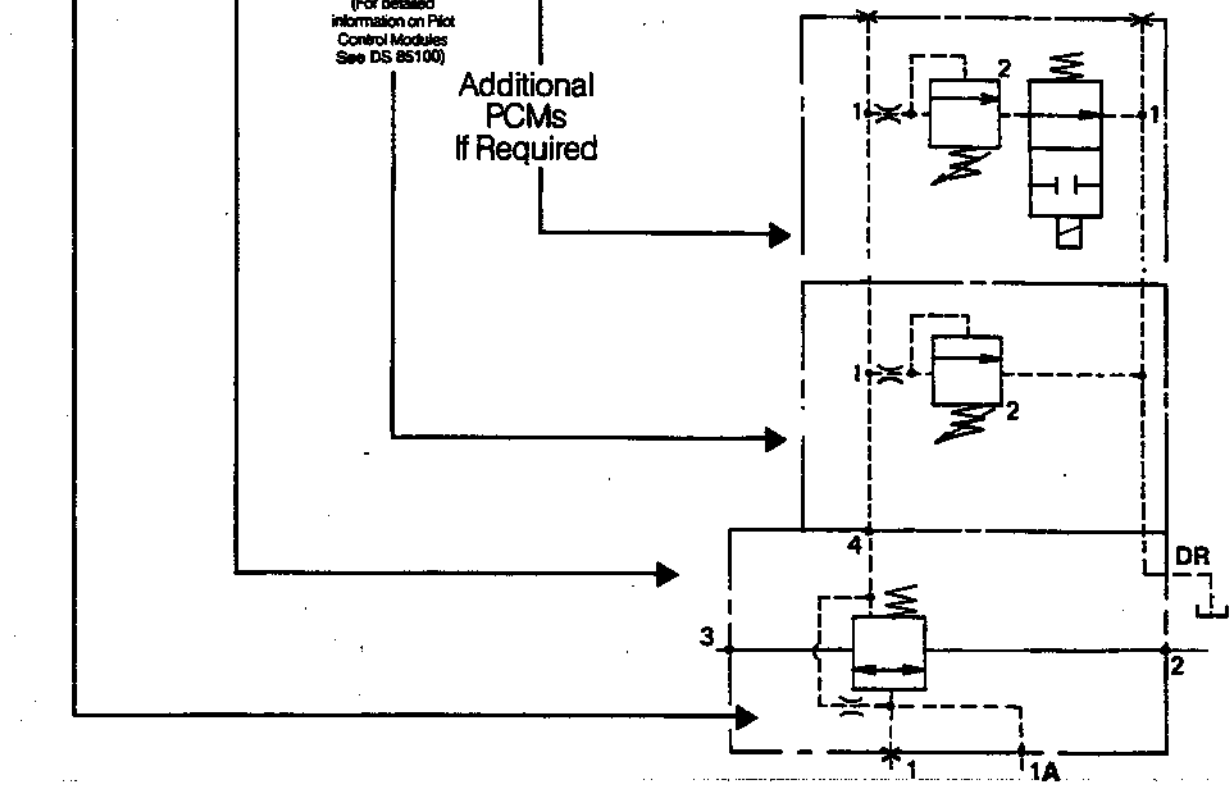
HSU1600 / EW1-24-C / 1-35-4-C / Optional

Cartridge

Line Mount Block

Pilot Control Module (PCM)
(For detailed information on Pilot Control Modules See DS 85100)

Additional PCMs If Required



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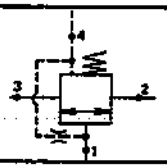
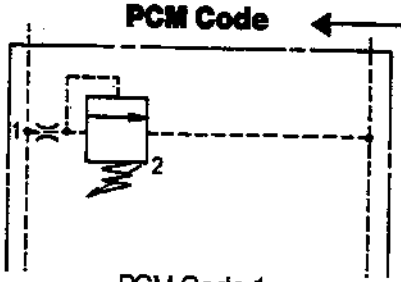


Data Sheet — Normally Closed Sequence Valve for Pilot Operation

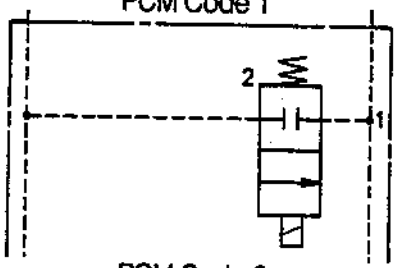
How To Order

Typical PCM How To Order Example: / 1 - 35 - 4 - 0W - C

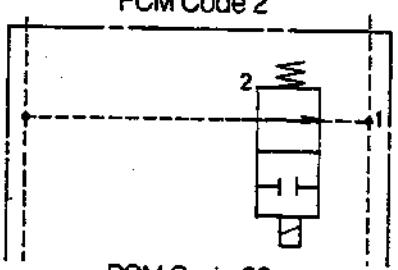
PCM Code



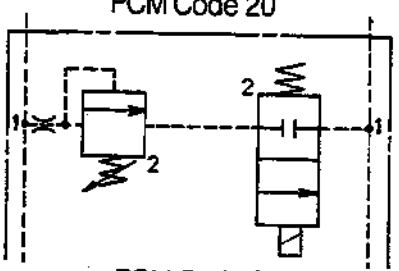
PCM Code 1



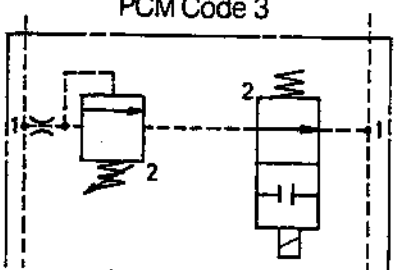
PCM Code 2



PCM Code 20



PCM Code 3



PCM Code 30

Pressure Range
07 = 50- 700 psi (3,4- 48,0 bar)
20 = 50-2000 psi (3,4-138,0 bar)
35 = 50-3500 psi (3,4-241,0 bar)
50 = 50-5000 psi (3,4-345,0 bar)

Orifice Diameter
4 = .040 Diameter (Standard)
See DS 85100 for special applications

Solenoid Voltage (if required)
0 = 115 V.A.C./60 HZ. or 110 V.A.C./50 HZ. Solenoid
1 = 230 V.A.C./60 HZ. or 220 V.A.C./50 HZ. Solenoid
2 = 12 V.D.C. Solenoid
3 = 24 V.D.C. Solenoid
Other voltages are available, consult factory

Electrical Connector (if required)
S = Cable connector w/o indicator light (standard)
L = Cable connector with indicator light
R = .500 NPTF connector w/o indicator light
W = .500 NPTF connector w/indicator light
C = Three pin Brad Harrison/DIN 43650 connector w/mating plug

Block Material
C = Nodular Iron (standard)

See DS 85100 for additional information on pilot controls.

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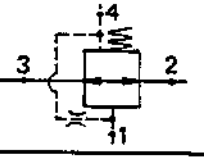
Oilgear

VALVE, SCREW-IN CARTRIDGE

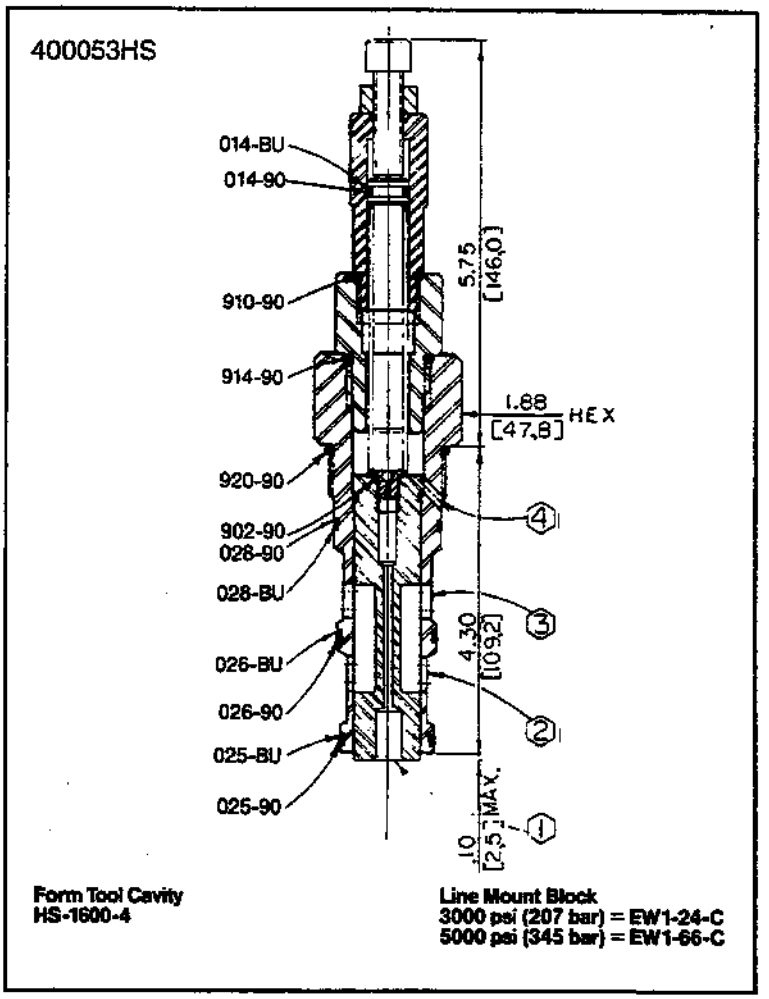
84 USGPM △ 100 PSI
(318,4 LPM △ 6,9 Bar)

HSUO1600

ENGINEERING | 1



Data Sheet — **Normally Open Sequence Valve for Pilot Operation**



Application

When operated by a HSLR pilot operator, the HSUO sequence valve disconnects primary and secondary system branches after the pressure requirement in third branch has been satisfied. This valve can be circuited to be operated by multiple pressure settings or vented to close it.

Operation

A HSLR pilot relief valve must be connected via port 4 to top (spring side) of the main spool and pressure must be connected to port 1 to operate the relief valve which pilots the sequence valve to block flow between ports 2 and 3. When inlet pressure (ported through the valve) exceeds the pilot setting, pressure on top side of the spool is relieved, a pressure imbalance then exists across the main spool and port 1 pressure raises the spool to block flow between ports 2 and 3.

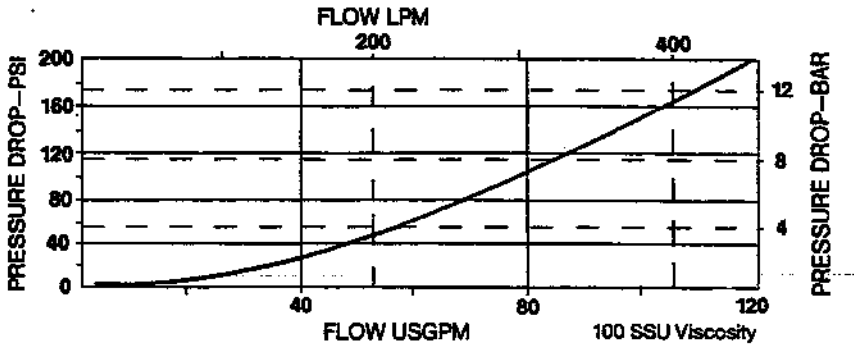
Features

Several pressure ranges are available to choose from. The cartridge is constructed of steel parts and operating parts are hardened and ground as required. Cartridge is designed for easy service or repair.

Specifications

Rated flow to- 119 USgpm △ 2000 psi
(450,5 lpm △ 13,8 bar)
Maximum operating pressure—
5000 psi (345 bar)
Adjustable pressure range— See HSLR Pilot Valve DS 82550-B2.1A
Viscosity range - 27-30 SSU at 100°F
35 - 2000 SSU at 100°F
Seals—Viton
Operating temperature- -40°F to 350°F
(-39,6°C to 175°C)
Filtration— Maintain SAE Class 6, ISO 18/15
Seal kit- HSSK-1600D

Performance Curve



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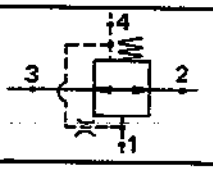
Oilgear

VALVE, SCREW-IN CARTRIDGE

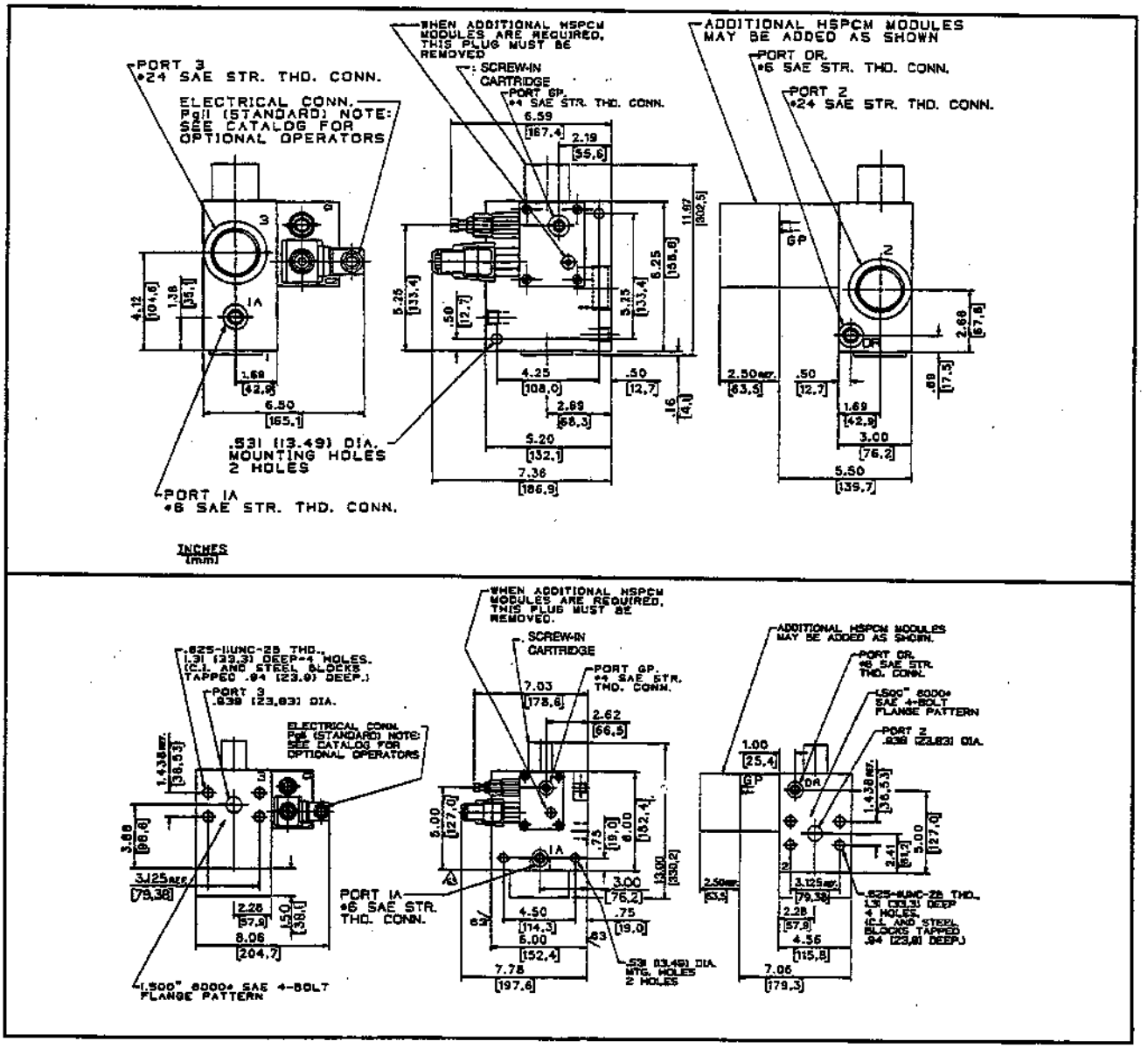
84 USGPM △ 100 PSI
(318,4 LPM △ 6,9 Bar)

HSUO1600

ENGINEERING | **2**



Data Sheet — **Normally Open Sequence Valve for Pilot Operation**



How To Order

Screw-In Cartridge Only

HSUO1600

Cartridge With Line Mount Block

3000 psi (207 bar) service pressure
HSUO1600/EW1-24-C•

5000 psi (345 bar) service pressure
HSUO1600/EW1-66-C•

*Line Mount Blocks shown include Pilot Control Modules (PCM). See Pages 3 and 4 for How To Order Line Mount Blocks with Pilot Control Modules.

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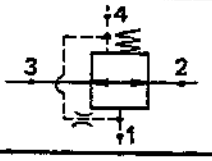
Oilgear

VALVE, SCREW-IN CARTRIDGE

84 USGPM Δ 100 PSI
(318,4 LPM Δ 6,9 Bar)

HSUO1600

ENGINEERING | 3



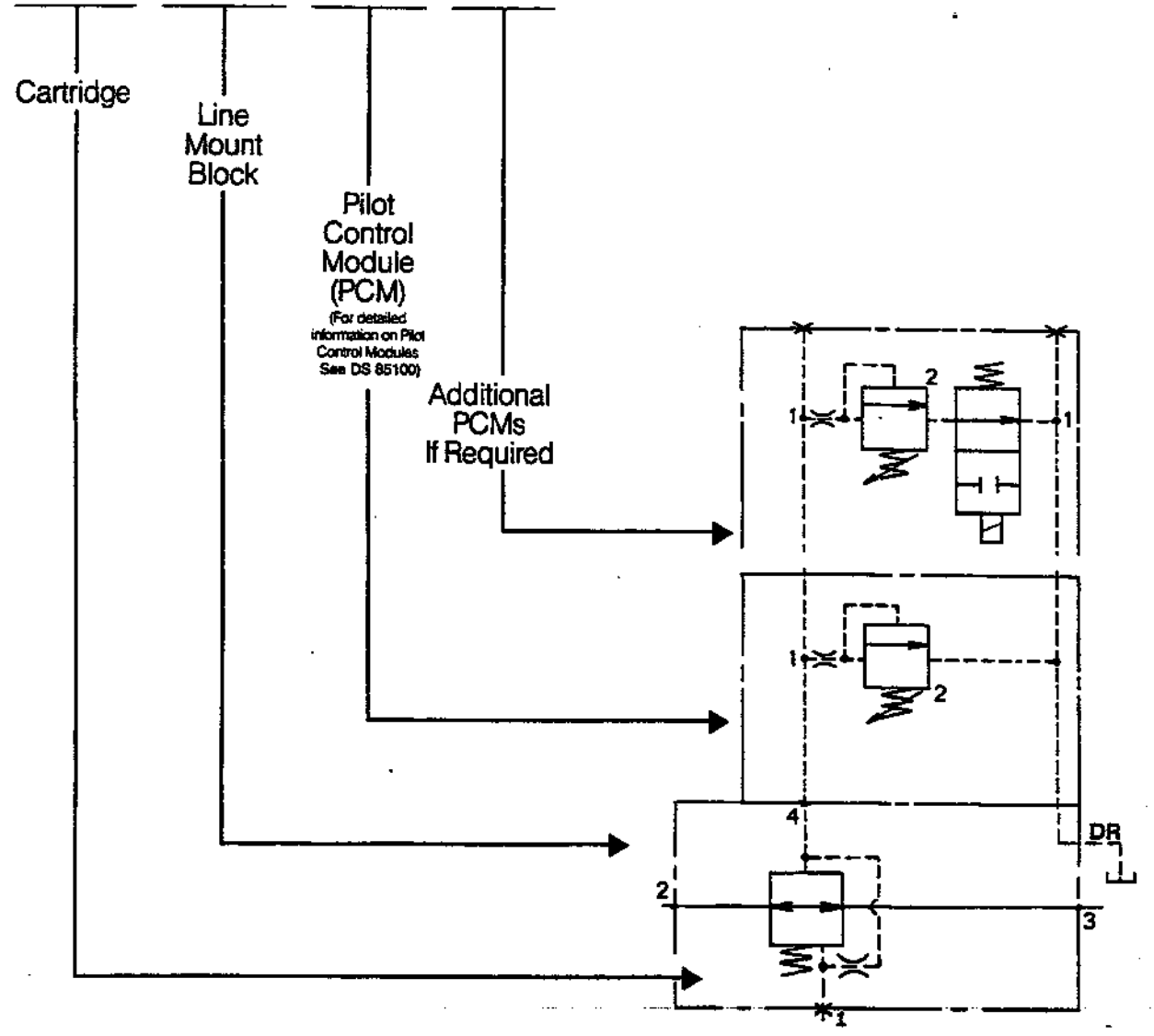
Data Sheet — Normally Open Sequence Valve for Pilot Operation

Cartridge Must Have Pilot Control Module

This cartridge valve requires pilot logic to offer added flexibility in providing maximum pressure consistently and smoothly. At least one pilot control module must be added to the valve.

Typical HSUO1600 How To Order Example

HSUO1600 / EW1-24-C / 1-35-4-C / Optional



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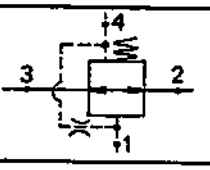
Oilgear

VALVE, SCREW-IN CARTRIDGE

84 USGPM Δ 100 PSI
(318,4 LPM Δ 6,9 Bar)

HSUO1600

ENGINEERING | 4

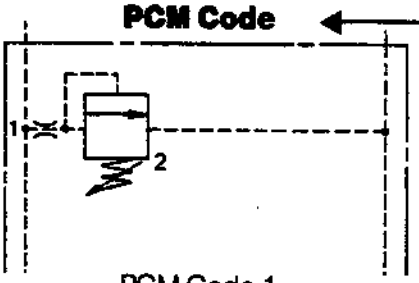


Data Sheet — **Normally Open Sequence Valve for Pilot Operation**

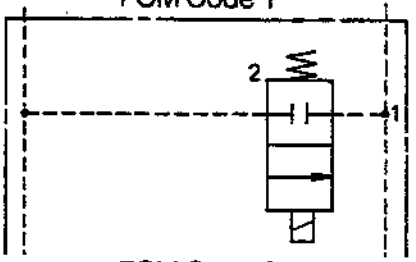
How To Order

Typical PCM How To Order Example: /30 - 35 - 4 - 0W - C

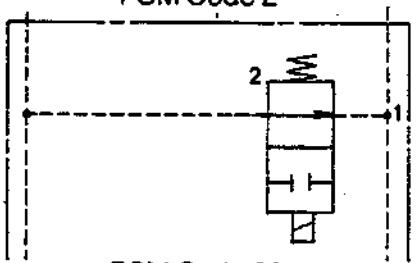
PCM Code



PCM Code 1



PCM Code 2



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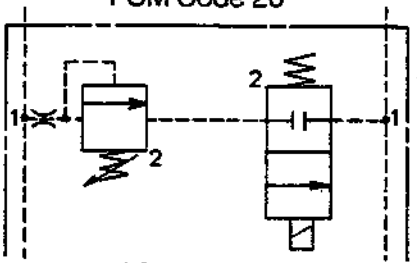
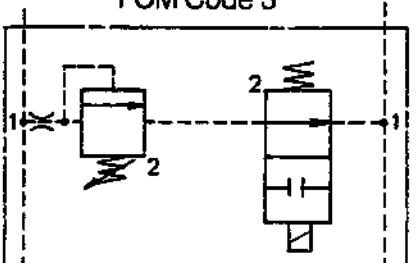


PCM Code 3



PCM Code 30

Pressure Range
07 = 50- 700 psi (3,4- 48,0 bar)
20 = 50-2000 psi (3,4-138,0 bar)
35 = 50-3500 psi (3,4-241,0 bar)
50 = 50-5000 psi (3,4-345,0 bar)

Orifice Diameter
4 = .040 Diameter (Standard)
See DS 85100 for special applications

Solenoid Voltage (if required)
0 = 115 V.A.C./60 HZ. or 110 V.A.C./50 HZ. Solenoid
1 = 230 V.A.C./60 HZ. or 220 V.A.C./50 HZ. Solenoid
2 = 12 V.D.C. Solenoid
3 = 24 V.D.C. Solenoid
Other voltages are available, consult factory

Electrical Connector (if required)
S = Cable connector w/o indicator light (standard)
L = Cable connector with indicator light
R = .500 NPTF connector w/o indicator light
W = .500 NPTF connector w/indicator light
C = Three pin Brad Harrison/DIN 43650 connector w/mating plug

Block Material
C = Nodular iron (standard)

See DS 85100 for additional information on pilot controls.

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DS 82652-B9.5

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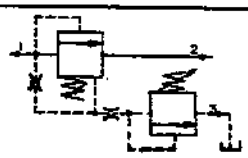
Oilgear

VALVE, SCREW-IN CARTRIDGE

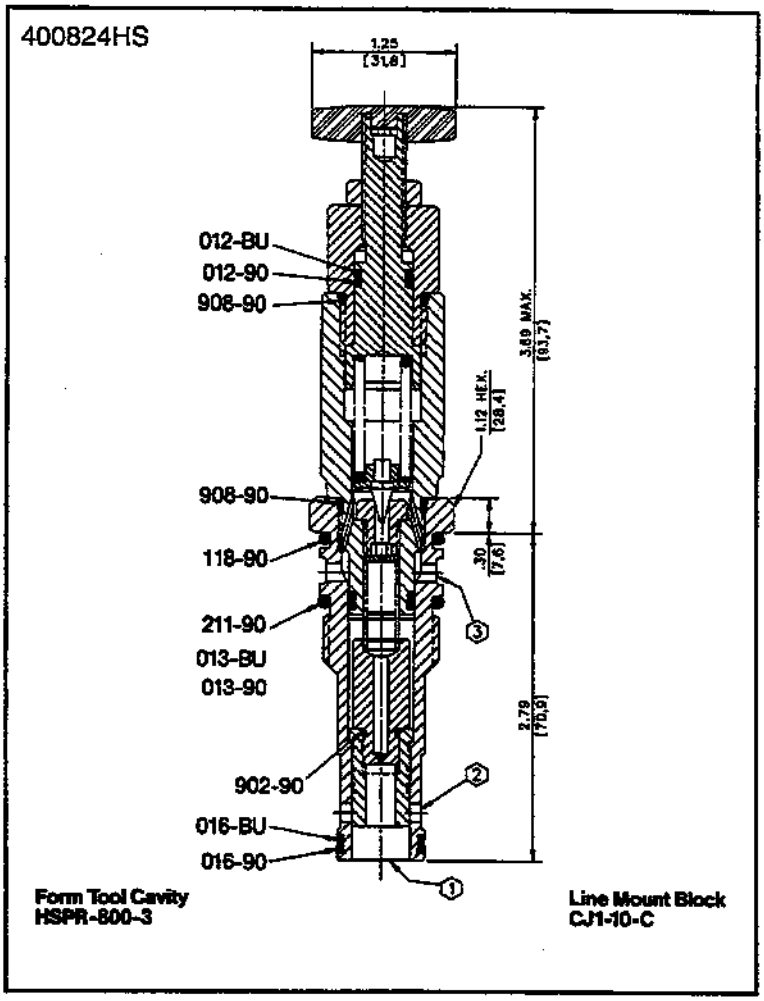
41 USGPM △ 100 PSI
(155,4 LPM △ 6,9 Bar)

HSS801-P

ENGINEERING | 1



Data Sheet — **Piloted Sequence Valve**



Application

The HSS pilot operated sequence valve is used for very precise sequential (pressure) operation in systems where amount of flow may vary. It can also be used as a relief valve where back pressure exists in exhaust line (provided port 3 is connected directly to reservoir).

Operation

Inlet pressure is ported thru orifices in the center of the valve spool to the pilot relief valve (in upper portion of the body). When inlet pressure exceeds this valve's setting pressure on top side of the main spool is relieved (thru port 3), a pressure imbalance then exists across the main spool and port 1 pressure raises the main spool to allow flow to port 2, allowing operation of a secondary system or flow to drain. Because port 2 is separate from port 3, any back pressure at port 2 does not add to the setting of the pilot valve spring and alter pressure setting.

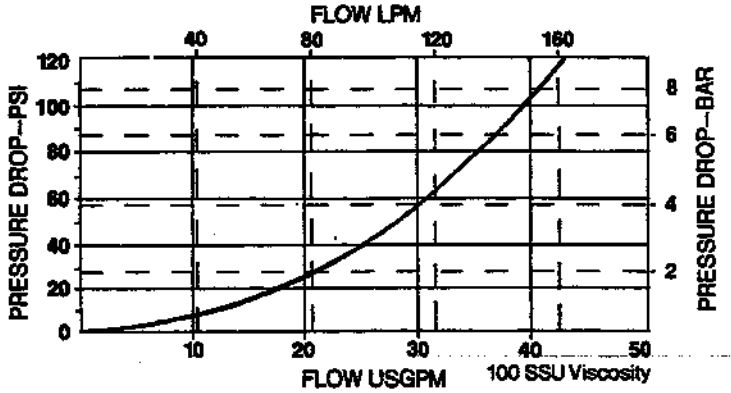
Features

HSS cartridge valve is constructed of steel parts all operating parts are hardened and ground as required. Cartridge is designed for easy service or field repair. Several ranges of adjustable pressure are offered.

Specifications

Rated flow to—41 USgpm (155,4 lpm)
Maximum operating pressure—
5000 psi (345 bar)
Adjustable pressure range—See "How To Order"
Viscosity range—27-30 SSU at 100°F
35-2000 SSU at 100°F
Seals—Viton
Operating temperature—-40°F to 350°F
(-39,6°C to 175°C)
Filtration—Maintain SAE Class 6, ISO 18/15
Seal kit—HSSK-800-C

Performance Curve



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Reissued: Nov., 1995

DS 82660-B7.2

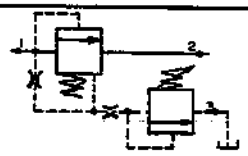
Oilgear

VALVE, SCREW-IN CARTRIDGE

41 USGPM △ 100 PSI
(155,4 LPM △ 6,9 Bar)

HSS801-P

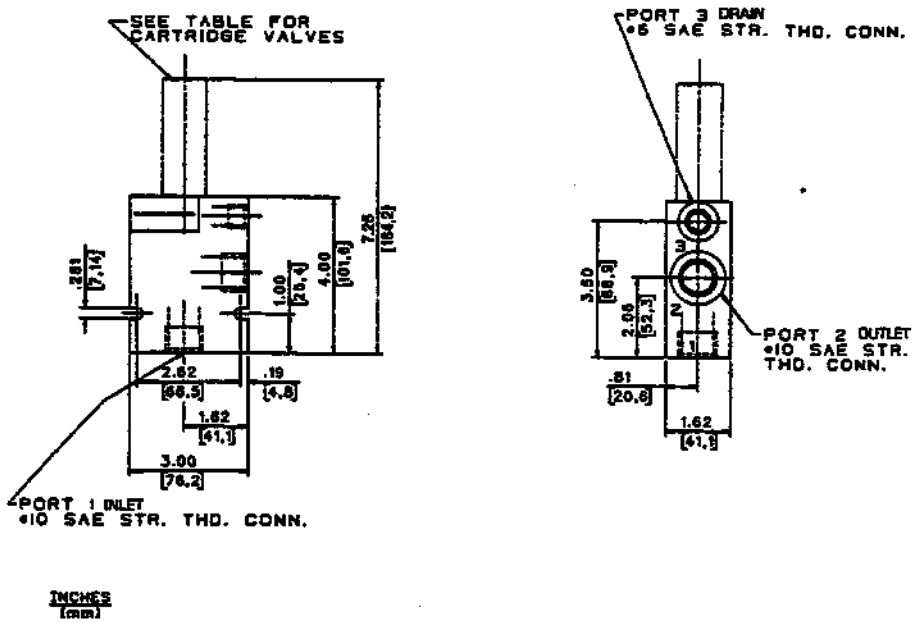
ENGINEERING | 2



Data Sheet — Piloted Sequence Valve

Line Mount Specifications

HSS801-P/CJ1-10-C



How To Order

Screw-In Cartridge Only

HSS801-P-____

	Pressure Range	
	psi	bar
07	50- 700	3,4- 48
20	50-2000	3,4-138
35	50-3500	3,4-241
50	50-5000	3,4-345

Note: All adjusting screw options on DS 82550-1B are available for this valve.

Cartridge With Line Mount Block

HSS801-P-__/CJ1-10-C

Reissued: Nov., 1995
DS 82660-B7.2

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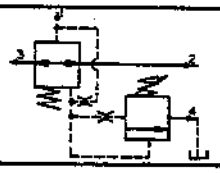
Oilgear

VALVE, SCREW-IN CARTRIDGE

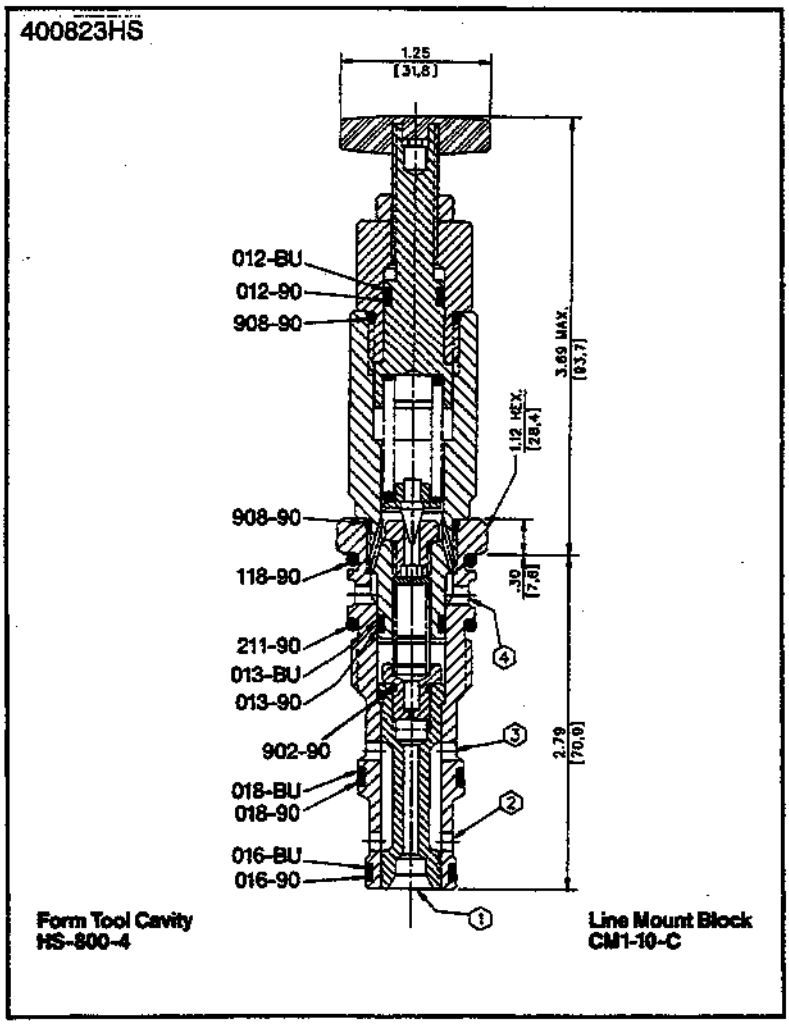
17.5 USGPM △ 100 PSI
(66,3 LPM △ 6,9 Bar)

HSUO801-P

ENGINEERING | 1



Data Sheet — **Normally Open External Pilot Sequence Valve**



Application

The HSUO sequence valve disconnects primary and secondary system branches after the pressure requirement in a third branch is satisfied.

Operation

Pilot pressure must be connected to port 1 to operate the integral relief valve which pilots the sequence valve to block port 2 from 3. Port 1 pressure is ported thru orifices in the center of the valve to the pilot relief valve (in upper portion of the body). When this pressure exceeds this valve setting, pressure on the side of the main spool is relieved, a pressure imbalance then exists across the main spool and port 1 pressure raises the main spool to block flow between ports 2 and 3.

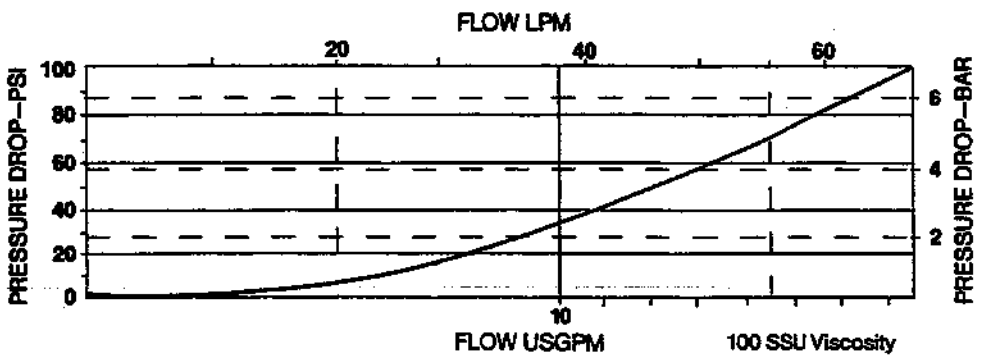
Features

Several pressure ranges are available to choose from. The cartridge is constructed of steel parts and operating parts are hardened and ground as required. Cartridge is designed for easy service or field repair.

Specifications

Rated flow to—17.5 USgpm (66,3 lpm)
Maximum operating pressure—
5000 psi (345 bar)
Adjustable pressure range—See "How To Order"
Viscosity range—27-30 SSU at 100°F
35-2000 SSU at 100°F
Seals—Viton
Operating temperature—-40°F to 350°F
(-39,6°C to 175°C)
Filtration—Maintain SAE Class 6, ISO 18/15
Seal kit—HSSK-800-D

Performance Curve



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Reissued: Nov., 1995

DS 82662-B9.2

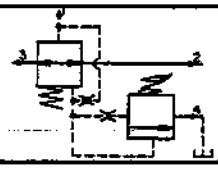
Oilgear

VALVE, SCREW-IN CARTRIDGE

17.5 USGPM △ 100 PSI
(66,3 LPM △ 6,9 Bar)

HSUO801-P

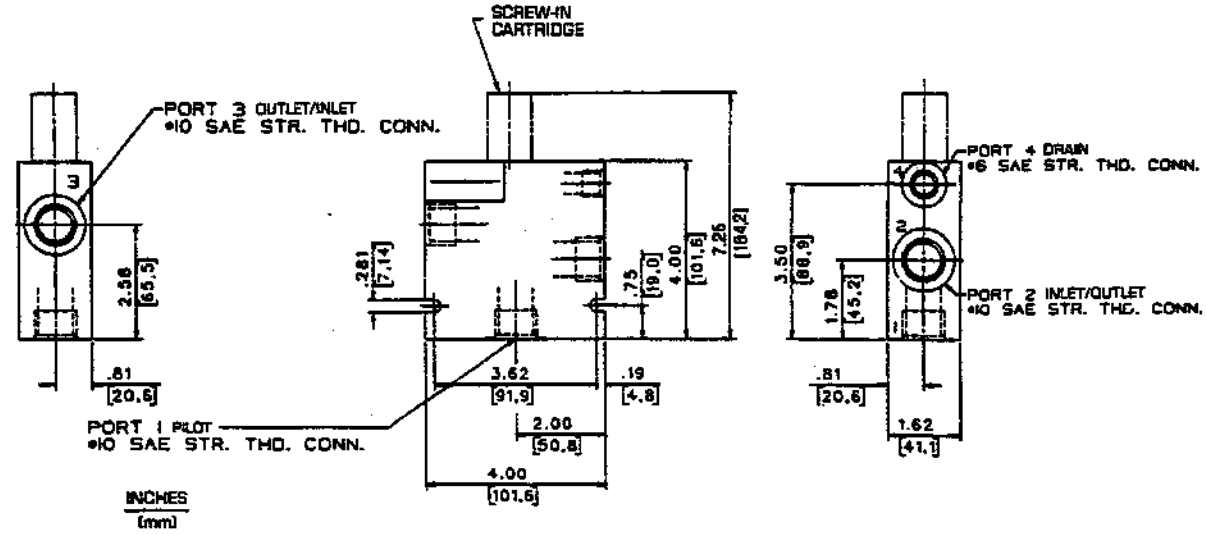
ENGINEERING | 2



Data Sheet — **Normally Open External Pilot Sequence Valve**

Line Mount Specifications

HSUO801-P/CM1-10-C



How To Order

Screw-In Cartridge Only

HSUO801-P-_____

	Pressure Range	
	psi	bar
07	50- 700	3,4- 48
20	50-2000	3,4-138
35	50-3500	3,4-241
50	50-5000	3,4-345

Cartridge With Line Mount Block

HSUO801-P-__/CM1-10-C

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DS 82662-B9.2

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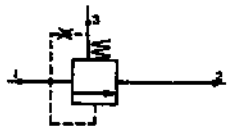
Oilgear

VALVE, SCREW-IN CARTRIDGE

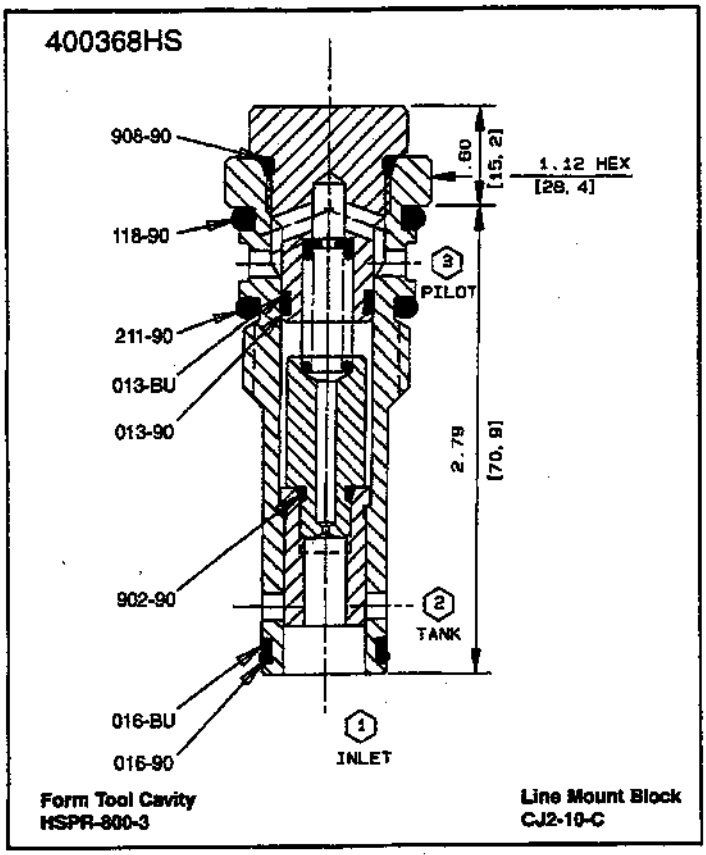
35 USGPM 100 PSI
(132,7 LPM 6,9 Bar)

HSS8801-RP

ENGINEERING | 1



Data Sheet — **Sequence Valve for Pilot Operation**



Application

This HSS cartridge is a precise sequence valve, when operated by a HSLR pilot operator, for sequential (pressure) control in systems where amount of flow may vary. It can also be used as a relief valve where back pressure exists in exhaust line (provided port 2 of HSLR pilot valve is connected directly to reservoir).

Operation

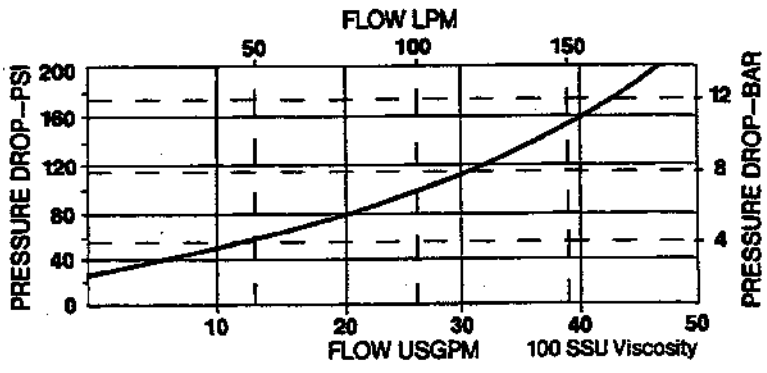
A HSLR pilot relief valve must be connected via port 3 to the top (spring side) of the main spool. When inlet pressure (ported thru the valve) exceeds the pilot setting, pressure on top side of the spool is relieved, a pressure imbalance then exists across the main spool and port 1 pressure raises the spool to allow flow to port 2 allowing operation of a secondary system or flow to drain. Because port 2 of the HSLR pilot valve is not connected to port 2 of the sequence valve, back pressure at sequence valve port 2 does not add to the resistance valve of the pilot valve spring and alter the pressure opening valve.

Features

Thru use of standard pilot (HLSR) relief valves, this valve can provide numerous pre-selected or infinitely variable settings. A trim adjustment is provided to vary the cracking and re-seat pressure.

The HSS cartridge valve is constructed of steel parts and operating parts are hardened and ground as required. Cartridge is designed for easy service or field repair.

Performance Curves



Specifications

Rated flow to— 35 USgpm 132,7 lpm)
Maximum operating pressure— 5000 psi (345 bar)
Adjustable pressure range— See HSLR Pilot Valve, DS 82550-B2.1A
Viscosity range— 27-30 SSU at 100°F
35-2000 SSU at 100°F
Seals—Viton
Operating temperature— -40°F to 350°F (-39,6°C to 175°C)
Filtration— Maintain SAE Class 6, ISO 18/15
Seal Kit HSSK-800-C

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Reissued: Dec., 1997
DS 82670-B7.4

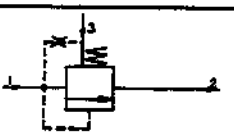
Oilgear

VALVE, SCREW-IN CARTRIDGE

35 USGPM 100 PSI
(132,7 LPM 6,9 Bar)

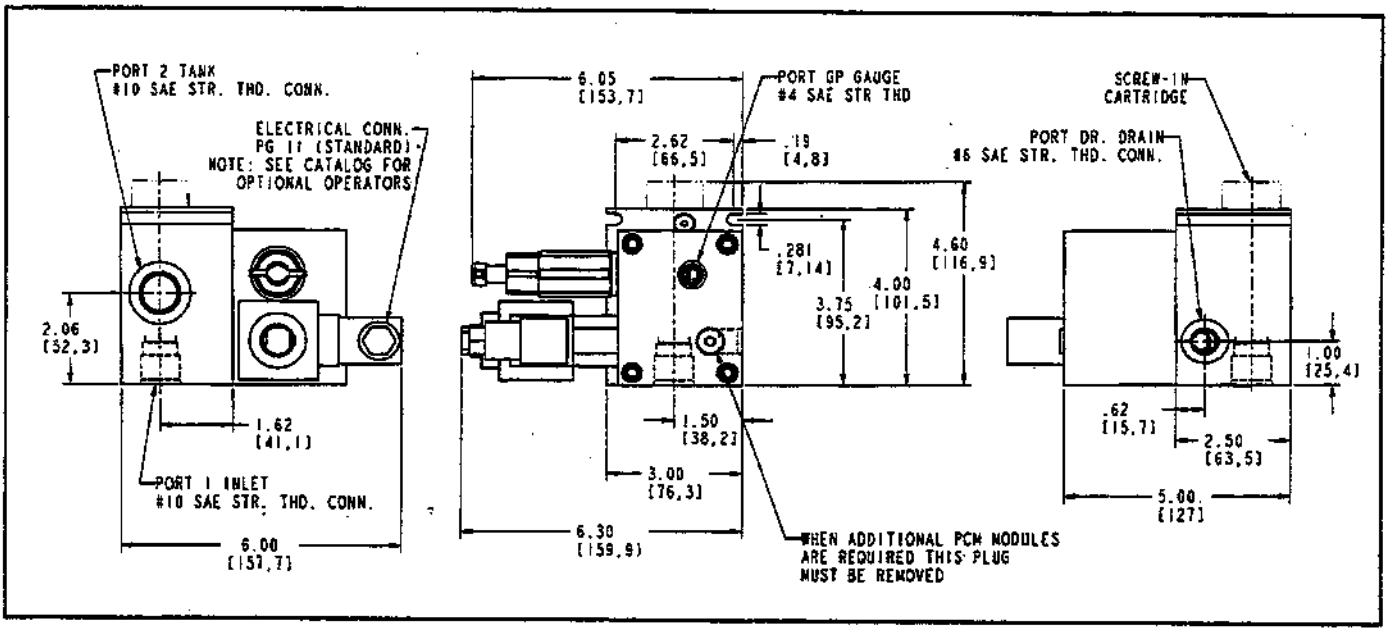
HSS8801-RP

ENGINEERING | **2**



Data Sheet — **Sequence Valve for Pilot Operation**

Line Mount Specification



How To Order

Screw-In Cartridge Only
HSS801-RP

Cartridge With Line Mount Block
HSS801-RP/CJ2-10-C*

*Line Mount Blocks shown include Pilot Control Modules (PCM). See Pages 3 and 4 for "How To Order" Line Mount Blocks with Pilot Control Modules.

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DS 82670-B7.4

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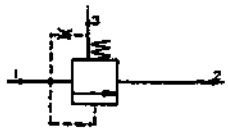
VALVE, SCREW-IN CARTRIDGE

35 USGPM 100 PSI
(132,7 LPM 6,9 Bar)

HSS8801-RP

ENGINEERING 3



Data Sheet — **Sequence Valve for Pilot Operation**

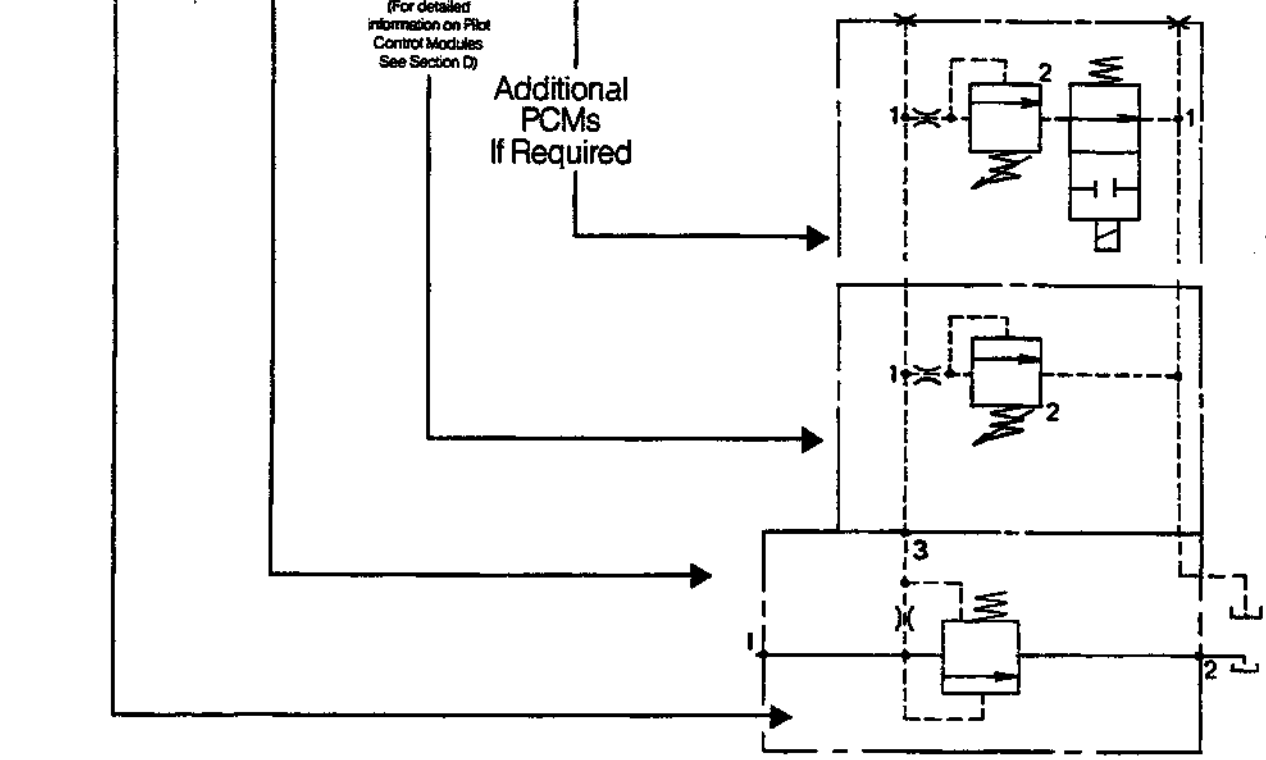
Cartridge Must Have Pilot Control Module

This cartridge valve requires pilot logic to offer added flexibility in providing maximum pressure consistently and smoothly. At least one pilot control module must be added to the valve.

Typical HSS801-RP How To Order Example

HSS801-RP / CJ2-10-C / 1-35-4-C / Optional

- HSS801-RP — Cartridge
- CJ2-10-C — Line Mount Block
- 1-35-4-C — Pilot Control Module (PCM) (For detailed information on Pilot Control Modules See Section D)
- Optional — Additional PCMs If Required



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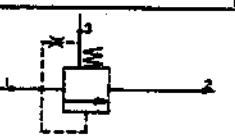
DS 82670-B7.4

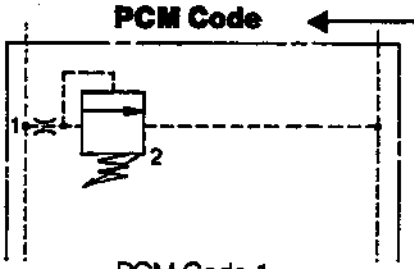


Data Sheet — Sequence Valve for Pilot Operation

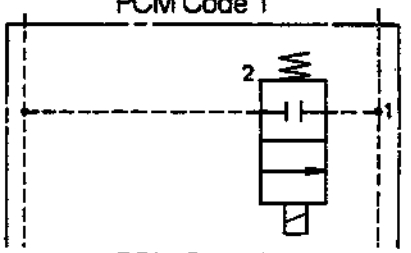
How To Order

Typical PCM How To Order Example: / 1 - 35 - 4 - 0W - C

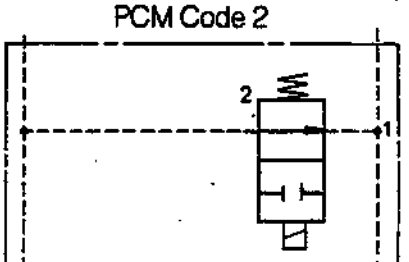
PCM Code



PCM Code 1



PCM Code 2



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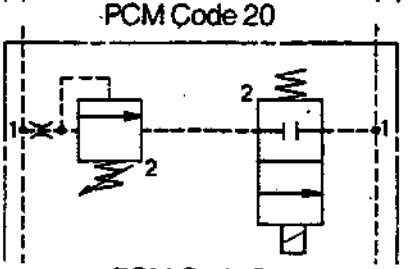

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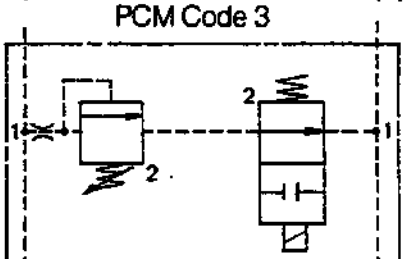

PCM Code 30

Pressure Range
07 = 50- 700 psi (3,4- 48,0 bar)
20 = 50-2000 psi (3,4-138,0 bar)
35 = 50-3500 psi (3,4-241,0 bar)
50 = 50-5000 psi (3,4-345,0 bar)

Orifice Diameter
4 = .040 Diameter (Standard)
See DS 85100 for special applications

Solenoid Voltage (if required)
0 = 115 V.A.C./60 HZ. or 110 V.A.C./50 HZ. Solenoid
1 = 230 V.A.C./60 HZ. or 220 V.A.C./50 HZ. Solenoid
2 = 12 V.D.C. Solenoid
3 = 24 V.D.C. Solenoid

Electrical Connector (if required)
S = Cable connector w/o indicator light (standard)
L = Cable connector with indicator light (115 V.A.C. only)
R = .5 NPTF connector w/o indicator light
W = .5 NPTF connector with indicator light

Block Material
C = Cast Iron (Standard)

See DS 85100 for additional information on pilot controls.

OILGEAR
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Milwaukee, WI USA 53219

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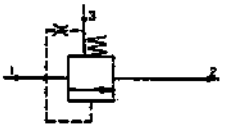
VALVE, SCREW-IN CARTRIDGE

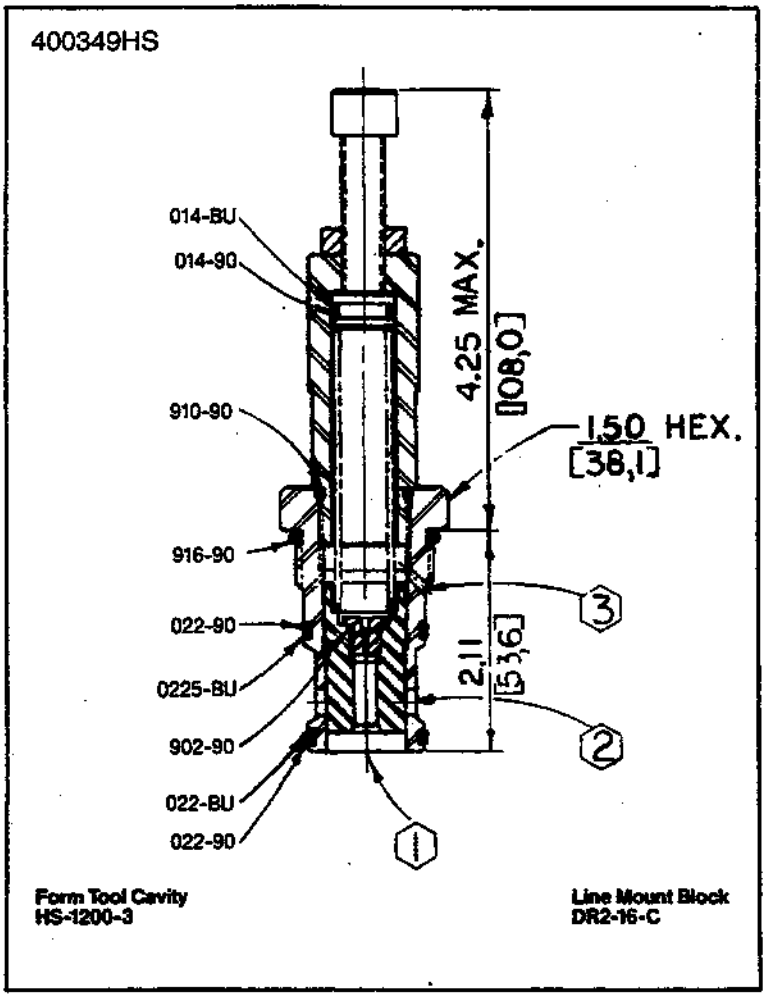
60 USGPM △ 100 PSI
(227,4 LPM △ 6,9 Bar)

HSS1201

ENGINEERING | 1



Data Sheet — **Sequence Valve for Pilot Operation**



Application

This HSS cartridge is a precise sequence valve, when operated by a HSLR pilot operator, for sequential (pressure) control in systems where amount of flow may vary. It can also be used as a relief valve where back pressure exists in exhaust line (provided port 2 of HSLR pilot valve is connected directly to reservoir).

Operation

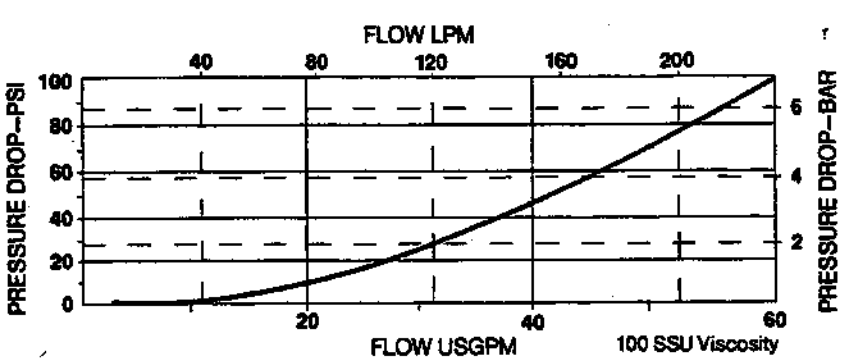
A HSLR pilot relief valve must be connected via port 3 to the top (spring side) of the main spool. When inlet pressure (ported thru the valve) exceeds the pilot setting, pressure on top side of the spool is relieved, a pressure imbalance then exists across the main spool and port 1 pressure raises the spool to allow flow to port 2 allowing operation of a secondary system or flow to drain. Because port 2 of the HSLR pilot valve is not connected to port 2 of the sequence valve, back pressure at sequence valve port 2 does not add to the resistance valve of the pilot valve spring and alter the pressure opening valve.

Features

Thru use of standard pilot (HSLR) relief valves, this valve can provide numerous pre-selected or infinitely variable settings. A trim adjustment is provided to vary the cracking and re-seat pressure.

The HSS cartridge valve is constructed of steel parts and operating parts are hardened and ground as required. Cartridge is designed for easy service or field repair.

Performance Curve



Specifications

Rated flow to—60 USgpm (227,4 lpm)
Maximum operating pressure—
5000 psi (345 bar)
Adjustable pressure range—See HSLR Pilot Valve, DS 82550-B2.1A
Viscosity range—27-30 SSU at 100°F
35-2000 SSU at 100°F
Seals—Viton
Operating temperature— -40°F to 350°F
(-39,6°C to 175°C)
Filtration—Maintain SAE Class 6, ISO 18/15
Seal Kit HSSK-1200-C

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Reissued: Nov., 1995

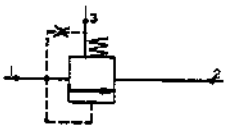
Oilgear

VALVE, SCREW-IN CARTRIDGE

60 USGPM △ 100 PSI
(227,4 LPM △ 6,9 Bar)

HSS1201

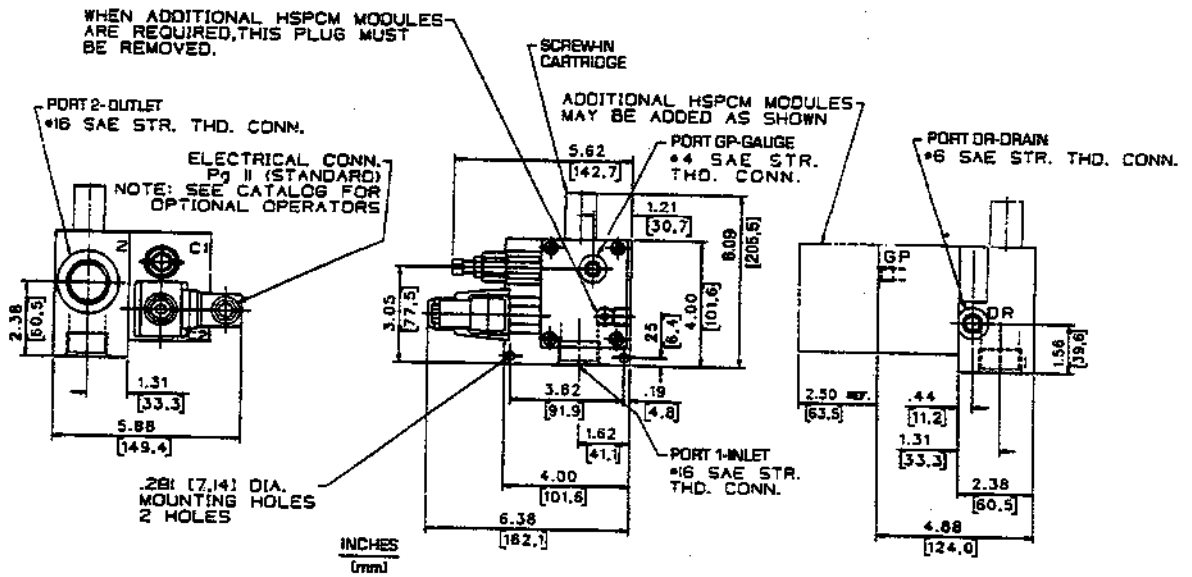
ENGINEERING | 2



Data Sheet — Sequence Valve for Pilot Operation

Line Mount Specifications

HSS1201/DR2-16-C



How To Order

Screw-In Cartridge Only

HSS1201

Cartridge With Line Mount Block

HSS1201/DR2-16-C*

*Line Mount Blocks shown include Pilot Control Modules (PCM). See Pages 3 and 4 for "How To Order" Line Mount Blocks with Pilot Control Modules.

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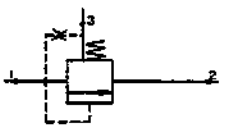
Oilgear

VALVE, SCREW-IN CARTRIDGE

60 USGPM △ 100 PSI
(227,4 LPM △ 6,9 Bar)

HSS1201

ENGINEERING | 3



Data Sheet — Sequence Valve for Pilot Operation

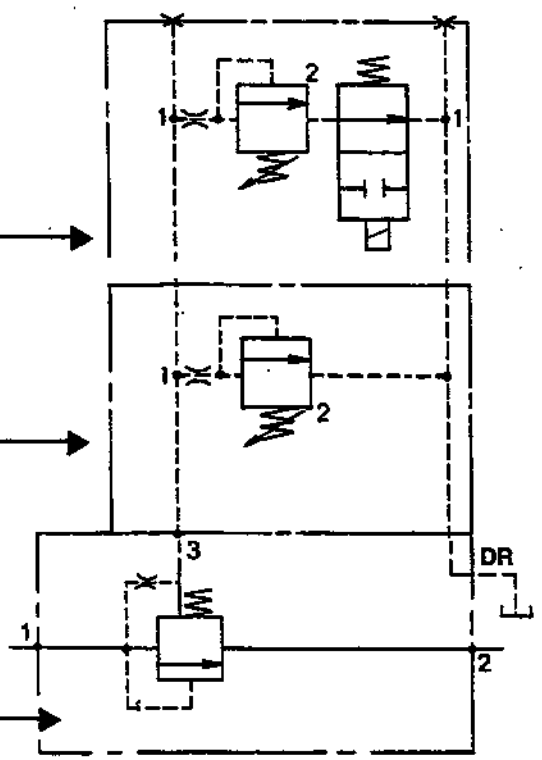
Cartridge Must Have Pilot Control Module

This cartridge valve requires pilot logic to offer added flexibility in providing maximum pressure consistently and smoothly. At least one pilot control module must be added to the valve.

Typical HSS1201 How To Order Example

HSS1201 / DR2-16-C / 1-35-4-C / Optional

- Cartridge
- Line Mount Block
- Pilot Control Module (PCM) (For detailed information on Pilot Control Modules See DS 85100)
- Additional PCMs If Required



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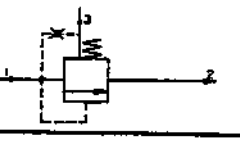
Reissued: Nov., 1995

DS 82670-B7.5

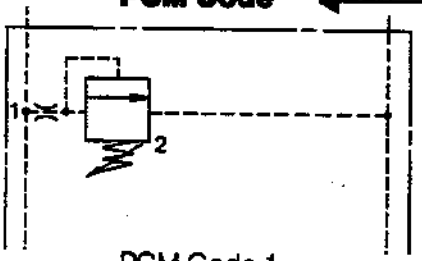


Data Sheet — Sequence Valve for Pilot Operation

How To Order

Typical PCM How To Order Example: / 1 - 35 - 4 - 0W - C

PCM Code



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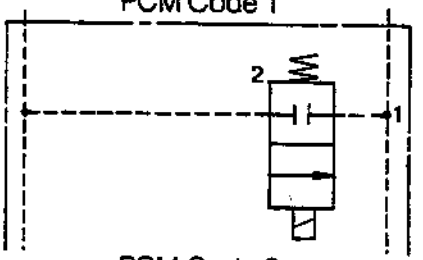

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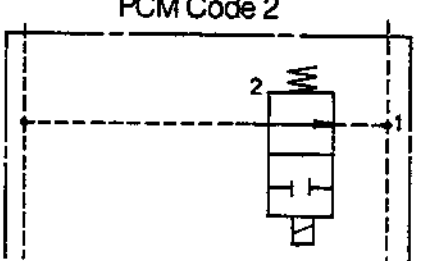

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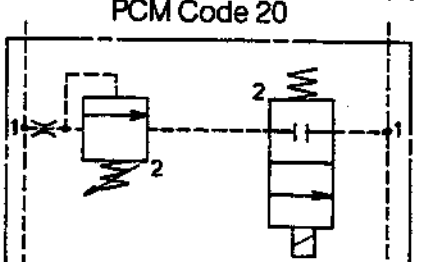

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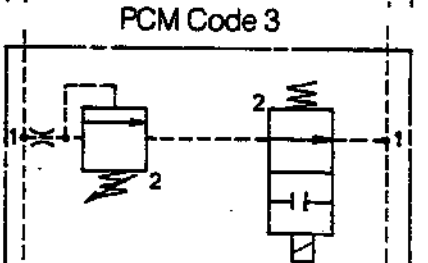

PCM Code 30

Pressure Range
07 = 50- 700 psi (3,4- 48,0 bar)
20 = 50-2000 psi (3,4-138,0 bar)
35 = 50-3500 psi (3,4-241,0 bar)
50 = 50-5000 psi (3,4-345,0 bar)

Orifice Diameter
4 = .040 Diameter (Standard)
See DS 85100 for special applications

Solenoid Voltage (if required)
0 = 115 V.A.C./60 HZ. or 110 V.A.C./50 HZ. Solenoid
1 = 230 V.A.C./60 HZ. or 220 V.A.C./50 HZ. Solenoid
2 = 12 V.D.C. Solenoid
3 = 24 V.D.C. Solenoid
Other voltages are available, consult factory

Electrical Connector (if required)
S = Cable connector w/o indicator light (standard)
L = Cable connector with indicator light
R = .500 NPTF connector w/o indicator light
W = .500 NPTF connector w/indicator light
C = Three pin Brad Harrison/DIN 43650 connector w/mating plug

Block Material
C = Nodular Iron (standard)

See DS 85100 for additional information on pilot controls.

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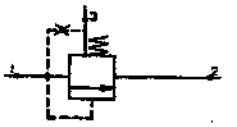
Oilgear

VALVE, SCREW-IN CARTRIDGE

108 USGPM △ 100 PSI
(409,3 LPM △ 6,9 Bar)

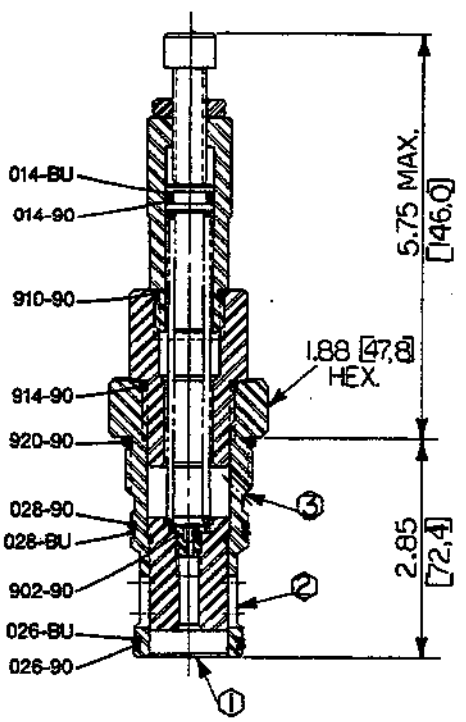
HSS1600

ENGINEERING | 1



Data Sheet — **Sequence Valve for Pilot Operation**

400282HS



Form Tool Cavity
HS-1600-3

Line Mount Block
3000 psi (207 bar) = EV1-24-C
5000 psi (345 bar) = EV1-66-C

Application

This HSS cartridge is a precise sequence valve, when operated by a HSLR pilot operator, for sequential (pressure) control in systems where amount of flow may vary. It can also be used as a relief valve where back pressure exists in exhaust line (provided port 2 of HSLR pilot valve is connected directly to reservoir).

Operation

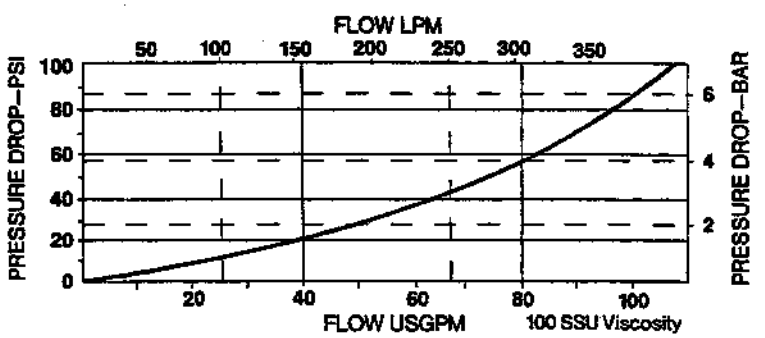
A HSLR pilot relief valve must be connected via port 3 to the top (spring side of the main spool. When inlet pressure (ported thru the valve) exceeds the pilot setting, pressure on top side of the spool is relieved, a pressure imbalance then exists across the main spool and port 1 pressure raises the spool to allow flow to port 2 allowing operation of a secondary system or flow to drain. Because port 2 of the HSLR pilot valve is not connected to port 2 of the sequence valve, back pressure at sequence valve port 2 does not add to the resistance value of the pilot valve spring and alter the pressure opening valve.

Features

Thru use of standard pilot (HSLR) relief valves, this valve can provide numerous pre-selected or infinitely variable settings. A trim adjustment is provided to vary the cracking and re-seat pressure.

The HSS cartridge valve is constructed of steel parts and operating parts are hardened and ground as required. Cartridge is designed for easy service or field repair.

Performance Curve



Specifications

Rated flow to—108 USgpm (409,3 lpm)
Maximum operating pressure—
5000 psi (345 bar)
Adjustable pressure range—See HSLR Pilot Valve, DS 82550-B2.1A
Viscosity range—27-30 SSU at 100°F
35-2000 SSU at 100°F
Seals—Viton
Operating temperature— -40°F to 350°F
(-39,6°C to 175°C)
Filtration—Maintain SAE Class 6, ISO 18/15
Seal kit-HSSK-1600-C

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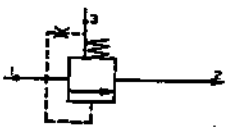
Oilgear

VALVE, SCREW-IN CARTRIDGE

108 USGPM △ 100 PSI
(409,3 LPM △ 6,9 Bar)

HSS1600

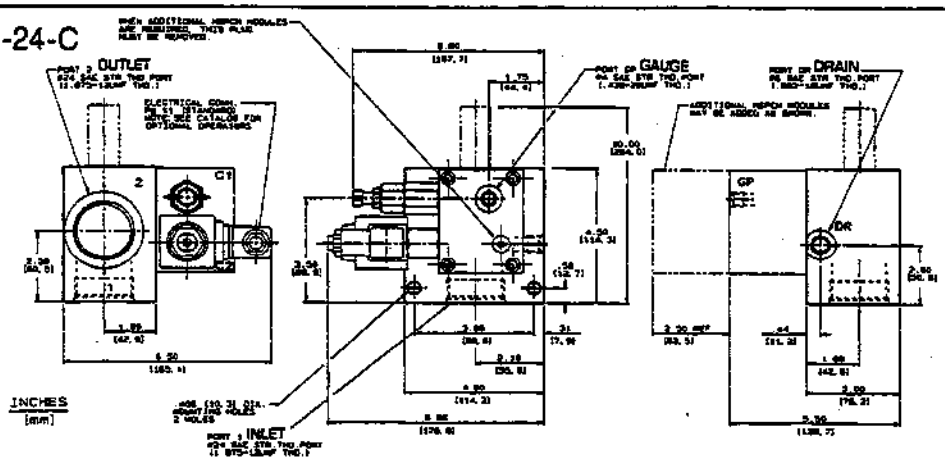
ENGINEERING | **2**



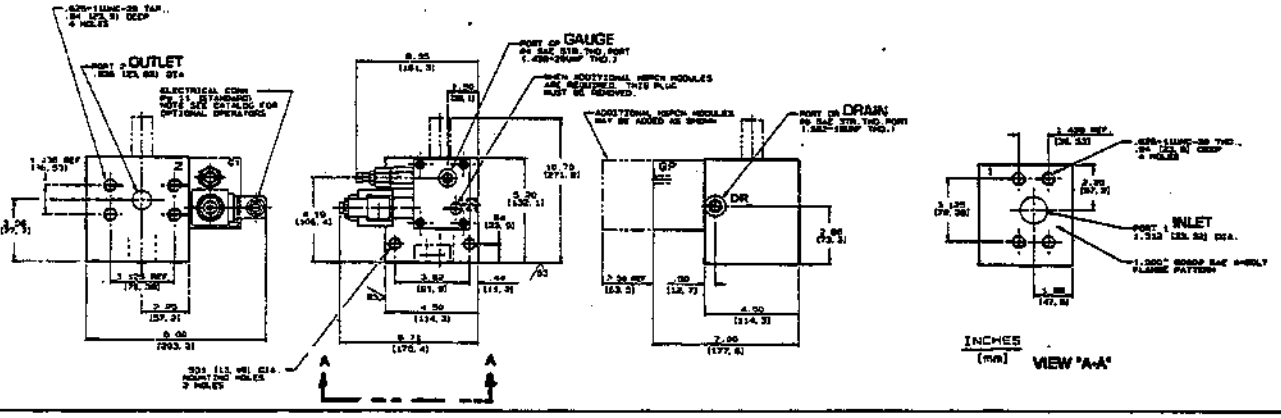
Data Sheet — **Sequence Valve for Pilot Operation**

Line Mount Specifications

HSS1600/EV1-24-C



HSS1600/EV1-66-C



How To Order

Screw-In Cartridge Only

HSS1600

Cartridge With Line Mount Block

3000 psi (207 bar) service pressure
HSS1600/EV1-24-C*

5000 psi (345 bar) service pressure
HSS1600/EV1-66-C*

*Line Mount Blocks shown include Pilot Control Modules (PCM). See Pages 3 and 4 for "How To Order" Line Mount Blocks with Pilot Control Modules.

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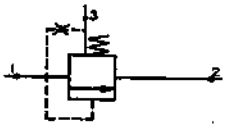
Oilgear

VALVE, SCREW-IN CARTRIDGE

108 USGPM △ 100 PSI
(409,3 LPM △ 6,9 Bar)

HSS1600

ENGINEERING | 3



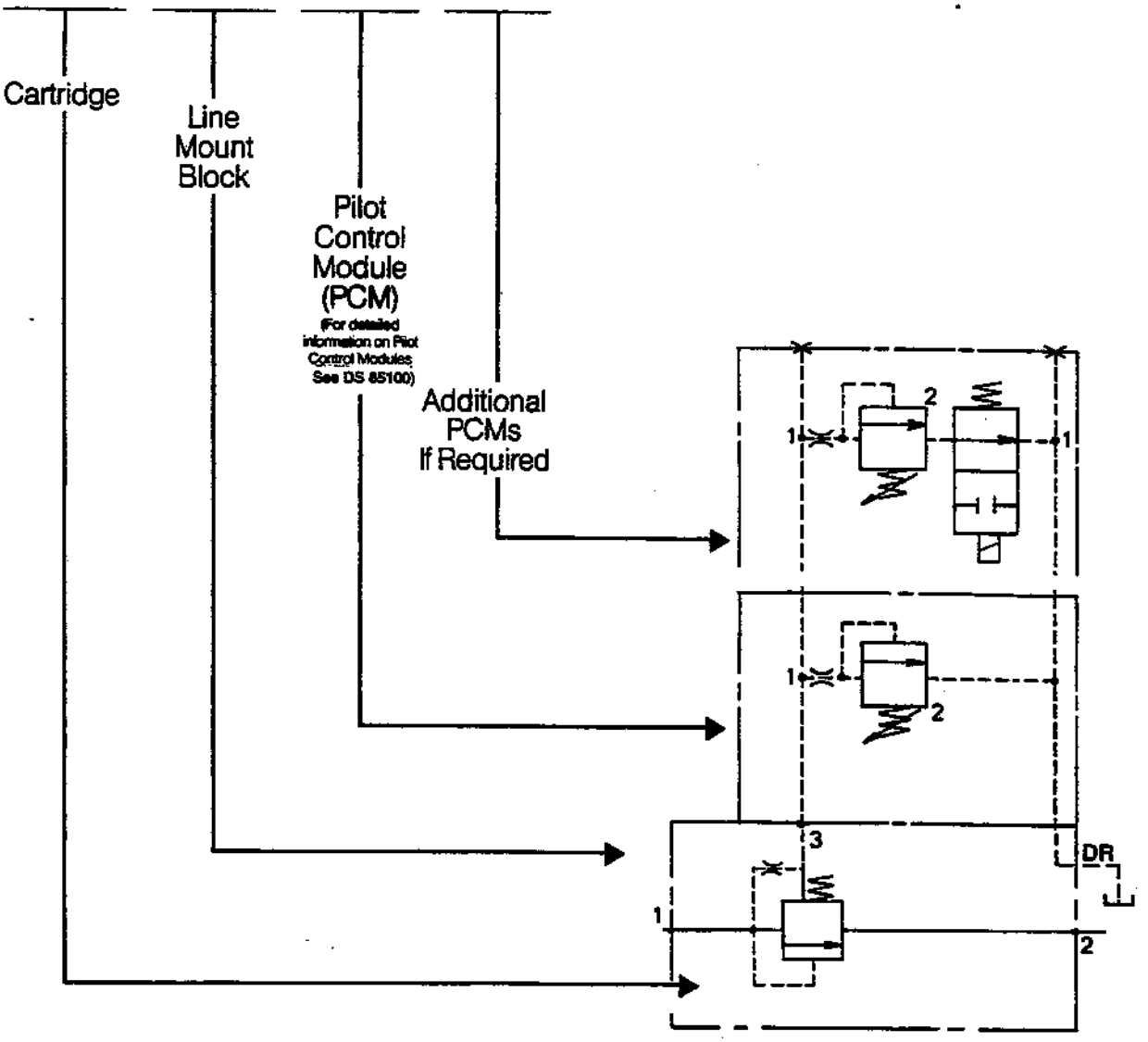
Data Sheet — Sequence Valve for Pilot Operation

Cartridge Must Have Pilot Control Module

This cartridge valve requires pilot logic to offer added flexibility in providing maximum pressure consistently and smoothly. At least one pilot control module must be added to the valve.

Typical HSS1600 How To Order Example

HSS1600 / EV1-24-C / 1-35-4-C / Optional



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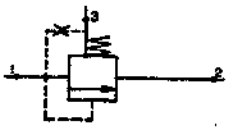
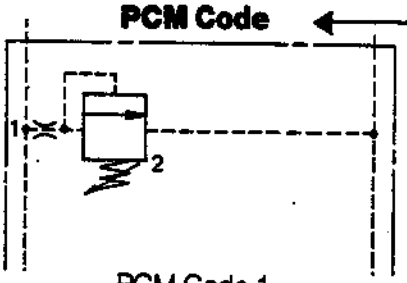


Data Sheet — Sequence Valve for Pilot Operation

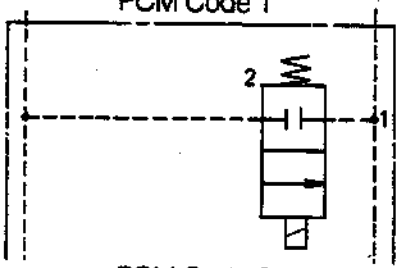
How To Order

Typical PCM How To Order Example: / 1 - 35 - 4 - 0W - C

PCM Code



PCM Code 1



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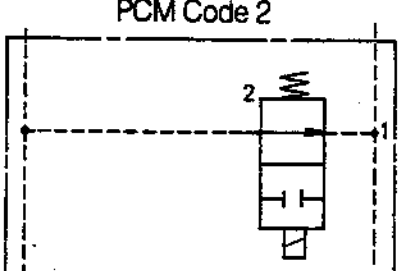
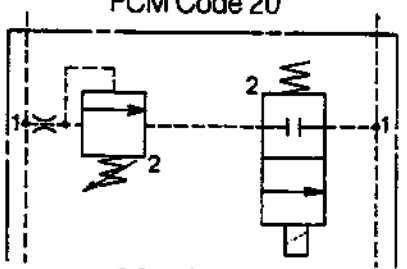
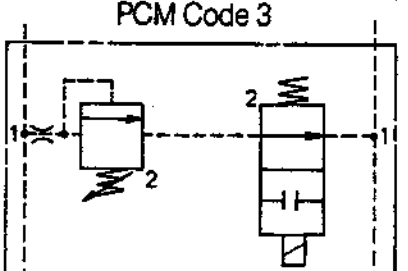


PCM Code 20



PCM Code 3



PCM Code 30

Pressure Range
07 = 50- 700 psi (3,4- 48,0 bar)
20 = 50-2000 psi (3,4-138,0 bar)
35 = 50-3500 psi (3,4-241,0 bar)
50 = 50-5000 psi (3,4-345,0 bar)

Orifice Diameter
4 = .040 Diameter (Standard)
See Section "D" for special applications

Solenoid Voltage (if required)
0 = 115 V.A.C./60 HZ. or 110 V.A.C./50 HZ. Solenoid
1 = 230 V.A.C./60 HZ. or 220 V.A.C./50 HZ. Solenoid
2 = 12 V.D.C. Solenoid
3 = 24 V.D.C. Solenoid
Other voltages are available, consult factory

Electrical Connector (if required)
S = Cable connector w/o indicator light (standard)
L = Cable connector with indicator light
R = .500 NPTF connector w/o indicator light
W = .500 NPTF connector w/indicator light
C = Three pin Brad Harrison/DIN 43650 connector w/mating plug

Block Material
C = Nodular Iron (standard)

See DS 85100 for additional information on pilot controls.

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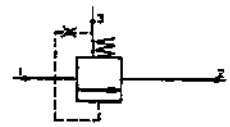
VALVE, SCREW-IN CARTRIDGE

230 USGPM Δ 100 PSI
(871,7 LPM Δ 6,9 Bar)

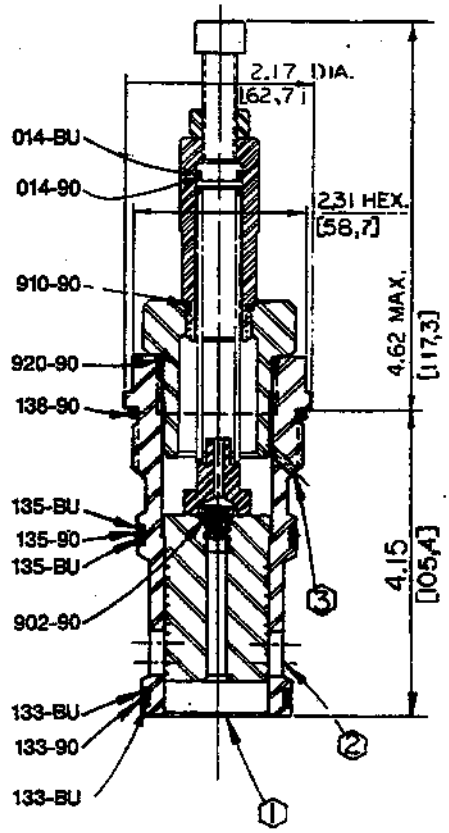
HSS2000

ENGINEERING | 1



Data Sheet — **Sequence Valve for Pilot Operation**

400296HS



Form Tool Cavity
HS-2000-3

Line Mount Block
3000 psi (207 bar) = FY2-38-C
5000 psi (345 bar) = FY1-68-C

Application

This HSS cartridge is a precise sequence valve, when operated by a HSLR pilot operator, for sequential (pressure) control in systems where amount of flow may vary. It can also be used as a relief valve where back pressure exists in exhaust line (provided port 2 of HSLR pilot valve is connected directly to reservoir).

Operation

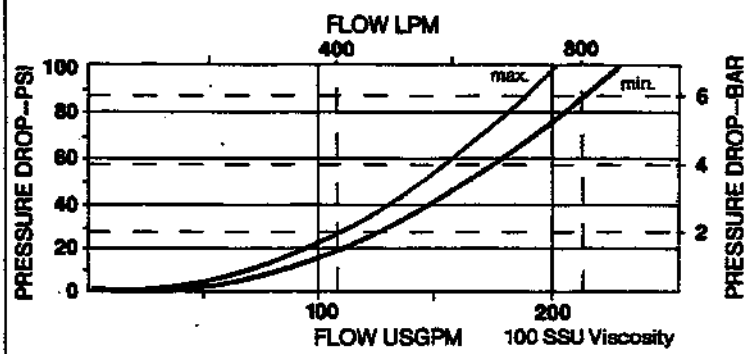
A HSLR pilot relief valve must be connected via port 3 to the top (spring side of the main spool. When inlet pressure (ported thru the valve) exceeds the pilot setting, pressure on top side of the spool is relieved, a pressure imbalance then exists across the main spool and port 1 pressure raises the spool to allow flow to port 2 allowing operation of a secondary system or flow to drain. Because port 2 of the HSLR pilot valve is not connected to port 2 of the sequence valve, back pressure at sequence valve port 2 does not add to the resistance value of the pilot valve spring and alter the pressure opening valve.

Features

Thru use of standard pilot (HSLR) relief valves, this valve can provide numerous preselected or infinitely variable settings. A trim adjustment is provided to vary the cracking and re-seat pressure.

The HSS cartridge valve is constructed of steel parts and operating parts are hardened and ground as required. Cartridge is designed for easy service or field repair.

Performance Curve



Specifications

Rated flow to— 230 USgpm (871,7 lpm)
Maximum operating pressure—
5000 psi (345 bar)
Adjustable pressure range—See HSLR Pilot Valve, DS 82550-B2.1A
Viscosity range—27-30 SSU at 100°F
35-2000 SSU at 100°F
Seals—Viton
Operating temperature— -40°F to 350°F
(-39,6°C to 175°C)
Filtration—Maintain SAE Class 6, ISO 18/15
Seal kit-HSSK-2000-C

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DS 82670-B7.7

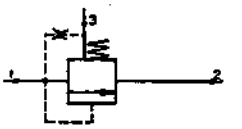
Oilgear

VALVE, SCREW-IN CARTRIDGE

230 USGPM △ 100 PSI
(871,7 LPM △ 6,9 Bar)

HSS2000

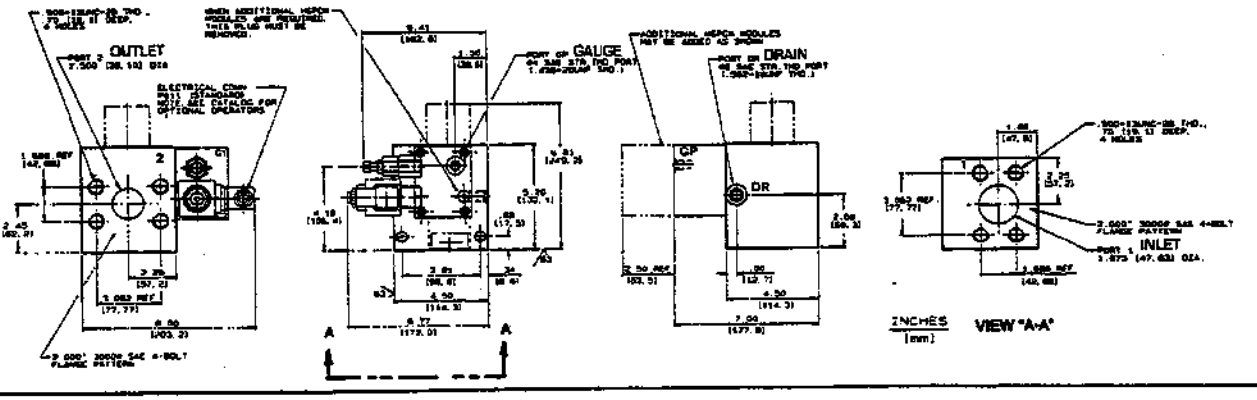
ENGINEERING | 2



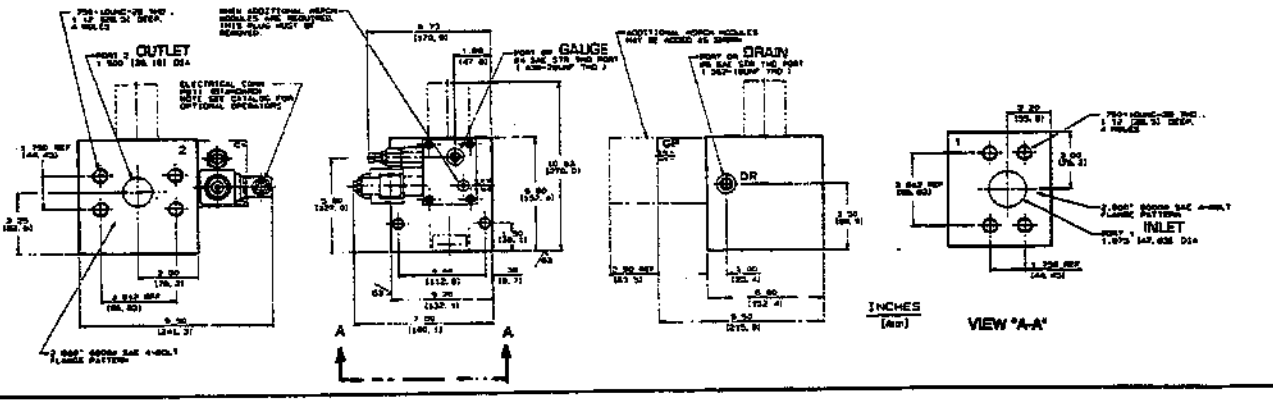
Data Sheet — Sequence Valve for Pilot Operation

Line Mount Specifications

HSS2000/FY1-38-C



HSS2000/FY1-68-C



How To Order

Screw-In Cartridge Only

HSS2000

Cartridge With Line Mount Block

3000 psi (207 bar) service pressure
HSS2000/FY2-38-C*

5000 psi (345 bar) service pressure
HSS2000/FY1-68-C*

*Line Mount Blocks shown include Pilot Control Modules (PCM). See Pages 3 and 4 for "How To Order" Line Mount Blocks with Pilot Control Modules.

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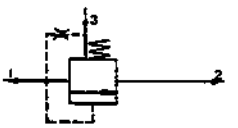


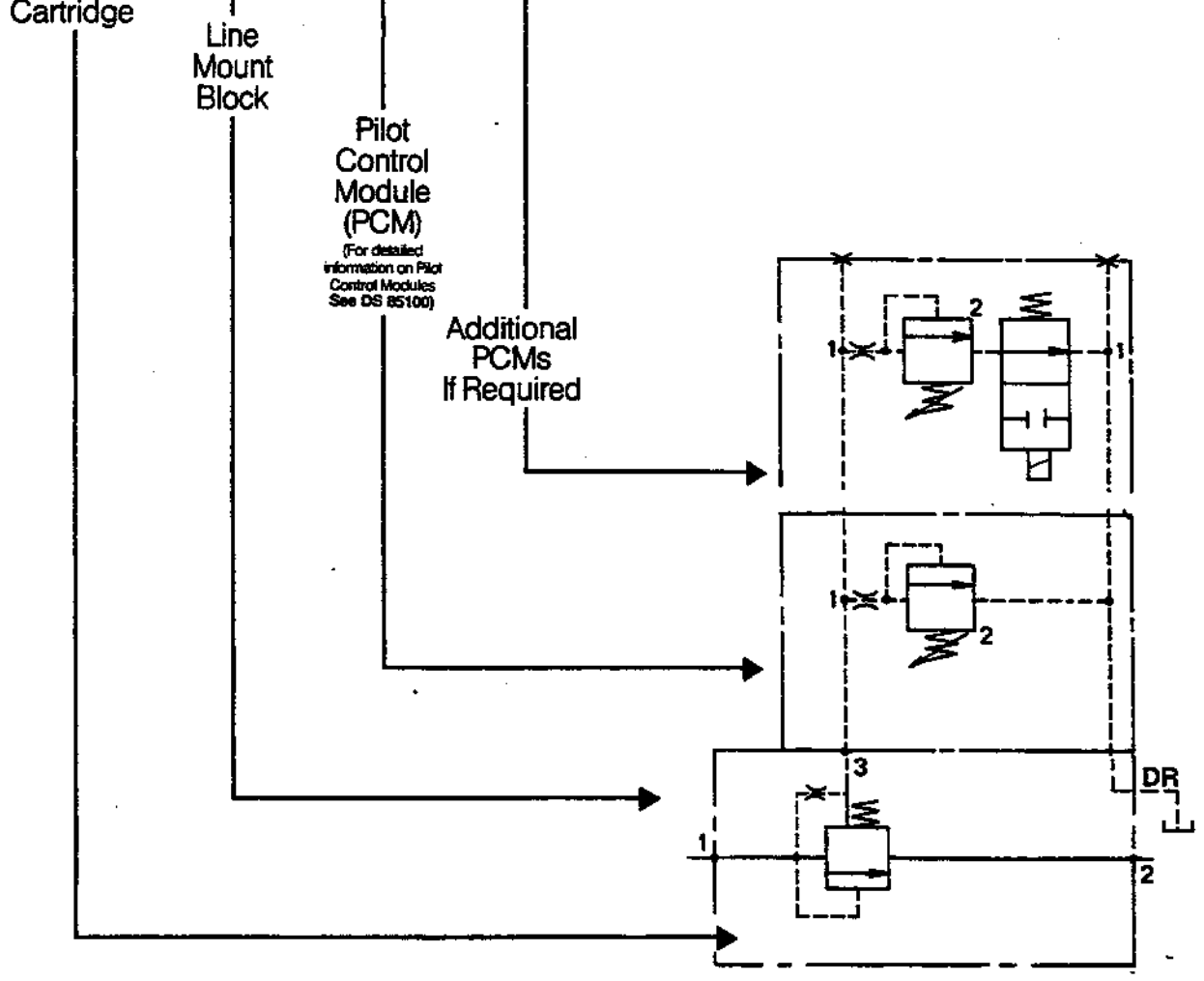
Data Sheet — Sequence Valve for Pilot Operation

Cartridge Must Have Pilot Control Module

This cartridge valve requires pilot logic to offer added flexibility in providing maximum pressure consistently and smoothly. At least one pilot control module must be added to the valve.

Typical HSS2000 How To Order Example

HSS2000 / FY2-38-C / 1-35-4-C / Optional



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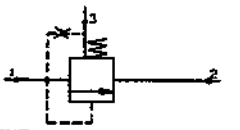
DS 82670-B7.7

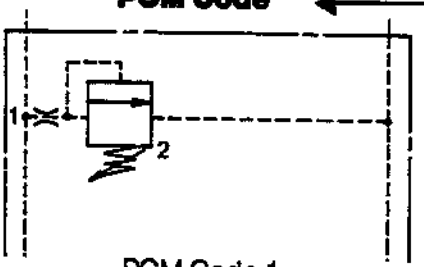


Data Sheet — Sequence Valve for Pilot Operation

How To Order

Typical PCM How To Order Example: / 1 - 35 - 4 - 0W - C

PCM Code



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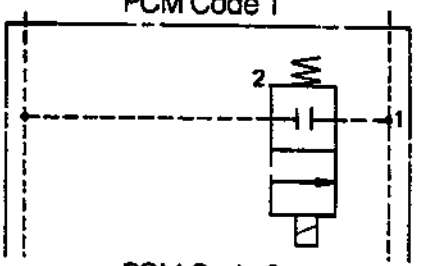

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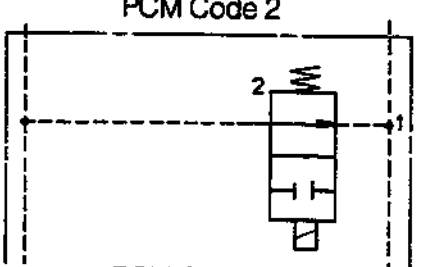

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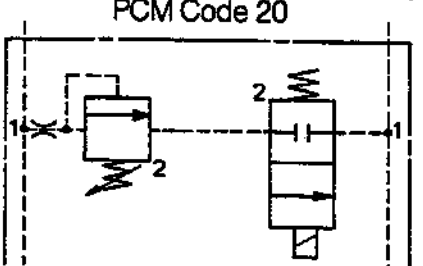

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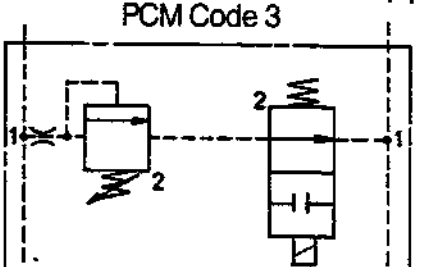

PCM Code 30

Pressure Range
07 = 50- 700 psi (3,4- 48,0 bar)
20 = 50-2000 psi (3,4-138,0 bar)
35 = 50-3500 psi (3,4-241,0 bar)
50 = 50-5000 psi (3,4-345,0 bar)

Orifice Diameter
4 = .040 Diameter (Standard)
See DS 85100 for special applications

Solenoid Voltage (if required)
0 = 115 V.A.C./60 HZ. or 110 V.A.C./50 HZ. Solenoid
1 = 230 V.A.C./60 HZ. or 220 V.A.C./50 HZ. Solenoid
2 = 12 V.D.C. Solenoid
3 = 24 V.D.C. Solenoid
Other voltages are available, consult factory

Electrical Connector (if required)
S = Cable connector w/o indicator light (standard)
L = Cable connector with indicator light
R = .500 NPTF connector w/o indicator light
W = .500 NPTF connector w/indicator light
C = Three pin Brad Harrison/DIN 43650 connector w/mating plug

Block Material
C = Nodular Iron (standard)

See DS 85100 for additional information on pilot controls.

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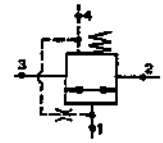
Oilgear

VALVE, SCREW-IN CARTRIDGE

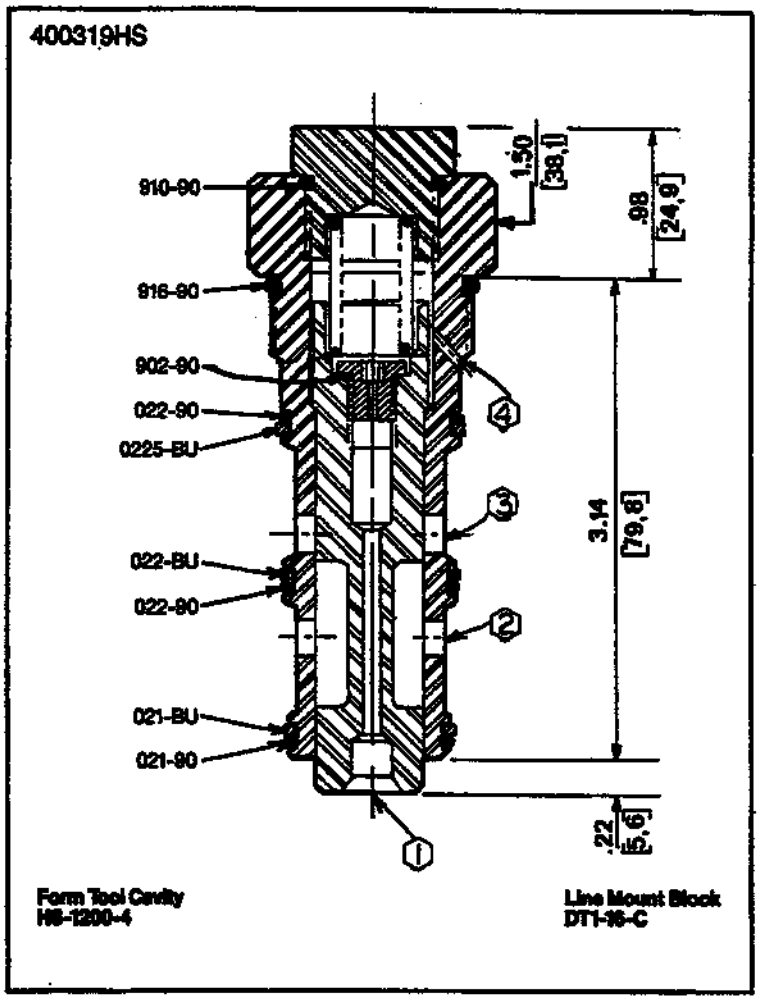
39 USGPM △ 100 PSI
(147,8 LPM △ 6,9 Bar)

HSU1201

ENGINEERING | 1



Data Sheet — **Normally Closed Sequence Valve for Pilot Operation**



Application

When operated by a HSLR pilot operator the HSU sequence valve connects primary and secondary system branches after the pressure requirement in a third branch has been satisfied. This valve can be circuited to be operated by multiple pressure settings.

Operation

A HSLR pilot relief valve must be connected via port 4 to the top (spring side) of the main spool and pressure must be connected to port 1 to operate the relief valve which pilots the sequence valve to connect ports 2 and 3. When inlet pressure (ported through the valve) exceeds the pilot relieved, a pressure imbalance then exists across the main spool and port 1 pressure raises the spool to allow flow between ports 2 and 3.

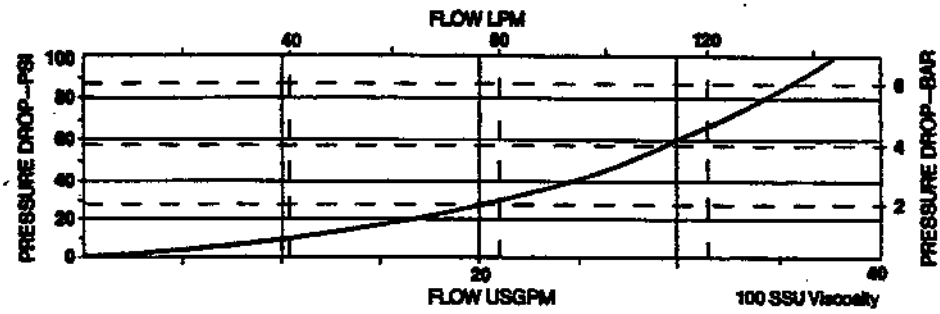
Features

The cartridge is constructed of steel parts and operating parts are hardened and ground as required. Cartridge is designed for easy service or field repair.

Specifications

Rated flow to 39 USgpm (147,8 lpm)
Maximum operating pressure- 5000 psi (345 bar)
Adjustable pressure range- See HSLR Pilot Valve (Section 5, page B1.1 and B2.1)
Viscosity range- 27-30 SSU at 100°F
35- 2000 SSU at 100°F
Seals- Viton
Operating temperature- -40°F to 350°F (-39,6°C to 175°C)
Filtration- Maintain SAE Class, 6, ISO 18/15
Seal kit - HSSK-1200-D

Performance Curve



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Reissued: Nov., 1995

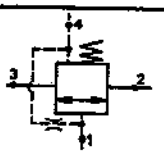
DS 82671-B8.3

Oilgear

VALVE, SCREW-IN CARTRIDGE

39 USGPM △ 100 PSI
(147,8 LPM △ 6,9 Bar)

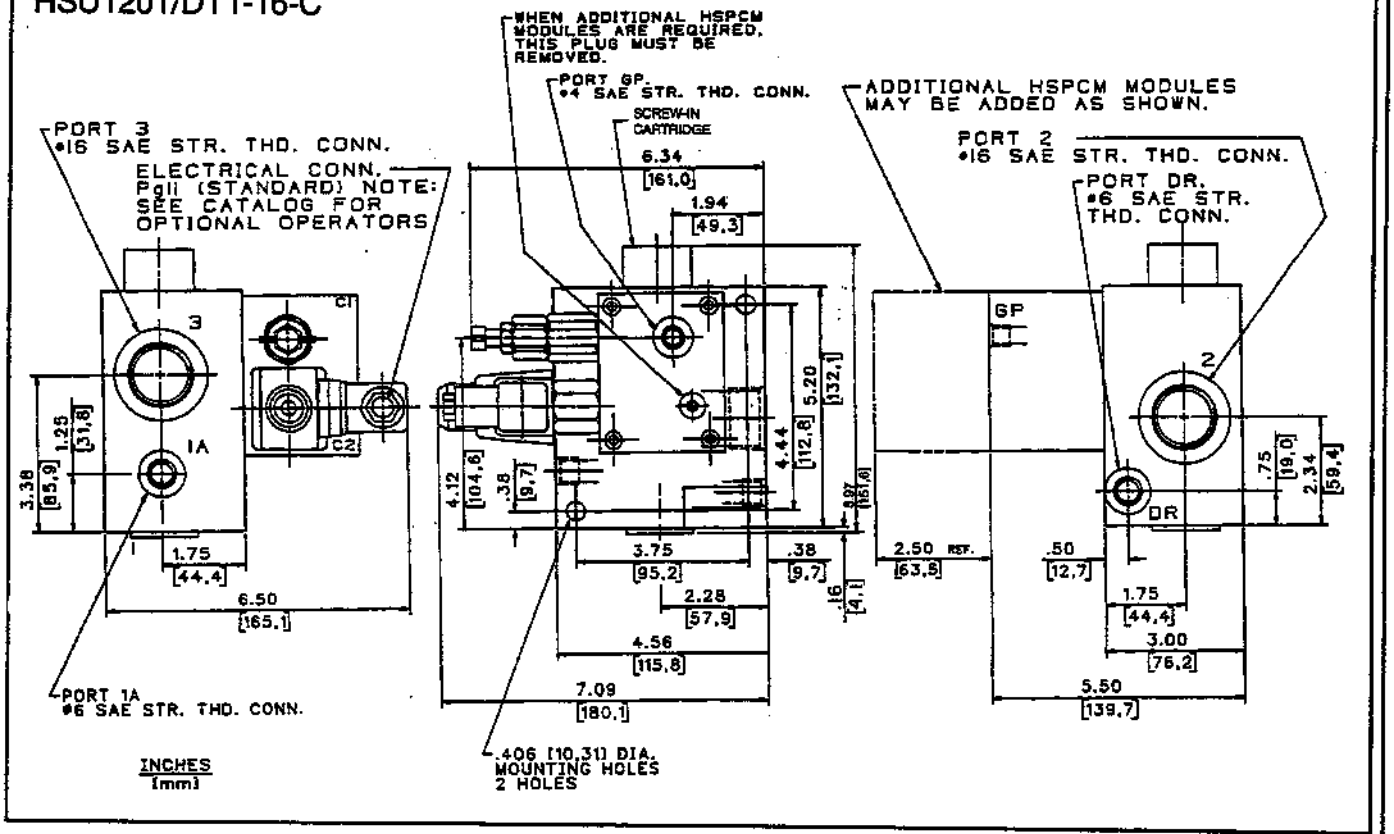
HSU1201



Data Sheet Normally Closed Sequence Valve for Pilot Operation

Line Mount Specifications

HSU1201/DT1-16-C



How To Order

Screw-In Cartridge Only

HSU1201

Cartridge With Line Mount Block

HSU1201/DT1-16-C *

*Line Mount Blocks shown include Pilot Control Modules (PCM). See Pages 3 and 4 for How To Order Line Mount Blocks with Pilot Control Modules.

OILGEAR
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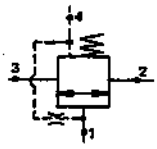
Oilgear

VALVE, SCREW-IN CARTRIDGE

39 USGPM △ 100 PSI
(147,8 LPM △ 6,9 Bar)

HSU1201

ENGINEERING | 3



Data Sheet — Normally Closed Sequence Valve for Pilot Operation

Cartridge Must Have Pilot Control Module

This cartridge valve requires pilot logic to offer added flexibility in providing maximum pressure consistently and smoothly. At least one pilot control module must be added to the valve.

Typical HSU1201 How To Order Example

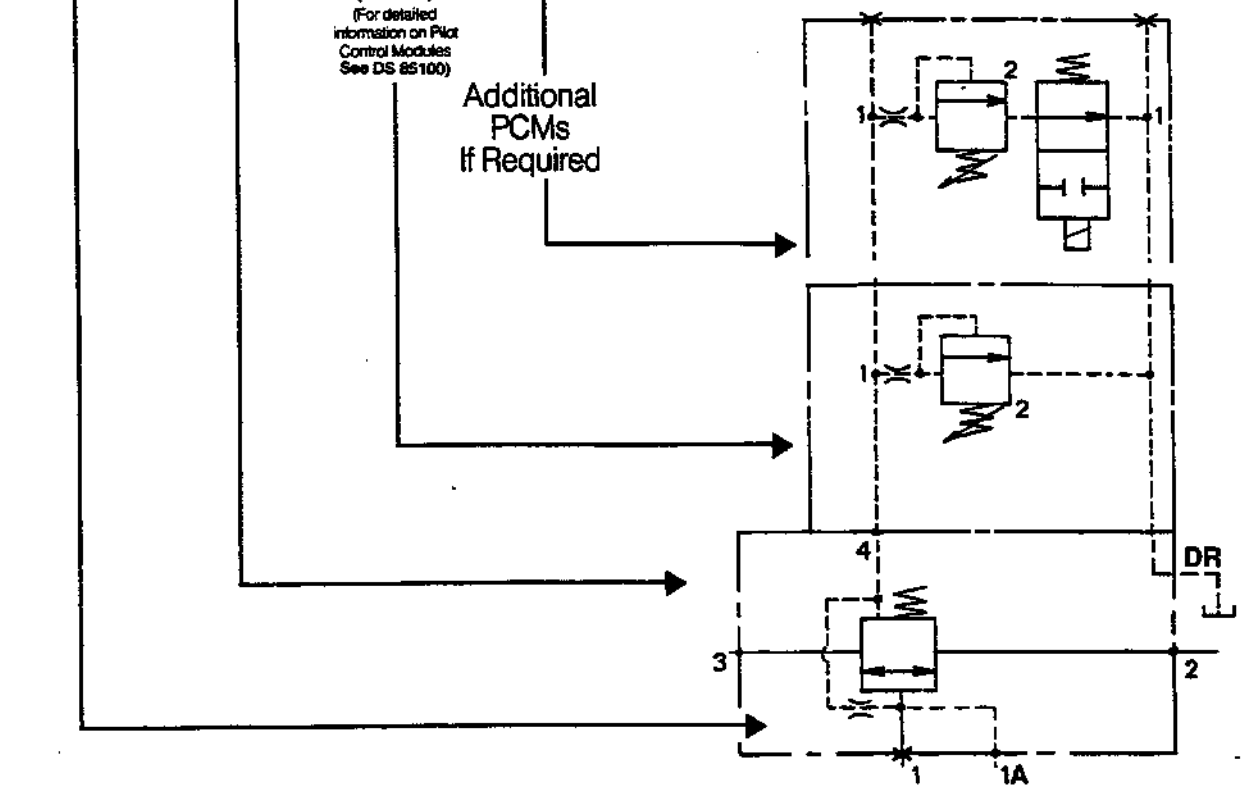
HSU1201 / DT1-16-C / 1-35-4-C / Optional

Cartridge

Line Mount Block

Pilot Control Module (PCM)
(For detailed information on Pilot Control Modules See DS 85100)

Additional PCMs If Required



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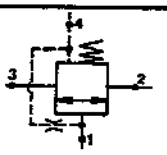
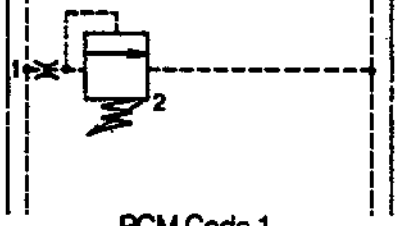


Data Sheet — Normally Closed Sequence Valve for Pilot Operation

How To Order

Typical PCM How To Order Example: / 1 - 35 - 4 - 0W - C

PCM Code



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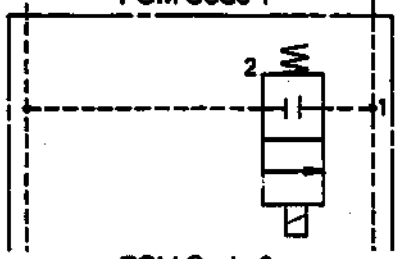

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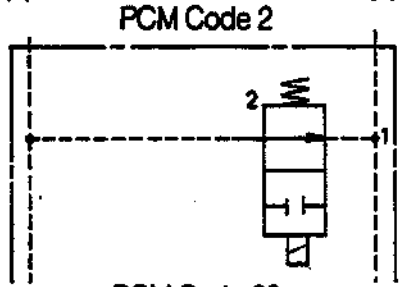
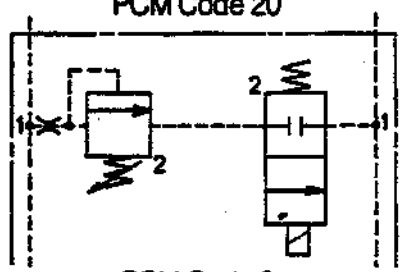


PCM Code 20



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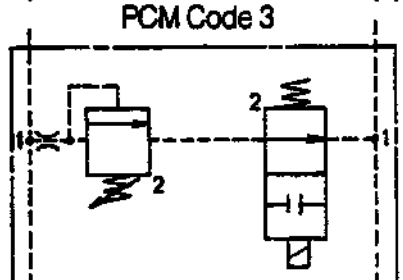

PCM Code 30

Pressure Range
07 = 50- 700 psi (3,4- 48,0 bar)
20 = 50-2000 psi (3,4-138,0 bar)
35 = 50-3500 psi (3,4-241,0 bar)
50 = 50-5000 psi (3,4-345,0 bar)

Orifice Diameter
4 = .040 Diameter (Standard)
See DS 85100 for special applications

Solenoid Voltage (if required)
0 = 115 V.A.C./60 HZ. or 110 V.A.C./50 HZ. Solenoid
1 = 230 V.A.C./60 HZ. or 220 V.A.C./50 HZ. Solenoid
2 = 12 V.D.C. Solenoid
3 = 24 V.D.C. Solenoid
Other voltages are available, consult factory

Electrical Connector (if required)
S = Cable connector w/o indicator light (standard)
L = Cable connector with indicator light
R = .500 NPTF connector w/o indicator light
W = .500 NPTF connector w/indicator light
C = Three pin Brad Harrison/DIN 43650 connector w/mating plug

Block Material
C = Nodular Iron (standard)

See DS 85100 for additional information on pilot controls.

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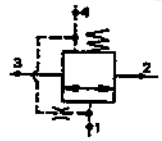
Oilgear

VALVE, SCREW-IN CARTRIDGE

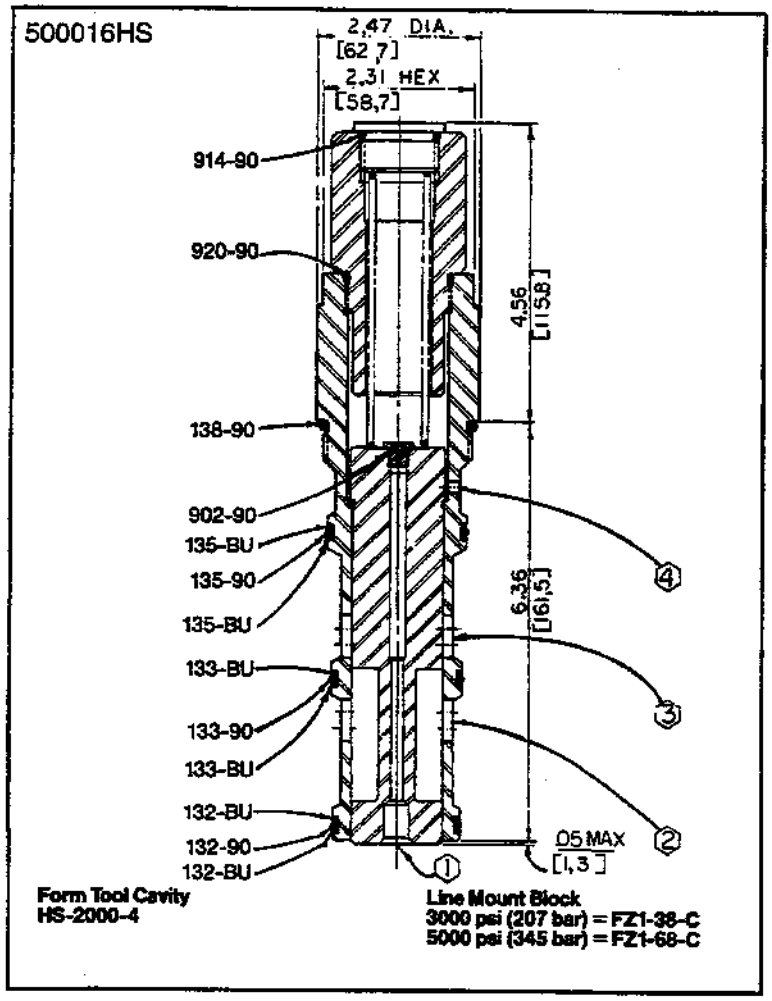
170 USGPM Δ 100 PSI
(644,3 LPM Δ 6,9 Bar)

HSU2000

ENGINEERING | 1



Data Sheet — **Normally Closed Sequence Valve, for Pilot Operation**



Application

When operated by a HSLR pilot operator, the HSU sequence valve connects primary and secondary system branches after the pressure requirement in a third branch has been satisfied. This valve can be circuited to be operated by multiple pressure settings

Operation

A HSLR pilot relief valve must be connected via port 4 to top (spring side) of the main spool and pressure must be connected to port 1 to operate the relief valve which pilots the sequence valve to connect ports 2 and 3. When inlet pressure (ported through the valve) exceeds the pilot setting, pressure on top side of the spool is relieved, a pressure imbalance then exists across the main spool and port 1 pressure raises the spool to allow flow between ports 2 and 3.

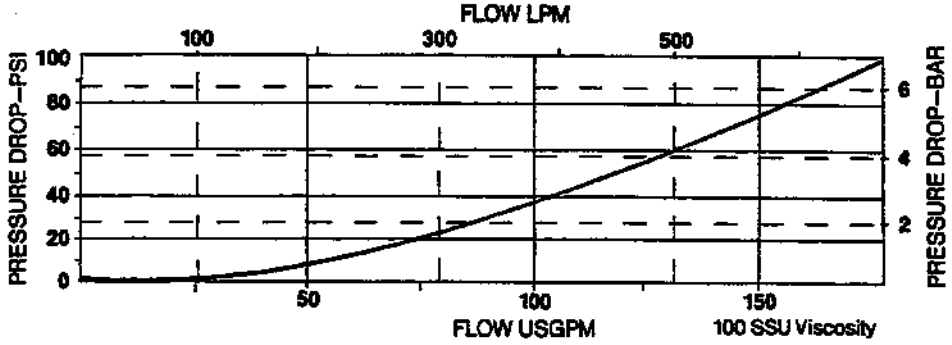
Features

The cartridge is constructed of steel parts and operating parts are hardened and ground as required. Cartridge is designed for easy service or field repair.

Specifications

Rated flow to- 170 USgpm (644,3 lpm)
Maximum operating pressure—
5000 psi (345 bar)
Adjustable pressure range— See HSLR Pilot Valve DS 82550- B1.1A & B2.1A
Viscosity range - 27- 30 SSU at 100°F
35 - 2000 SSU at 100°F
Seals—Viton
Operating temperature- -40°F to 350°F
(-39,6°C to 175°C)
Filtration— Maintain SAE Class 6, ISO 18/15
Seal kit- HSSK-2000D

Performance Curve



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DS 82671-B8.6

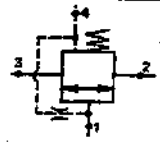
Oilgear

VALVE, SCREW-IN CARTRIDGE

170 USGPM △ 100 PSI
(644,3 LPM △ 6,9 Bar)

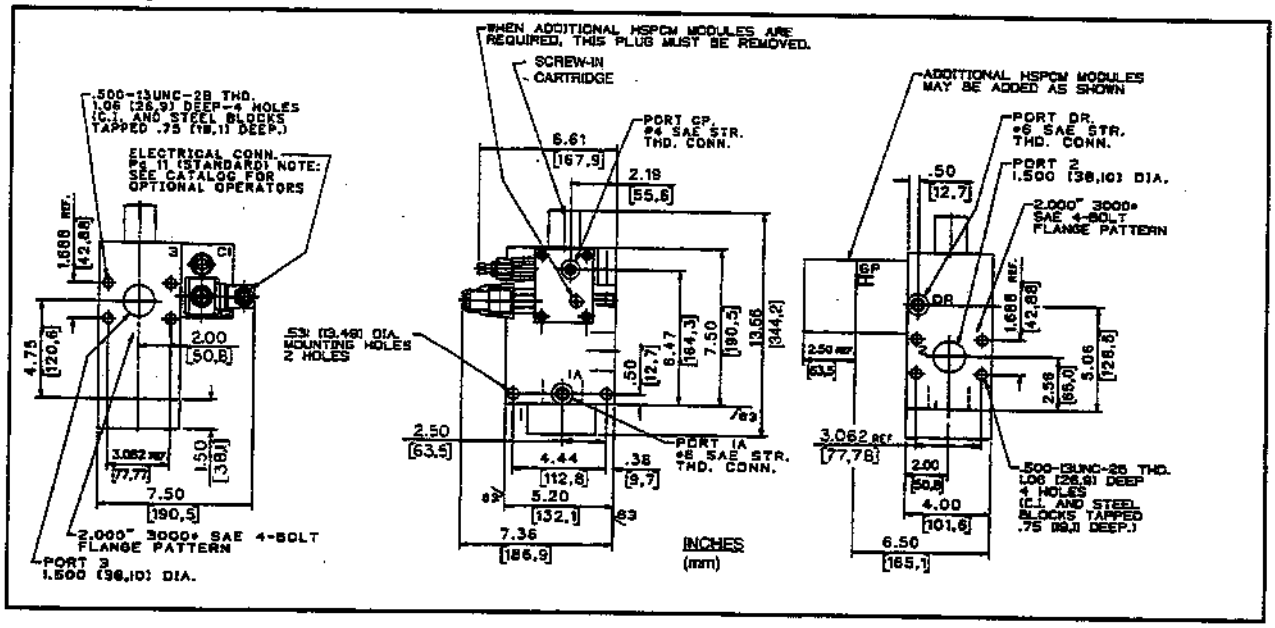
HSU2000

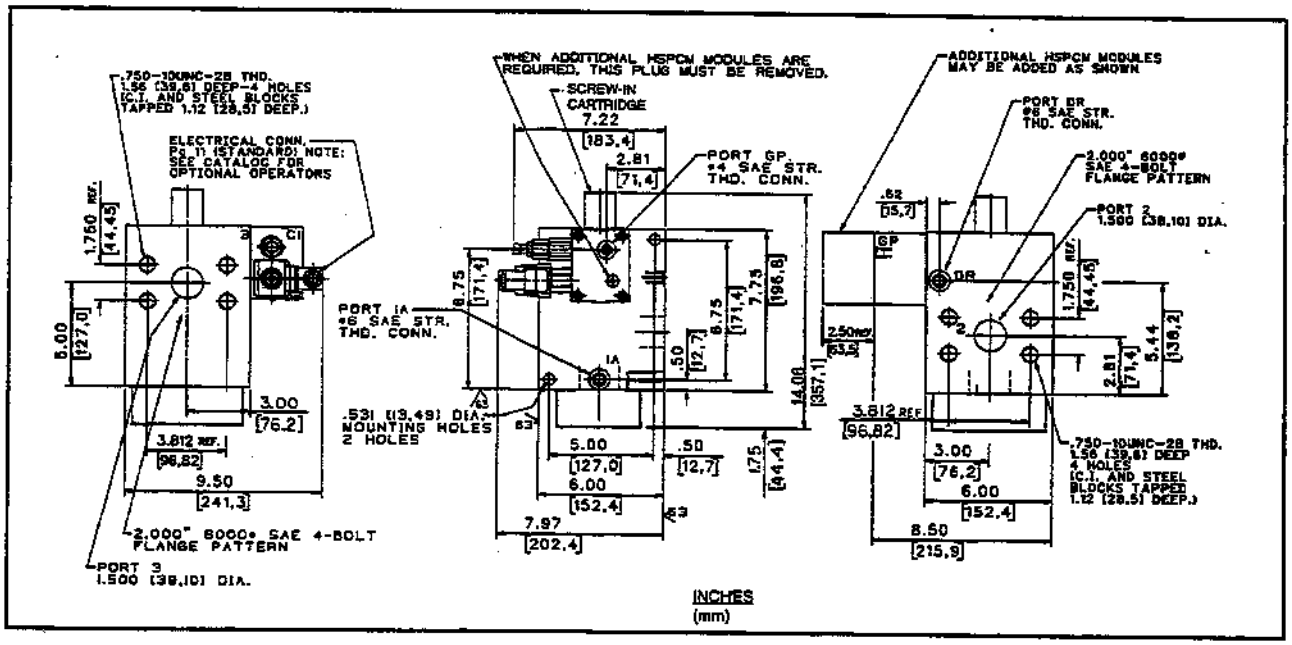
ENGINEERING | 2



Data Sheet — **Normally Closed Sequence Valve, for Pilot Operation**

Line Mount Specifications





How To Order

Screw-In Cartridge Only

HSU2000

Cartridge With Line Mount Block

HSU2000/FZ1-38-C*
3000 psi (207 bar) service pressure

HSU2000/FZ1-68-C*
5000 psi (345 bar) service pressure

*Line Mount Blocks shown include Pilot Control Modules (PCM). See Pages 3 and 4 for "How To Order" Line Mount Blocks with Pilot Control Modules.

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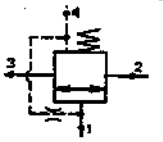
Oilgear

VALVE, SCREW-IN CARTRIDGE

170 USGPM △ 100 PSI
(644,3 LPM △ 6,9 Bar)

HSU2000

ENGINEERING | 3



Data Sheet — Normally Closed Sequence Valve, for Pilot Operation

Cartridge Must Have Pilot Control Module

This cartridge valve requires pilot logic to offer added flexibility in providing maximum pressure consistently and smoothly. At least one pilot control module must be added to the valve.

Typical HSU2000 How To Order Example

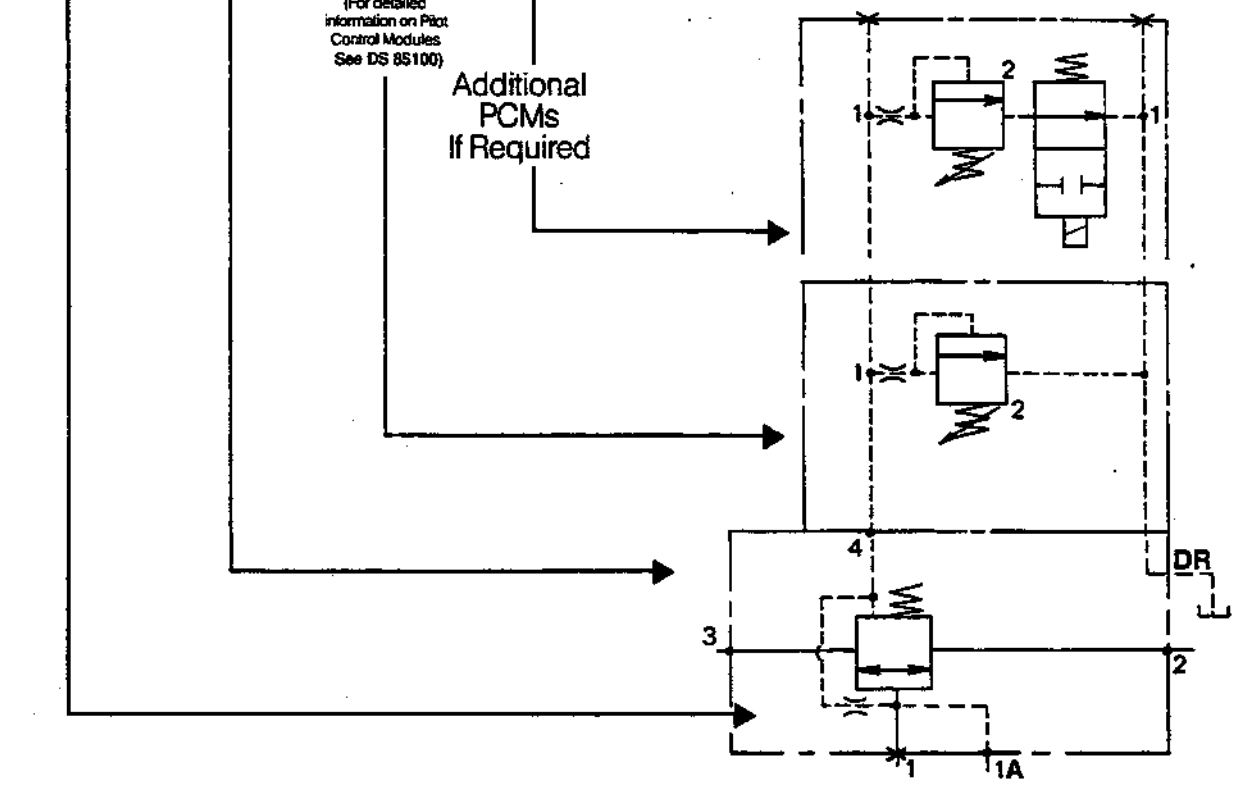
HSU2000 / FZ1-38-C / 1-35-4-C / Optional

Cartridge

Line Mount Block

Pilot Control Module (PCM)
(For detailed information on Pilot Control Modules See DS 85100)

Additional PCMs If Required



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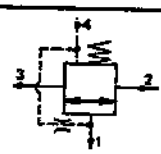
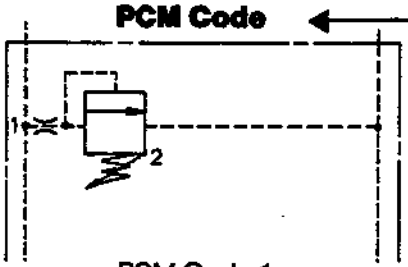


Data Sheet Normally Closed Sequence Valve, for Pilot Operation

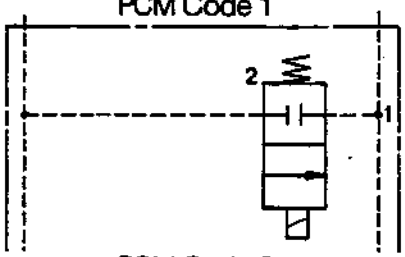
How To Order

Typical PCM How To Order Example: / 1 - 35 - 4 - 0W - C

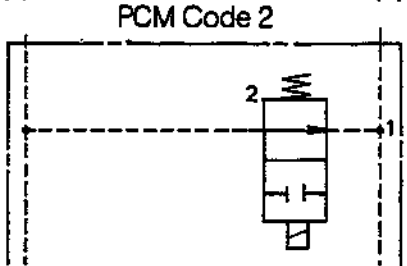
PCM Code



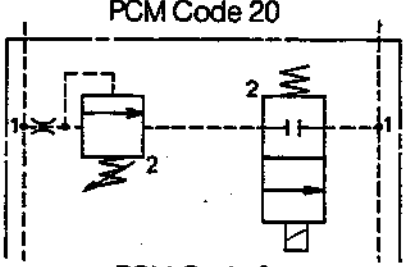
PCM Code 1



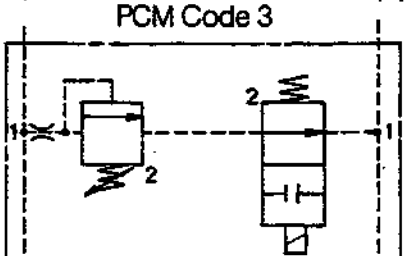
PCM Code 2



PCM Code 20



PCM Code 3



PCM Code 30

Pressure Range
07 = 50- 700 psi (3,4- 48,0 bar)
20 = 50-2000 psi (3,4-138,0 bar)
35 = 50-3500 psi (3,4-241,0 bar)
50 = 50-5000 psi (3,4-345,0 bar)

Orifice Diameter
4 = .040 Diameter (Standard)
See DS 85100 for special applications

Solenoid Voltage (if required)
0 = 115 V.A.C./60 HZ. or 110 V.A.C./50 HZ. Solenoid
1 = 230 V.A.C./60 HZ. or 220 V.A.C./50 HZ. Solenoid
2 = 12 V.D.C. Solenoid
3 = 24 V.D.C. Solenoid
Other voltages are available, consult factory

Electrical Connector (if required)
S = Cable connector w/o indicator light (standard)
L = Cable connector with indicator light
R = .500 NPTF connector w/o indicator light
W = .500 NPTF connector w/indicator light
C = Three pin Brad Harrison/DIN 43650 connector w/mating plug

Block Material
C = Nodular Iron (standard)

See DS 85100 for additional information on pilot controls.

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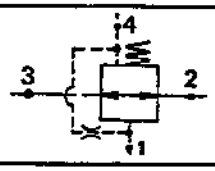
VALVE, SCREW-IN CARTRIDGE

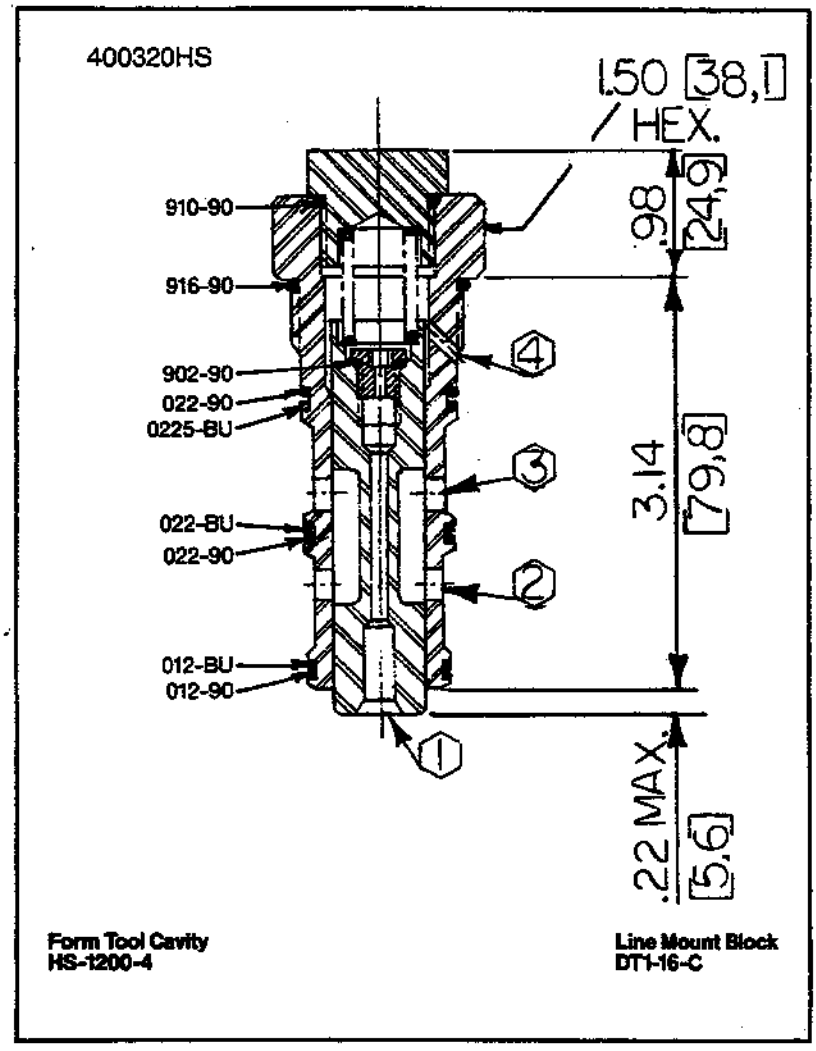
37 USGPM Δ 100 PSI
(140,2 LPM Δ 6,9 Bar)

HSUO1201

ENGINEERING | 1



Data Sheet — **Normally Open Sequence Valve for Pilot Operation**



Application

When operated by a HSLR pilot operator, the HSUO sequence valve disconnects primary and secondary system branches after the pressure requirement in third branch has been satisfied. This valve can be circuited to be operated by multiple pressure settings or vented to close it.

Operation

A HSLR pilot relief valve must be connected via port 4 to top (spring side) of the main spool and pressure must be connected to port 1 to operate the relief valve which pilots the sequence valve to block flow between pods 2 and 3. When inlet pressure (ported through the valve) exceeds the pilot setting, pressure on top side of the spool is relieved, a pressure imbalance then exists across the main spool and port 1 pressure raises the spool to block flow between ports 2 and 3.

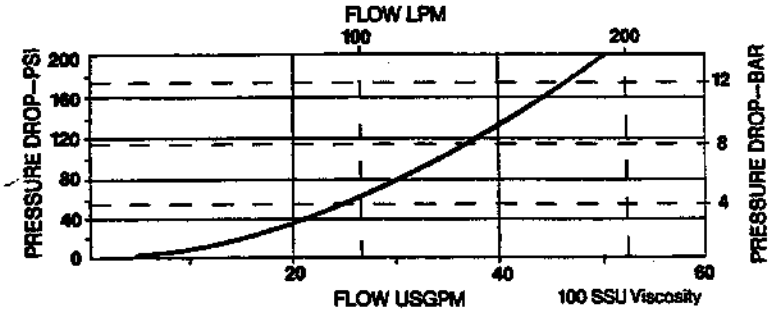
Features

Several pressure ranges are available to choose from. The cartridge is constructed of steel parts and operating parts are hardened and ground as required. Cartridge is designed for easy service or repair.

Specifications

Rated flow to-51 USgpm 200 psi
(193,1 lpm 13,8 bar)
Maximum operating pressure-
5000 psi (345 bar)
Adjustable pressure range-See HSLR602 Pilot Valve (Section 5, page B2.1)
Viscosity range-27 to 30 SSU at 100°F
35 to 2000 SSU at 100°F
Seals-Viton
Operating temperature- -40°F to 350°F
(-39,6°C to 175°C)
Filtration-Maintain SAE Class 6, ISO 18/15
Seal kit-HSSK-1200-D

Performance Curve



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DS-82672-B9.3

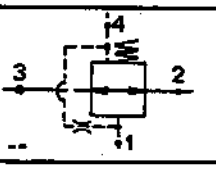
Oilgear

VALVE, SCREW-IN CARTRIDGE

37 USGPM Δ 100 PSI
(140,2 LPM Δ 6,9 Bar)

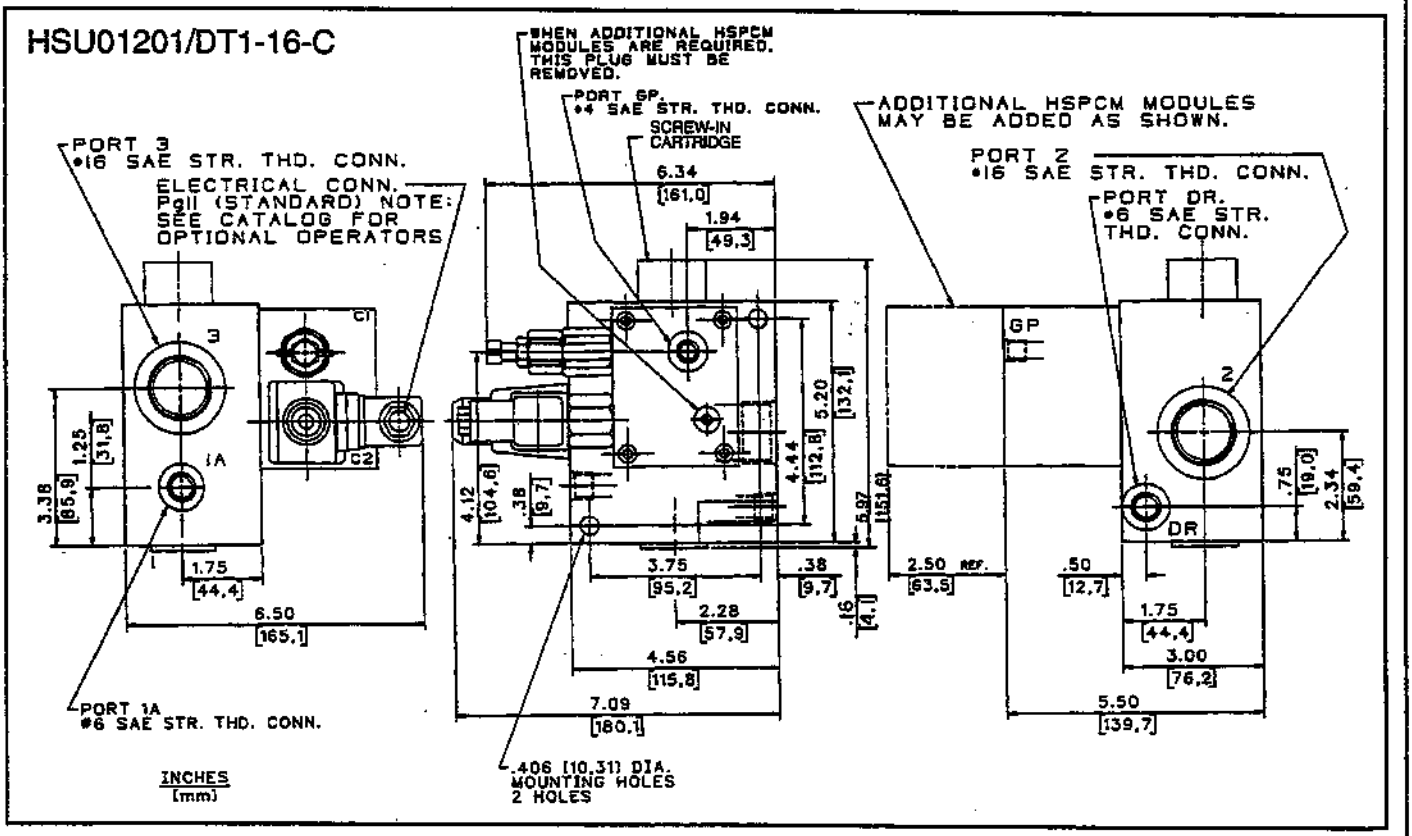
HSUO1201

ENGINEERING | **2**



Data Sheet — **Normally Open Sequence Valve for Pilot Operation**

Line Mount Specifications



How To Order

Screw-In Cartridge Only

HSUO1201

Cartridge With Line Mount Block

HSUO1201/DT1-16-C*

*Line Mount Blocks shown include Pilot Control Modules (PCM). See pages 3 and 4 for "How To Order" Line Mount Blocks with Pilot Control Modules.

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DS-82672-B9.3

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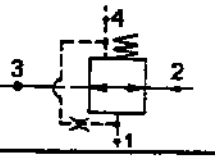
Oilgear

VALVE, SCREW-IN CARTRIDGE

37 USGPM △ 100 PSI
(140,2 LPM △ 6,9 Bar)

HSUO1201

ENGINEERING 3



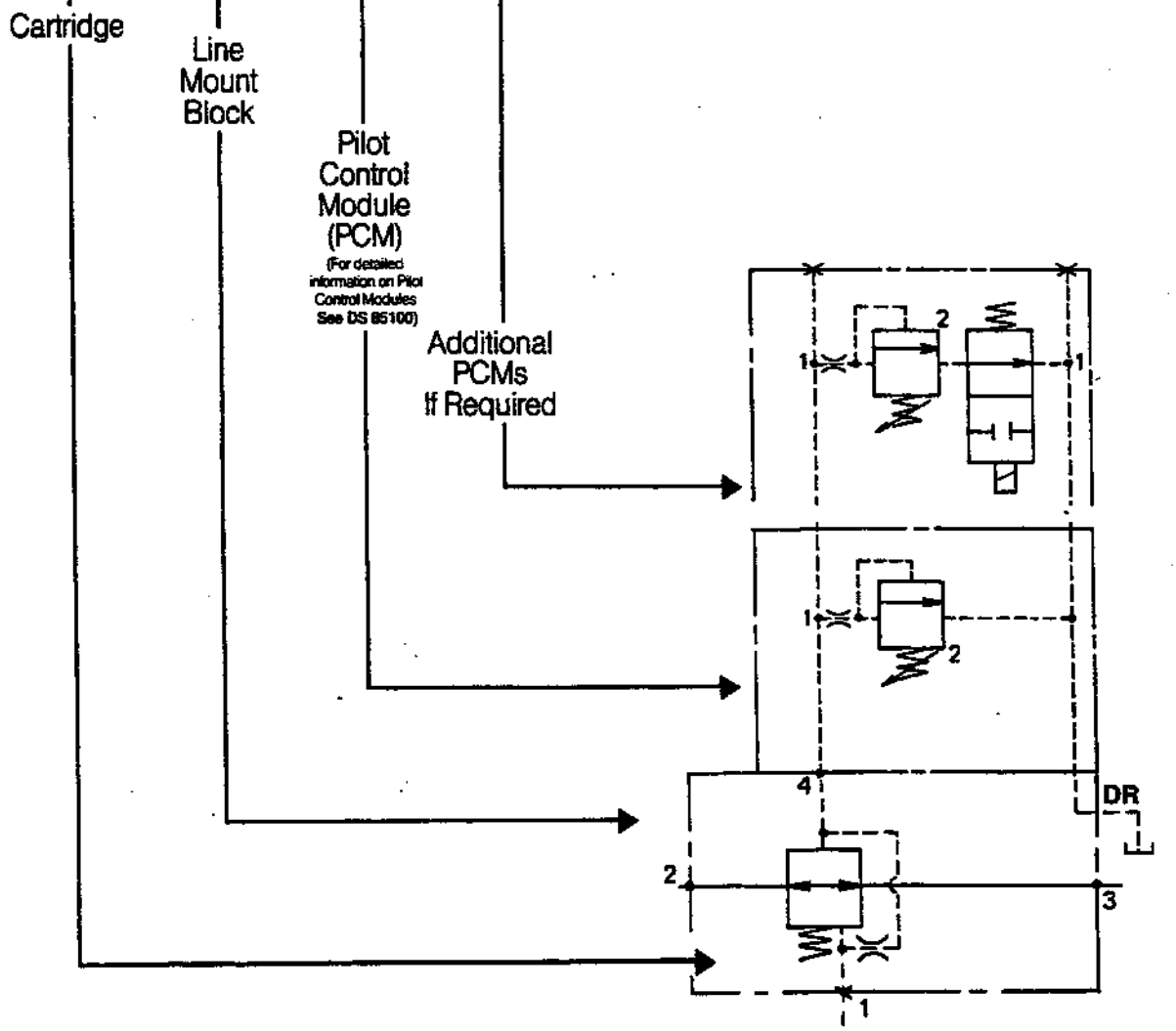
Data Sheet — Normally Open Sequence Valve for Pilot Operation

Cartridge Must Have Pilot Control Module

This cartridge valve requires pilot logic to offer added flexibility in providing maximum pressure consistently and smoothly. At least one pilot control module must be added to the valve.

Typical HSUO1201 How To Order Example

HSUO1201 / DT1-16-C / 1-35-4-C / Optional



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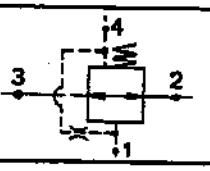
Oilgear

VALVE, SCREW-IN CARTRIDGE

37 USGPM △ 100 PSI
(140,2 LPM △ 6,9 Bar)

HSUO1201

ENGINEERING | 4

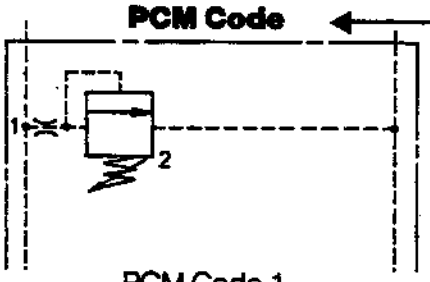


Data Sheet — **Normally Open Sequence Valve for Pilot Operation**

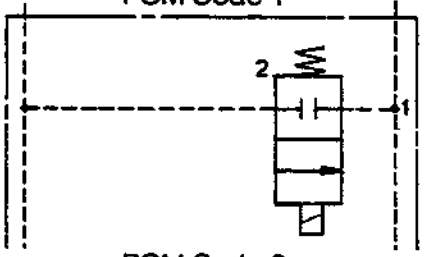
How To Order

Typical PCM How To Order Example: /30 - 35 - 4 - 0W - C

PCM Code



PCM Code 1



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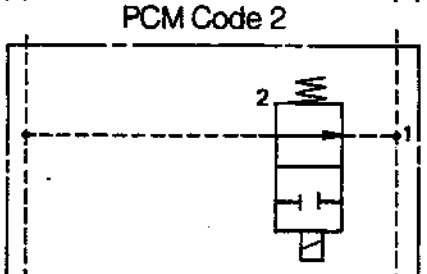
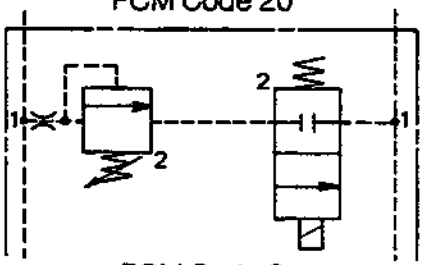


PCM Code 20



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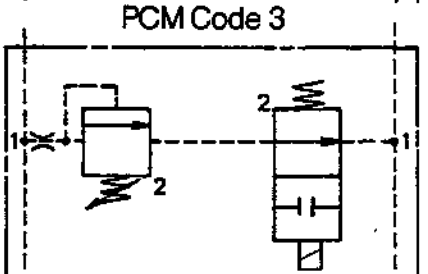


PCM Code 30

Pressure Range
07 = 50- 700 psi (3,4- 48,0 bar)
20 = 50-2000 psi (3,4-138,0 bar)
35 = 50-3500 psi (3,4-241,0 bar)
50 = 50-5000 psi (3,4-345,0 bar)

Orifice Diameter
4 = .040 Diameter (Standard)
See DS 85100 for special applications

Solenoid Voltage (if required)
0 = 115 V.A.C./60 HZ. or 110 V.A.C./50 HZ. Solenoid
1 = 230 V.A.C./60 HZ. or 220 V.A.C./50 HZ. Solenoid
2 = 12 V.D.C. Solenoid
3 = 24 V.D.C. Solenoid
Other voltages are available, consult factory

Electrical Connector (if required)
S = Cable connector w/o indicator light (standard)
L = Cable connector with indicator light
R = .500 NPTF connector w/o indicator light
W = .500 NPTF connector w/indicator light
C = Three pin Brad Harrison/DIN 43650 connector w/mating plug

Block Material
C = Nodular Iron (standard)

See DS 85100 for additional information on pilot controls.

Reissued: Nov, 1995
DS-82672-B9.3

OILGEAR
2300 So. 51st. Street
Milwaukee, WI USA 53219

Telephone: (414) 327-1700
Fax: (414) 327-0532

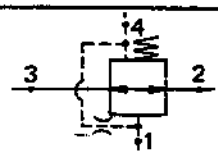
Oilgear

VALVE, SCREW-IN CARTRIDGE

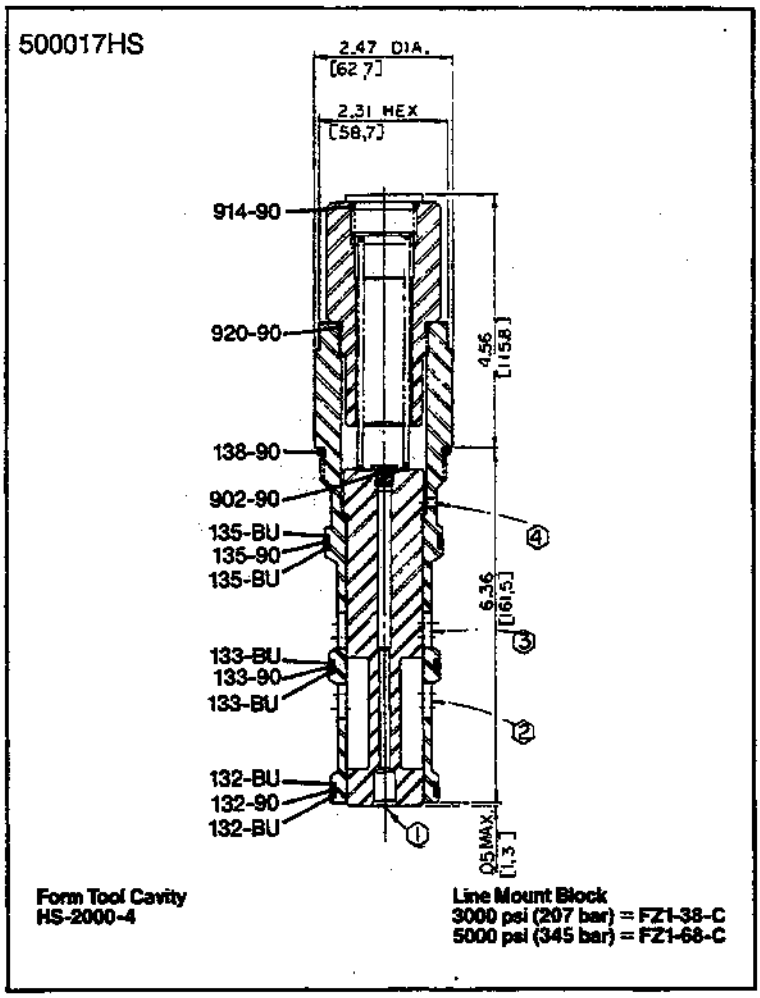
170 USGPM △ 100 PSI
(644,3 LPM △ 6,9 Bar)

HSUO2000

ENGINEERING | **1**



Data Sheet — **Normally Open Sequence Valve for Pilot Operation**



Application

When operated by a HSLR pilot operator, the HSUO sequence valve disconnects primary and secondary system branches after the pressure requirement in third branch has been satisfied. This valve can be circuited to be operated by multiple pressure settings or vented to close it.

Operation

A HSLR pilot relief valve must be connected via port 4 to top (spring side) of the main spool and pressure must be connected to port 1 to operate the relief valve which pilots the sequence valve to block flow between ports 2 and 3. When inlet pressure (ported through the valve) exceeds the pilot setting, pressure on top side of the spool is relieved, a pressure imbalance then exists across the main spool and port 1 pressure raises the spool to block flow between ports 2 and 3.

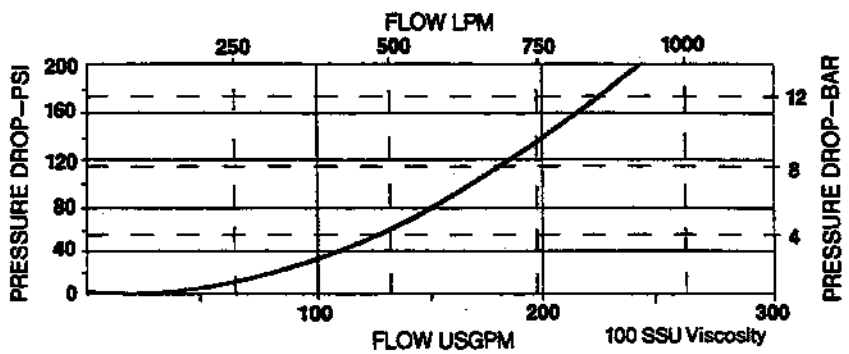
Features

Several pressure ranges are available to choose from. The cartridge is constructed of steel parts and operating parts are hardened and ground as required. Cartridge is designed for easy service or repair.

Specifications

Rated flow to- 240 USgpm △ 2000 psi
(908,6 lpm △ 13,8 bar)
Maximum operating pressure—
5000 psi (345 bar)
Adjustable pressure range— See HSLR Pilot Valve DS 82550-B2.1A
Viscosity range - 27- 30 SSU at 100°F
35 - 2000 SSU at 100°F
Seals—Viton
Operating temperature- -40°F to 350°F
(-39,6°C to 175°C)
Filtration— Maintain SAE Class 6, ISO 18/15
Seal kit- HSSK-2000D

Performance Curve



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Reissued: Nov., 1995

DS 82672-B9.6

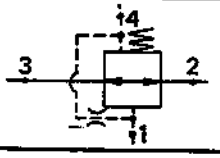
Oilgear

VALVE, SCREW-IN CARTRIDGE

170 USGPM Δ 100 PSI
(644,3 LPM Δ 6,9 Bar)

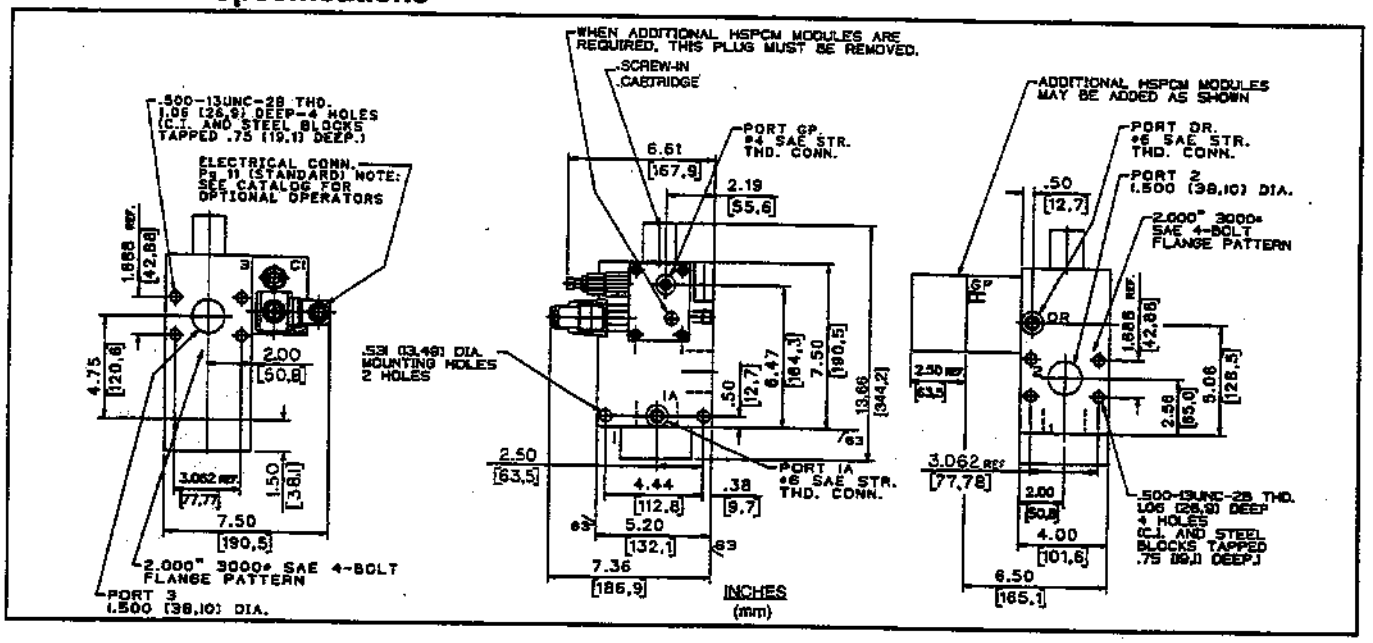
HSUO2000

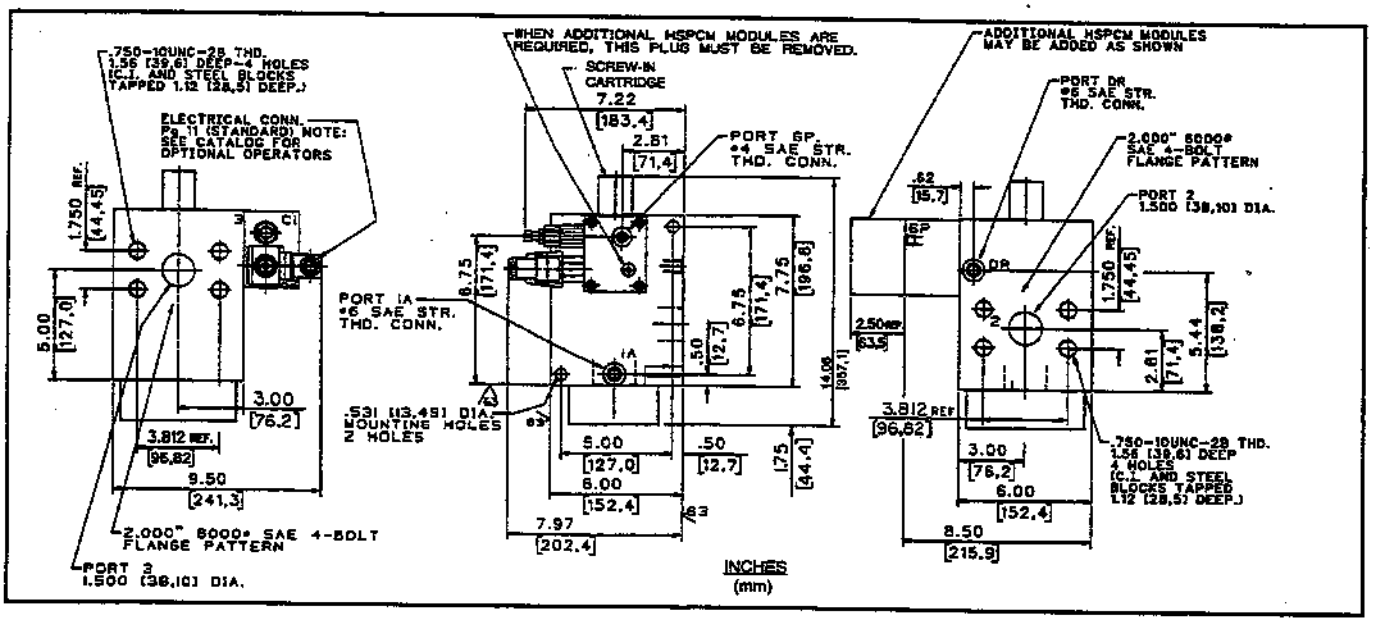
ENGINEERING | **2**



Data Sheet — **Normally Open Sequence Valve for Pilot Operation**

Line Mount Specifications





How To Order

Screw-In Cartridge Only

HSUO2000

Cartridge With Line Mount Block

3000 psi (207 bar) service pressure
HSUO2000/FZ1-38-C*

5000 psi (345 bar) service pressure
HSUO2000/FZ1-68-C*

*Line Mount Blocks shown include Pilot Control Modules (PCM). See Pages 3 and 4 for "How To Order" Line Mount Blocks with Pilot Control Modules.

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DS 82672-B9.6

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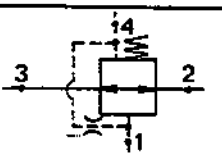
Oilgear

VALVE, SCREW-IN CARTRIDGE

170 USGPM △ 100 PSI
(644,3 LPM △ 6,9 Bar)

HSUO2000

ENGINEERING | 3



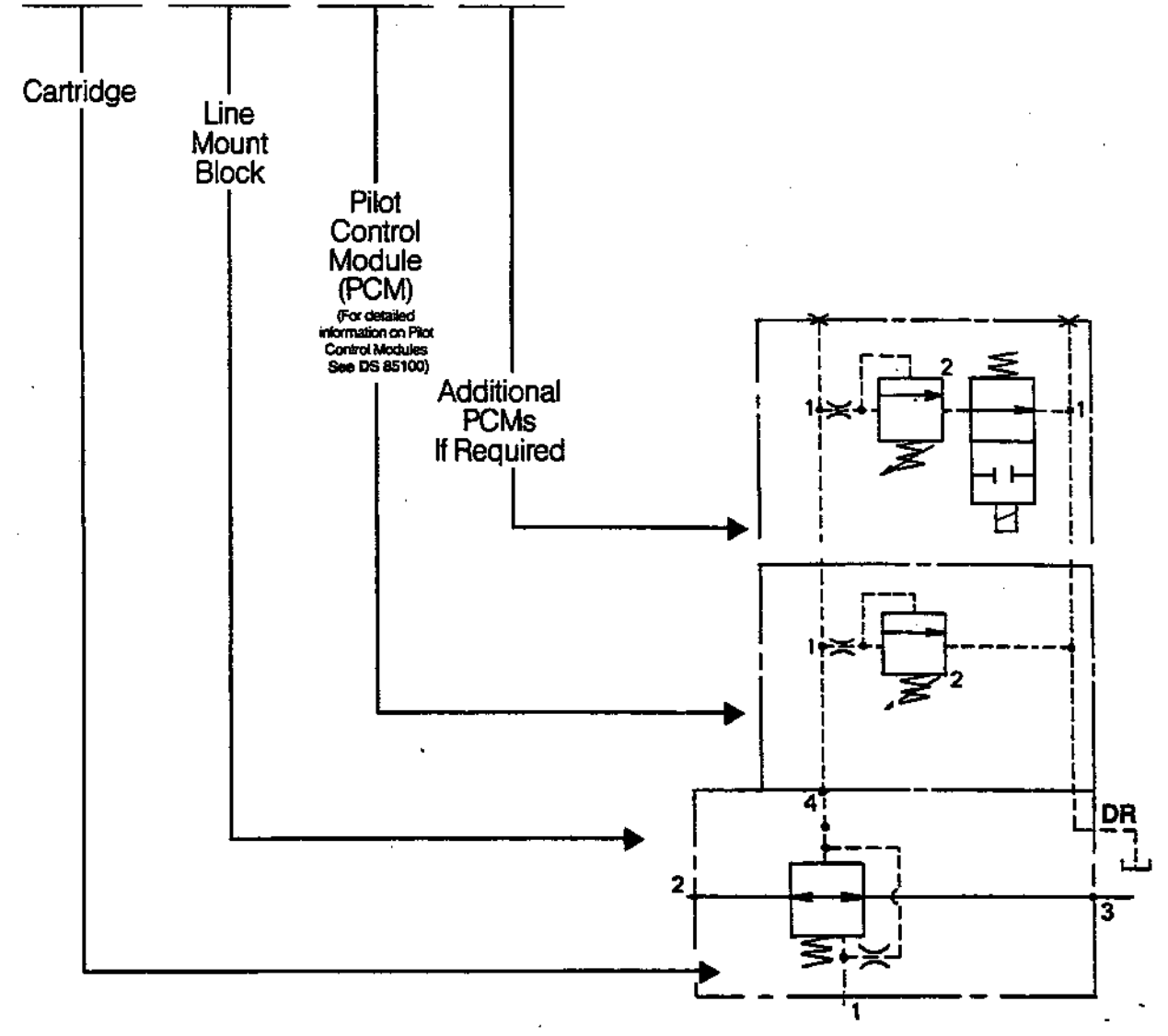
Data Sheet — Normally Open Sequence Valve for Pilot Operation

Cartridge Must Have Pilot Control Module

This cartridge valve requires pilot logic to offer added flexibility in providing maximum pressure consistently and smoothly. At least one pilot control module must be added to the valve.

Typical HSUO2000 How To Order Example

HSUO2000 / FZ1-38-C / 1-35-4-C / Optional



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Reissued: Nov., 1995

DS 82672-B9.6

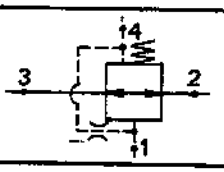
Oilgear

VALVE, SCREW-IN CARTRIDGE

170 USGPM △ 100 PSI
(644,3 LPM △ 6,9 Bar)

HSUO2000

ENGINEERING | 4

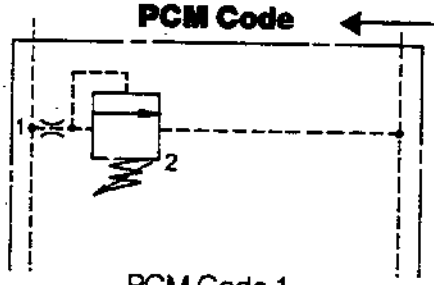


Data Sheet — **Normally Open Sequence Valve for Pilot Operation**

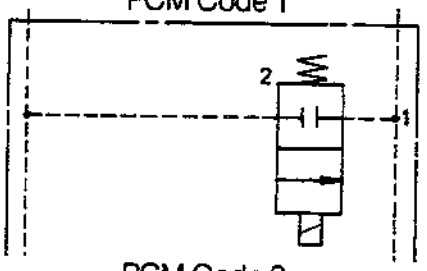
How To Order

Typical PCM How To Order Example: /30 - 35 - 4 - 0W - C

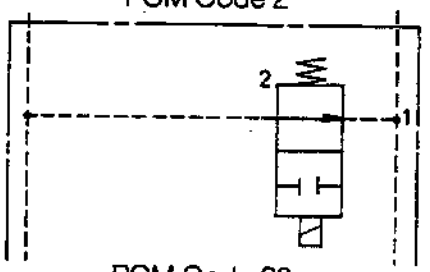
PCM Code



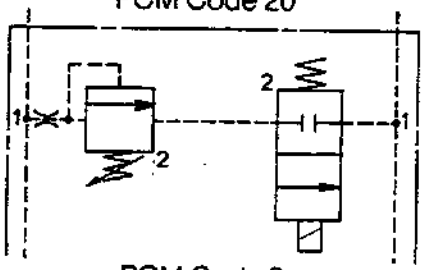
PCM Code 1



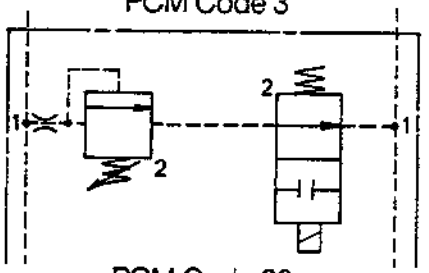
PCM Code 2



PCM Code 20



PCM Code 3



PCM Code 30

Pressure Range
07 = 50- 700 psi (3,4- 48,0 bar)
20 = 50-2000 psi (3,4-138,0 bar)
35 = 50-3500 psi (3,4-241,0 bar)
50 = 50-5000 psi (3,4-345,0 bar)

Orifice Diameter
4 = .040 Diameter (Standard)
See DS 85100 for special applications

Solenoid Voltage (if required)
0 = 115 V.A.C./60 HZ. or 110 V.A.C./50 HZ. Solenoid
1 = 230 V.A.C./60 HZ. or 220 V.A.C./50 HZ. Solenoid
2 = 12 V.D.C. Solenoid
3 = 24 V.D.C. Solenoid
Other voltages are available, consult factory

Electrical Connector (if required)
S = Cable connector w/o indicator light (standard)
L = Cable connector with indicator light
R = .500 NPTF connector w/o indicator light
W = .500 NPTF connector w/indicator light
C = Three pin Brad Harrison/DIN 43650 connector w/mating plug

Block Material
C = Nodular Iron (standard)

See DS 85100 for additional information on pilot controls.

OILGEAR
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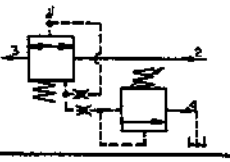
Oilgear

VALVE, SCREW-IN CARTRIDGE

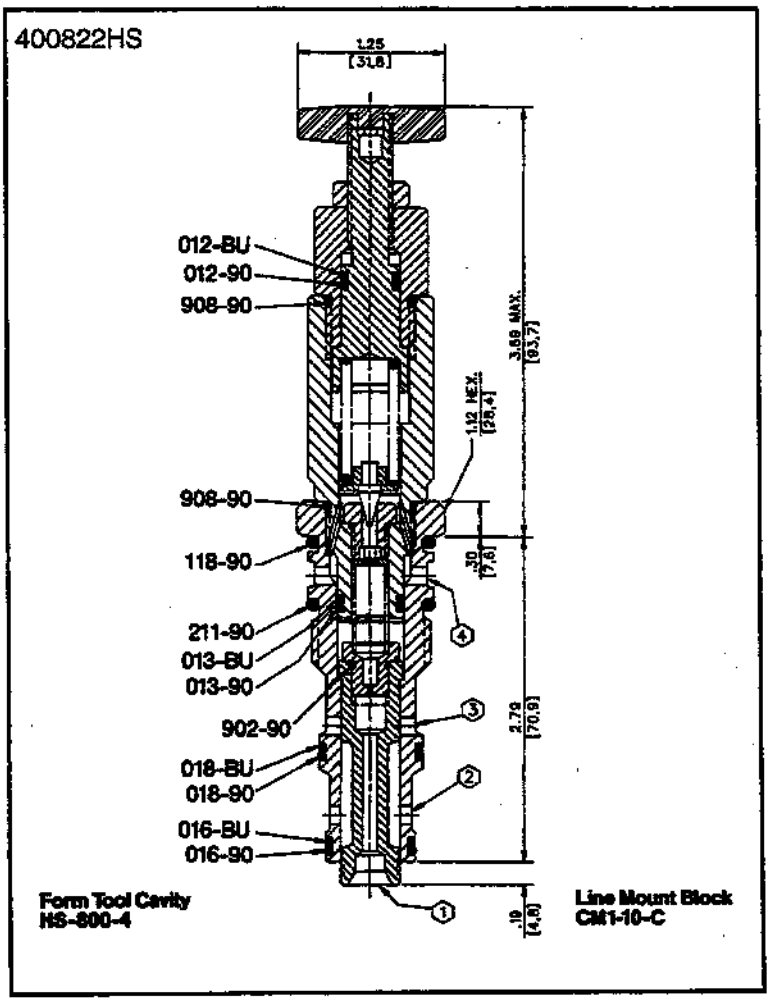
16 USGPM △ 100 PSI
(60,6 LPM △ 6,9 Bar)

HSU801-P

ENGINEERING | 1



Data Sheet — **Normally Closed External Pilot Sequence Valve**



Application

The HSU sequence valve connects primary and secondary system branches after the pressure requirement in a third branch is satisfied.

Operation

Pressure must be connected to port 1 to operate the integral relief valve which pilots the sequence valve to connect ports 2 and 3. Port 1 pressure is ported thru orifices in the center of the valve to the pilot relief valve (in upper portion of the body). When this pressure exceeds the valve setting, pressure on the top side of the main spool is relieved, a pressure imbalance then exists across the main spool and port 1 pressure raises the main spool allowing flow between ports 2 and 3.

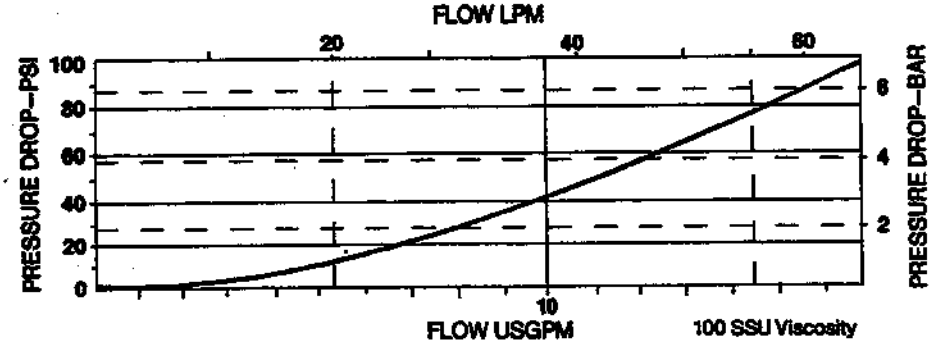
Features

Several pressure ranges are available to choose from. The cartridge is constructed of steel parts and all operating parts are hardened and ground as required. Cartridge is designed for easy service or field repair.

Specifications

Rated flow to—16 USgpm (60,6 lpm)
Maximum operating pressure—
5000 psi (345 bar)
Adjustable pressure range—See "How To Order"
Viscosity range—27-30 SSU at 100°F
35-2000 SSU at 100°F
Seals—Viton
Operating temperature—-40°F to 350°F
(-39,6°C to 175°C)
Filtration—Maintain SAE Class 6, ISO 18/15
Seal kit—HSSK-800-D

Performance Curve



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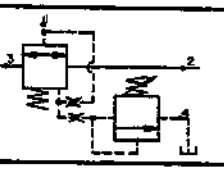
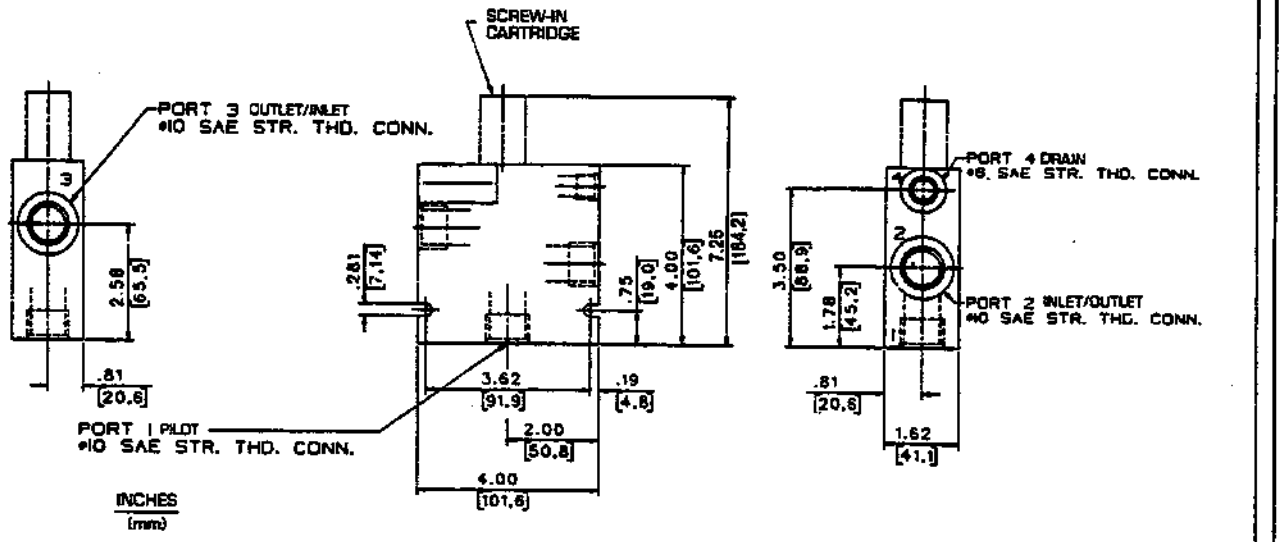
DS 82681-B8.2



Data Sheet — Normally Closed External Pilot Sequence Valve

Line Mount Specifications

HSU801-P/CM1-10-C



How To Order

Screw-in Cartridge Only

HSU801-P- ____

	Pressure Range	
	psi	bar
07	50- 700	3,4- 48
20	50-2000	3,4-138
35	50-3500	3,4-241
50	50-5000	3,4-345

Note: All adjusting screw options on DS 82550-1B are available for this valve.

Cartridge With Line Mount Block

HSU801-P-__/CM1-10-C

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Milwaukee, WI USA 53219

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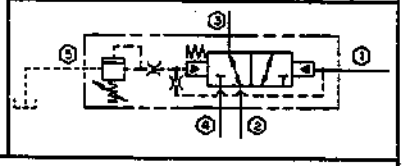
VALVE, SCREW-IN CARTRIDGE

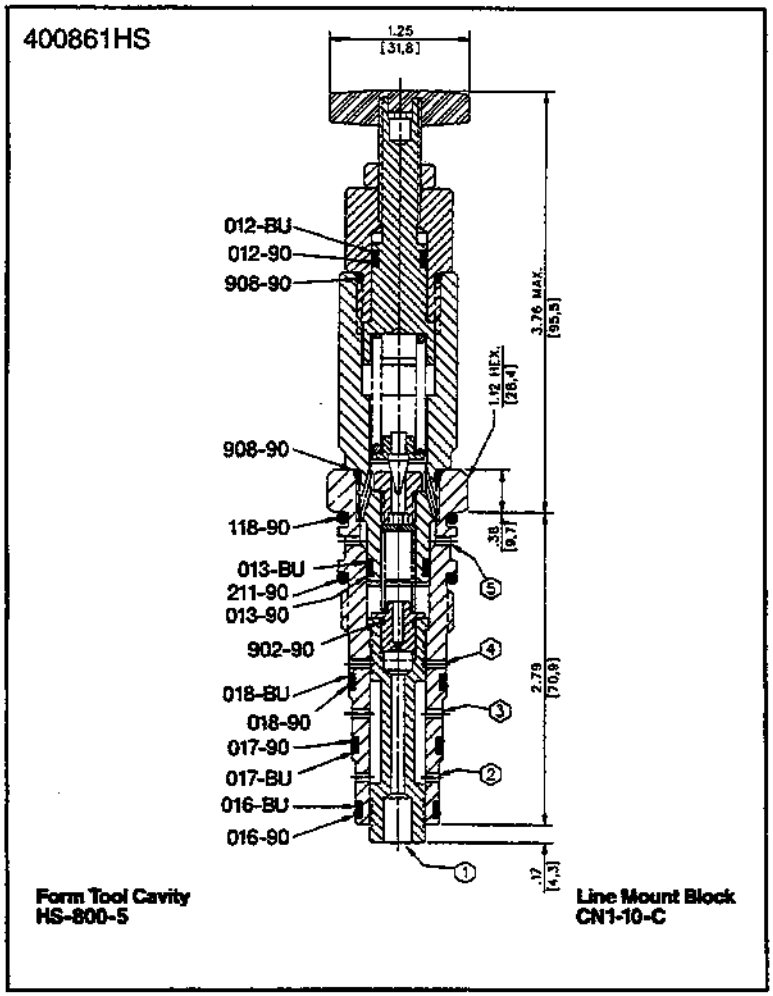
PILOT VALVE

HSUCO800-P

ENGINEERING | 1



Data Sheet — **Three Way External Piloted Sequence Valve**



Application

The HSUCO valve is primarily a pilot valve used to control large flow HSU, HSUO or HSP valves.

Operation

Pilot pressure must be connected to port 1 to operate the integral relief valve which pilots the sequence valve to connect port 2 to port 3 or port 4 to port 3. Port 1 pressure is ported thru orifices in the center of the valve to the pilot relief valve (in upper portion of the body). When the pressure exceeds this valve setting, pressure on the top side of the main spool is relieved, a pressure imbalance then exists across the main spool and port 1 pressure raises the main spool blocking port 2 and allowing flow from port 4 to port 3. When pilot pressure (at port 1) decreases, the pilot relief valve blocks flow. Pressure across the main spool is balanced and spring returns main spool to block port 4 and connect 2 to 3 once again.

Features

Several pressure ranges are available to choose from. The cartridge is constructed of steel parts and operating parts are hardened and ground as required. Cartridge is designed for easy service or field repair.

Specifications

Maximum operating pressure—
5000 psi (345 bar)
Adjustable pressure range—See "How To Order"
Viscosity range—27-30 SSU at 100°F
35-2000 SSU at 100°F
Seals—Viton
Operating temperature—-40°F to 350°F
(-39,6°C to 175°C)
Filtration—Maintain SAE Class 6, ISO 18/15
Seal kit—HSSK-800-O

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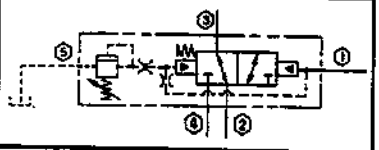
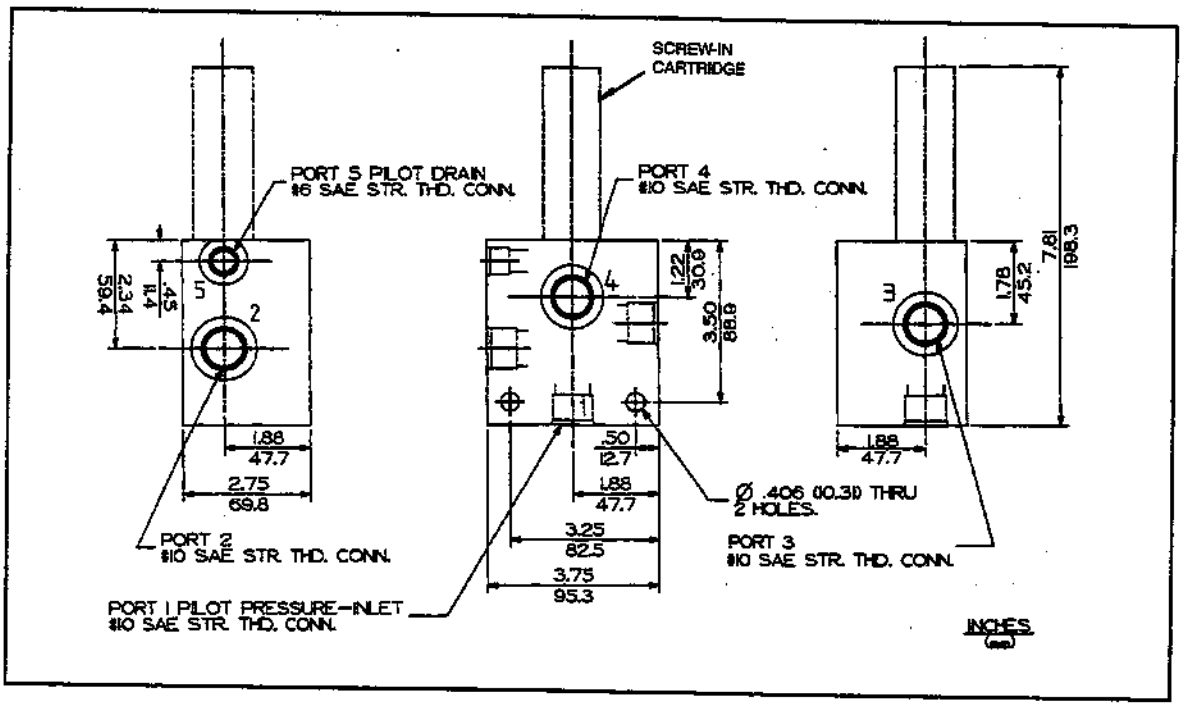
DS 82690-B10.1



Data Sheet — Three Way External Piloted Sequence Valve

Line Mount Specifications

HSUCO800/CN -10-C



How To Order

Screw-In Cartridge Only

HSUCO800-P-

	Pressure Range	
	psi	bar
07	50- 700	3,4- 48
20	50-2000	3,4-138
35	50-3500	3,4-241
50	50-5000	3,4-345

Cartridge With Line Mount Block

HSUCO800-P-__/CN1-10-C

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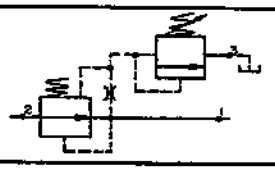
Oilgear

VALVE, SCREW-IN CARTRIDGE

22 USGPM △ 100 PSI
(83,4 LPM △ 6,9 Bar)

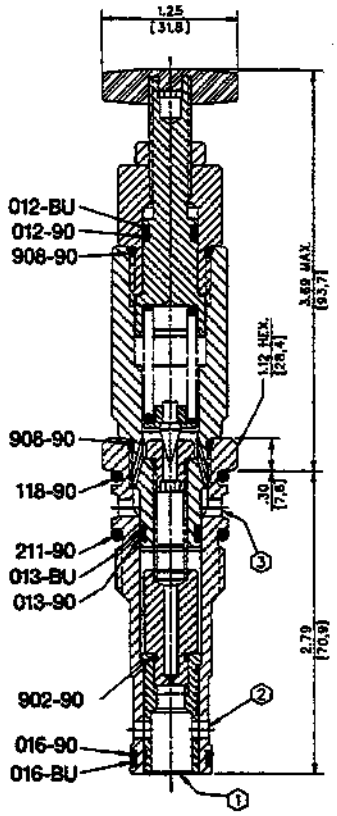
HSPR801-P

ENGINEERING | 1



Data Sheet — **Piloted Sleeve Pressure Reducing Valve**

400826HS



Form Tool Cavity
HSPR-800-3

Line Mount Block
CJ1-10-C

Application

The HSPR valve regulates and maintains reduced pressure (from the main hydraulic system) in a secondary circuit.

Operation

Outlet (port 1) pressure is transmitted thru an orifice in the center of the valve to the pilot relief valve (in upper portion of the body). When outlet pressure exceeds this valve setting, pressure on top side of the spool is relieved (thru port 3), a pressure imbalance then exists across the main spool. The main spool and sleeve tend to move and throttle or shut off flow between ports 2 and 1. If pressure in the secondary system drops, the pilot valve reseats, the main spool is again balanced and spring forces main spool and sleeve downward and allows flow again from port 2 to port 1.

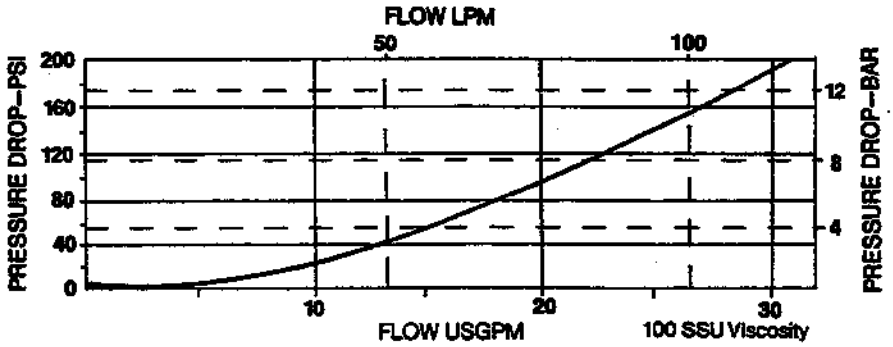
Features

Several pressure ranges are available for this high accuracy pilot operated design. HSPR cartridge valve is constructed of steel parts and all operating parts are hardened as required. Cartridge is designed for easy service or field repair.

Specifications

Rated flow to—36 USgpm △ 280 psi (1364 lpm △ 19,3 bar)
Maximum operating pressure—5000 psi (345 bar)
Adjustable pressure range—See "How To Order"
Viscosity range—27-30 SSU at 100°F
35-2000 SSU at 100°F
Seals—Viton
Operating temperature—-40°F to 350°F (-39,6°C to 175°C)
Filtration—Maintain SAE Class 6, ISO 18/15
Seal kit—HSSK-800-C

Performance Curve



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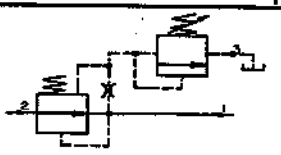
Reissued: Nov., 1995

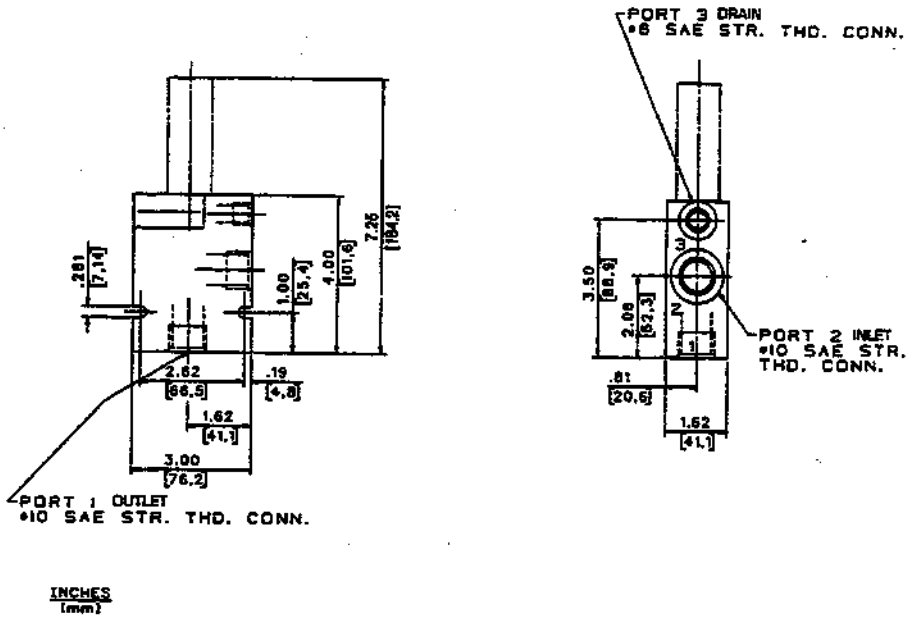
DS 82760-B13.3



Data Sheet — Piloted Sleeve Pressure Reducing Valve

Line Mount Specifications

HSPR801-P/CJ1-10-C



How To Order

Screw-In Cartridge Only

HSPR801-P-__

	Pressure Range	
	psi	bar
07	50- 700	3,4- 48
20	50-2000	3,4-138
35	50-3500	3,4-241
50	50-5000	3,4-345

Cartridge With Line Mount Block

HSPR801-P-__/CJ1-10-C

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Fax: (414) 327-0532

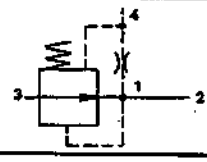
Oilgear

VALVE, SCREW-IN CARTRIDGE

25 USGPM Δ 100 PSI
(106,1 LPM Δ 6,9 Bar)

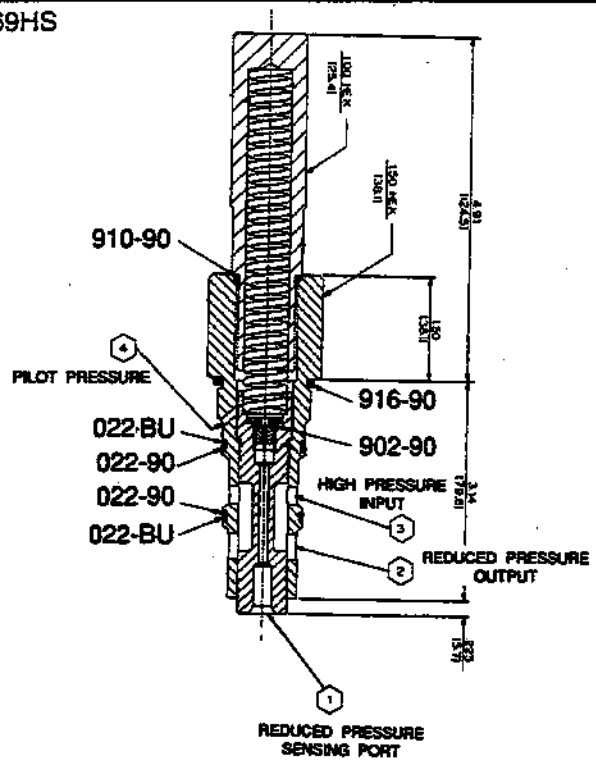
HSPRB1201

ENGINEERING | 1



Data Sheet — **Spool Pressure Reducing Valve for Pilot Operation**

400969HS



Form Tool
HS-1200-3B

Line Mount Block
DT1-16-C

Application

This HSPRB cartridge is designed to be piloted by one or more HSLR relief valves and can be used to provide multiple pressure settings and/or blocking.

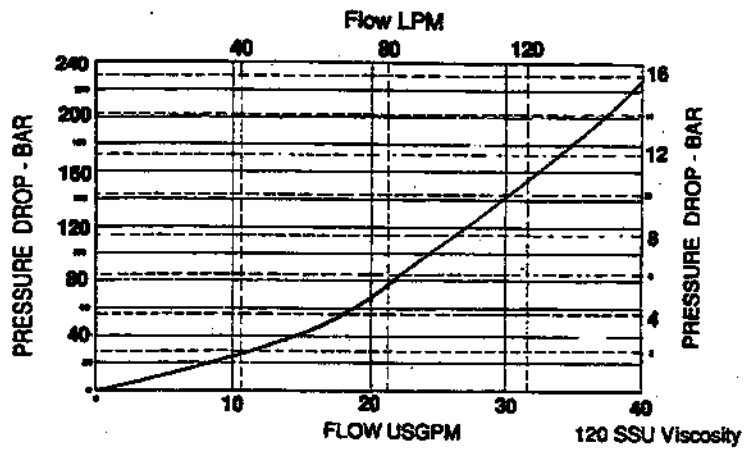
Operation

When cartridge is installed in it's cavity, port 1 is connected to port 2. A HSLR pilot relief valve must be connected via port 4 to top (spring side) of the spool. Outlet (port 2) pressure is transmitted thru an orifice in the center of the spool and port 4 to the pilot valve. When outlet pressure exceeds the pilot valve setting, pressure on the top side of the spool is releived and a pressure imbalance exists across the spool. The spool tends to rise in its bore and throttle or shut-off flow between ports 3 and 2. If pressure in the secondary system drops below the relief valve setting, the pilot valve reseats, spool is again balanced and spring forces spool downward to allow flow from port 3 to 2.

Features

Used with one or more HSLR pilot valves, several repeatable high hysteresis pressure ranges are available. Alternative orifice sizes and spring forces are available to further control sensitivity and speed of operation. Cartridge is constructed of steel parts and all operating parts are hardened as required. Cartridge is designed for easy service or field repair.

Performance Curve



Specifications

Rated flow to - 43US gpm Δ 260 psi
(163,0 lpm Δ 17,9 Bar)
Maximum operating pressure - 5000 psi (345 Bar)
Adjustable pressure range - See HSLR Pilot Valve (Section 5, Page B1.1 & B2.1)
Viscosity range - 27-2000 SSU at 100°F
Seal Vition
Operating temperature - -40°F to 350°F (-39,6°C to 175°C)
Filtration - Maintain SAE Class 6, ISO 18/15
Seal Kit - HSSK-1200-D

Telephone: (414) 327-1700
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Reissued: Nov., 1995

DS 82770-B14.2

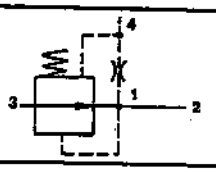
Oilgear

VALVE, SCREW-IN CARTRIDGE

25 USGPM Δ 100 PSI
(106,1 LPM Δ 6,9 Bar)

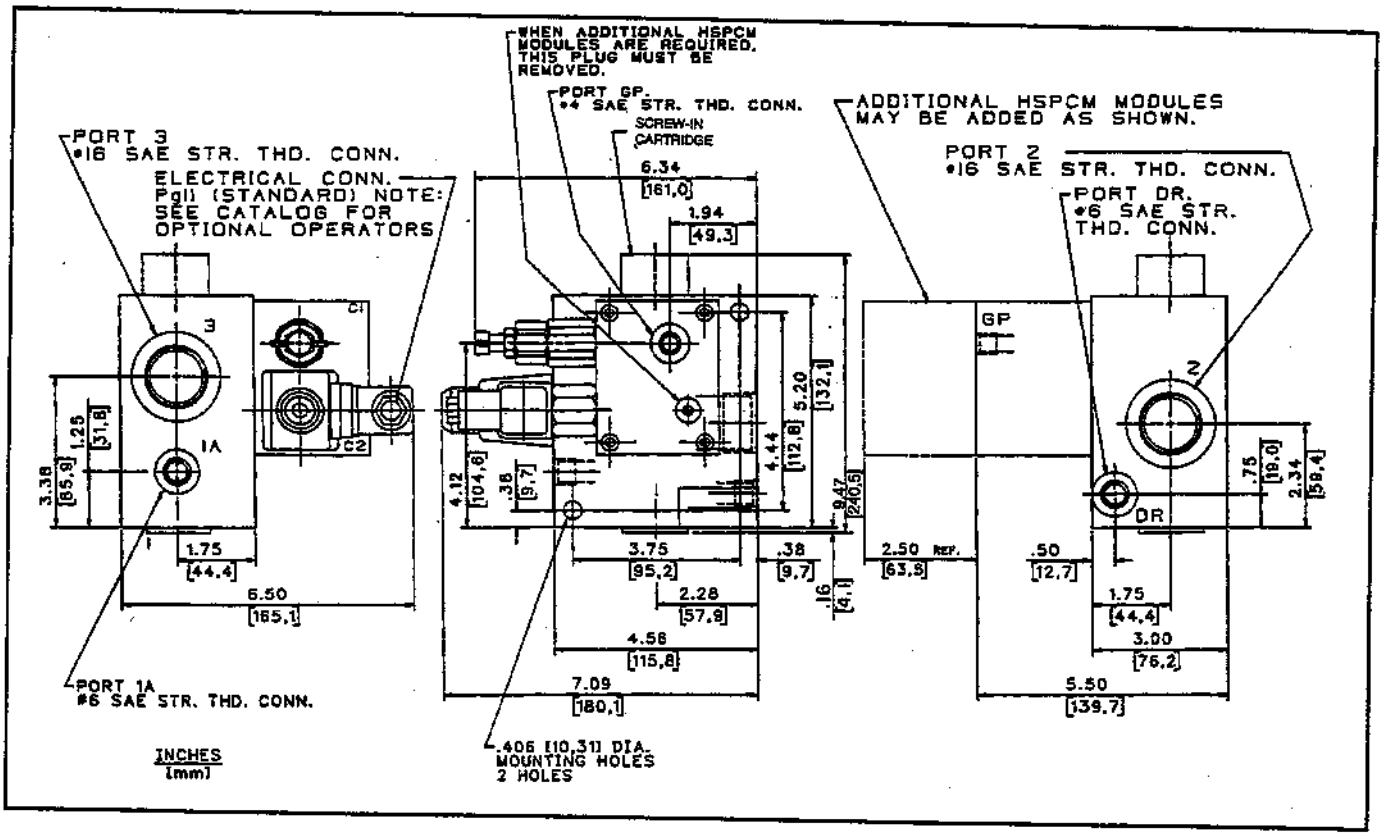
HSPRB1201

ENGINEERING | 2



Data Sheet Spool Pressure Reducing Valve for Pilot Operation

Line Mount Specification



How To Order

Screw-In Cartridge Only

HSPRB1201-__-

Spring	
H =	Heavy
L =	Light

Orifice Plug	
2 =	0.026"
3 =	0.030"

Cartridge With Line Mounted Block

HSPRB1201-__-__/DT1-16-C*

* Line Mount Block shown includes Pilot Control Modules (PCM). See pages 3 and 4 for "How To Order" Line Mount Blocks with Pilot Control Modules.

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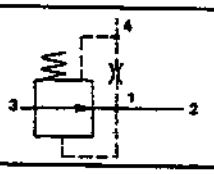
Oilgear

VALVE, SCREW-IN CARTRIDGE

25 USGPM Δ 100 PSI
(106,1 LPM Δ 6,9 Bar)

HSPRB1201

ENGINEERING | 3



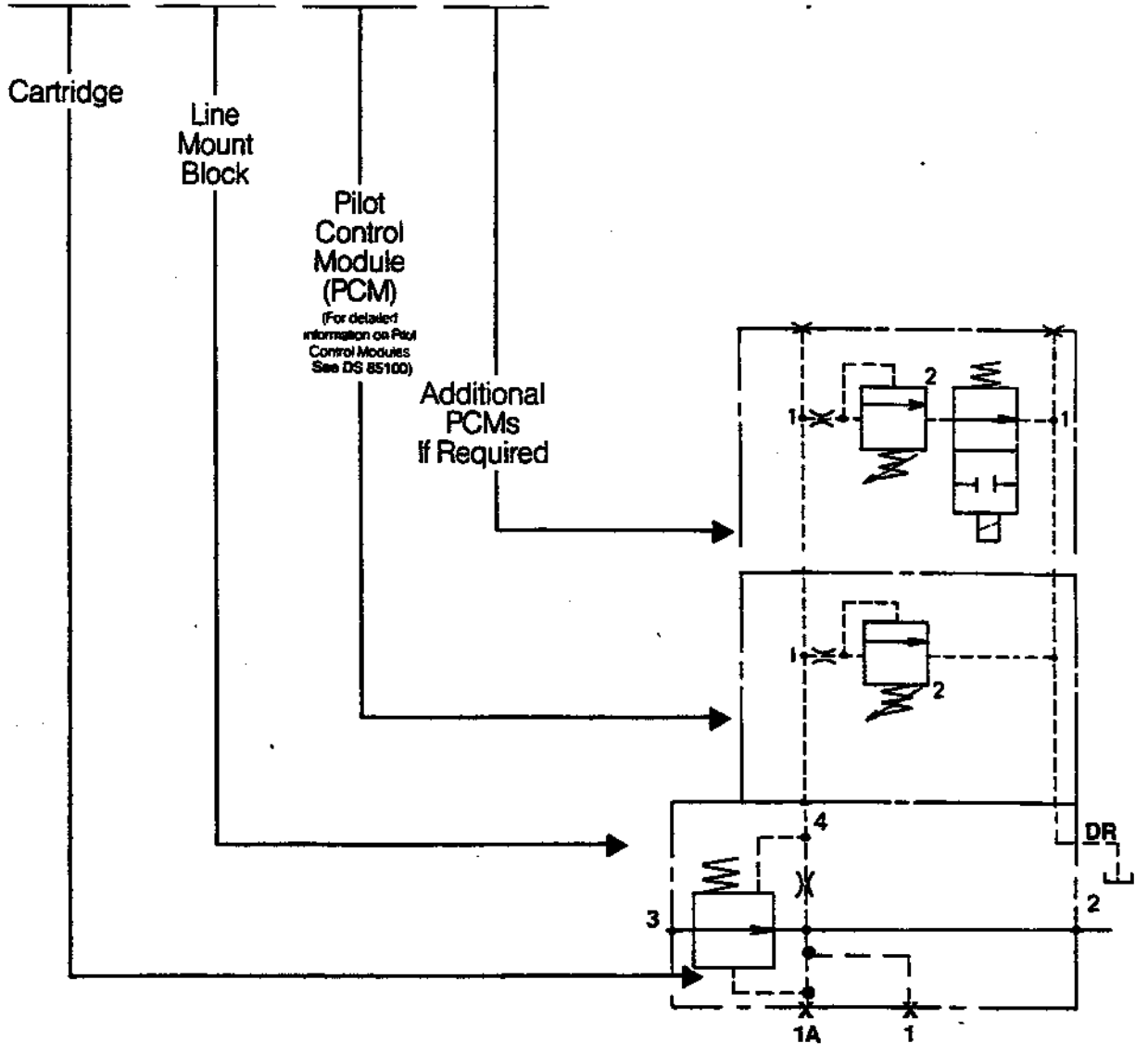
Data Sheet — Spool Pressure Reducing Valve for Pilot Operation

Cartridge Must Have Pilot Control Module

This cartridge valve requires pilot logic to offer added flexibility in providing maximum pressure consistently and smoothly. At least one pilot control module must be added to the valve.

Typical HSPRB1201 How To Order Example

HSPRB1201__-__/DT1-16-C/1-35-4-C/Optional



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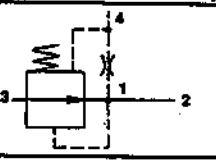
Oilgear

VALVE, SCREW-IN CARTRIDGE

25 USGPM Δ 100 PSI
(106,1 LPM Δ 6,9 Bar)

HSPRB1201

ENGINEERING | 4

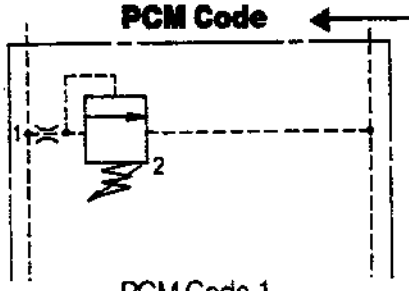


Data Sheet — **Spool Pressure Reducing Valve for Pilot Operation**

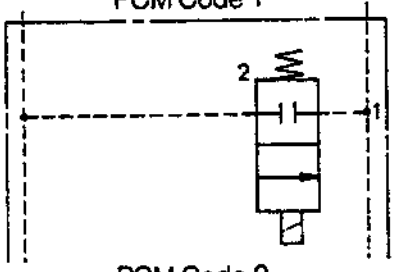
How To Order

Typical PCM How To Order Example: /30 - 35 - 4 - 0W - C

PCM Code



PCM Code 1



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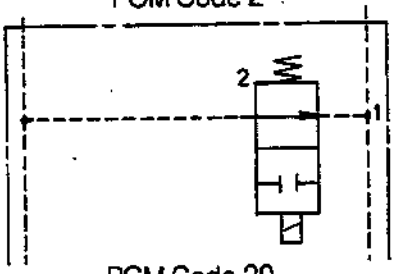
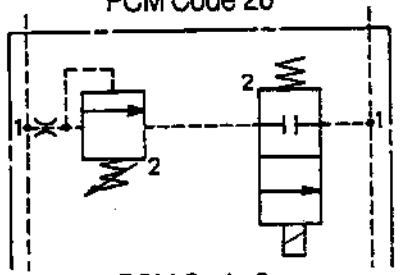
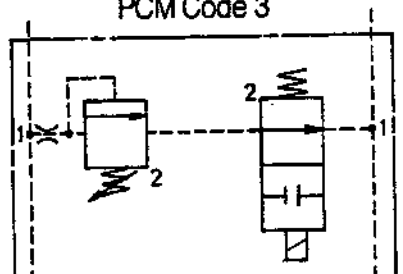


PCM Code 20



PCM Code 3



PCM Code 30

Pressure Range
07 = 50 - 700 psi (3,4 - 48,0 bar)
20 = 50 - 2000 psi (3,4 - 138,0 bar)
35 = 50 - 3500 psi (3,4 - 241,0 bar)
50 = 50 - 5000 psi (3,4 - 345,0 bar)

Orifice Diameter
4 = .040 Diameter (Standard)
See DS 85100 for special applications

Solenoid Voltage (if required)
0 = 115 V.A.C./60 HZ. or 110 V.A.C./50 HZ. Solenoid
1 = 230 V.A.C./60 HZ. or 220 V.A.C./50 HZ. Solenoid
2 = 12 V.D.C. Solenoid
3 = 24 V.D.C. Solenoid
Other voltages are available, consult factory

Electrical Connector (if required)
S = Cable connector w/o indicator light (standard)
L = Cable connector with indicator light
R = .500 NPTF connector w/o indicator light
W = .500 NPTF connector w/indicator light
C = Three pin Brad Harrison/DIN 43650 connector w/mating plug

Block Material
C = Nodular Iron (standard)

See DS 85100 for additional information on pilot controls.

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DS 82770-B14.2

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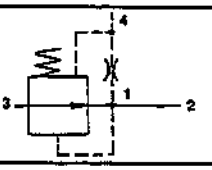
VALVE, SCREW-IN CARTRIDGE

43USGPM △100 PSI
(163,0 LPM △ 6,9 Bar)

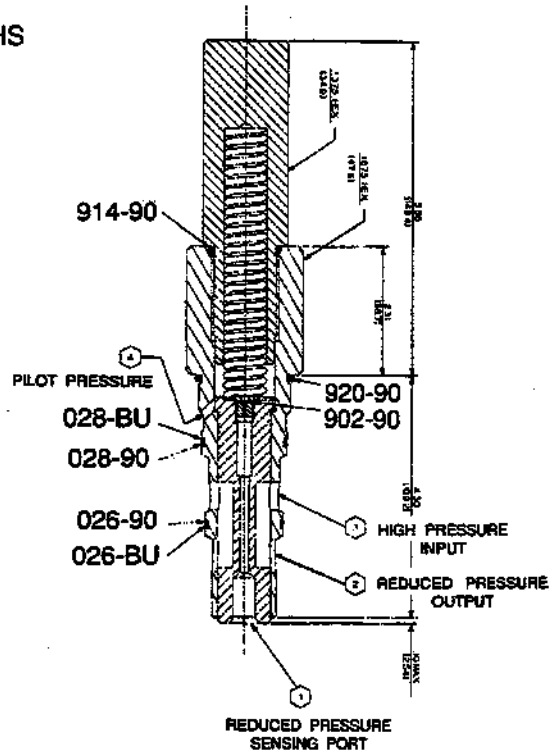
HSPRB1601

ENGINEERING | 1



Data Sheet — **Spool Pressure Reducing Valve for Pilot Operation**

400970HS



Form Tool Cavity
HS-1600-3B

Line Mount Block
EW1-24-C
EW1-66-C

Application

This HSPRB cartridge is designed to be piloted by one or more HSLR relief valves and can be used to provide multiple pressure settings and/or blocking.

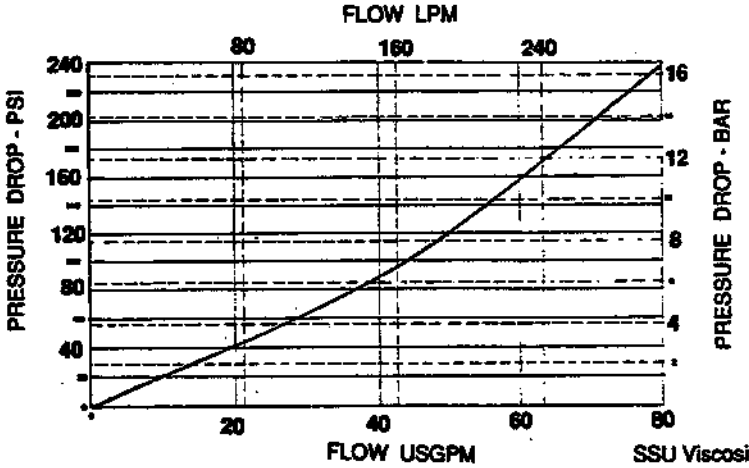
Operation

When cartridge is installed in it's cavity, port 1 is connected to port 2. A HSLR pilot relief valve must be connected via port 4 to the top (spring side) of the spool. Outlet (port 2) pressure is transmitted thru an orifice in the center of the spool and port 4 to the pilot valve. When outlet pressure exceeds the pilot valve setting, pressure exceeds the pilot valve setting, pressure on the top side of the spool is relieved and a pressure imbalance exists across the spool. The spool tends to rise in its bore and throttle or shut-off flow between ports 3 and 2. If pressure in the secondary system drops below the relief valve setting, the pilot valve re-seats, spool is again balanced and spring forces spool downward to allow flow from port 3 to 2.

Features

Used with one or more HSLR pilot valves, several repeatable high hysterisis pressure ranges are available. Alternative orifice sizes and spring forces are available to further control sensitivity and speed of operation. Cartridge is constructed of steel parts and all operating parts are hardened as required. Cartridge is designed for easy service or field repair.

Performance Curve



Specifications

Rated flow to - 85US gpm △ 260 psi
(322,2 lpm △17,9 Bar)
Maximum operating pressure - 5000 psi (345 Bar)
Adjustable pressure range - See HSLR Pilot Valve DS 82550-B2.1A
Viscosity range - 27-30 SSU at 100°F
35-2000 SSU at 100°F
Seals - Viton
Operating temperature - -40°F to 350°F
(-39,6°C to 175°C)
Filtration - Maintain SAE class 6, ISO 18/15
Seal Kit - HSSK-1600-C

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DS 82770-B14.3

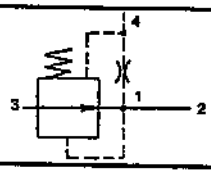
Oilgear

VALVE, SCREW-IN CARTRIDGE

43USGPM △100 PSI
(163,0 LPM △ 6,9 Bar)

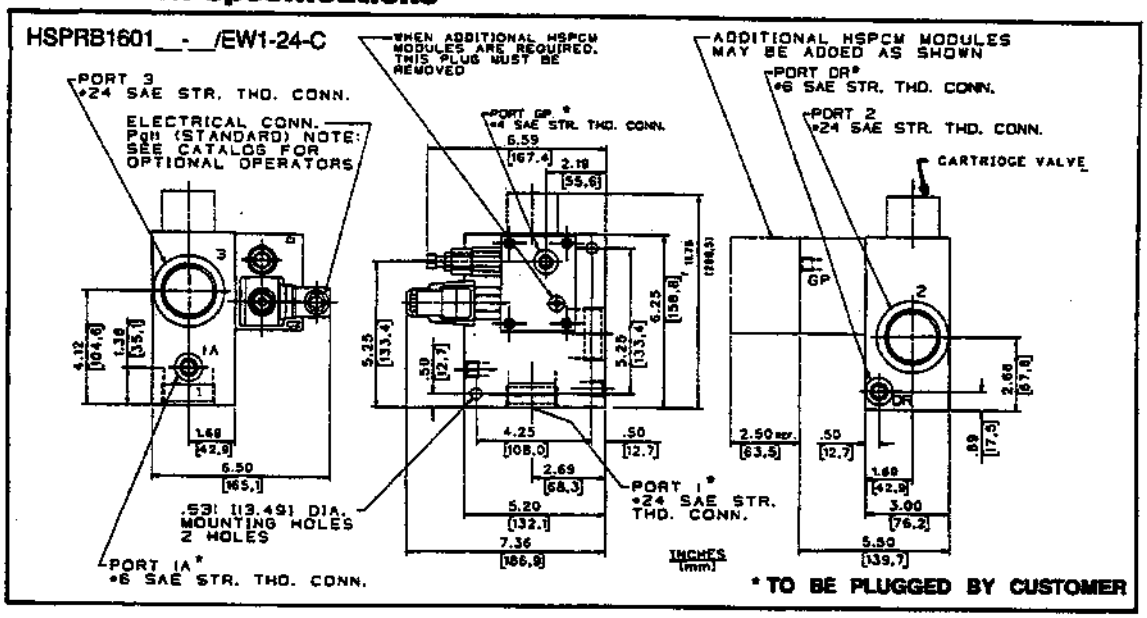
HSPRB1601

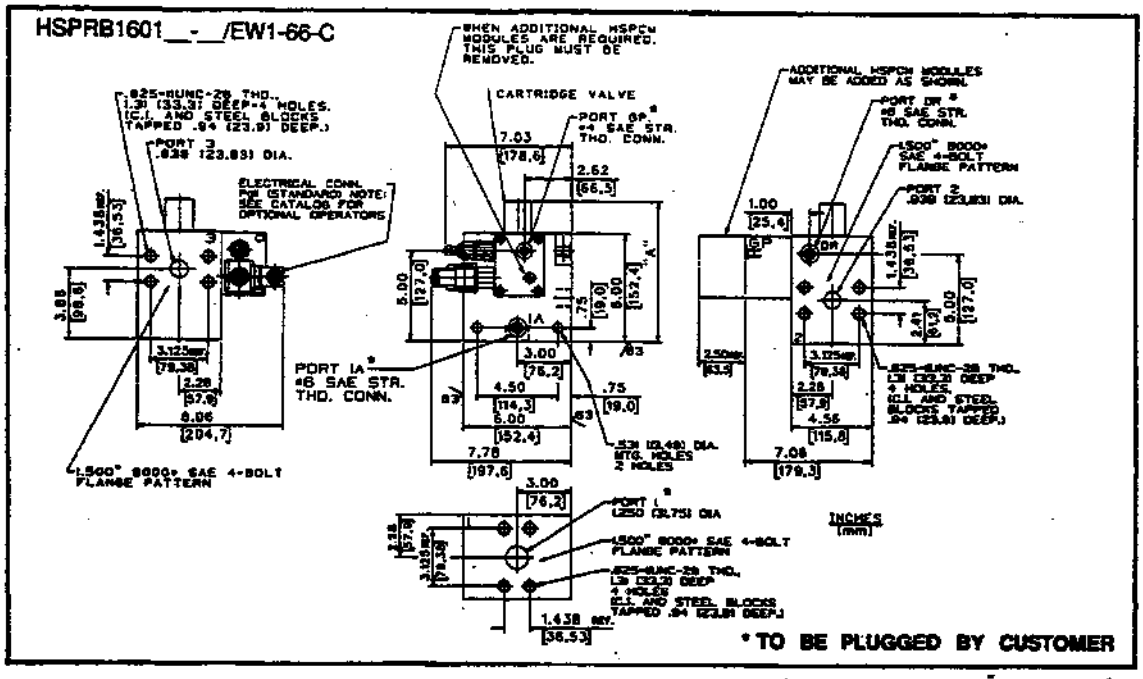
ENGINEERING | 2



Data Sheet — **Spool Pressure Reducing Valve for Pilot Operation**

Line Mount Specifications





How To Order

Screw-In Cartridge Only

HSPRB1601-__-__

	Spring
H =	Heavy
L =	Light

	Orifice Plug
2 =	0.026"
3 =	0.030"

Cartridge With Line Mount Block

3000 psi (207 Bar) service pressure
HSPRB1601-__-__/EW1-24-C*

5000 psi (345 Bar) service pressure
HSPRB1601-__-__/EW1-66-C*

* Line Mount Block shown includes Pilot Control Modules (PCM). See pages 3 and 4 for "How To Order" Line Mount Blocks with Pilot Control Modules.

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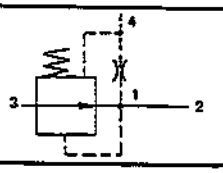


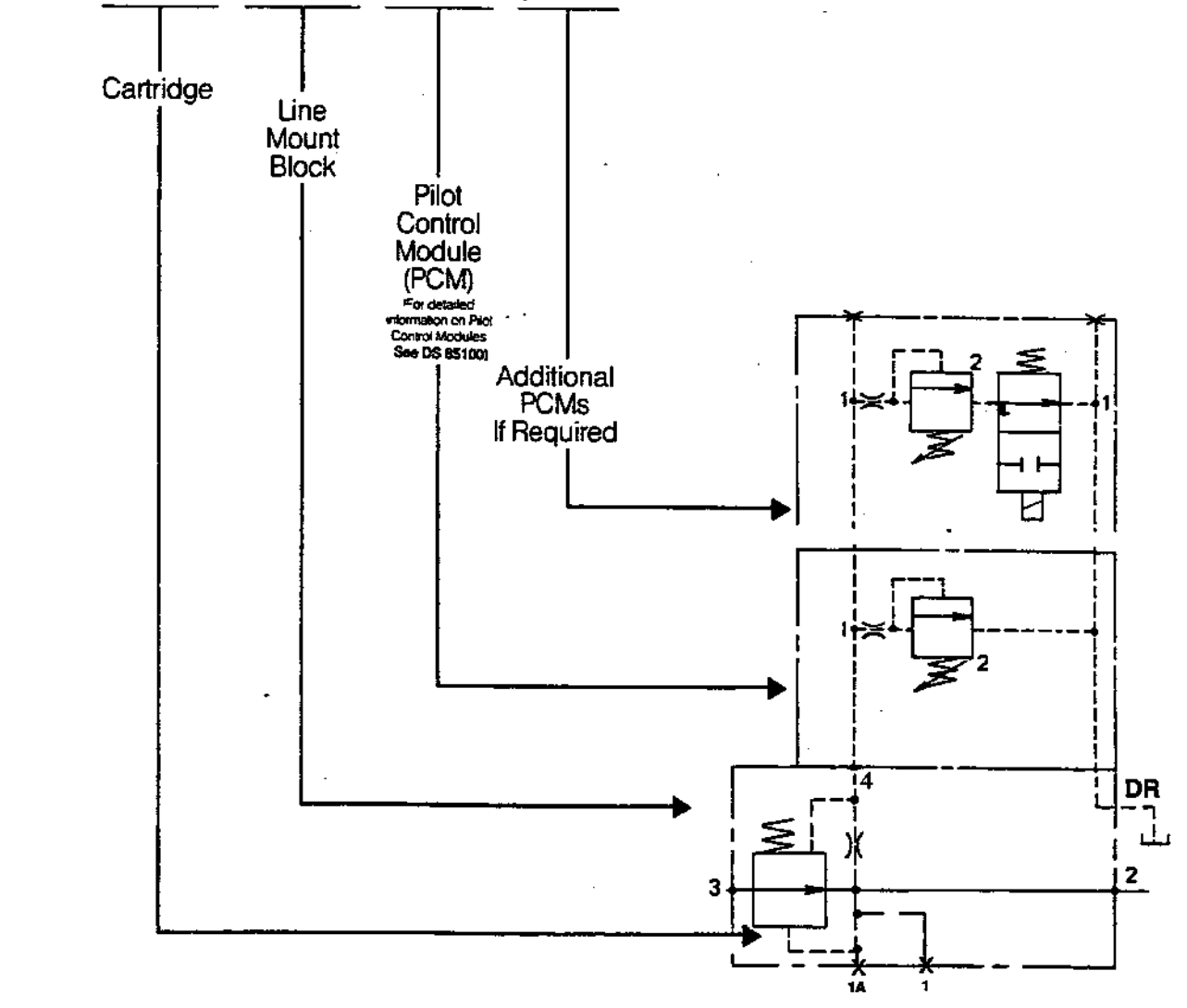
Data Sheet — Spool Pressure Reducing Valve for Pilot Operation

Cartridge Must Have Pilot Control Module

This cartridge valve requires pilot logic to offer added flexibility in providing maximum pressure consistently and smoothly. At least one pilot control module must be added to the valve.

Typical HSPRB1601 How To Order Example

HSPRB1601__-__/EW1-24-C/1-35-4-C/Optional



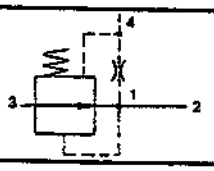
Oilgear

VALVE, SCREW-IN CARTRIDGE

43USGPM △100 PSI
(163,0 LPM △ 6,9 Bar)

HSPRB1601

ENGINEERING | 4

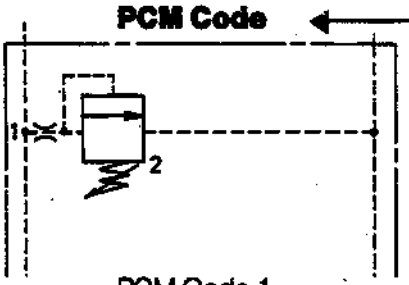


Data Sheet — **Spool Pressure Reducing Valve for Pilot Operation**

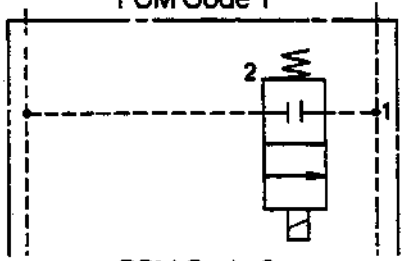
How To Order

Typical PCM How To Order Example: /30 - 35 - 4 - 0W - C

PCM Code



PCM Code 1



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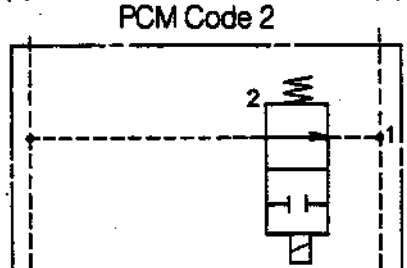
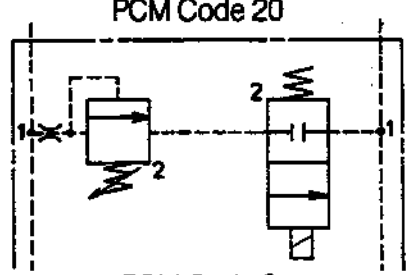
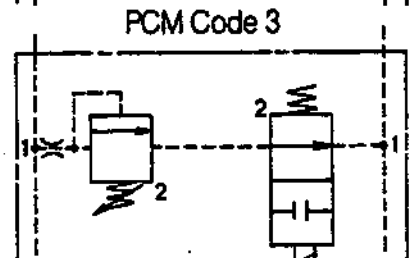


PCM Code 20



PCM Code 3



PCM Code 30

Pressure Range
07 = 50- 700 psi (3,4- 48,0 bar)
20 = 50-2000 psi (3,4-138,0 bar)
35 = 50-3500 psi (3,4-241,0 bar)
50 = 50-5000 psi (3,4-345,0 bar)

Orifice Diameter
4 = .040 Diameter (Standard)
See DS 85100 for special applications ;

Solenoid Voltage (if required)
0 = 115 V.A.C./60 HZ. or 110 V.A.C./50 HZ. Solenoid
1 = 230 V.A.C./60 HZ. or 220 V.A.C./50 HZ. Solenoid
2 = 12 V.D.C. Solenoid
3 = 24 V.D.C. Solenoid
Other voltages are available, consult factory

Electrical Connector (if required)
S = Cable connector w/o indicator light (standard)
L = Cable connector with indicator light
R = .500 NPTF connector w/o indicator light
W = .500 NPTF connector w/indicator light
C = Three pin Brad Harrison/DIN 43650 connector w/mating plug

Block Material
C = Nodular Iron (standard)

See DS 85100 for additional information on pilot controls.

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DS 82770-B14.3

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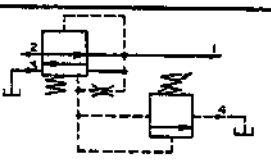
Oilgear

VALVE, SCREW-IN CARTRIDGE

19 USGPM △ 100 PSI
(72,0 LPM △ 6,9 Bar)

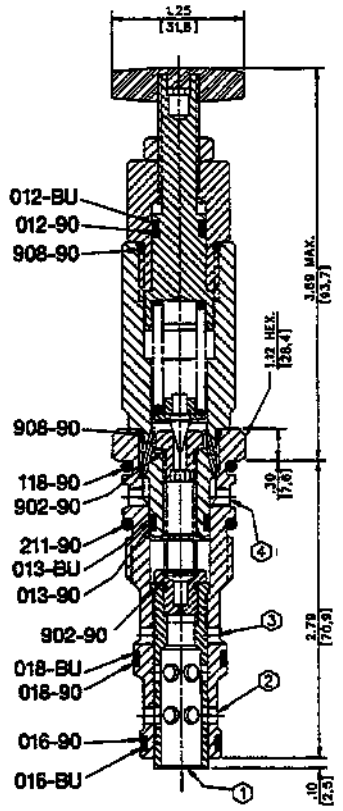
HSPRR801-P

ENGINEERING | 1



Data Sheet — **Pressure Reducing & Relieving Valve**

400825HS



Form Tool Cavity
HS-800-4

Line Mount Block
CM1-10-C

Application

The HSPRR valve is used to provide and maintain a regulated pressure (to a secondary circuit) that is lower than the supply pressure. The valve also provides a relief function for the regulated circuit at a pressure slightly (approximately 3%) above the reduced pressure setting.

Operation

Outlet (port 1) pressure is transmitted thru an orifice in the center of the spool to the pilot relief valve (in upper portion of the body). When outlet pressure exceeds this valve setting, pressure on the top side of the main spool and sleeve is relieved (thru port 4), a pressure imbalance then exists across the main spool. The main spool and sleeve tend to rise and throttle or shut-off flow between ports 2 and 1. If pressure in secondary circuit (port 1) which is now shut-off from main circuit (port 2), rises above the relief valve setting, the pressure on the top side of the spool is relieved again (thru port 4) again creating a pressure imbalance across the main spool and pressure at port 1 pushes the main spool and sleeve higher in the body until port 1 is connected thru the sleeve to (tank) port 3. Note: that in this position port 2 remains blocked.

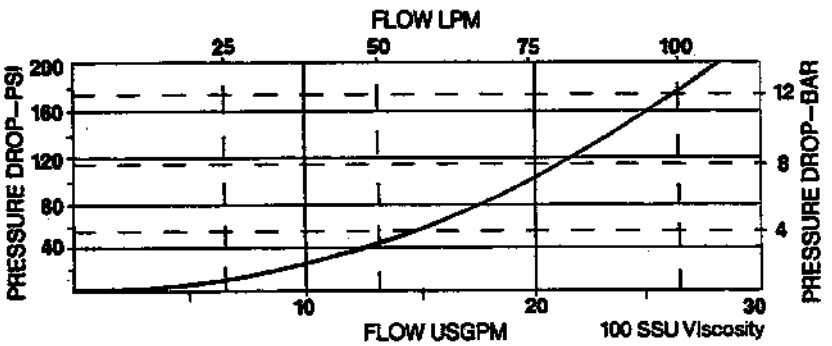
Features

Two valve function from one low cost cartridge. Several pressure ranges available with this high accuracy pilot operated design. Constructed of steel parts and operating parts are hardened as required. Cartridge is designed for easy service or field repair.

Specifications

Rated flow to—33 USgpm △ 300 psi
(125 lpm △ 20,7 bar)
Maximum operating pressure—
5000 psi (345 bar)
Adjustable pressure range—Depends on pressure range selected. See "How To Order"
Viscosity range—27-30 SSU at 100°F
35-2000 SSU at 100°F
Seals—Viton
Operating temperature—-40°F to 350°F
(-39,6°C to 175°C)
Filtration—Maintain SAE Class 6, ISO 18/15
Seal kit—HSSK-800-D

Performance Curve



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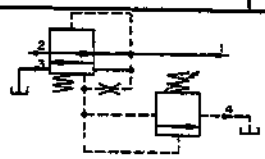
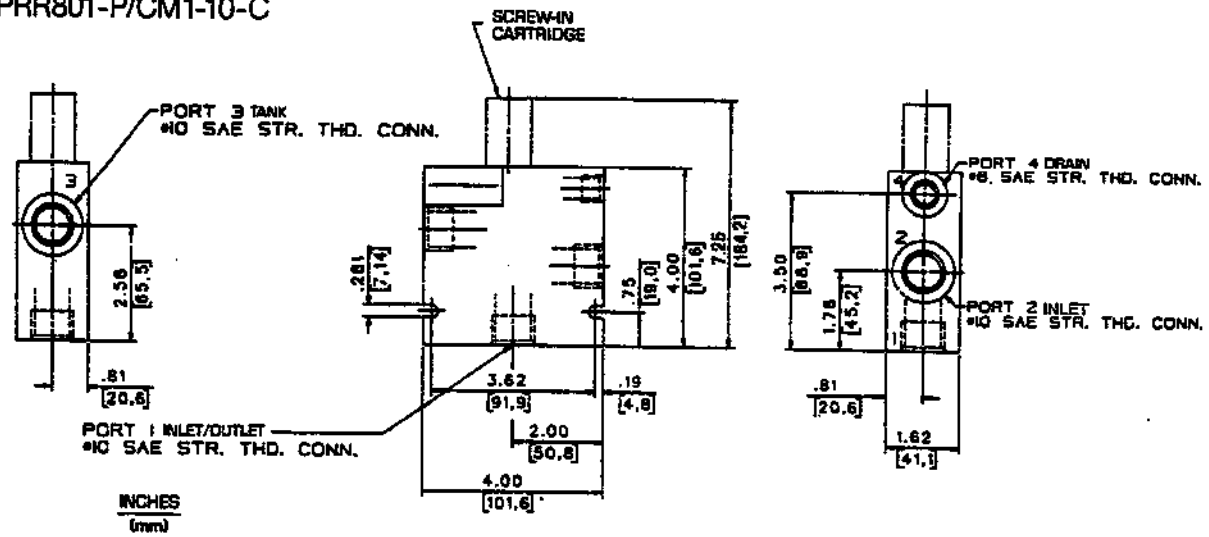
DS 82790-B15.1



Data Sheet — Pressure Reducing & Relieving Valve

Line Mount Specifications

HSPRR801-P/CM1-10-C



How To Order

Screw-In Cartridge Only

HSPRR801-P-__

	Pressure Range	
	psi	bar
07	50- 700	3,4- 48
20	50-2000	3,4-138
35	50-3500	3,4-241
50	50-5000	3,4-345

Cartridge With Line Mount Block

HSPRR801-P-__/CM1-10-C

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