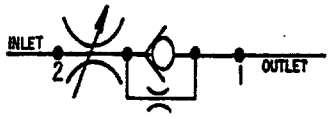
Oilgear

VALVE, SCREW-IN CARTRIDGE

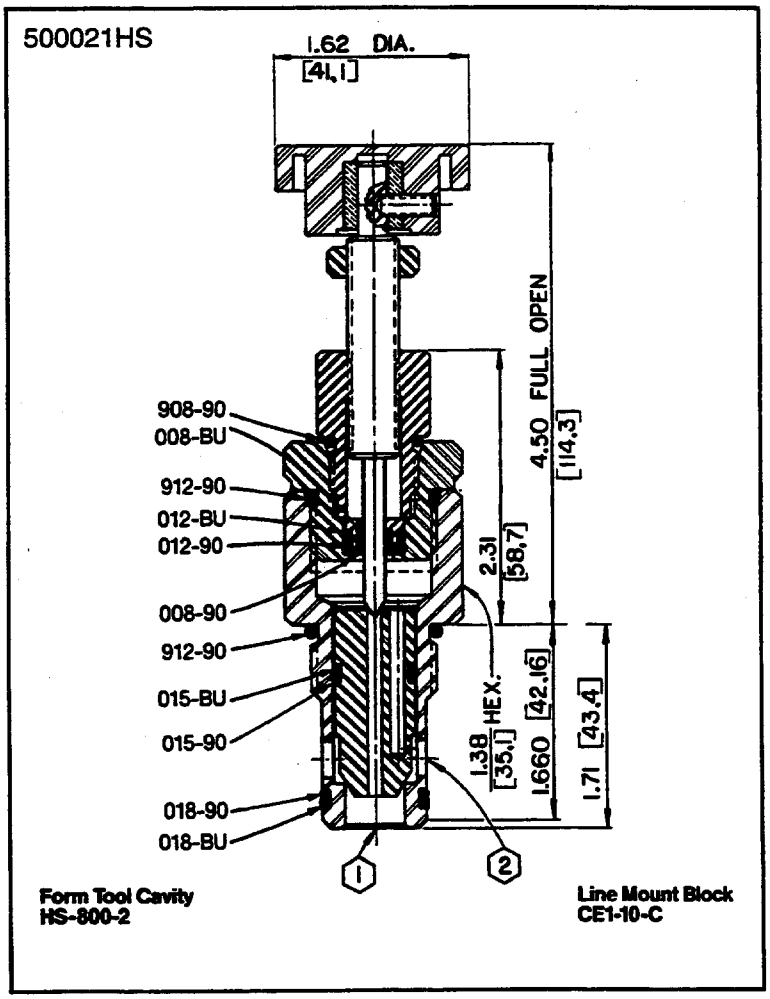
34 GPM △ 100 PSI
(128,9 LPM △ 6,9 Bar)

HSTV800

ENGINEERING | 1



Data Sheet — **Throttle Valve**



Application

The HSTV valve is a low torque—fast acting, non-compensated adjustable orifice (port 2 to 1) used to meter-in, meter-out, or bleed-off circuits to control fluid flow volume.

Operation

The adjusting screw is separate from the main spool. Turning the screw outward connects the upper area of the spool to the low pressure port 1 and allows port 2 pressure (flow) to act on the annular area of the main spool and raise it until the point of the screw seals a passage to port 1 drilled thru the spool. Port 2 is also connected thru a balancing orifice and another drilled passage to the area above the spool. Therefore, fluid pressure is the same (balanced) on both ends of the spool. When screw is turned inward to reduce flow, only the sliding friction of the spool in the body has to be overcome. Unadjustable flow from port 1 to port 2 is possible under some circumstances.

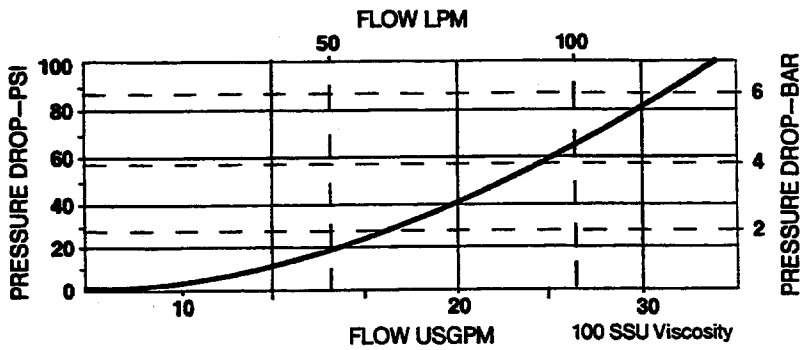
Features

The valve is hydraulically balanced and can be adjusted, even at 5000 psi, in either direction with finger tip ease. Cartridge valve is constructed of steel parts, operating parts are hardened and ground as required. Cartridge is designed for easy service or field repairs. A stepping motor drive can be added for open or closed loop control.

Specifications

Nominal flow to—34 gpm (128,9 lpm)
Maximum operating pressure—
5000 psi (345 bar)
Turn, full open to close—5 turns
Torque to adjust valve when under maximum pressure—(port 2 to 1) = 1.35 in. lb.
(0.15 Nmm)
Maximum shut-off leakage at rated pressure—
5 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-800-J

Performance Curve



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OILGEAR
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Reissued: Nov., 1995

DS 84360-A4.1

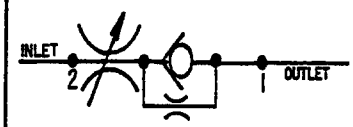
Oilgear

VALVE, SCREW-IN CARTRIDGE

34 GPM △ 100 PSI
(128,9 LPM △ 6,9 Bar)

HSTV800

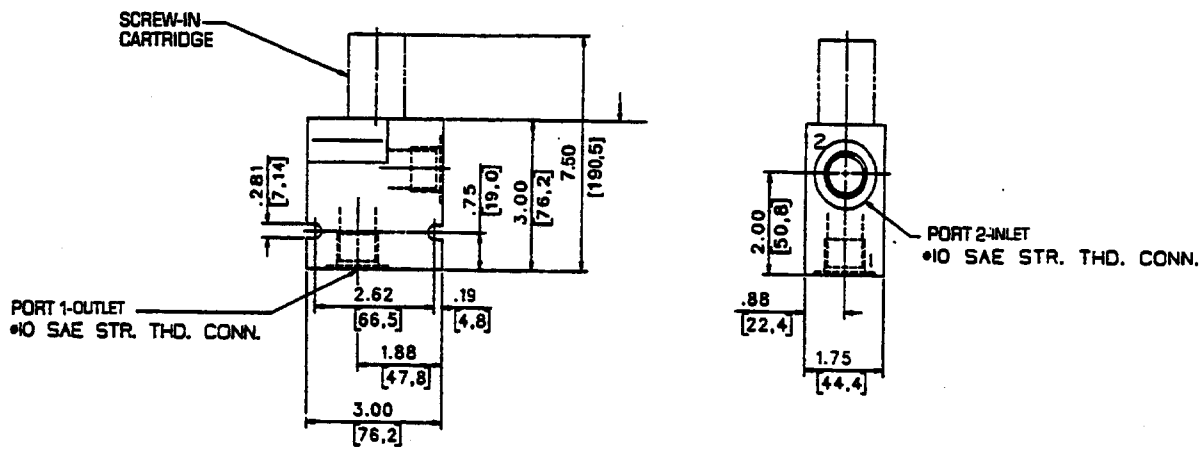
ENGINEERING | 2



Data Sheet — Throttle Valve

Line Mount Specifications

HSTV800/CE1-10-C



How To Order

Screw-In Cartridge Only

HSTV800-__

	Adjuster
Blank	Plastic knob (Std)
K	Knurted knob

Cartridge With Line Mount Block

HSTV800-__/CE1-10-C

OILGEAR
2300 So. 51st. Street
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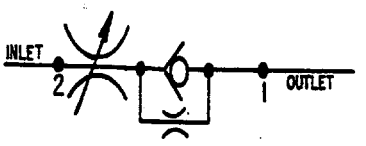
Oilgear

VALVE, SCREW-IN CARTRIDGE

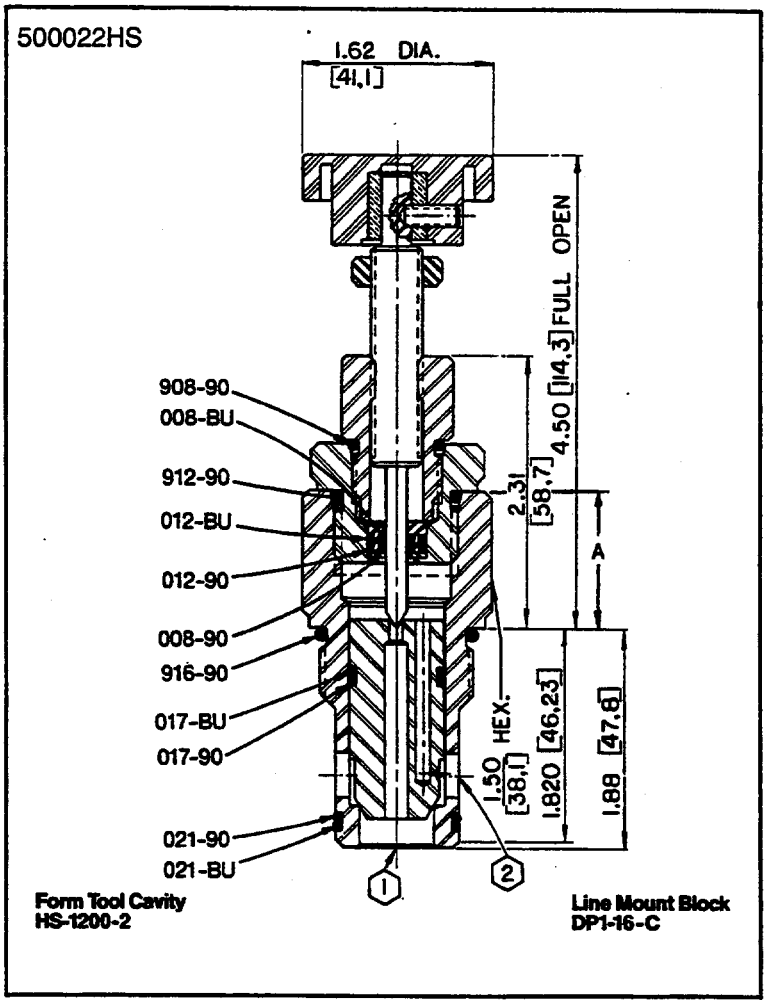
60 GPM △ 100 PSI
(227,4 LPM △ 6,9 Bar)

HSTV1200

ENGINEERING | 1



Data Sheet — **Throttle Valve**



Application

The HSTV valve is a low torque—fast acting, non-compensated adjustable orifice (port 2 to 1) used to meter-in, meter-out, or bleed-off circuits to control fluid flow volume.

Operation

The adjusting screw is separate from the main spool. Turning the screw outward connects the upper area of the spool to the low pressure port 1 and allows port 2 pressure (flow) to act on the annular area of the main spool and raise it until the point of the screw seals a passage to port 1 drilled thru the spool. Port 2 is also connected thru a balancing orifice and another drilled passage to the area above the spool. Therefore, fluid pressure is the same (balanced) on both ends of the spool. When screw is turned inward to reduce flow, only the sliding friction of the spool in the body has to be overcome. Unadjustable flow from port 1 to port 2 is possible under some circumstances.

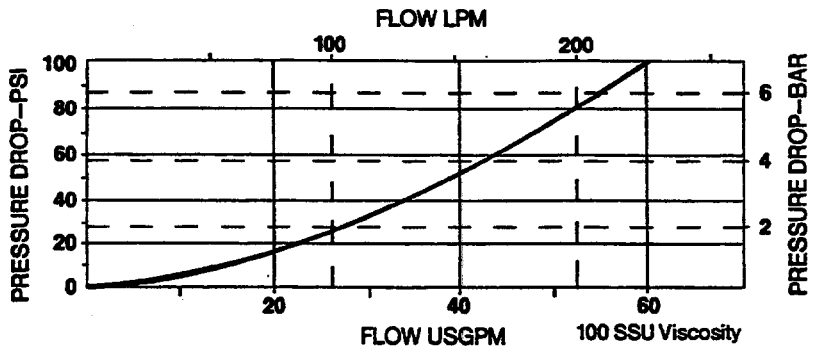
Features

The valve is hydraulically balanced and can be adjusted, even at 5000 psi, in either direction with finger tip ease. Cartridge valve is constructed of steel parts, operating parts are hardened and ground as required. Cartridge is designed for easy service or field repairs. A stepping motor drive can be added for open or closed loop control.

Specifications

Nominal flow to—60 gpm (227,4 lpm)
Maximum operating pressure—
5000 psi (345 bar)
Turn, full open to close—5 turns
Torque to adjust valve when under maximum pressure—(port 2 to 1) to raise pressure = 1.0 in. lb. (0.113 Nmm), to reduce pressure = 0.44 in. lb. (0.049 Nmm)
Maximum shut-off leakage at rated pressure—
5 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-1200-F

Performance Curve



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OILGEAR
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Reissued: Nov., 1995

DS 84360-A4.2

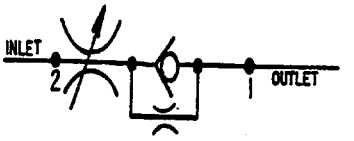
Oilgear

VALVE, SCREW-IN CARTRIDGE

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

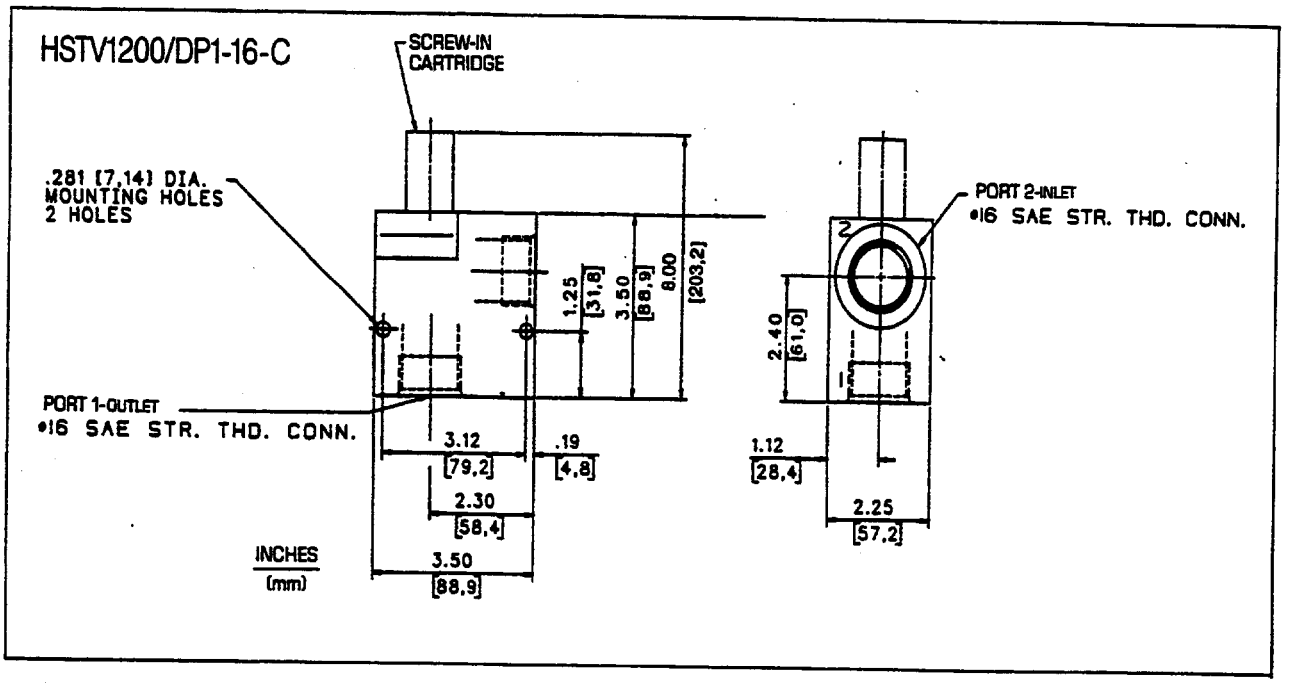
HSTV1200

ENGINEERING | 2



Data Sheet — Throttle Valve

Line Mount Specifications



How To Order

Screw-In Cartridge Only

HSTV1200- ____

	Adjuster
Blank	Plastic knob (Std)
K	Knurted knob

Cartridge With Line Mount Block

HSTV1200-__/DP1-16-C

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

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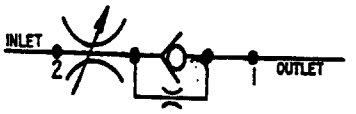
Oilgear

VALVE, SCREW-IN CARTRIDGE

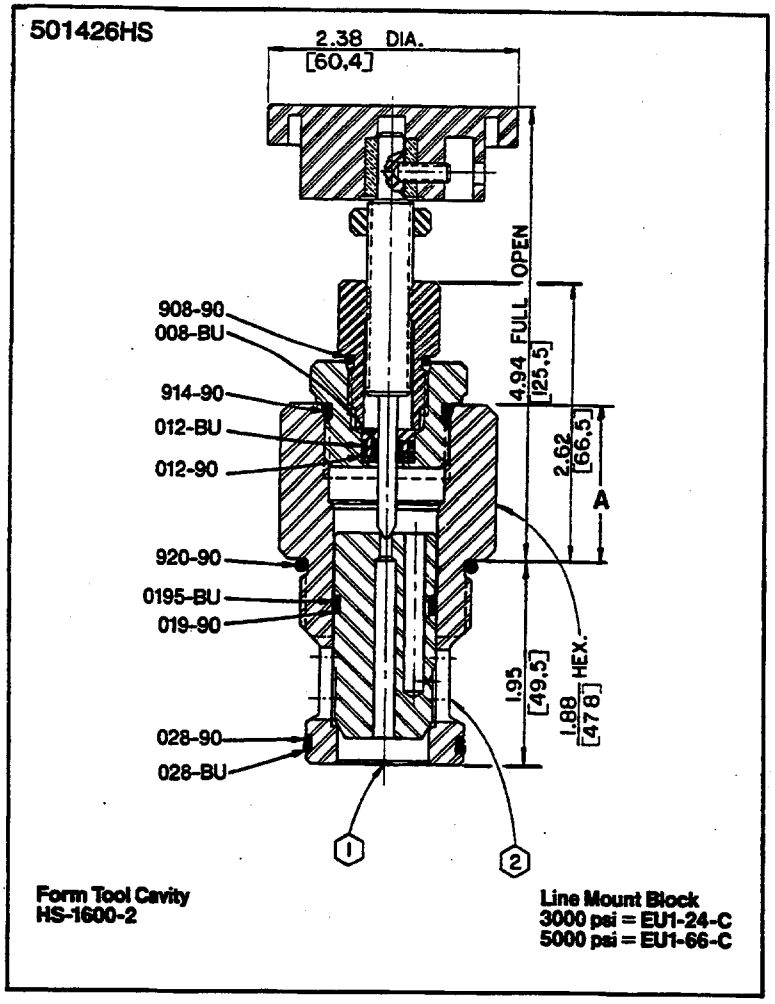
83 GPM △ 100 PSI
(314,6 LPM △ 6,9 Bar)

HSTV1601

ENGINEERING | 1



Data Sheet — **Throttle Valve**



Application

The HSTV valve is a low torque—fast acting, non-compensated adjustable orifice (port 2 to 1) used to meter-in, meter-out, or bleed-off circuits to control fluid flow volume.

Operation

The adjusting screw is separate from the main spool. Turning the screw outward connects the upper area of the spool to the low pressure port 1 and allows port 2 pressure (flow) to act on the annular area of the main spool and raise it until the point of the screw seals a passage to port 1 drilled thru the spool. Port 2 is also connected thru a balancing orifice and another drilled passage to the area above the spool. Therefore, fluid pressure is the same (balanced) on both ends of the spool. When screw is turned inward to reduce flow, only the sliding friction of the spool in the body has to be overcome. Unadjustable flow from port 1 to port 2 is possible under some circumstances.

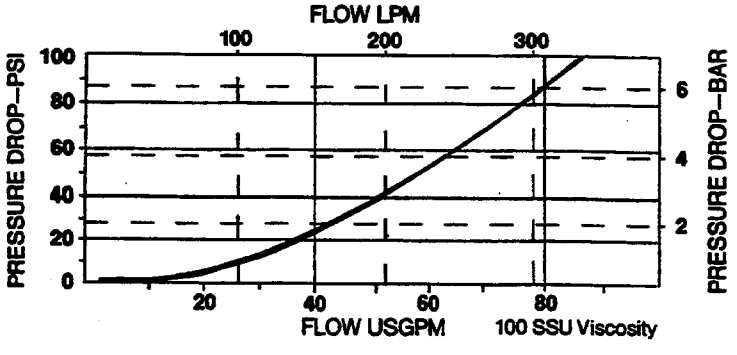
Features

The valve is hydraulically balanced and can be adjusted, even at 5000 psi, in either direction with finger tip ease. Cartridge valve is constructed of steel parts, operating parts are hardened and ground as required. Cartridge is designed for easy service or field repairs. A stepping motor drive can be added for open or closed loop control.

Specifications

Nominal flow to—83 gpm (314,6 lpm)
Maximum operating pressure—
5000 psi (345 bar)
Turn, full open to close—8 turns
Torque to adjust valve when under maximum pressure—(port 2 to 1) to raise pressure = 0.63 in. lb. (0.07 Nmm), to reduce pressure = 0.38 in. lb. (0.04 Nmm)
Maximum shut-off leakage at rated pressure—
5 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-1600-F

Performance Curve



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OILGEAR
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Reissued: Nov., 1995

DS 84360-A4.3

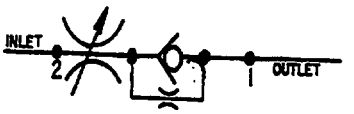
Oilgear

VALVE, SCREW-IN CARTRIDGE

83 GPM △ 100 PSI
(314,6 LPM △ 6,9 Bar)

HSTV1601

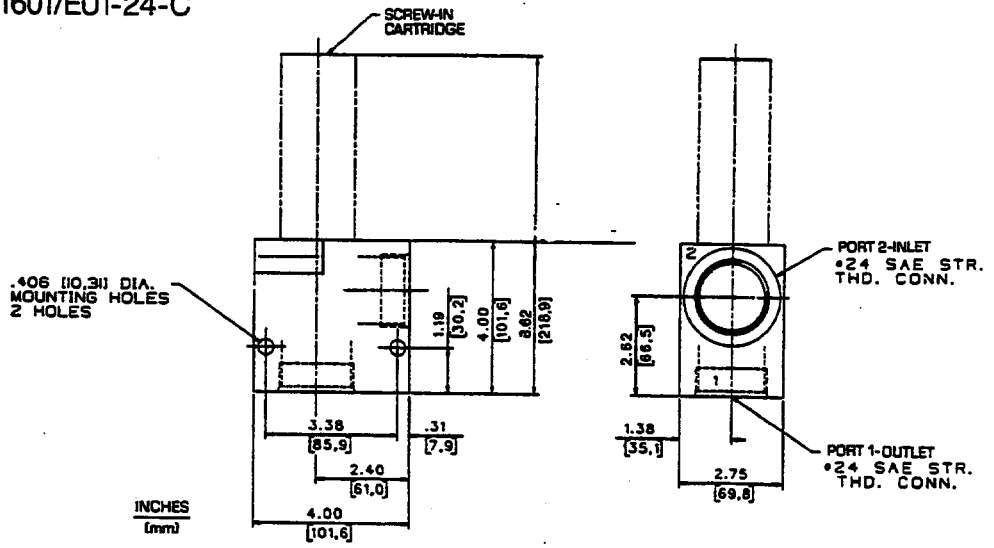
ENGINEERING | 2



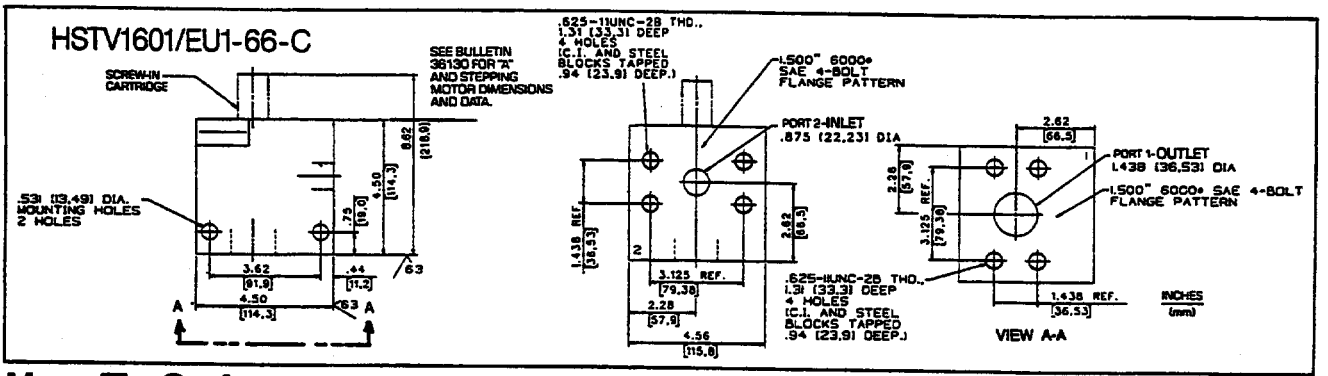
Data Sheet — **Throttle Valve**

Line Mount Specifications

HSTV1601/EU1-24-C



HSTV1601/EU1-66-C



How To Order

Screw-In Cartridge Only

HSTV1601-___

	Adjuster
Blank	Plastic knob (Std)
K	Knurted knob
See Bulletin 36130 for stepper motor data	

Cartridge With Line Mount Block

3000 psi (207 bar) service pressure
HSTV1601- /EU1-24-C
5000 psi (345 bar) service pressure
HSTV1601- /EU1-66-C

Reissued: Nov., 1995
DS 84360-A4.3

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Milwaukee, WI USA 53219

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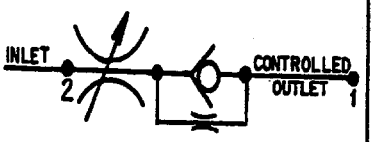
Oilgear

VALVE, SCREW-IN CARTRIDGE

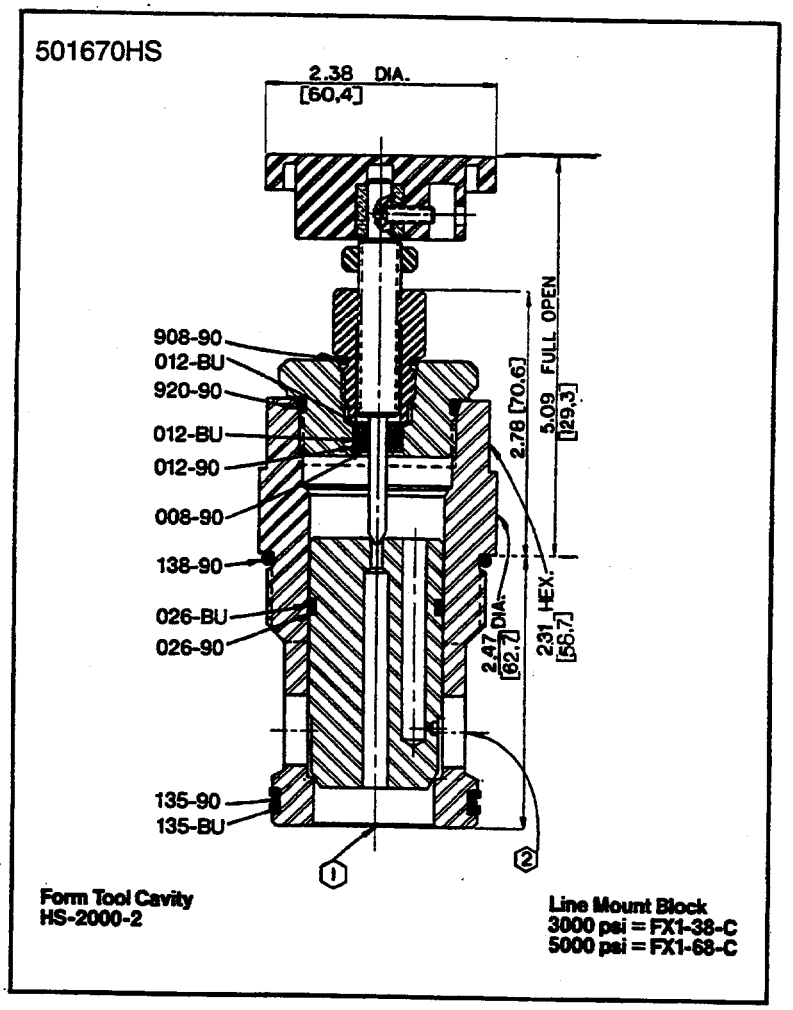
215 GPM △ 100 PSI
(814,9 LPM △ 6,9 Bar)

HSTV2001

ENGINEERING | 1



Data Sheet — **Throttle Valve**



Application

The HSTV valve is a low torque—fast acting, non-compensated adjustable orifice (port 2 to 1) used to meter-in, meter-out, or bleed-off circuits to control fluid flow volume.

Operation

The adjusting screw is separate from the main spool. Turning the screw outward connects the upper area of the spool to the low pressure port 1 and allows port 2 pressure (flow) to act on the annular area of the main spool and raise it until the point of the screw seals a passage to port 1 drilled thru the spool. Port 2 is also connected thru a balancing orifice and another drilled passage to the area above the spool. Therefore, fluid pressure is the same (balanced) on both ends of the spool. When screw is turned inward to reduce flow, only the sliding friction of the spool in the body has to be overcome. Unadjustable flow from port 1 to port 2 is possible under some circumstances.

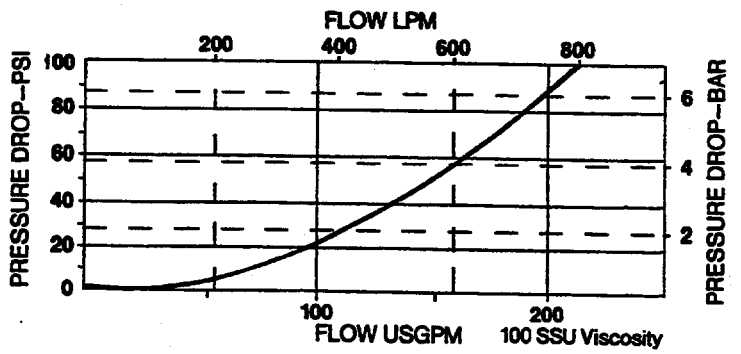
Features

The valve is hydraulically balanced and can be adjusted, even at 5000 psi, in either direction with finger tip ease. Cartridge valve is constructed of steel parts, operating parts are hardened and ground as required. Cartridge is designed for easy service or field repairs. A stepping motor drive can be added for open or closed loop control.

Specifications

Nominal flow to—215 gpm (814,9 lpm)
Maximum operating pressure—
5000 psi (345 bar)
Turn, full open to close—10 turns
Torque to adjust valve when under maximum pressure—(port 2 to 1) to raise pressure = 0.75 in. lb. (0.08 Nmm), to reduce pressure = 0.63 in lb. (0.071 Nmm)
Maximum shut-off leakage at rated pressure—
5 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-2000-J

Performance Curve



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Reissued: Nov., 1995

DS 84360-A4.4

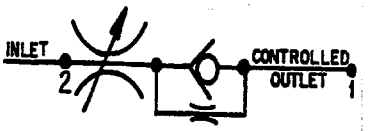
Oilgear

VALVE, SCREW-IN CARTRIDGE

215 GPM △ 100 PSI
(814,9 LPM △ 6,9 Bar)

HSTV2001

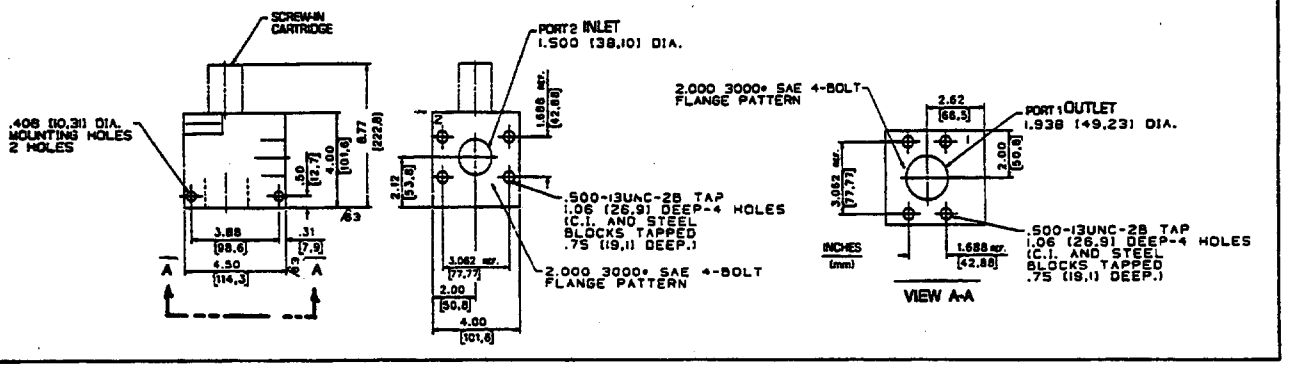
ENGINEERING | 2



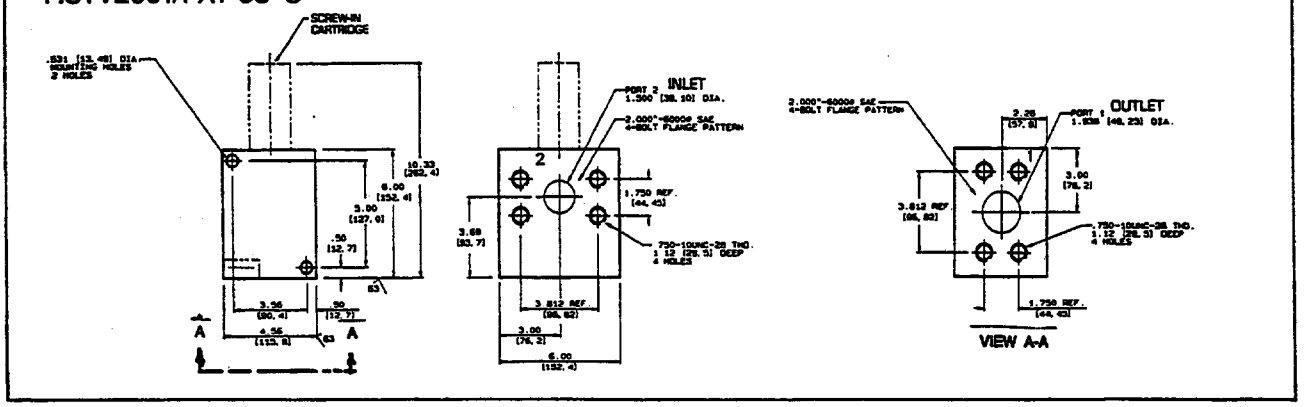
Data Sheet — **Throttle Valve**

Line Mount Specifications

HSTV2001/FX1-38-C



HSTV2001/FX1-68-C



How To Order

Screw-In Cartridge Only

HSTV2001 -___

	Adjuster
Blank	Plastic knob (Std)
K	Knurled knob

Cartridge With Line Mount Block

3000 psi (207 bar) service pressure
HSTV2001-__/FX1-38-C

5000 psi (345 bar) service pressure
HSTV2001-__/FX1-68-C

Reissued: Nov., 1995
DS 84360-A4.4

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