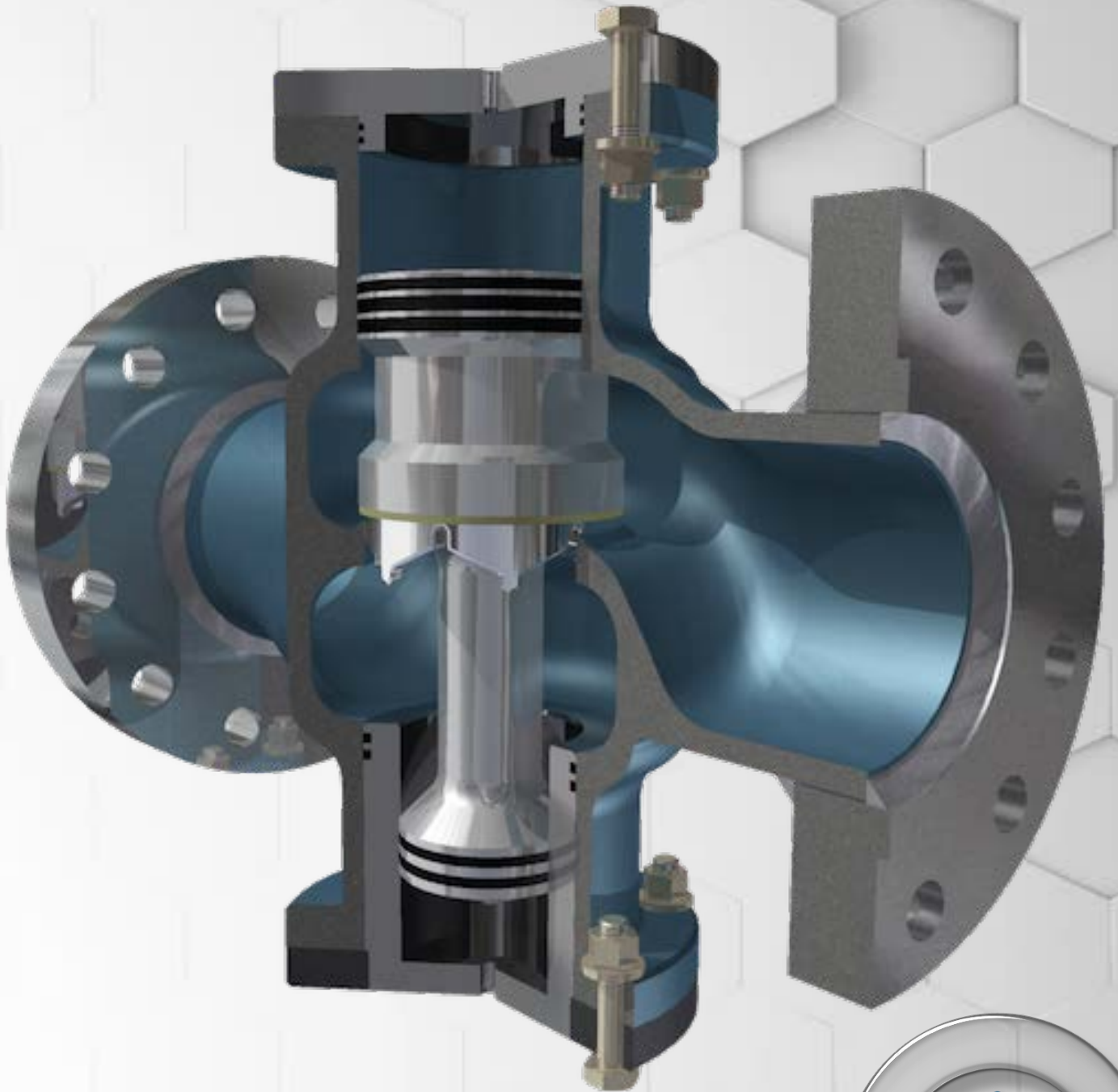


Hydrocore Limited Presents

The Symmetrical Pressure Reducing Valve with V-Trim





Hydrocore™ Symmetrical Pressure Reducing Valve with V-Trim

HYDROCORE LIMITED
*The smart solutions
for your business*

OVERVIEW

Hydrocore's V-Port trim is utilized in the Hydrocore Pressure Reducing Valve Range. With the V-Port trim installed as the seat holder, pressure and flow regulation is more accurate, stable and smoother. The V-port trim replaces the standard Hydrocore seat holder, and can be applied to all sizes and pressure ratings.

FEATURES AND BENEFITS

- Accurate, stable & smooth control of pressure and flow regulation.
- Can suit all valve sizes and pressure ratings.
- Suitable for low flow (high velocity).
- Reduces noise and vibration.
- Improved anti-cavitation on valve seat area.
- Increased longevity of valve lifespan.

FIXED REDUCTION RATIO VALVE

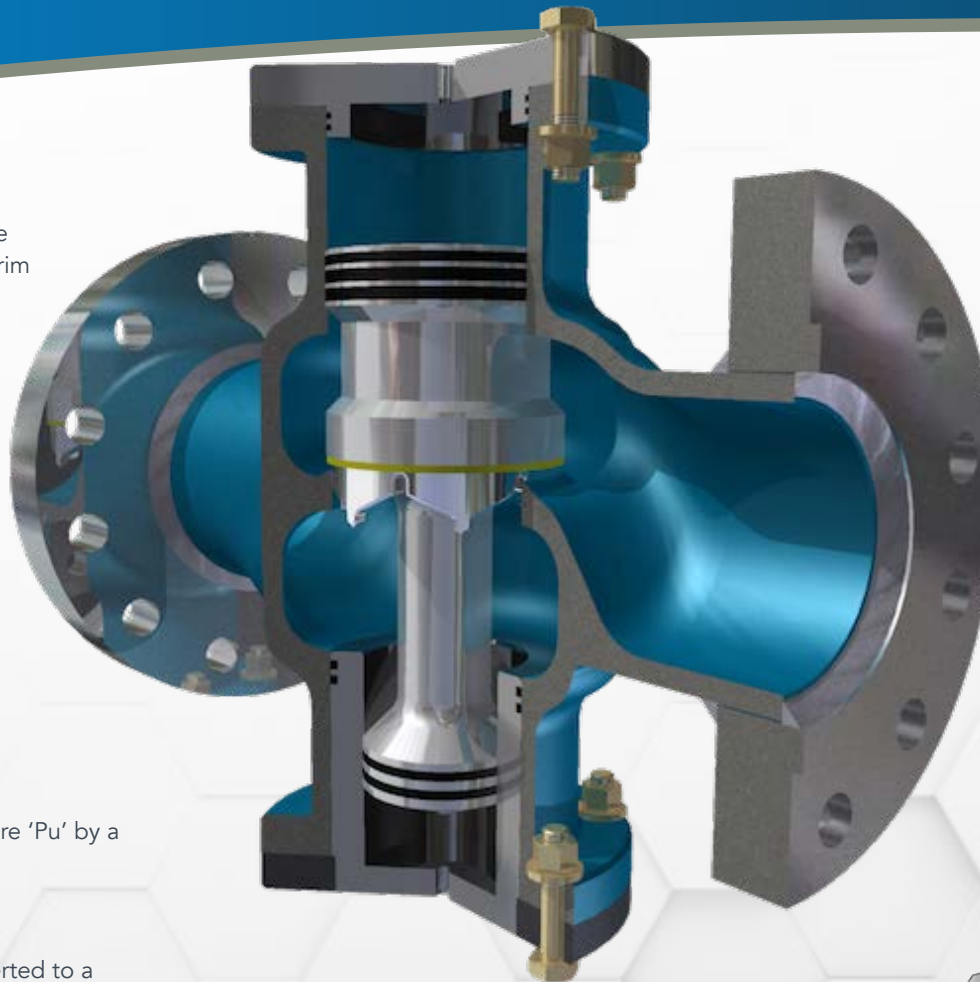
The fixed ratio valve reduces the upstream pressure 'Pu' by a fixed reduction ratio, irrespective of the flow rate.

PRESSURE CONTROL VALVE

The Hydrocore™ Symmetrical 'PRV' can be converted to a pressure control valve, which maintains a constant downstream pressure 'Pd' rather than a fixed pressure reduction ratio.

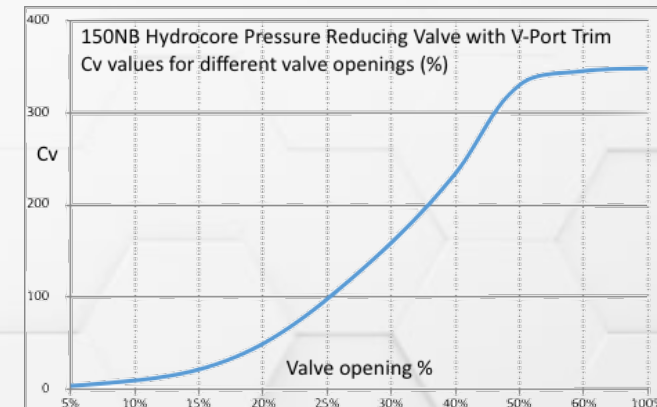
ALTERNATIVE CONTROL & ACTUATION

Various types of directional valves, operated by various types of actuators, could be applied for the purpose of venting or pressurizing of the control compartment.



MINIMAL MAINTENANCE

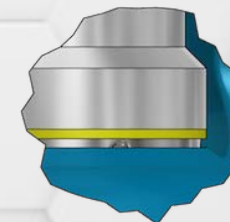
The 'Hydrocore™ Symmetrical' pressure reducing valve requires minimal maintenance, consisting of an annual cleaning and greasing of the sealing surfaces inside the valve's bore.



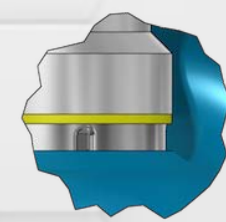
ANTI-CAVITATION

A difficult problem that arises in many low flow (high velocity) and high pressure settings is an increased level of cavitation attributed to the seat area when a valve begins opening. With the new and improved V-Port trim and seat design this problem is all but eliminated (see diagram).

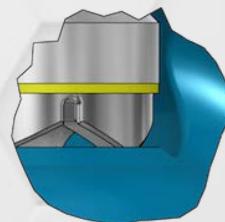
ANTI-CAVITATION SEAT



5% valve



15% valve opened



30% valve



Hydrocore™ Symmetrical Pressure Reducing Valve with V-Trim

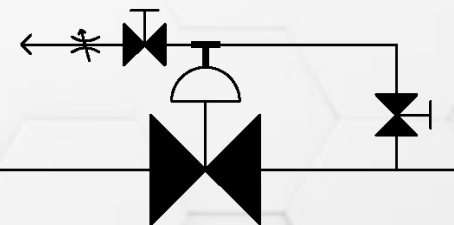
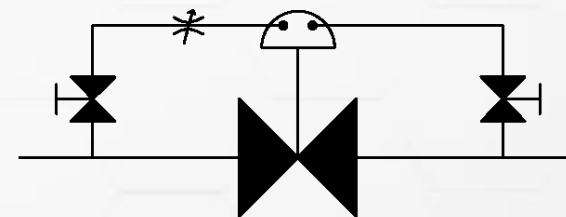
HYDROCORE LIMITED

*The smart solutions
for your business*

PRESSURE REDUCTION RATIO ADJUSTMENT

DECREASE THE DOWNSTREAM PRESSURE

The pressure reduction ratio can be increased by a controlled injection of fluid from the upstream side into the fluid in the valve's closing compartment.



INCREASE THE DOWNSTREAM PRESSURE

The pressure reduction ratio can be reduced by a controlled bleeding of fluid from the valve's closing compartment.

DIMENSIONS

25NB (1") - 600NB (24")

RATINGS

10 bar (147 psi) - 250 bar (3675 psi)

FLANGES

SABS 1123, BS4504, BS10, ASME B16.34

COUPLINGS

Tapered shoulders and other pipe couplings

RECOMMENDED RATIOS

0 - 20 bar 5:1

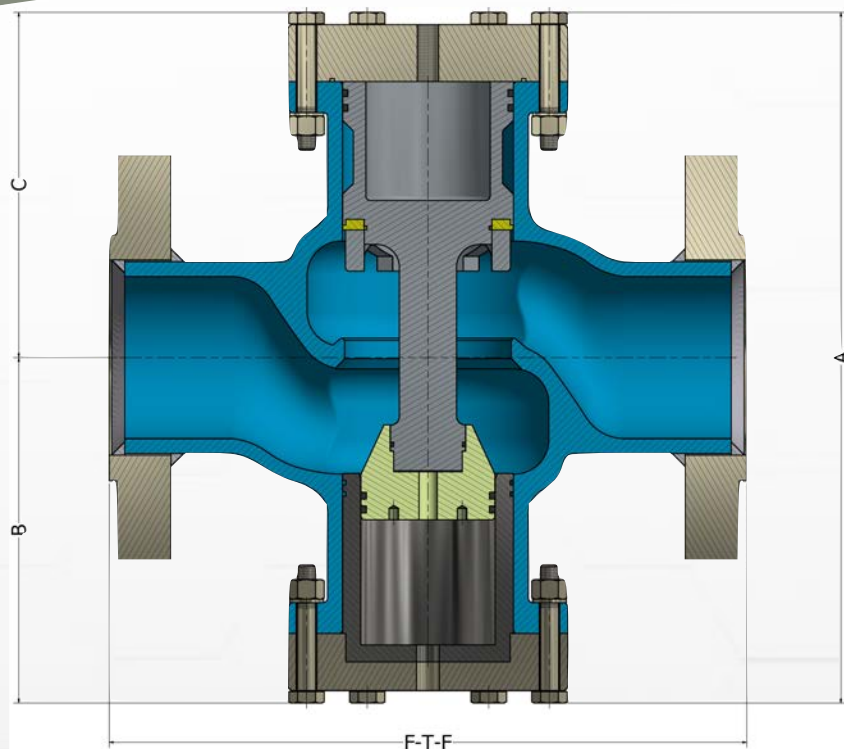
20 - 40 bar 4:1

40 - 60 bar 3:1

60 - 80 bar 2½:1

80 - 100 bar 2:1

100 - 120 bar 1½:1



HYDROCORE SYMETRICAL CONTROL VALVE - SIZES AND DIMENSIONS

NB	A	B	C	Cv (V-PORT)	MAX FLOW RATE	#150 F-T-F	#300 F-T-F	#600 F-T-F	#900 F-T-F	#1500 F-T-F
50	270mm	135mm	135mm	50 (41)	9 l/sec	203mm / 16kg	267mm / 18kg	292mm / 19kg	368mm / 33kg	368mm / 33kg
80	336mm	168mm	168mm	97 (86)	25 l/sec	267mm / 23kg	318mm / 28kg	356mm / 31kg	381mm / 41kg	470mm / 51kg
100	402mm	201mm	201mm	132 (119)	38 l/sec	292mm / 31kg	356mm / 41kg	432mm / 53kg	457mm / 64kg	546mm / TBD
150	532mm	266mm	266mm	325 (309)	117 l/sec	356mm / 109kg	445mm / 131kg	559mm / 162kg	610mm / 187kg	705mm / TBD
200	658mm	329mm	329mm	648 (523)	152 l/sec	495mm / 245kg	559mm / 275kg	660mm / 316kg	737mm / 358kg	832mm / TBD
250	755mm	378mm	378mm	871	233 l/sec	622mm / 465kg	622mm / 498kg	787mm / 585kg	838mm / 636kg	991mm / TBD
300	850mm	425mm	425mm	1500	337 l/sec	699mm / 705kg	711mm / 755kg	838mm / 839kg	965mm / 954kg	1130mm / TBD



Hydrocore™ Symmetrical Pressure Reducing Valve with V-Trim

HYDROCORE LIMITED

*The smart solutions
for your business*

PART	DESCRIPTION	MATERIAL
1	BODY CASTING	431SS
2	SHUTTLE	431SS
3	ANTI-CAVITATION BODY SEAT	431SS
4	SEAT	UHMPWE
5	V-PORT TRIM	431SS
6	TOP COVER	EN-8
7	BOTTOM COVER	EN-8
8	SEALS	NITRILE
9	SLEEVE	431SS
10	FLANGE	ASTM A105*
11	HOSE	N/A

* As well as 316SS, 431SS

