

SCORE BT300 BT320

三偏芯蝶阀 Triple-offset Butterfly Valves

应用 Application

SCORE 的 BT300、BT320 系列三偏芯蝶阀具有阀板面偏离轴平面（Offset1）、阀体和阀板的几何中心偏离阀板回转中心（Offset2）、阀板密封线偏离阀板平面（Offset3），是真正意义上的三偏芯。有金属阀座、多层式阀座可选，适用于各种不同的工况，既可以用于低压差的调节场合，也适于开关和严密切断的控制。阀座泄漏量从 ClassIV 到 ClassVI 可以根据阀座结构选择。阀座安装于阀体上，更便于检修更换。

BT300 是经济、轻便的对夹式蝶阀，BT320 是双法兰式蝶阀。

SCORE BT300, BT320 triple-offset butterfly valves, shaft offsets are created by designing the valve with the shaft located behind the centerline of the sealing surface and slightly to one side of the pipe centerline. The third offset is point of intersection of tangents of seat and disc sealing deviating from the rotary center. These offsets are to completely eliminate all seat to seat rubbing throughout the valve's entire 90 degrees of rotation. Solid Metal seat, laminated seat are optional. The triple-offset provides ANSI Class IV, V, VI leakage performance. The seat seal ring can be changed easily.

BT300 is wafer type, BT320 is double flanged type.

特点 Features

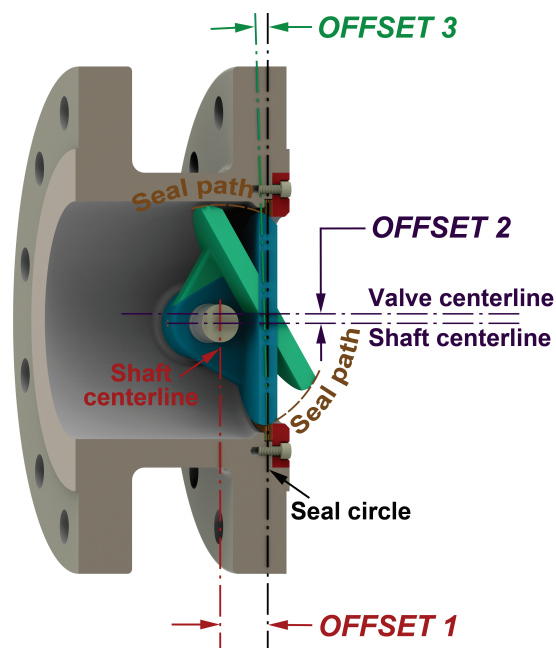
- 真正意义上的三偏芯结构，仅在关闭位置时阀板和阀座才有接触，摩擦扭矩小，只需较小的驱动扭矩。
- 阀座和阀板密封面偏离阀板平面角度较小，实现可靠开关、切断的同时，还很适于调节的场合。
- 安装于阀体上的阀座易于装拆，维护性能更好。
- 多种阀座结构和材质可选，适用于各种工况。
- 阀体结构允许材质符合 NACE0175-2003, 详情请与 SCORE 联系。
- 高性能的 GF TFE 填料或柔性石墨填料（EVSP9000）加上动态补偿蝶簧（Live-loading），大大降低了阀门填料函逸散泄漏的可能，符合 API-622 低逸散规范。
- A real triple offset design, only in the close position the disc and seat ring can contact, low frictional torque results in small driving torque for actuator.



图 1. SCORE BT320 带 ASR 执行机构
Figure 1 SCORE BT320 Valve with ASR Actuator



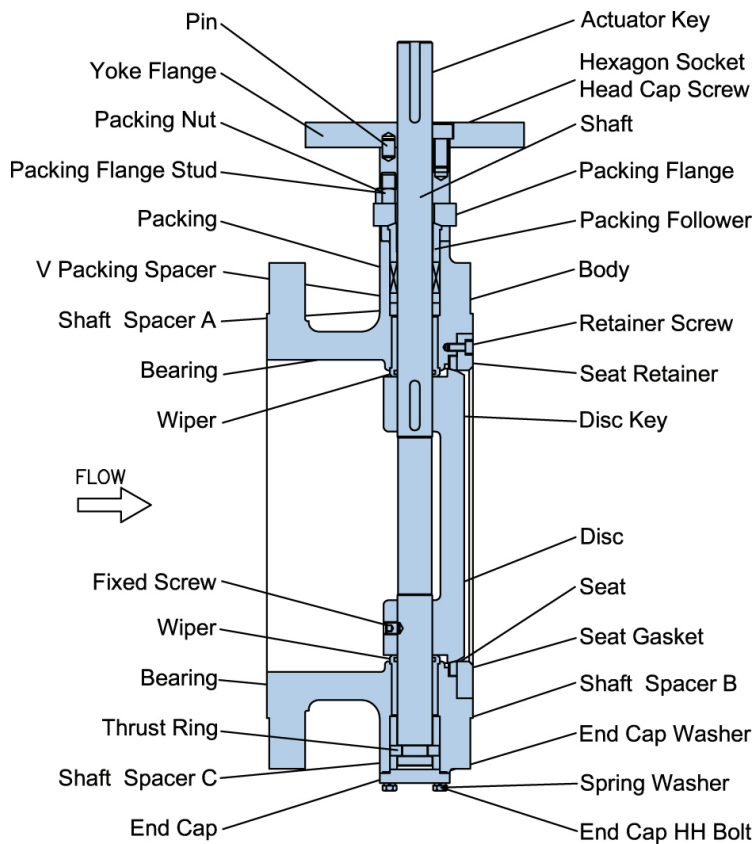
- The third offset small angle can achieve reliable on-off and shut-off function. This design is also suitable for modulating occasion.
- The seat seal ring can be changed easily.
- Metal seal, resilient metal seal and soft seal are optional.
- Valve constructions allow material compatibility with NACE MR0175-2003, please contact with SCORE for details.
- High performance GF TFE packing and graphite packing (EVSP9000) with live-loading to fit with low fugitive emissions API-622.



BT300 320 阀门工程参数 Engineering Data of SCORE BT300 BT320

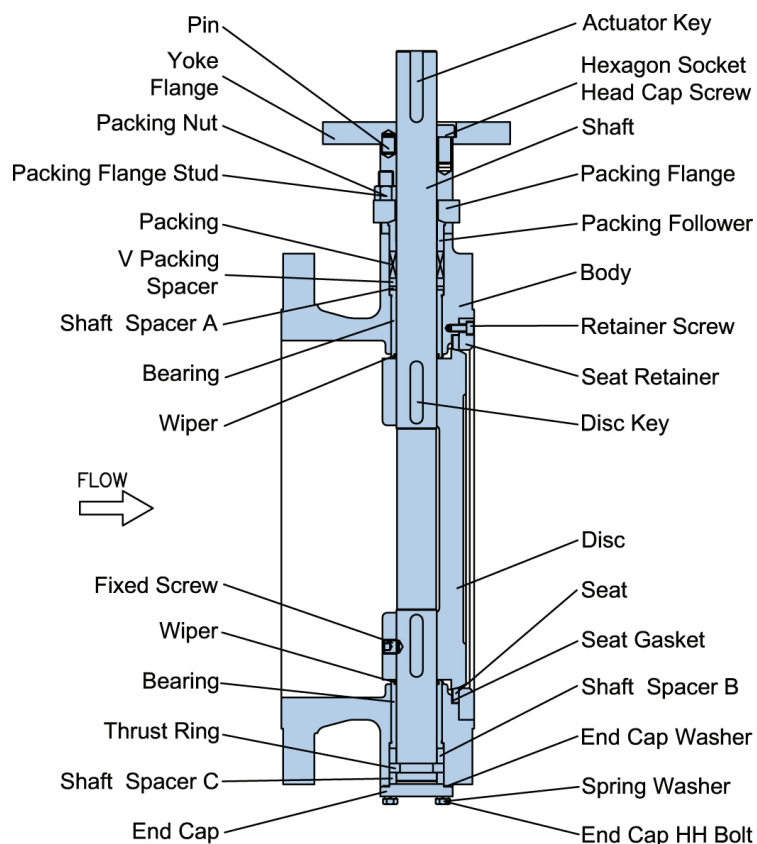
公称通径	End Connection Sizes	3"~60" (DN80~DN1500)
公称压力	Valve Body Ratings	ANSI 150#, 300#, 600#, 900#, 1500# GB/T9113-2010 & HG20592-2009 PN1.0, PN1.6, 4.0, 6.3, 10.0, 16.0Mpa
连接方式	End Connection Styles	BT300: 对夹式; BT320: 双法兰式 BT300 : Wafer type, BT320 : Double flanged type
设计标准	Design Standards	ANSI B16.34-2009, GB/T9113-2010, HG20592-2009
法兰距	Body Face to Face Dimensions	BT300 ANSI 150#: API 609 B BT300 ANSI 300#: ISO 5752 16 Series BT320 ANSI 150#/300#: API 609 Short Series
阀内件形式	Trim Form	三偏芯 Triple-offset
流量特性	Characteristics	近似等百分比 Approximate EQ%
可调比 R	Rangeability	70° 开度/50:1, 90° 开度/100:1 70° Opening/50:1, 90° Opening/100:1
阀座泄漏量	Seat Leakage	金属阀座 Solide Metal Seat: ANSI/FCI 70.2 Class IV, V, VI 多层式阀座 Laminated Seat: ANSI/FCI 70.2 Class VI
上阀盖形式	Bonnet Styles	标准型 Standard Type: -45~+500℃
		外部轴承型 Out Bearing Type: ≥+500℃
		低温型 Cryogenic Type: -45~-196℃
		蒸汽夹套型 Steam Jacket Type: -45~+500℃
上阀盖填料	Bonnet Packing	聚四氟乙烯 V 型填料、聚四氟乙烯纤维、柔性石墨填料等。 Teflon V-ring, Telon Fiber, Graphite Packing (EVSP9000), ets...
垫圈	Gasket	强化聚四氟乙烯 Reinforced Teflon 柔性石墨平垫圈 Graphite with metal core inserted (316LSS+Graphite) 缠绕式垫圈 Spiral Wound Gasket (316LSS+PTFE、316LSS+Graphite)
表面涂层色	Paint	艳蓝（聚氨酯）和其他环氧树脂处理均可，不锈钢阀体材质时不需油漆。 Gorgeous blue RAL5018 (polyurethanes group) and other expoxy finishes is available. NO painting is standard for stainless steel body.

BT300 BT320 本体部结构 Body Assembly Construction



公称通径/L 级阀体: 10"及以下, M 级阀体: 4"及以下

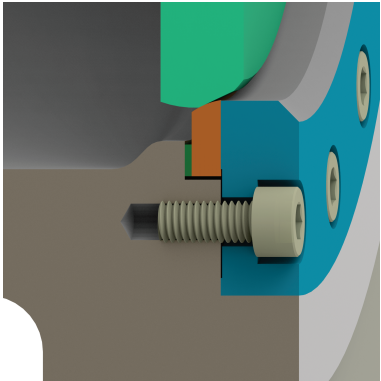
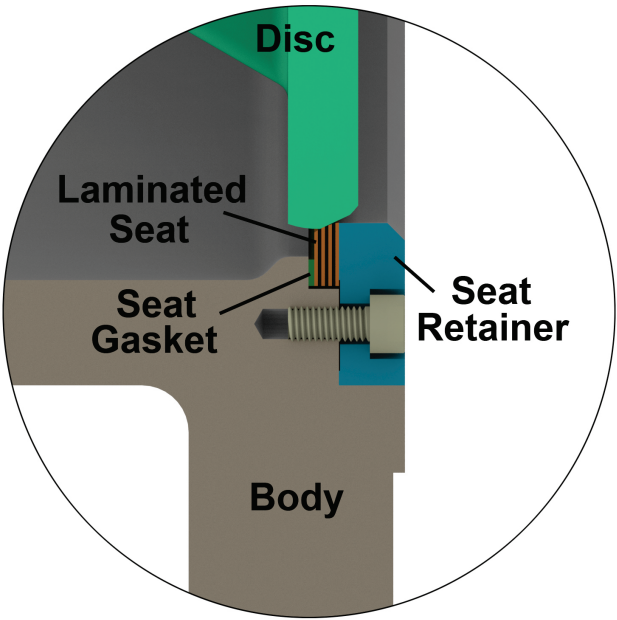
Body Size/L Class Body: 10" and under, M Class Body: 4" and under



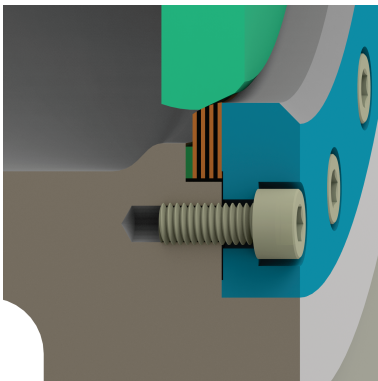
公称通径/L 级阀体: 12"及以上, M 级阀体: 6"及以上

Body Size/L Class Body: 12" and over, M Class Body: 6" and over

BT300 320 阀座结构图 Seat Ring Construction



金属阀座
Solid Metal Seat



多层式阀座
Laminated Seat

BT300 BT320 材料组合 Material Combinations:

阀体材质 Body Material	A216-WCB, A217-WC6, A217-WC9, A217-C5, A352-LCB		
阀板材质 Disc Material	A351-CF8/ENP, A351-CF8/Stellite 21		
阀杆材质 Shaft Material	A564-630/H1100		
轴承材质 Bearing Material	A276-440C/HT		
阀座材质 Seat Ring Material	A564-630/H1050	S31803+Graphite	
阀座允许泄漏量 Seat Leakage	Class IV, V, VI	Class V, VI	
使用温度 Fluid Temperature ℃	WCB Body	-29~+427	-29~+400
	WC6 Body		
	C5 Body		
	LCB Body	-45~+200	-45~+200

阀体材质 Body Material	A351-CF8, A351-CF8M, A351-CF3, A351-CF3M		
阀板材质 Disc Material	A351-CF8/ENP, A351-CF8M/ENP, A351-CF3/ENP, A351-CF3M/ENP A351-CF8/PS, A351-CF8M/PS, A351-CF3/PS, A351-CF3M/PS		
阀杆材质 Shaft Material	A564-630/H1100, A638-660, A276-316, A276-316L, Nitronic 50		
轴承材质 Bearing Material	A276-440C/HT, Nitronic 60		
阀座材质 Seat Ring Material	A564-630/H1050	S31803+Graphite	
阀座允许泄漏量 Seat Leakage	Class IV, V, VI	Class V, VI	
使用温度 Fluid Temperature ℃	-45~+427	-45~+400	

阀体材质 Body Material	A217-WC6, A217-WC9		
阀板材质 Disc Material	A217-WC6, A217-WC9, A351-CF8, A351-CF8M/Stellite 21		
阀杆材质 Shaft Material	A638-660, Inconel 718		
轴承材质 Bearing Material	Nitronic 60		
阀座材质 Seat Ring Material	Nitronic 50, Inconel 718	Inconel 718+Graphite	
阀座允许泄漏量 Seat Leakage	Class IV, V, VI	Class V, VI	
使用温度 Fluid Temperature ℃	-29~+650	-29~+650	

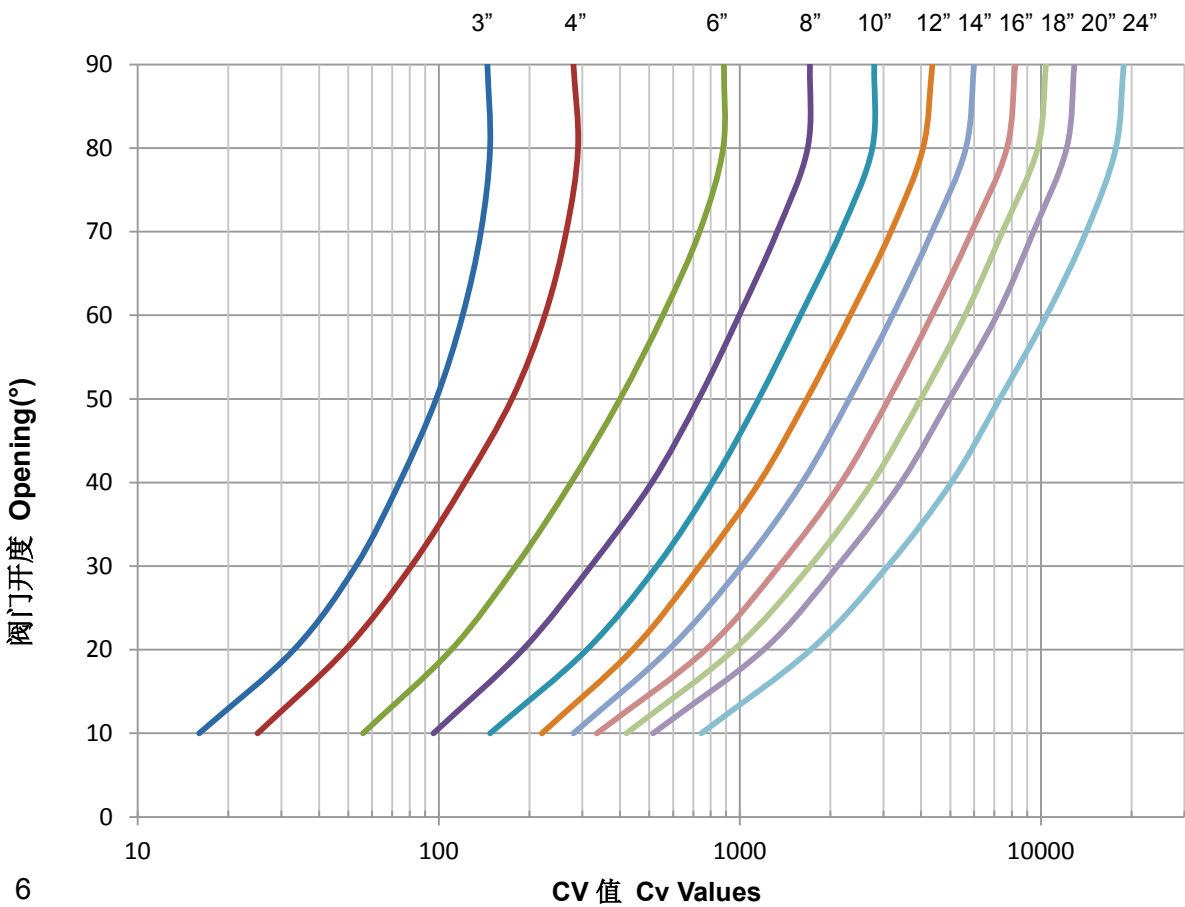
阀体材质 Body Material	A351-CF8, A351-CF8M, A351-CF3, A351-CF3M		
阀板材质 Disc Material	A351-CF8, A351-CF8M, A351-CF3, A351-CF3M/Stellite 21		
阀杆材质 Shaft Material	A638-660, Inconel 718		
轴承材质 Bearing Material	Nitronic 60		
阀座材质 Seat Ring Material	Nitronic 50/Inconel 718	Inconel 718+Graphite	
阀座允许泄漏量 Seat Leakage	Class IV, V, VI	Class V, VI	
使用温度 Fluid Temperature ℃	-196~+650	-75~+650	

BT300、BT320 ANSI 150#/PN10/PN16 各开度下的 Cv 值

Cv Values Versus Opening for BT300 BT320 ANSI 150#/PN10/PN16

公称通径 Size		阀门开度 Opening								
Inch	mm	10°	20°	30°	40°	50°	60°	70°	80°	90°
3	80	16	33	53	74	98	120	138	148	148
4	100	25	49	81	122	175	225	265	290	290
5	125									
6	150	56	110	180	275	400	555	735	885	885
8	200	96	190	320	510	730	995	1,330	1,680	1,710
10	250	148	310	530	810	1,155	1,590	2,165	2,755	2,795
12	300	220	440	735	1,160	1,670	2,325	3,175	4,060	4,360
14	350	280	580	1,015	1,610	2,310	3,215	4,350	5,635	6,000
16	400	335	770	1,350	2,170	3,125	4,345	5,890	7,710	8,220
18	450	420	955	1,710	2,750	3,990	5,595	7,450	9,760	10,400
20	500	515	1,210	2,110	3,430	4,975	7,140	9,450	12,180	12,920
24	600	745	1,720	3,100	5,040	7,300	10,440	14,150	17,740	18,840
28	700									28,000
32	800									36,000
36	900									45,000
40	1000									56,000
44	1100									71,440
48	1200									81,000
54	1350									
60	1500									
64	1600									

流量特性曲线 Flow Characteristics Diagram

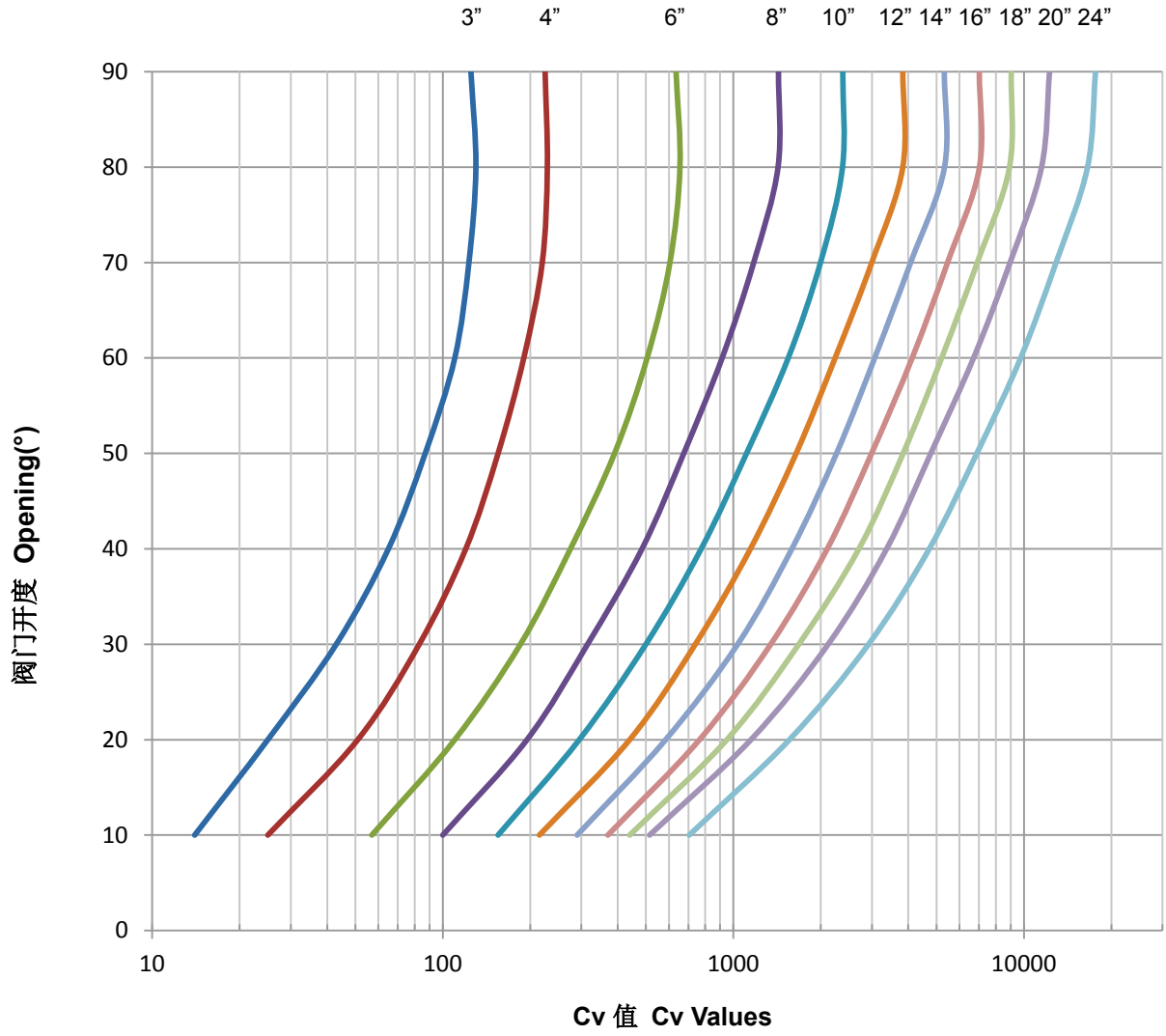


BT300、BT320 ANSI 300#/PN25/PN40 各开度下的 Cv 值

Cv Values Versus Opening for BT300 BT320 ANSI 300#/PN25/PN40

公称通径 Size		阀门开度 Opening								
Inch	mm	10°	20°	30°	40°	50°	60°	70°	80°	90°
3	80	14	25	43	65	87	110	123	130	130
4	100	25	51	83	120	155	190	220	229	229
5	125									
6	150	57	110	185	275	390	505	605	655	655
8	200	100	195	315	485	675	915	1,175	1,425	1,430
10	250	155	295	500	775	1,110	1,545	1,995	2,375	2,380
12	300	215	440	740	1,145	1,645	2,240	2,995	3,830	3,830
14	350	290	585	1,035	1,590	2,265	3,065	4,075	5,330	5,330
16	400	370	765	1,365	2,105	2,990	4,125	5,460	7,030	7,030
18	450	440	950	1,680	2,705	3,840	5,210	6,910	8,920	9,045
20	500	515	1,150	2,120	3,380	4,780	6,710	8,960	11,500	12,250
24	600	705	1,560	2,920	4,725	6,885	9,745	12,900	16,555	17,640
28	700									23,400
32	800									33,300
36	900									42,500
40	1000									51,800

流量特性曲线 Flow Characteristics Diagram



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