

Y Valves

Diverter for the solid phase

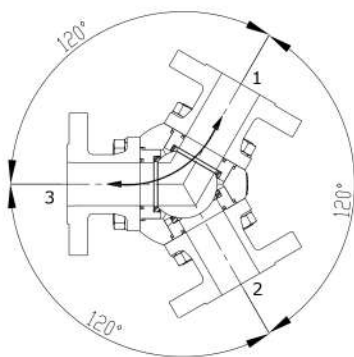


MICROFINISH VALVES

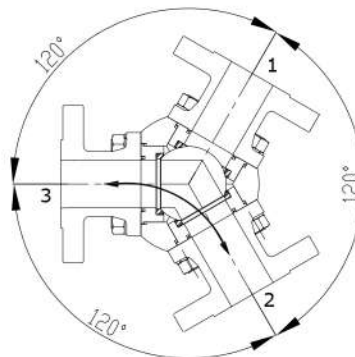
Quality you can trust.

Microfinish Y series

The new Y series valve is a unique addition to the Microfinish diverter floating ball valve line. With a distinctive design, the Y-pattern valve, with its compact design and 120 degree flow direction, excels in diverting within a single valve body. These 120 degree 3-way valves are used for diverting solids, highly viscous or slurry media in the petrochemical, chemical and the food and beverage industries. The Microfinish Y-pattern valve provides the optimal solution for diverting solid laden process streams, in a free flow diversion, all while reducing required space.



Position-1 (Flow from 3 to 1)



Position-2 (Counterclockwise rotation) flow from 3 to 2

Standards of compliance

- Size : 2" [DN50]-8" [DN200]
- Pressure : Vacuum to Class 150 and Class 300
- Temperature : -46°C to 260°C [-50°F to 500°F]
- Connection : Flanged, Threaded, Welded ends
- Media : Crude oil, HDPE, PP, Fly ash, Slurry, Powder, Dough, Wax

Features

- Divert the flow to one of the downstream angled legs.
- Minimal areas for solids to accumulate reduces the likelihood of plugging in hydrocarbon streams that are prone to coke formation.
- Single 120 degree actuator required to automate.
- Cast construction WCB, WCC, LCB, LCC, CF8, CF8M (other materials upon request)
- Three seat floating ball valve construction
- Lockable design

Optional features

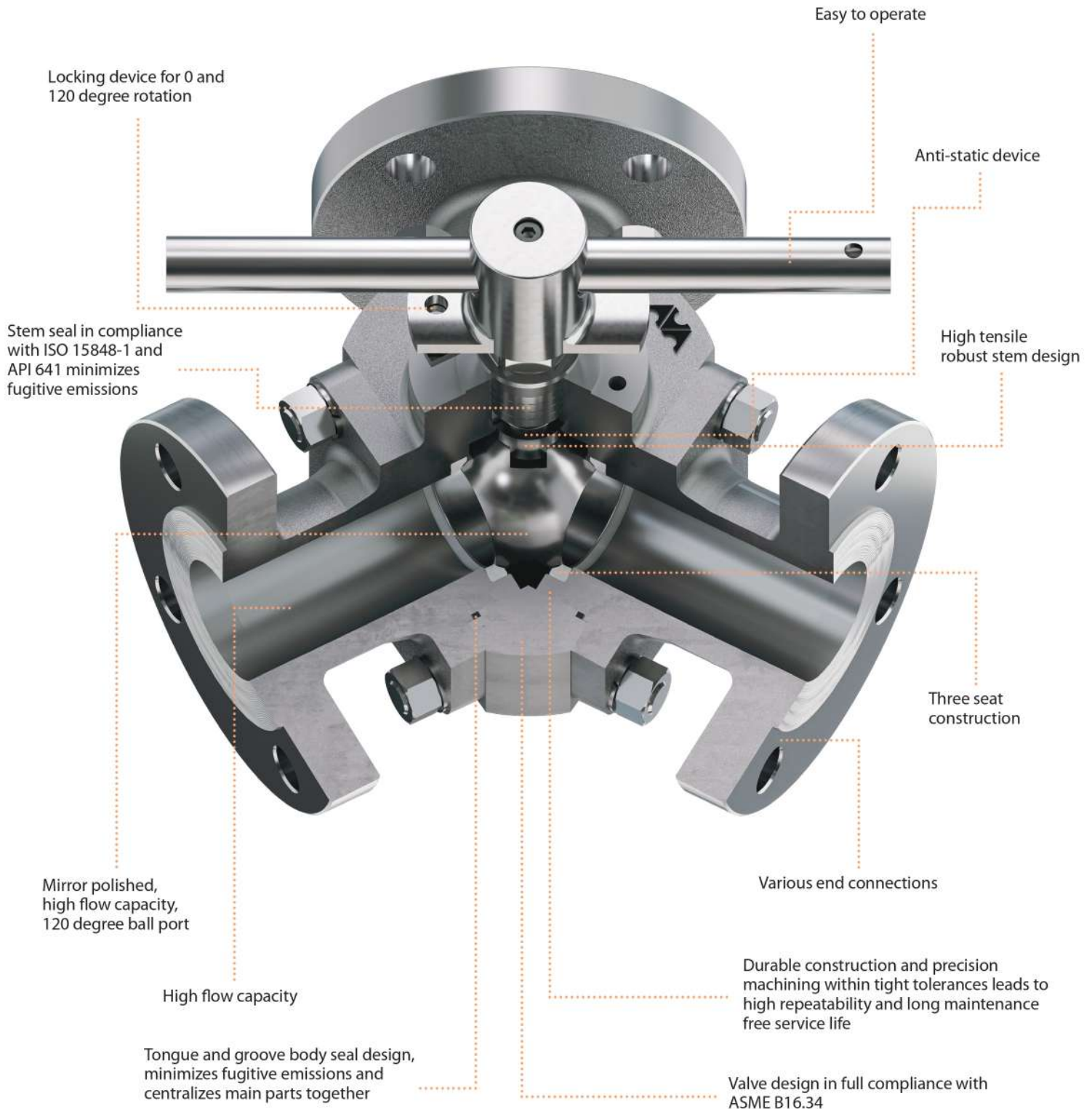
- Cryogenic design as per BS6364
- Chromium Carbide over Cobalt base metal seats
- Thermal jacket for highly viscous media

Standards of compliance

- Quality management system : ISO 9001-2015
- Valve design : ANSI B16.34; ISO 17292; API 608; API 6D/ISO 14313
- Testing for metallic valves : API 598; EN 12266-1; API 6D/ISO 14313
- Emission control : ISO 15848-1; API 641

Unique features

Y-Valve



Y-Valve

A71A3, A74A3 Series

Full bore, flanged class 150/300

NPS 2-8, DN50-DN200

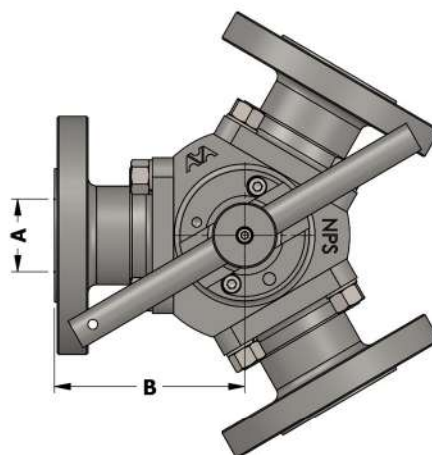
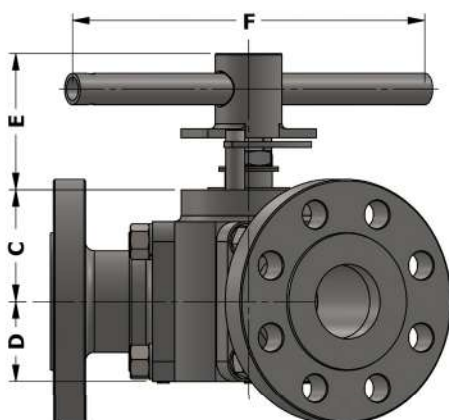
Dimensional data

A71A3 - CLASS 150 FULL BORE FLANGED VALVE

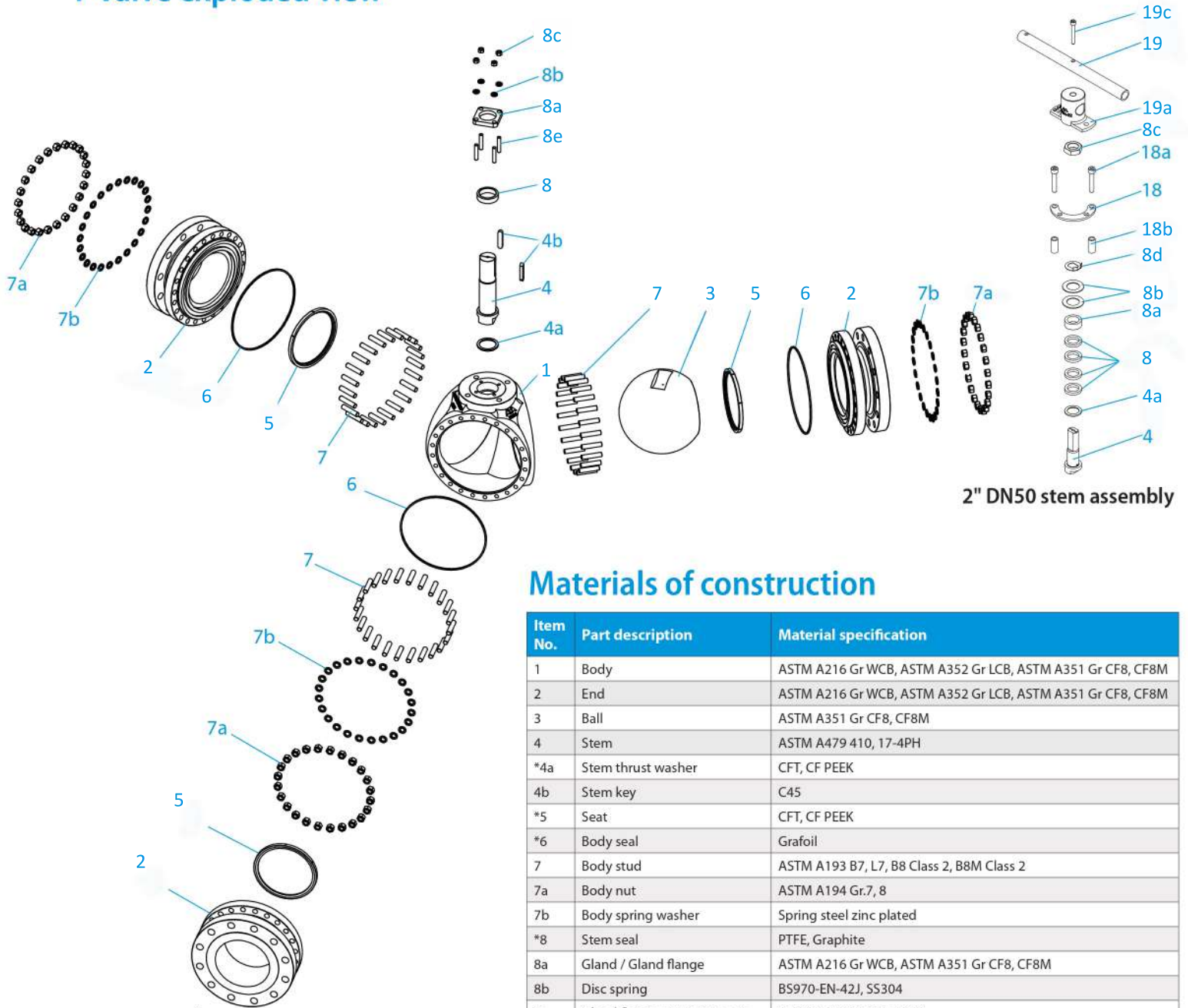
Valve size (DN/NPS)	A	B	C	D	E	F	Trim number	Weight (Kg / lbs)	Kv / Cv
DN50	50	89	100	54	92	320	22	16	335
2	1.97	3.50	3.94	2.13	3.62	12.60		35	387
DN80	76	101.5	135	89	-	-	30	55	818
3	2.99	4.00	5.31	3.50	-	-		121	946
DN100	102	114.5	154	116	-	-	40	104	1520
4	4.02	4.51	6.06	4.57	-	-		229	1757
DN150	152	197	194	152	-	-	48	186	3486
6	5.98	7.76	7.64	5.98	-	-		410	4029
DN200	203	228.5	206	172	-	-	60	295	6434
8	7.99	9.00	8.11	6.77	-	-		650	7438

A74A3 - CLASS 300 FULL BORE FLANGED VALVE

Valve size (DN/NPS)	A	B	C	D	E	F	Trim number	Weight (Kg / lbs)	Kv / Cv
DN50	50	108	114	56	92	320	22	18	335
2	1.97	4.25	4.49	2.20	3.62	12.60		40	387
DN80	76	141.5	149	108	-	-	30	64	818
3	2.99	5.57	5.87	4.25	-	-		141	946
DN100	102	152.5	172	130	-	-	48	126	1520
4	4.02	6.00	6.77	5.12	-	-		278	1757
DN150	152	201.5	207	168	-	-	48	202	3486
6	5.98	7.93	8.15	6.61	-	-		445	4029
DN200	203	251	220.5	190.5	-	-	60	313	6434
8	7.99	9.88	8.68	7.50	-	-		690	7438



Y-Valve exploded view



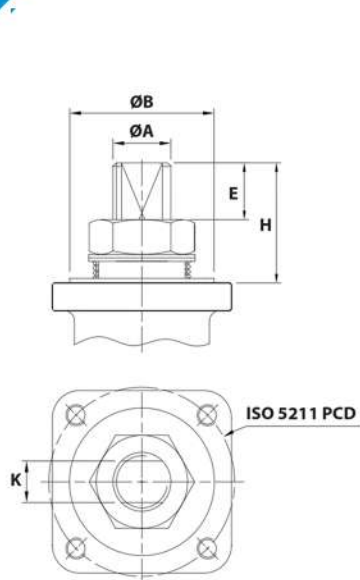
2" DN50 stem assembly

Materials of construction

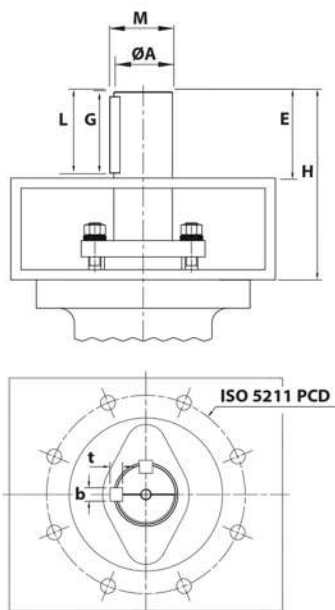
Item No.	Part description	Material specification
1	Body	ASTM A216 Gr WCB, ASTM A352 Gr LCB, ASTM A351 Gr CF8, CF8M
2	End	ASTM A216 Gr WCB, ASTM A352 Gr LCB, ASTM A351 Gr CF8, CF8M
3	Ball	ASTM A351 Gr CF8, CF8M
4	Stem	ASTM A479 410, 17-4PH
*4a	Stem thrust washer	CFT, CF PEEK
4b	Stem key	C45
*5	Seat	CFT, CF PEEK
*6	Body seal	Grafoil
7	Body stud	ASTM A193 B7, L7, B8 Class 2, B8M Class 2
7a	Body nut	ASTM A194 Gr.7, 8
7b	Body spring washer	Spring steel zinc plated
*8	Stem seal	PTFE, Graphite
8a	Gland / Gland flange	ASTM A216 Gr WCB, ASTM A351 Gr CF8, CF8M
8b	Disc spring	B5970-EN-42J, SS304
8c	Gland flange nut / Stem nut	ASTM A194 Gr. 2H, 7, 8M
8d	Nut lock clip	SS304
8e	Gland flange stud	ASTM A193 B7, L7, B8 Class 2, B8M Class 2
16	Antistatic plunger (not shown)	SS304
16a	Antistatic spring (not shown)	SS304
17	Valve tag (not shown)	SS304
18	Locking disc	WCB
18a	Locking disc bolt	HT GR.12.9
18b	Locking disc bushing	CS Zinc plated
19	Handle	CS Zinc plated
19a	Handle adaptor	ASTM A216 Gr WCB
19b	Handle sleeve	PVC
19c	Adaptor bolt	C.st HT Gr 12.9
19d	Handle bolt	CS Zinc plated
19e	Handle bolt washer	CS Zinc plated

* Repair kit item

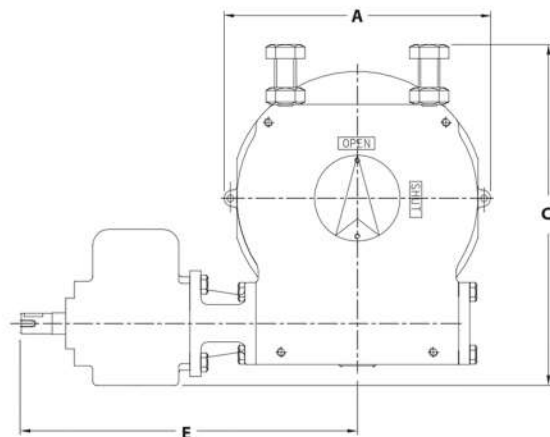




Trim 22 - Trim 48



TRIM 60



Gearbox top view

Top mounting dimensions and Maximum Allowable Stem Torque (MAST)

Trim number	ISO 5211 PCD	Unit	ØA	ØB	E	K	H	Unit	M.A.S.T. 17-4PH	M.A.S.T. XM-19
22	F07	mm	M20X2P	55.0	15.0	14.0	50	N-m	337	189
		inch		2.165	0.591	0.551	1.969	lbf-in.	2983	1673
30	F10	mm	24.5	70.0	25.0	19.0	62.0	N-m	1048	587
		inch	0.965	2.756	0.984	0.748	2.441	lbf-in.	9274	5192
40	F12	mm	32	85.0	30.0	22.0	70.0	N-m	2662	1491
		inch	1.260	3.346	1.181	0.866	2.756	lbf-in.	23561	13196
48	F14	mm	44.8	100.0	35.0	36.0	84.0	N-m	4420	2475
		inch	1.764	3.937	1.378	1.417	3.307	lbf-in.	39120	21903

Trim number	ISO 5211 PCD	Unit	ØA	E	G	H	L	M	b	t	Unit	M.A.S.T. 17-4PH	M.A.S.T. XM-19
60	F16	mm	57.5	85.0	75.0	185.0	80.0	61.5	16.0	10.0	N-m	11723	6565
		inch	2.264	3.346	2.953	7.283	3.150	2.421	0.630	0.394	lbf-in.	103757	58102

Gearbox dimensions and selection

Trim number	ISO 5211 PCD	Unit	A	C	E	Gear Height	Shaft diameter	Hand wheel diameter	Drive bore diameter	Weight (Kg / lbs)	Maximum input torque (Nm / lbf-in)	Maximum output torque (Nm / lbf-in)
30	F10	mm	88	116	153	62	16	250	30	3.20	44	440
		inch	3.465	4.567	6.024	2.441	0.630	9.843	1.181	7.05	389	3894
40	F12	mm	127	158	199	79	20	450	35.5	8.00	89	981
		inch	5.000	6.220	7.835	3.110	0.787	17.717	1.398	17.64	789	8683
48	F14	mm	230	249	254	107	20	550	43.5	22.00	202	3236
		inch	9.055	9.803	10.000	4.213	0.787	21.654	1.713	48.50	1790	28641
60	F16	mm	265	288	256	114	20	600	57.5	34.00	98	4905
		inch	10.433	11.339	10.079	4.488	0.787	23.622	2.264	74.96	868	43413

Build your Y valve code

BV 2" DN50 A74A3-1492GG-0RAL-000-000

BV	2" DN50	A	74	A3	-	1	4	9	2	G	G	-
Type	Size	Model	Class	Port size / Construction		Body / End	Ball	Stem	Seat	Stem seal	Body seal	
O	R	A	L	-	00	-	0	-	000			
Features	End connection	Bonnet / Ext / Pad	Operator	Special testing	Special construction or assembly	Trim metal treatment						

Type	Size NPS	Size MM
BV	2"-8"	DN50-DN200

Model	
A	Std. temperature -29° C ≤ T ≤ +204° C
V	Elevated temp. -29° C ≤ T ≤ +260° C
H	High temperature -29° C ≤ T ≤ +540° C
L	Low temperature -49° C ≤ T ≤ +204° C
P	Low temperature -100° C ≤ T ≤ +204° C
W	Low and elevated temp. -49° C ≤ T ≤ +260° C
C	Cryogenic temp. -196° C ≤ T ≤ +150° C
M	Metal seats

Class	
71	#150
74	#300

Port size / Construction	
A3	Y-Valve / 120° Diverter / Full bore

Body / End	
1	WCB
2	CF8
4	CF8M
9	LCB
F	CD3MN A995 4A
G	CE3MN A995 5A
H	CD3MWCuN A995 6A
U	CD4MCuN A995 1B

Ball	
2	CF8 - 304
4	CF8M - 316
F	CD3MN A995 4A
G	CE3MN A995 5A
H	CD3MWCuN A995 6A
U	CD4MCuN A995 1B

Stem	
5	Nitronic 50 (XM19)
9	17-4PH (H1150D)
E	SS410
F	Duplex 2205 (UNS 31803)
G	Super duplex 2507
H	Super duplex (UNS 32760)

Seat	
2	TFM
3	CFT (CF PTFE)
4	DEVLON
5	PEEK (VIRGIN)
6	PCTFE
7	RTFM (CF TFM)
8	CF PEEK

Metal seat	
E	F6A / SS 410 / CA15
F	Duplex 2205 (UNS 31803)
Y	CF8 SS304 F304
Z	CF8M SS316 F316

Stem seal	
3	CFT (CF PTFE)
G ⁽¹⁾	Graphite
H	Graphite Cup-n-Cone
P	CFT Cup-n-Cone
S	PTFE Cup-n-Cone
T	Virgin PTFE

Body seal	
1	Viton FKM O-ring
3	NBR O-ring
5	HNBR O-ring
7	EPDM O-ring
G ⁽¹⁾	Graphite
T	Virgin PTFE

Features	
0	Non-Fire Safe
F	Fire safe to atmosphere

End connection	
A	NPT
B	BSPT
C	Socket-Weld-End (SWE)
K	BW Sch. 10
L	BW Sch. 40
R	RF Flange
S	Flat face flange
U ⁽²⁾	Extended-pups BW Sch. 10
V ⁽²⁾	Extended-pups BW Sch. 40
Z ⁽²⁾	Extended-pups SW

Bonnet / Extension / Valve pad	
A	ISO 5211 pad
C	Cryogenic bonnet BS6364 (10 inch / 250 MM)
D	Cryogenic bonnet BS6364 Cold box
E	Extension 10 inch / 250 mm

Operator	
B	Bare stem
C	Lever
D	Pneumatic actuator and manual override
E	Electric actuator
G	Gear
K	Lockable gear
L	Lockable lever
P	Pneumatic actuator

Special testing			
0	None	0	None
1	Positive Material Identification (PMI)	1	Impact test @ -1° C
2	Radiographic Test (RT)	2	Impact test @ -29° C
3	Ultrasonic Test (UT)	3	Impact test @ -49° C
4	Die Penetrat (DP)	4	Impact test @ -101° C
		5	Impact test @ -196° C
		6	Class VI metal seat leak rate
		8	Helium Test (HT)

Special construction or assembly	
0	None
C	Special cleaning for Oxygen service
H	Valve with counter slip-on flange fasteners and gasket
J	Valve with counter weld-neck flange fasteners and gasket

Trim metal treatment			
Ball	Seat	Stem	
0	None		
E	ENP 25 micron		
F	ENP 50 micron		
N	ENP 75 micron		
H	Nitrid hardening		
S	Stellite		
T	Tungsten carbide (HVOF)		
C	Chromium carbide (HVOF)		

(1) Graphite body seal material shall be selected for fire safe valve.

(2) Default pups-end is 2 times DN.

Note (1): **Bold mark font** indicates standard price list, short delivery item.





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