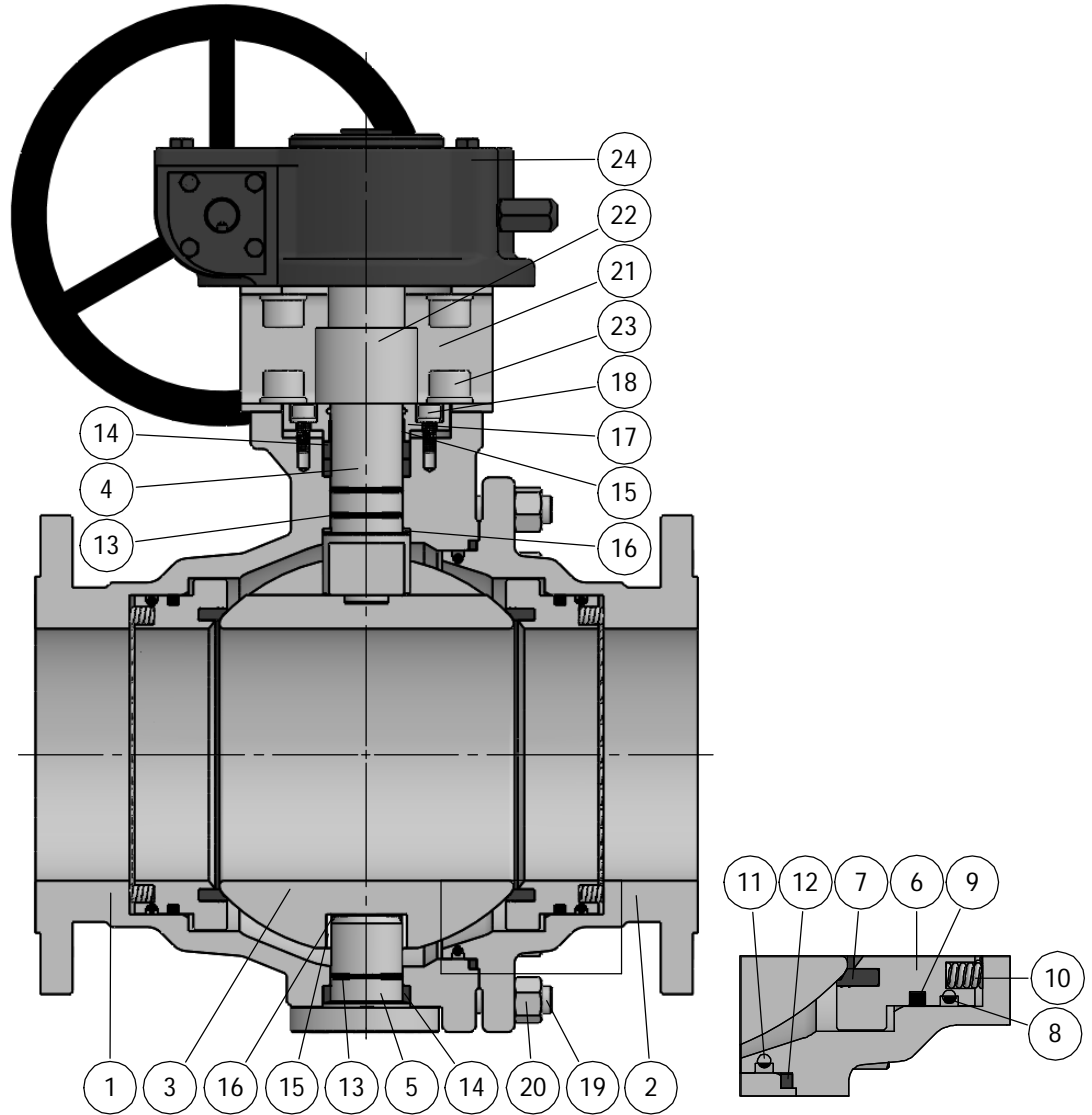
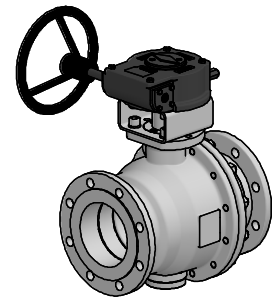


## CTR SERIES

CL150/CL300 (300/750psi)  
 FULL BORE - DN150 (6") ÷ DN300 (12")  
 STANDARD ASME  
 BILL OF MATERIALS



### BILL OF MATERIALS

Part	Qt.	Description	CARBON STEEL VERSION	ST. STEEL VERSION
1	1	Body	A352 LCC	A351 CF8M
2	1	End	A352 LCC	A351 CF8M
3	1	Ball	A351 CF8M	
4	1	Upper Stem	A479 316/L	
5	1	Lower Stem	A479 316/L	
6	2	Seat Support	↙	A479 316/L
7	2	Seat	↙	C-RPTFE
8	2	Seat Support O'Ring	↙	FKM
9	2	Seat Support Seal	↙	GRAPHITE
10	-	Spring	↙	INCONEL X-750
11	1	Body O'Ring	↙	FKM
12	1	Body Seal	↙	GRAPHITE

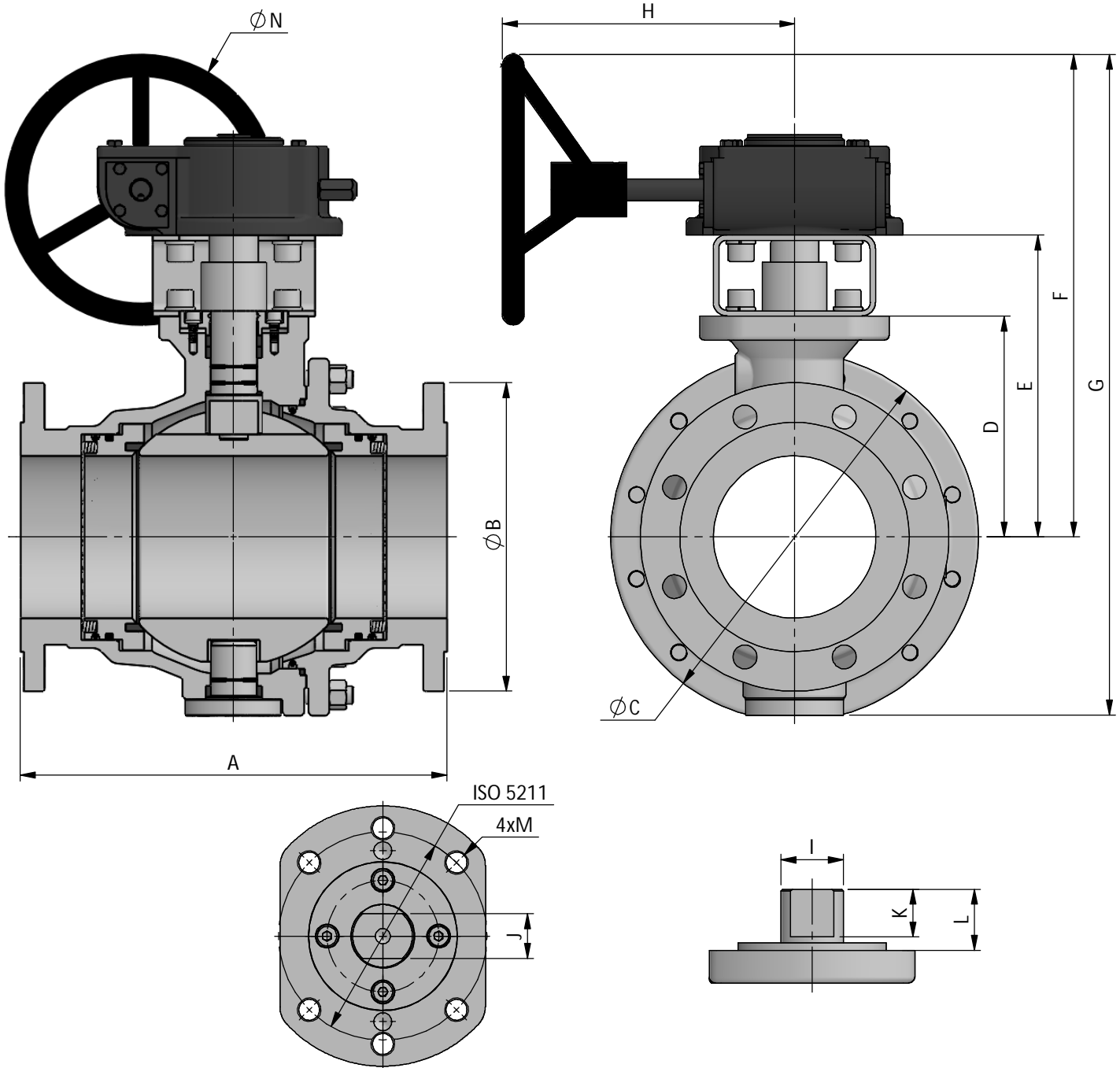
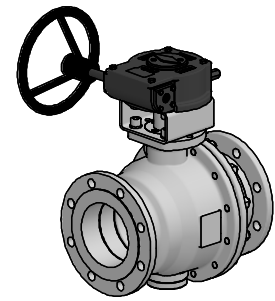
### BILL OF MATERIALS

Part	Qt.	Description	CARBON STEEL VERSION	ST. STEEL VERSION
13	-	Stem O'Ring	↙	FKM
14	2	Stem Packing Set	↙	GRAPHITE
15	-	Stem Bearing	↙	F316 + PTFE
16	-	Stem Thrust Seals	↙	PEEK
17	1	Gland Packing	A479 316/L	
18	-	Gland Packing Bolt	A4 CL.70	
19	-	Stud	A320 Gr. L7M ZINC.	A193 Gr. B8M cl.2
20	-	Nut	A194 Gr. 7ML ZINC.	A194 Gr. 8M
21	1	Bracket	STAINLESS ST. 304	
22	1	Bracket Stem	A479 316/L	
23	-	Bracket Bolt	A4 CL.70	
24	1	Gearbox	CAST IRON	

↙ TYPICAL SPARE PARTS

## CTR SERIES

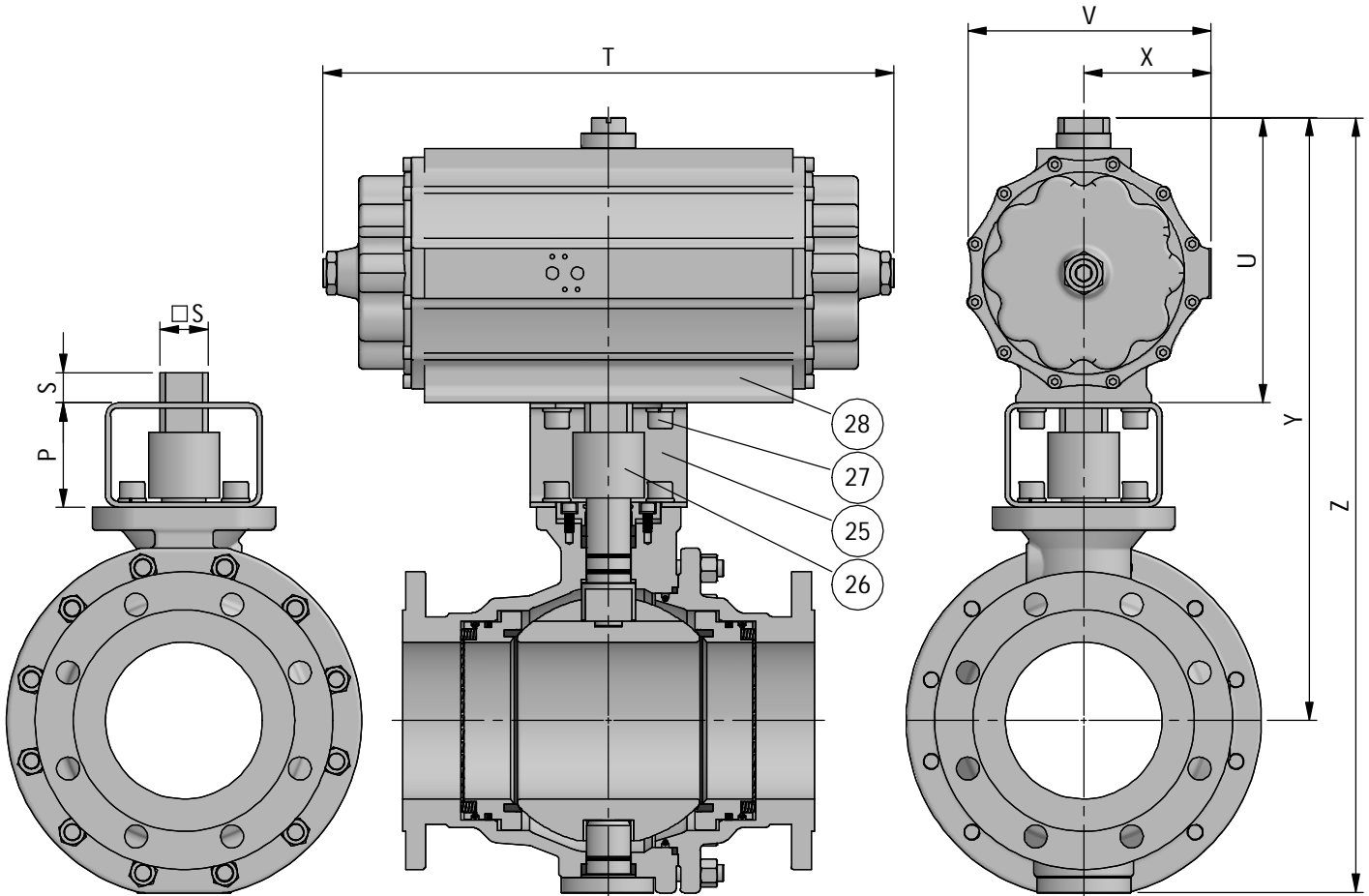
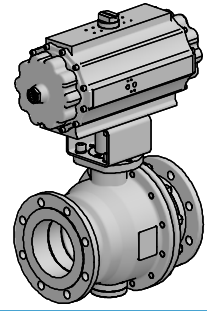
CL150/CL300 (300/750psi)  
 FULL BORE - DN150 (6") ÷ DN300 (12")  
 STANDARD ASME  
 OVERALL DIMENSIONS



DN / Size		Dimensions										Automation							GearBox	Weight Approx. [kg]
mm	inch	Ball Port	CL	A	B	C	D	E	F	G	H	I	J	K	L	M	N	ISO 5211		
150	6"	151	150	394	280	340	205	305	495	660	285	42	30	32	41	M16	300	F14	AB550	110
			300	403	320	350	205	305	495	660	285	42	30	32	41	M16	300	F14	AB550	150
200	8"	201	150	457	345	440	260	360	550	765	270	56	36	38	47	M20	300	F16	AB880	235
			300	502	380	450	260	360	600	820	285	56	36	38	47	M20	400	F16	AB880	340
250	10"	252	150	under development																
			300																	
300	12"	303	150	under development																
			300																	

## CTR SERIES

CL150/CL300 (300/750psi)  
 FULL BORE - DN150 (6") ÷ DN300 (12")  
 STANDARD ASME  
 BRACKET FOR AUTOMATION



### BILL OF MATERIALS

Part	Qt.	Description	CARBON STEEL VERSION	ST. STEEL VERSION
25	1	Bracket		STAINLESS ST. 304
26	1	Coupling		A479 316/L
27	-	Bolt		STAINLESS ST. 316
28	1	Pneumatic Actuator		ALUMINIUM

DN / Size	CL150										CL300									
	FULL BORE		Automation		Actuator						Automation		Actuator							
mm	inch	P	S	REF.	T	U	V	X	Y	Z	P	S	REF.	T	U	V	X	Y	Z	
150	6"	100	46	200-20	537	272	232	120	580	745	100	46	370-20	670	340	305	151	645	810	
200	8"	100	36	250-40	460	340	305	151	700	915	100	46	370-20	670	340	305	151	700	920	
250	10"	under development																		
300	12"																			

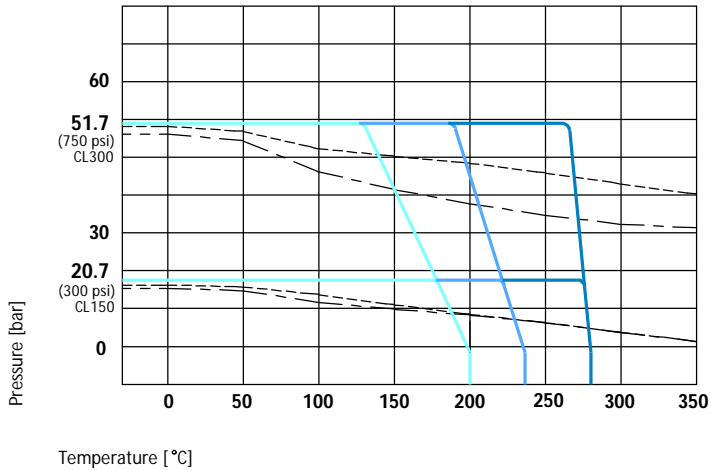


# CTR SERIES

CL150/CL300 (300/750psi)  
FULL BORE - DN150 (6") ÷ DN300 (12")  
TECHNICAL SPECIFICATIONS

### Pressure - Temperature Rating

A352 LCC    A351 CF8M    PEEK    C-RPTFE    PTFE/TFM



### Working Conditions

Material		mOT* [°C]	MOT* [°C]
A352 LCC	PTFE / TFM - FKM	-40	200
	C-RPTFE - FKM	-40	200
	PEEK - FFKM	-18	280
A351 CF8M	PTFE / TFM - FKM	-40	200
	C-RPTFE - FKM	-40	200
	PEEK - FFKM	-18	280

\*mOT - minimum Operating Temperature.  
\*MOT - Maximum Operating Temperature at 10 bar

DN	Rating
FB 150 (6") to 300 (12")	CL150 - 20.7 bar / 300 psi
FB 150 (6") to 300 (12")	CL300 - 51.7 bar / 750 psi

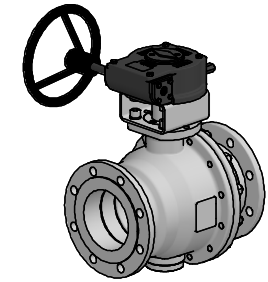
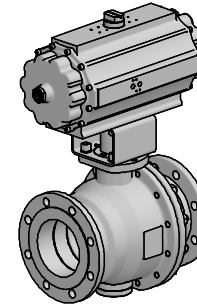
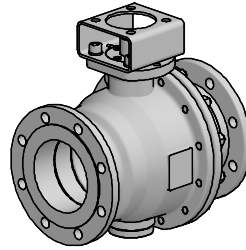
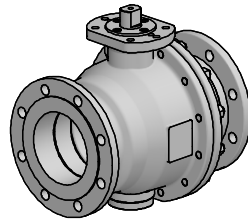
DN / Size		Torque Valve Figure [Nm] *												Maximum Allowable Stem Torque [Nm]		Flow Coefficient Cv
FULL BORE		C-RPTFE												316	S17400	
mm	inch	CL150						CL300						MAST		
		BTO	RTO	ETO	BTC	RTC	ETC	BTO	RTO	ETO	BTC	RTC	ETC			
150	6"	350	195	265	265	195	280	550	305	415	415	305	440	1150	4075	4500
200	8"	500	275	375	375	275	400	850	470	640	640	470	680	2530	8950	10000
250	10"	under development														
300	12"	under development														

\*Values without safety margin

Reference BTO 100% - RTO 55% | ETO 75% | BTC 75% | RTC 55% | ETC 80%

CERTIFICATION	CONSTRUCTION STANDARDS	TEST STANDARDS
CE Certification acc. to PED 2014/68/EU Fire Safe Design acc. to API 607Ed.6/ISO 10497 ATEX II 2GD Design acc. to 2014/34/EU Quality System Certified acc. to ISO 9001	ASME B16.34 ASME B16.5 ASME B16.10 API 6D ISO 5211	Pressure tests according to: EN12266-1 / API 598 / ISO 5208 Rate A  Tests applied: Hydrostatic Shell Test Hydrostatic Seat Test Pneumatic Tightness Test Pneumatic Seat Test  EN 10204 type 3.1 Certificate

Standards acc. to the latest available revision



SERIE	CLASS	VERSION	PORT	DN	ENDS	BODY	BALL   STEM	BOLTING	SEATS	PACKING   SEAL	OPTIONS
CTR	1 - CL150	1 - SP	F - FB	150	<b>FLANGED RF</b>	B - A352 LCC	E - A351 CF8M   A564 S17400	<b>D - L7M</b>	1 - PTFE	1 - Grafite   Grafite   FKM	E - Extension
	2 - CL300	2 - DP		200	F1 - ASME RF	F - A351 CF8M	<b>F - A351 CF8M   A479 316</b>	<b>F - B8M cl.2</b>	2 - TFM 1600		F - Bracket Automation
				250		Z - Others	G - A351 CF8   A479 304		<b>3 - C-RPTFE</b>		G - Gear Box
				300			Z - Others		4 - PEEK NATURE		H - Actuators
									5 - PEEK MOD		L - Locking Lever/Handle
									6 - DEVLON		I - Switch Box / Limit Swiches
									7 - UHMWPE		R - Bare Shaft / Bare Stem
											S - Solenoid Valve
											W - "V" Ball Port
											Z - Others

Example:

**CTR11F150F1F1FFF31G**

**CTR12F200F1F1BFD32R**

## INDUSTRIAL RANGE

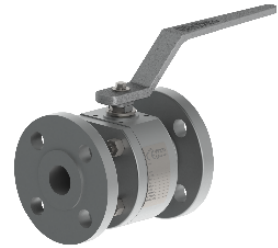
**XF Series**  
3 pieces bolted - Floating  
CI 300 to 600  
DN ¾" (10) to 4" (100)



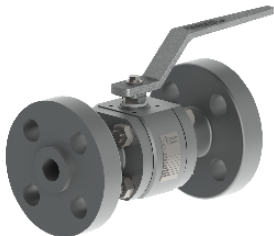
**SF Series**  
3 pieces bolted - Floating  
CI 300 to 800  
DN ¾" (10) to 4" (100)



**BF Series**  
2 split body - Floating  
CI 150 to 600  
DN ½" (15) to 4" (100)



**HF Series**  
3 pieces bolted - Floating  
CI 1500/2500  
DN ¾" (10) to 2" (50)



**QF Series**  
Multi-ways - Floating  
CI 150 to 600  
DN ½" (15) to 2" (50)



**VTR Series**  
3 pieces bolted - Trunnion  
CI 150 to 2500  
DN ½" (15) to 12" (300)



## OTHER RANGE

**SANITARY RANGE**  
XP / RP / LP / MP / QP



**CRYOGENIC RANGE**  
CCF / CXF / CBF / CSF / CVT



**METALLIC SEATS RANGE**  
XFM / CFM / BFM / SFM / VTM



