



KTM RICHARDS FIGURE R711/R713 FLOATING BALL VALVES

DN 50 - 200

A one piece, fire safe, anti-static, reduced bore, end entry, flanged ball valve for the chemical and petroleum industries

- R711 - ASME Class 150
- R713 - ASME Class 300



FEATURES

- Designed to ASME B16.34, API 608 and ISO 17292. Optional testing to API 6D / ISO 14313
- Single piece end entry body design complies with ASME B16.34
- ISO 5211 top mounting flange
- Face to Face to ASME B16.10
- Fire Safe tested and certified to API 607 by Lloyd's Register Asia
- Flange connection to ASME B 16.5 as standard
- One piece body offers total pipe integrity minimizing the number of potential leak paths
- Carbon steel or stainless steel body as standard
- Precision 316 stainless steel ball as standard
- Blowout proof shouldered stem
- Anti-static to API 608
- A secondary metal "fire safe" seat
- Cantilevered block seat as standard
- Optional spring energized constrained seat design
- Double block and bleed capability
- Optional cavity pressure bleed / vent fitting
- Emergency sealant facility (optional)
- Spring energized stem assembly to compensate for wear and temperature changes
- Optional fugitive emission stem seal package
- Vented ball equalizes body cavity pressure in open position and prevents possible seat damage
- Manufactured under quality system ISO 9001 Cert. No. MEL0929678/A and API 6D Q1 Cert. No. 6D-0243
- All valves factory hydro/air tested to API 598
- Certificate of compliance to EN 10204 / ISO 10474 Type 3.1 (DIN 50 049) are supplied as standard
- EC Certificate of Conformity for PED 97/23/EC, Schedule 4, Module H
- Certified AGA service to AS4617 and AS4629

GENERAL APPLICATION

Ideally suited for use in the oil and gas production, refining and chemical applications. Body material and wetted trim components conform to NACE Standard MR0175 - 2002.

Hazardous areas handling flammable fuels, gases or chemicals where 'fire safe', or anti-static valves are mandatory or desirable.

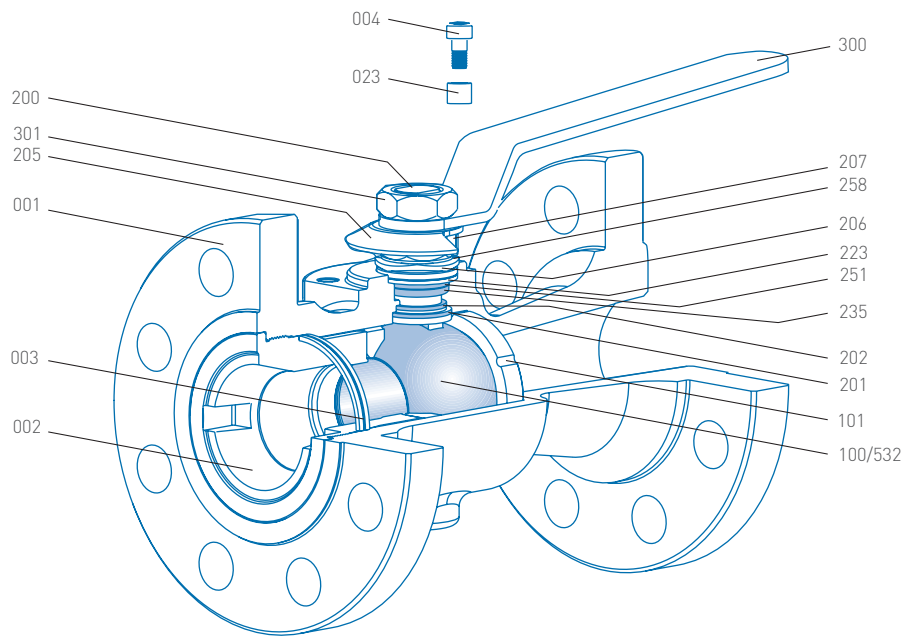
TECHNICAL DATA

Size range: DN 50 - 200
 Pressure rating: ASME Class 150 to 300
 Temperature rating: Up to 260°C
 End connections: Flanged ASME B16.5

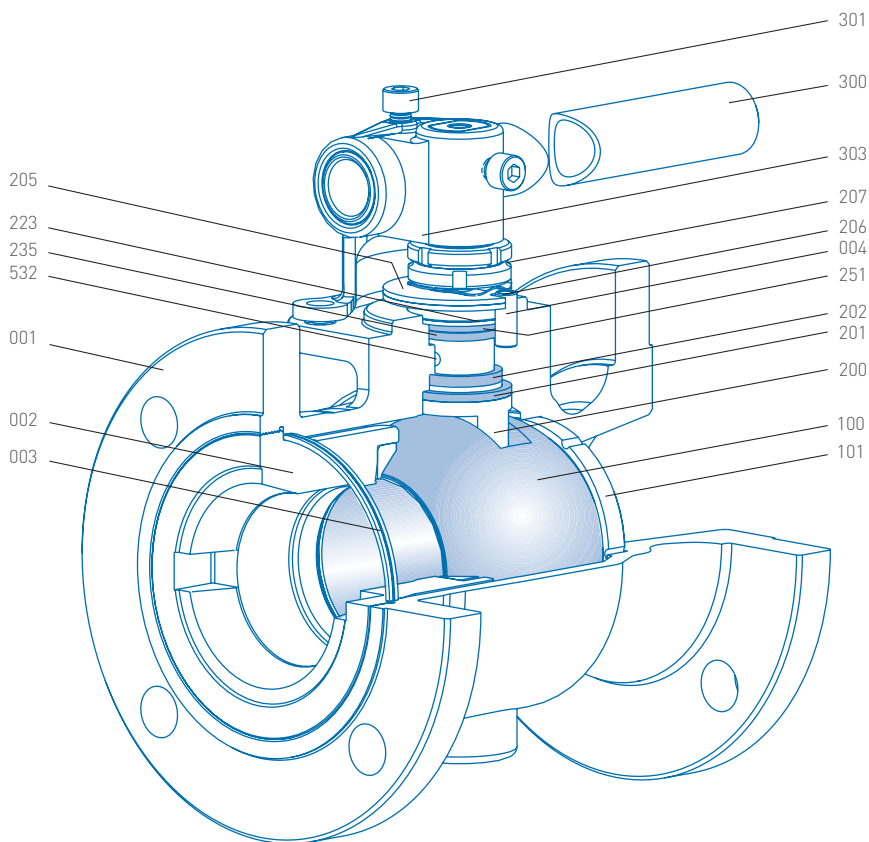


KTM RICHARDS FIGURE R711/R713 FLOATING BALL VALVES

DN 50 - 200



NOTE: DN 50 R713 valve illustrated

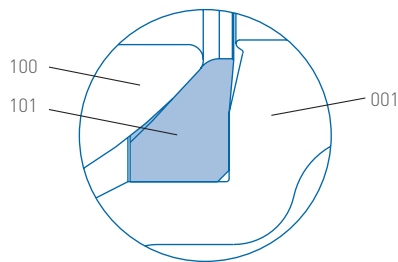


NOTE: DN 150 R711 valve illustrated with wrench sectioned for clarity.

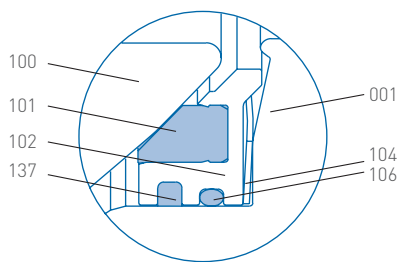
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DN 50 - 200

SEAT DETAIL



CANTILEVER SEAT



ENERGIZED SEAT

PARTS LIST

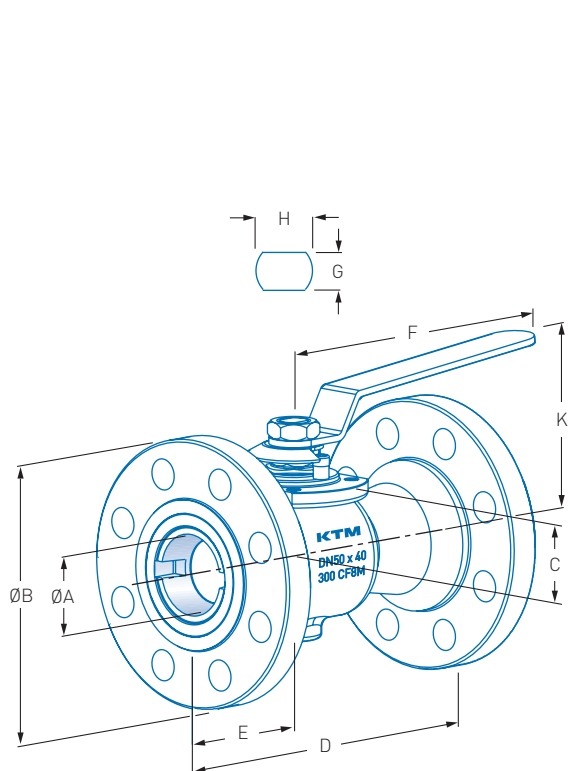
No.	Description	Carbon steel	Stainless steel
001	Body	ASTM A216-WCC	ASTM A351-CF8M
002	Body insert	ASTM A216-WCC	ASTM A351-CF8M
003	Body insert seal	Virgin PTFE	Virgin PTFE
004	Stop pin	Alloy steel	UNS S31600
023	Stop pin spacer (DN 50)	UNS S31600	UNS S31600
100	Ball	UNS S31600	UNS S31600
101	Seat (code T - cantilevered)	Virgin PTFE	Virgin PTFE
	Seat (code C - cantilevered)	Carbon reinforced PTFE	Carbon reinforced PTFE
	Seat (code 2 - energized)	Carbon reinforced PTFE	Carbon reinforced PTFE
102	Seat follower (energized seat)	UNS S31600	UNS S31600
104	Seat spring (energized seat)	Inconel	Inconel
106	Seat housing seal (energized seat)	FKM A	FKM A
137	Aux. Fire safe housing seal (energized seat)	Flexible graphite	Flexible graphite
200	Stem (standard)	UNS S31600	UNS S31600
	Stem (high strength)	(optional - UNS S17400)	(optional - UNS S17400)
201	Primary stem seal	Carbon reinforced PTFE	Carbon reinforced PTFE
202	Fire safe stem seal	Flexible graphite	Flexible graphite
205	Stop plate	UNS S31600	UNS S31600
206	Stem spring	Inconel	Inconel
207	Stem nut	UNS S31600	UNS S31600
223	Stem seal follower	UNS S31600	UNS S31600
235	Aux. stem seal	FKM A	FKM A
251	Weather seal	Comp. carbon fiber	Comp. carbon fiber
258	Lock washer (DN 50)	UNS S31600	UNS S31600
300	Wrench (DN 50)	UNS 30400 (Optional - UNS S31600)	UNS 30400 (Optional - UNS S31600)
	Wrench (DN 80 - DN 200)	Carbon steel painted (Optional - UNS S31600)	Carbon steel zinc plated (Optional - UNS S31600)
301	Wrench retainer	Carbon steel zinc plated (optional - UNS S31600)	Carbon steel zinc plated (optional - UNS S31600)
303	Wrench head	S.G. Iron (prime coated) (optional - UNS S31600)	S.G. Iron (prime coated) (optional - UNS S31600)
532	Anti-static device	UNS S31600 / Inconel	UNS S31600 / Inconel

NOTE:

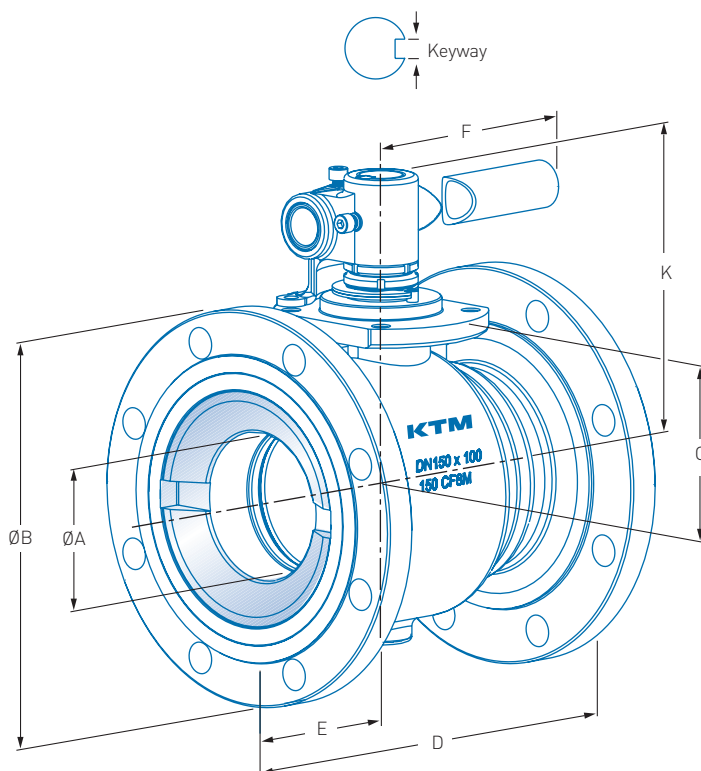
Pressure containing materials conform to NACE MR0175 - 2002

KTM RICHARDS FIGURE R711/R713 FLOATING BALL VALVES

DN 50 - 200



NOTE: DN 50 R713 valve illustrated



NOTE: DN 150 R711 valve illustrated

DIMENSIONS (mm)

Valve size DN	ØA bore	ØB		C	D			Stem conn.		Top plate data			Mass (kg)		K _v at full open			
		Class 150	Class 300		Class 150	Class 300	E	F	K	H x G	Keyway	No. holes	Hole dia.	PCD	Class 150	Class 300	Class 150	Class 300
50	38	150	165	47.5	178	216	89.0	200	112	19 x 12.7	N/A	4	M8	70	8.5	11.0	139	152
80	63	190	210	85.0	203	282	103.3	427	158	22 x 15.9	N/A	4	M10	102	18.5	26.0	351	357
100	76	230	255	97.0	229	305	114.5	427	170	22 x 15.9	N/A	4	M10	102	29.5	40.5	532	600
150	102	280	320	124.0	267	403	133.5	625	220	Ø32	10 x 10	4	M12	125	52.0	78.0	578	832
200	150	345	380	159.0	292	419	161.0	966	255	Ø32	10 x 10	4	M12	125	98.0	118.0	1280	1558

NOTE:

F = The handle dimension when the handle is in the extended position.

H = The diameter of the stem connection.

G = The dimension across the stem flats.

K_v = The flow rate of water in m³/hr that will pass through a valve with a pressure drop of 1 bar (100 kPa) at 20°C.

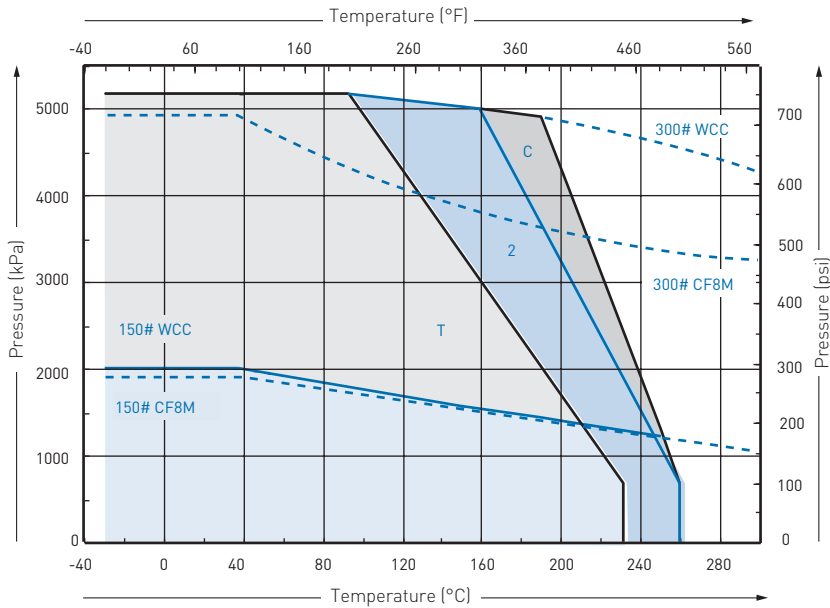
C_v = 1.155 K_v.

Dimensions are nominal to ± 1 mm.

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PRESSURE/TEMPERATURE CHART



- T** Virgin PTFE cantilevered seat
- C** R' PTFE cantilevered seat
- 2** R' PTFE energized seat

PRESSURE/TEMPERATURE RATINGS

Class 150 (Figure R711) PTFE seated.

Carbon steel: 1980 kPa/19.8 bar max at 38°C
Stainless steel: 1900 kPa/19.8 bar max at 38°C

Carbon reinforced PTFE

Carbon steel: 1980 kPa/19.8 bar max at 38°C
Stainless steel: 1900 kPa/19 bar max at 38°C

Class 300 (Figure R713) PTFE seated.

Carbon steel: 5170 kPa/51.7 bar max at 38°C
Stainless steel: 4960 kPa/49.6 bar max at 38°C

Carbon reinforced PTFE

Carbon steel: 5170 kPa/51.7 bar max at 38°C
Stainless steel: 4960 kPa/49.6 bar max at 38°C

NOTE:

1. These pressure/temperature ratings displayed are for total valve assembly with the respective seat material fitted.
2. Seat pressure/temperature limitations displayed for Class 150 and 300 are in combination with FKM- A O-ring seals. For other seat/sealing materials refer to Emerson.
3. Carbon steel valves have a minimum temperature limitation of minus 29°C.

TYPICAL SPECIFYING SEQUENCE - CLASS 150 AND CLASS 300

150	R711	C	A	A	T	S	F	3	-	01
Valve size	Figure no.	Body material	End conn. (note 1)	End conn. (note 1)	Seat type	Trim material	Body seal	Certification code (note 2)	Valve variant	Standard option

Size range: DN 50 - 200 (reduced bore)

Figure no.: R711 - Fire safe, anti-static, Class 150, reduced bore, floating ball design ball valve, wrench operated with locking device.
R713 - Fire safe, anti-static, Class 300, reduced bore, floating ball design ball valve, wrench operated with locking device.

Trim code	Body material	End conn.	End conn.	Seat	Trim	Body seal
CAATST	Carbon steel	Flg ASME	Flg ASME	PTFE	316 S/S	PTFE
CAACST	Carbon steel	Flg ASME	Flg ASME	Carbon R'PTFE	316 S/S	PTFE
SAATST	316 S/S	Flg ASME	Flg ASME	PTFE	316 S/S	PTFE
SAACST	316 S/S	Flg ASME	Flg ASME	Carbon R'PTFE	316 S/S	PTFE
CAA2ST	Carbon steel	Flg ASME	Flg ASME	Carbon R'PTFE	316 S/S	PTFE
SAA2ST	316 S/S	Flg ASME	Flg ASME	Carbon R'PTFE	316 S/S	PTFE

NOTE:

1. For end connection details refer to Emerson.
2. Certification code: Standard certification code 3 includes pressure test certification and material certification of the pressure containing components conforming to EN 10204:1991/ISO 10474 Type 3.1 (DIN 50 049). Additional certification requirements is available on request, refer to Emerson.
3. Valve variant: Standard valve is not offered with variants. Should a valve variant be required, refer to Emerson for variant listing and order code details.
4. Standard options: Base valve is supplied with wrench operator with locking device - code 01. For other valve options, refer to Emerson for listing and order code details. For bare shaft valves (code 08) where fitment of gearbox or actuator is required, the order requirement is to be specified as "Complete with" followed by the details of the requirement - eg: complete with gearbox.

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