SERIES 134

HIGH PRESSURE THREE-PIECE BALL VALVES

INCO® VALVE AND CONTROLS

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SERIES 134

HIGH PRESSURE THREE-PIECE BALL VALVES

SUMMARY

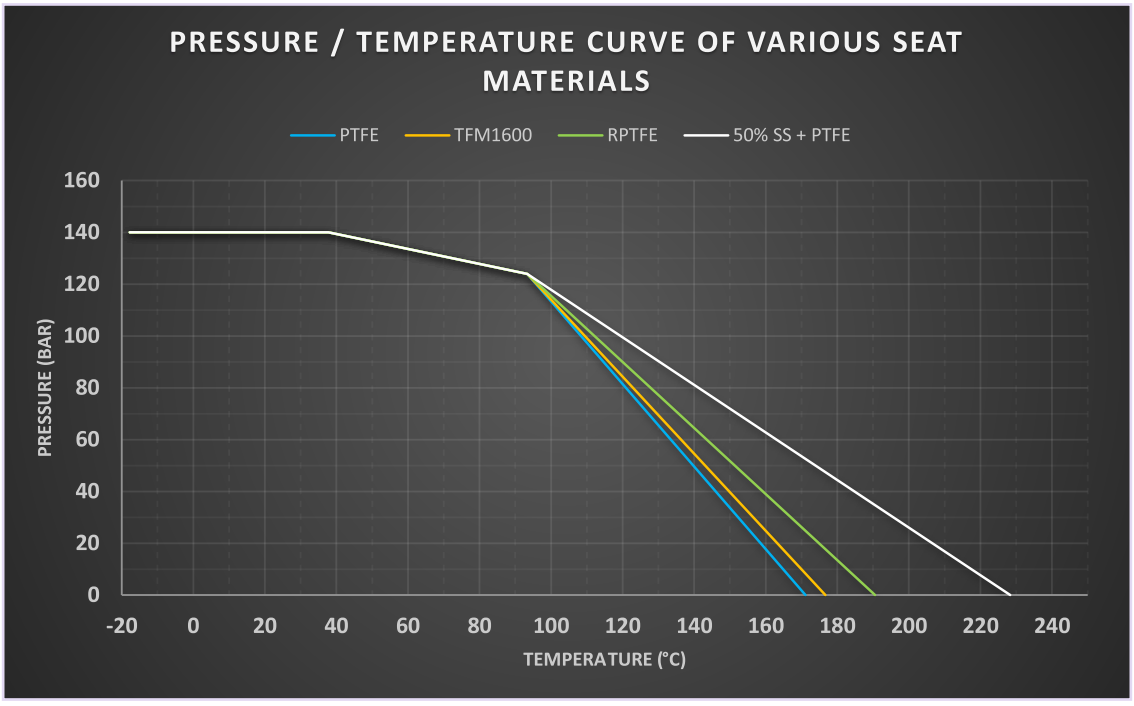
- **PRESSURE RATING** | DN8 - DN50: 140 bar; DN65 - DN100: 100 bar / 1/4" - 2": 2000 psi; 2½" - 4": 1500 psi
- **MOUNTING PAD** | ISO 5211
- **DESIGN STANDARD** | EN12516-3
- **BODY MATERIALS** | STAINLESS STEEL & CARBON STEEL
- **STANDARD SEAT MATERIAL** | TFM1600
- **BLOW-OUT PROOF STEM**
- **ANTI-STATIC DEVICE**
- **FULL PORT**
- **INTERCHANGEABLE SEATS WITH RELIEF GROOVES**
- **STANDARD LOCKABLE HAND LEVER**
- **END CONNECTIONS**

  ISO 228 / DIN 259 / DIN 2999 (BSPT) |ANSI B1.20.1 (NPT) | SOCKET WELD END | BUTT WELD END |
- **OPTIONAL SEAT MATERIALS TO SUIT VARIOUS APPLICATIONS**

  PTFE | RPTFE (15% GLASS FIBRE REINFORCED) | PFA | PEEK | UHMWPE | 50/50 (316 SS + RPTFE) | METAL |

  15% CARBON REINFORCED PTFE | TFM 1600 (MODIFIED PTFE) | 25% CARBON REINFORCED PTFE |

  23% CARBON, 2% GRAPHITE REINFORCED TFM1600.
- **TEMPERATURE RANGE** | 40 °C @ 140 bar; 90 °C @ 125 bar; 190 °C @ 40 bar.



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OPERATORS

GEAR OPERATORS

The INCOVALVE® Series 134 is offered with a standard epoxy coated ductile iron gearbox. The gearbox is available with an acid resistant or offshore coating as well as in full ASTM A351 Gr. CF8M Stainless Steel on request.

HAND LEVERS

The INCOVALVE® Series 134 has a standard, lockable stainless steel hand lever. Simply lift the locking pad to adjust the valve position. A hole is provided for a padlock for secure lockout during maintenance.

PNEUMATIC ACTUATORS

The INCOVALVE® Series 134 can be fitted with an INCOAIR™ rack & pinion or scotch yoke actuator. INCOAIR™ rack & pinion actuators are both hard anodized and epoxy coated as standard and can deliver up to 13,000 Nm torque. INCOAIR™ scotch yoke actuators can deliver up to 257,000 Nm torque and the standard material offered is epoxy coated ductile iron. For additional corrosion resistance INCOAIR™ actuators can be supplied in ASTM 351 Gr. CF8M or with a PTFE protective coating on request.

ACCESORIES

Inco Valve & Controls® specialises in the specification and fitment of actuators and control accessories. Consult us for all your control and monitoring requirements.

INCO® offers a wide variety of valve accessories that are compatible with INCOVALVE® Series 134 ball valves including:

- Limit switch boxes
- Valve status monitors
- Solenoid valves
- Valve positioners
- Speed controllers
- Air filter regulators
- Control panels
- Pneumatic enclosures

Inco Valve & Controls® can supply any customer specified instrumentation.

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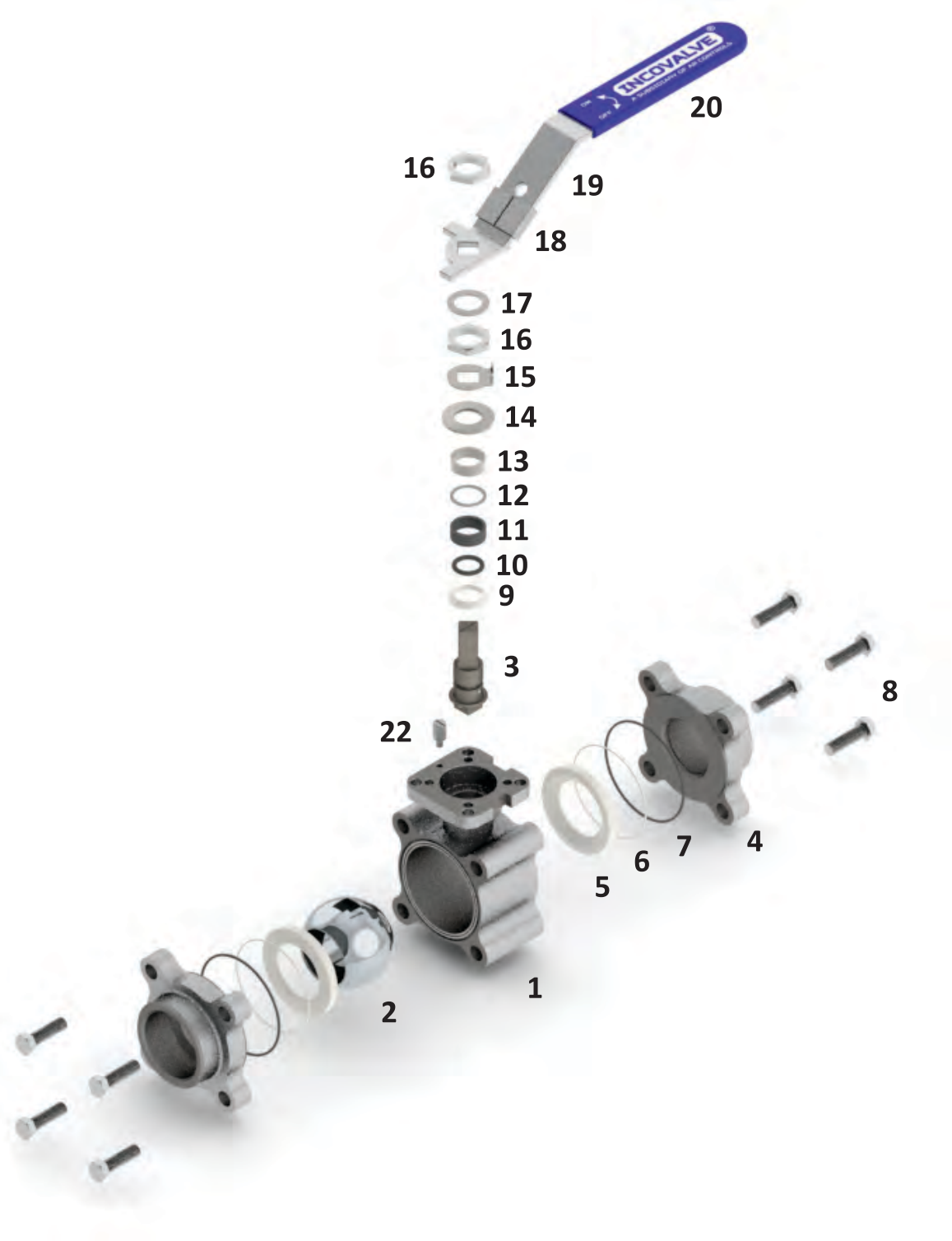
MATERIALS OF CONSTRUCTION



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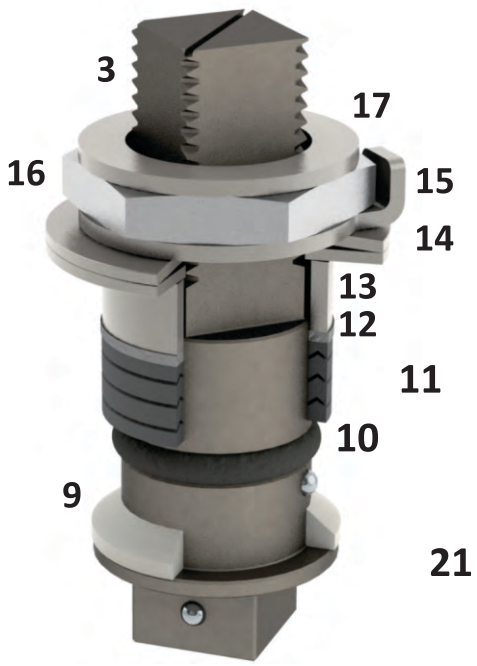
BILL OF MATERIALS

NO.	PART NAME	STAINLESS STEEL	CARBON STEEL
1	BODY	ASTM A351 GR. CF8M / EN10213-4 1.4408	ASTM A216 GR. WCB / EN10213-1 1.0619
2	BALL	ASTM A351 GR. CF8M / EN10213-4 1.4408	ASTM A351 GR. CF8M / EN10213-4 1.4408
3	STEM	ASTM A276 GR. 316 / EN10088-3 1.4401	ASTM A276 GR. 316 / EN10088-3 1.4401
4	END CAP	ASTM A351 GR. CF8M / EN10213-4 1.4408	ASTM A216 GR. WCB / EN10213-2 1.0619
5	SEAT	TFM1600	
6	BODY SEAL	TFM1600	
7	BODY SEAL	GRAPHITE	
8	BODY BOLT	ASTM A193 GR. B8 / EN3506-1 A2-70	
9	THRUST WASHER	MODIFIED TFM1600	
10	O-RING	FKM	
11	STEM PACKING	GRAPHITE	
12	PACKING PROTECTOR	RPTFE	
13	PACKING FOLLOWER	ASTM A276 GR. 304 / EN10088-3 1.4301	
14	BELLEVILLE WASHER	ASTM A666 GR. 301 / EN16983 1.4310	
15	STOP WASHER	ASTM A240 GR. 304 / EN10088-2 1.4301	
16	NUT	ASTM A194 GR. 8 / EN3506-2 A2-035	
17	WASHER	ASTM A240 GR. 304 / EN7089 A2	
18	LOCKING PAD	ASTM A240 GR. 304 / EN10088-2 1.4301	
19	LEVER	ASTM A240 GR. 304 / EN10088-2 1.4301	
20	LEVER COVER	PLASTIC	
21	ANTI-STATIC DEVICE	ASTM A276 GR. 316 / EN10088-3 1.4401	
22	MECHANICAL STOP	ASTM A276 GR. 304 / EN10088-3 1.4301	

- Various materials available on request.



INCOVALVE® SERIES 134 STEM ASSEMBLY

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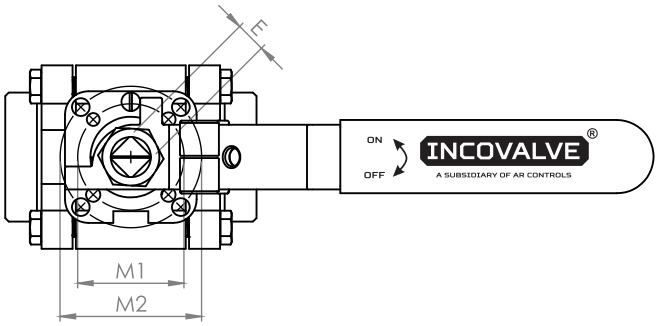
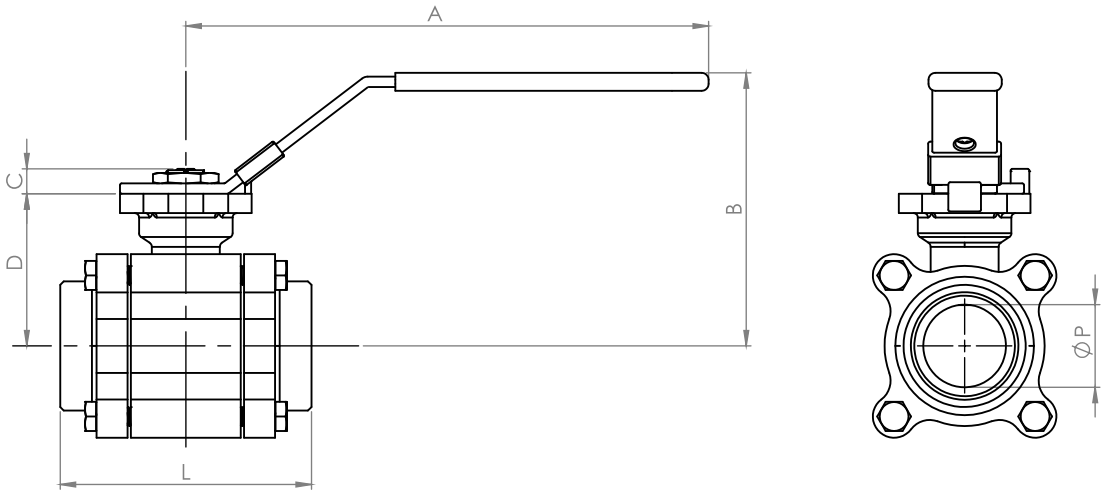
DIMENSIONS





SERIES 134 DN 8 - DN 50 (1/4" - 2")

SIZE		P	L	A	B	C	D	E	M1	M2	WEIGHT
DN8	1/4"	11.5	57.5	115.0	81.5	9.0	44.0	9.0	F03	F05	0.91
DN10	3/8"	12.5	57.5	115.0	81.5	9.0	44.0	9.0	F03	F05	0.91
DN15	1/2"	15.0	71.1	115.0	81.5	9.0	44.0	9.0	F03	F05	0.94
DN20	3/4"	20.0	76.0	115.0	86.0	9.0	49.5	9.0	F03	F05	1.10
DN25	1"	25.0	84.0	139.0	96.5	9.0	57.0	9.0	F03	F05	1.50
DN32	1 1/4"	32.0	96.0	188.0	102.5	9.0	62.5	9.0	F03	F05	2.42
DN40	1 1/2"	38.0	110.0	201.0	117.5	14.0	74.8	14.0	F05	F07	3.83
DN50	2"	50.0	125.0	201.0	132.5	14.0	89.5	14.0	F05	F07	12.90

- Dimensions are in mm.
- Mounting dimensions M1 and M2 are in accordance with ISO5211.
- Consult factory for DN65-DN100 dimensions.

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TORQUE FIGURES

The operating torque of the valve can be calculated using the formula and tables below. It is necessary to determine the operating torque of the valve in order to select a suitable actuator or gearbox. Proper sizing and selection of the operator will ensure smooth and reliable operation of the valve. The operating torque of the valve is influenced by the working pressure, media, valve seat material, operation frequency and valve configuration.

$$T_O = T_{WP} \times (S_F + M_F + C_F + F_F)$$

T_O = Operating Torque
T_{WP} = Torque at Working Pressure
S_F = Seat Factor
M_F = Media Factor
C_F = Configuration Factor
F_F = Frequency Factor

Media Factor		Configuration Factor	
Media	**Factor**	**Configuration**	**Factor**
Clean lubricating fluid	0.0	Through Port	0.0
Clean non-lubricating fluid	0.0	V-Port	0.3
Chilled water	0.3	Modulating Service	0.3
Low temperature service (< 0°C)	0.3	**Frequency Factor**	
Raw water	0.4	**Frequency**	**Factor**
Steam	0.4	Cycled Daily	0.0
Clean Gas	0.4	Cycled Weekly	0.1
Slurry	0.8	Cycled Monthly	0.2
Dry media	0.8	Cycled Bi-monthly	0.3

Seat Factor			
Seat Material	**Factor**	**Seat Material**	**Factor**
TFM 1600, MODIFIED TFM 1600, PTFE	1.00	UHMWPE	1.35
RPTFE	1.10	PEEK, 50/50	1.50

Valve Size		Torque [Nm] @ Working Pressure			
inch	**mm**	**50 Bar**	**80 Bar**	**100 Bar**	**150 Bar**
1/4"	**8**	6	6	10	10
1/2"	**15**	6	6	10	10
3/4"	**20**	8	10	10	12
1"	**25**	12	12	14	14
1 1/4"	**32**	16	16	16	22
1 1/2"	**40**	30	30	39	40
2"	**50**	42	50	130	170

- Torque figures do not include safety factor.

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PRODUCT WARRANTY

AR Controls will at its discretion repair or replace without charge or refund the purchase price for products supplied, which prove to be defective in matter or workmanship provided that, in each case the product has been properly installed and is used in the service for which it was recommended, and that the written claim, specifying the alleged defect is presented to AR Controls within 18 months from the date of shipment or within 12 months from date of installation, whichever date occurs first. AR Controls shall in no event be liable for the following cost, which includes but is not limited to costs associated with; consequential damages, labour, equipment or engineering costs related to the repair or replacement of defective equipment.

The warranty stated in this paragraph is in lieu of all other warranties, either express or implied. With respect to warranties, this paragraph states the buyer's exclusive remedy and AR Controls' exclusive liability.

14 CHROME STREET, CE6,
VANDERBIJLPARK, 1900, SOUTH AFRICA

SALES@ARCONTROLS.COM +27 (16) 981 4551

AR Controls®

www.arcontrols.com

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