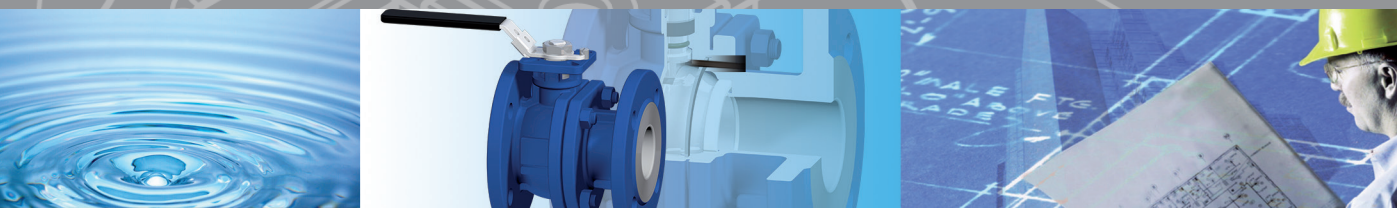


Uniflow®



EN/ANSI Ball Valves Direct Mounting
Series BG
www.comeval.es



Design Attributes

The ball valve plays a significant role in the valve industry. Due to its ¼ turn design, it is very easy to operate and has wide and varied applications. It is applied to many fields where other types of valves were previously used. The design and production of ball valves meet the highest levels of demand and have created a reputation of quality and total reliability in the market. The fact that they are maintenance-free through the double self-sealing stem to ISO 15848-1, their fire safe API 607 design, and the high ease of automation through the top flange according to ISO 5211, make them the best choice for your processes.

Lever design for
DN15-DN65

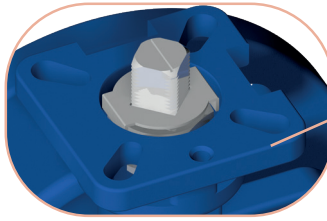
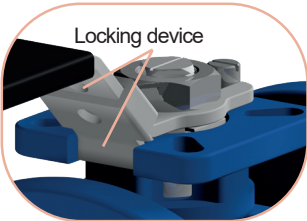


Rugged and light
hand lever

Lever design for
DN80-DN200



Locking device



Direct mounting pad with
top flange and square
stem with bevelled edges
acc. to ISO 5211 to suit
actuators. Easy and
inexpensive automation
with no need for brackets

Locking device



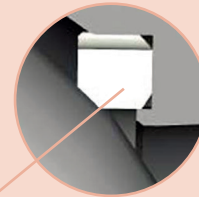
**FIRE SAFE
CERTIFIED**
API 607 /
ISO 10497



**FUGITIVE
EMISSIONS
CERTIFIED**
ISO 15848-1

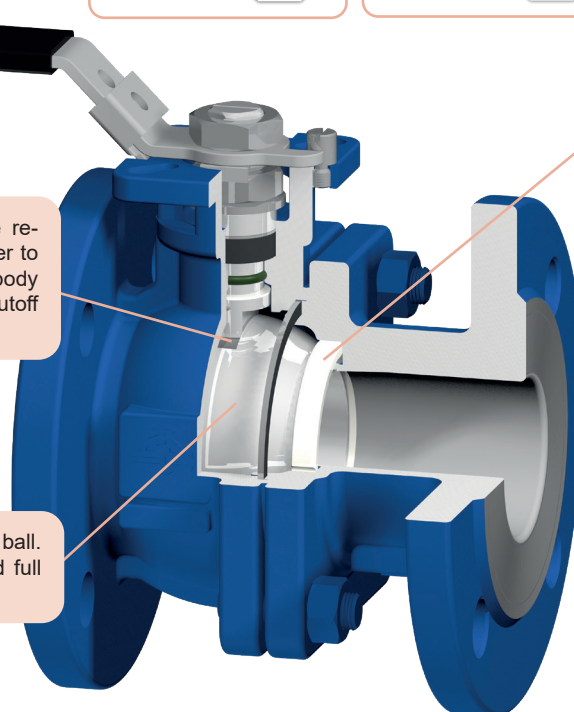


Reliable TFM1600
grade seat seal,
elastic sealing
ring features a
bigger sealing
pressure ratio
between the
ring surface and
the ball when
medium pressure
gets lower (smaller
contact area). When
medium pressure
gets higher the
contact area becomes
bigger as the
sealing ring
transforms
elastically to
undertake the
bigger force
pushed by the
medium without
any damage



The solid ball has a pressure
relief hole in the stem
slot in order to
avoid pressure
build-up in the
body cavity. This
ensures a tight
shutoff and
long service life

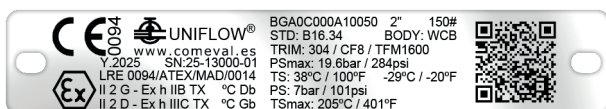
Mirror polished solid st. steel ball.
Reduced operating torque and full
seat tightness



Floating ball, full bore, split body
design, integral flanges

Precision machined components, for
optimal valve performance

Nameplate incl. batch no. for full traceability with QR code

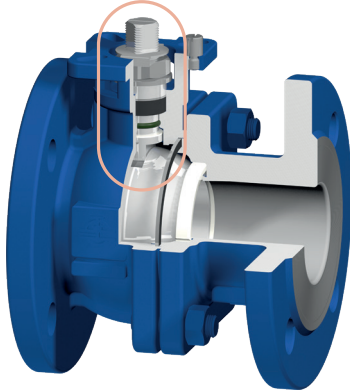


Low valve surface porosity and roughness, thanks to lost wax casting technology, better aesthetic and less prone to corrosion attack



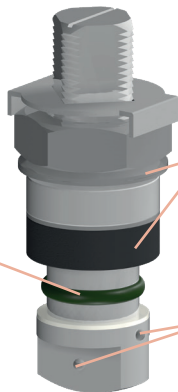
Design Attributes

Stem/packing features



Blow out proof stem

Viton O-ring safety shaft sealing, ensure atmospheric tightness with liquids and gases

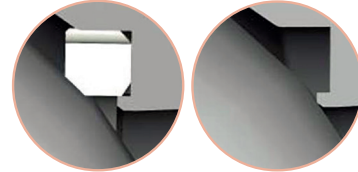


Live loaded stem graphite packing, belleville washers automatically adjusting for thermal effects

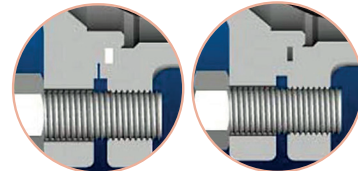
Double antistatic device in accordance with ATEX regulations 2014/34/EU for potentially explosive environments

Fire safe design

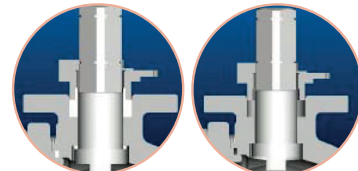
Fire safe version of seat
Before fire After fire



Fire safe version of bodies union
Before fire After fire



Fire safe version of stem, with back seat feature and blow out proof
Before fire After fire



Main Features

Valve design: EN 12516 (for DIN range) / ASME B16.34 (for ANSI range)

Nominal pressure: PN16 / PN40 / ANSI 150 / ANSI 300

Face to face length: PN40/16

DN15-100 EN 558 S14/S27 (DIN 3202 F4)

DN125-200 EN 558 S15/S27 (DIN 3202 F5)

ANSI 150/300 — According to ASME B16.10

Valve end connections: Flanged to EN 1092-1 type 21/B, PN16/40 (for DIN range)*; Flanged to ASME B16.5 (for ANSI range)

**(valves DN65 with 4 holes as accepted variant in standard in PN16)*

Flange facings surface roughness AARH 200 (Ra 6.3µm)

Marking: EN 19

Pressure Tests: EN 12266-1 (for DIN range) / API 598 (for ANSI range)

Paint blue color similar to RAL5002 for protection during storage and transport for cast steel valves

Seat leakage rate: Rate A (full seat tightness in both directions)

Product compliant with Directive 2014/68/EU on Pressure Equipment (PED) and Machinery Directive 2006/42/EC

Fire safe Certified API 607 / ISO 10497

Fugitive Emissions ISO 15848-1

Graphite packing to API 622 fugitive emission standard

ATEX 204/34/EU

Main Duties / Limits of use

Liquids compatible with materials of construction, acc. to Directive 2014/68/EU, Annex II tables 8 (group 1*) & 9 (group 2*) up to category III;
Stable gases compatible with materials of construction, acc. to Directive 2014/68/EU, Annex II tables 6 (group 1*) & 7 (group 2*) up to category III

Questions referring to chemical resistance, please consult us

Observe also pressure/temperature limits on diagram

**Classification of fluids (group 1 or 2) acc. to Directive 2014/68/EU, Article 13*

Material and Test Certificates

All Comeval flanged Ball Valves can be supplied with a EN 10204-3.1 test- and material certificate.

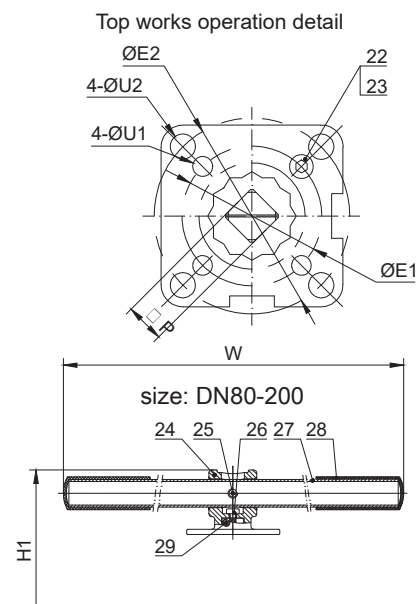
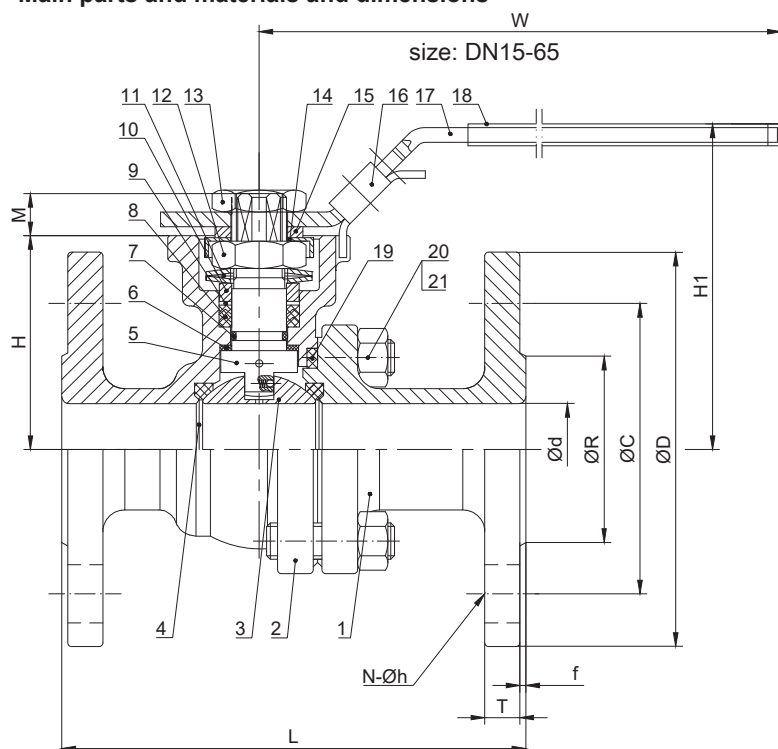
Options

Other designs and approvals, limit switches, different actuation, please consult us



EN/DIN valves 1.0619 /1.4408 PN16 & PN40

Main parts and materials and dimensions



NO.	PART NAME	Cast steel	Stainless steel	NO.	PART NAME	Cast steel	Stainless steel
1	End cap	EN 10213 1.0619	EN 10213 1.4408	15	Handle gland		304
2	Body	EN 10213 1.0619	EN 10213 1.4408	16	Lock device ¹		304
3	Ball	DN15-100 ASTM A182 F304	DN125-200 ASTM A182 F316	17	Handle ¹		304
4	Ball seat	TFM1600 (option TFM4215)		18	Handle sleeve ¹		Vynil plastic
5	Stem (anti-static device)	ASTM A276 304	ASTM A276 316	19	Body gasket		316 spiral wound + graphite
6	Thrust washer	TFM1600 (option TFM4215)		20	Bolting		A2-70
7	O-ring	FKM	75A FKM	21	Bolt nut		A2-70
8	Packing		Graphite (API 622)	22	Stop bolt		A2-70
9	Bushing		304	23	Stop nut		A2-70
10	Gland		316	24	Handle adapter ²		CF8
11	Belleville washer		301	25	Set screw ²		A2-70
12	Stem nut		A194-8 (304)	26	Bolting ²		A2-70
13	Handle nut ¹		A194-8 (304)	27	Pipe handle ²		A53+ plated Zn
14	Stop-lock-cap		304	28	Handle sleeve ²		Vynil plastic
				29	Set screw ²		A2-70

¹ For DN15 to DN65 / ² For DN80 to DN200 / ³ Only for DN150

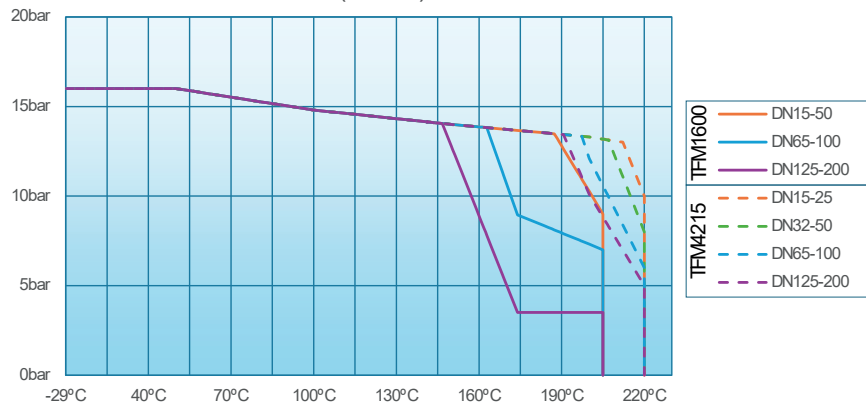
SIZE	PN	d	L	R	D	C	f	T	N	h	H	H1	W	P	M	E1	E2	U1	U2	ISO5211
DN15		15	115	45	95	65	2	16	4	14	48	78	147	9	8	36	42	6	6	F03-F04
DN20		20	120	58	105	75	2	18	4	14	53	84	147	9	9	36	42	6	6	F03-F04
DN25		25	125	68	115	85	2	18	4	14	59	90	177	11	11	42	50	6	7	F04-F05
DN32		32	130	78	140	100	2	18	4	18	71	102	177	11	11	42	50	6	7	F04-F05
DN40		38	140	88	150	110	3	18	4	18	76	110	197	14	14	50	70	7	9	F05-F07
DN50		50	150	102	165	125	3	20	4	18	85	118	197	14	14	50	70	7	9	F05-F07
DN65	16 40	63,5	170	122	185	145	3	18 22	4 8	18	102 107	150 155	267	17	17	70	102	9	11	F07-F10
DN80	16 40	76	180	138	200	160	3	20 24	8	18	112 117	176 181	300	17	17	70	102	9	11	F07-F10
DN100	16 40	100	190	158 162	220 235	180 190	3	20 24	8	18 22	140	211	400	22	22	-	102	-	11	F10
DN125	16 40	125	325	188	250 270	210 220	3	22 26	8	18 22	183	263	600	27	27	-	125	-	14	F12
DN150	16 40	150	350	212 218	285 300	240 250	3	22 28	8	22 26	204	284	800	27	27	-	125	-	14	F12
DN200	16 40	200	400	268 285	340 375	295 320	3	24 34	12	22 30	253	352	800	36	36	-	140	-	18	F14

Dimensions in mm. subject to manufacturing tolerance

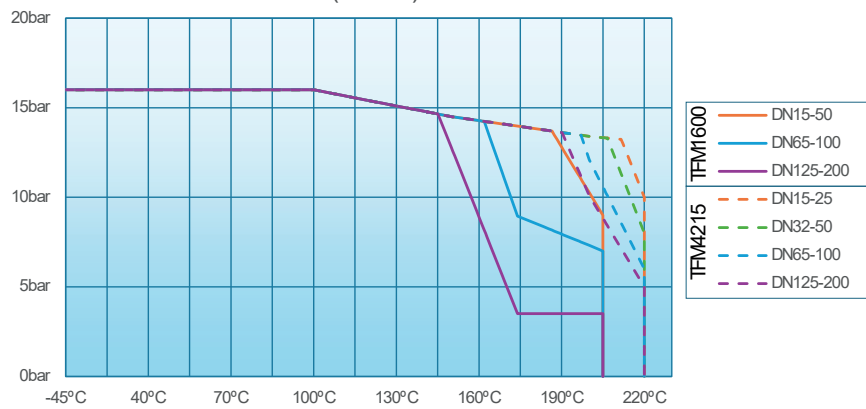


Pressure-temperature charts

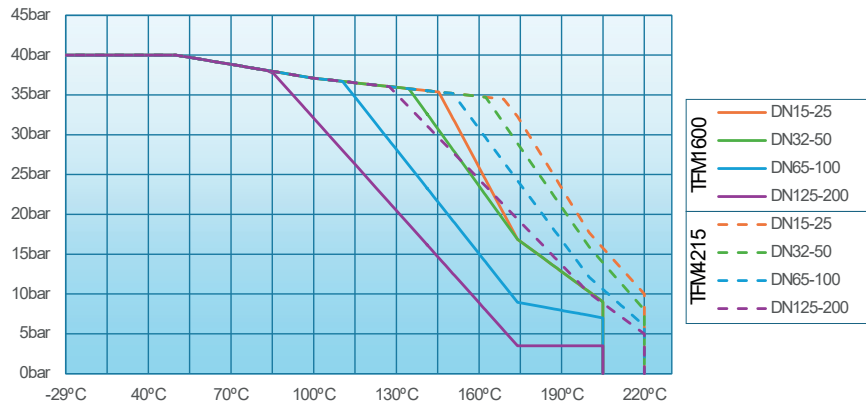
P-T for BGA0 (1.0619) PN16 valves



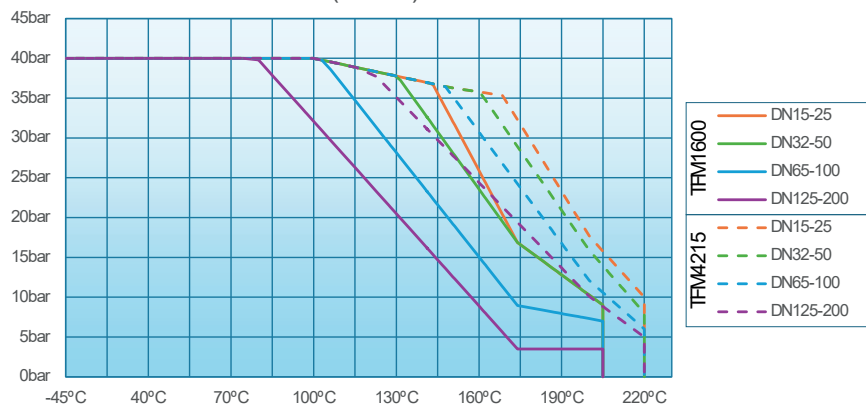
P-T for BGI0 (1.4408) PN16 valves



P-T for BGA0 (1.0619) PN40 valves



P-T for BGI0 (1.4408) PN40 valves



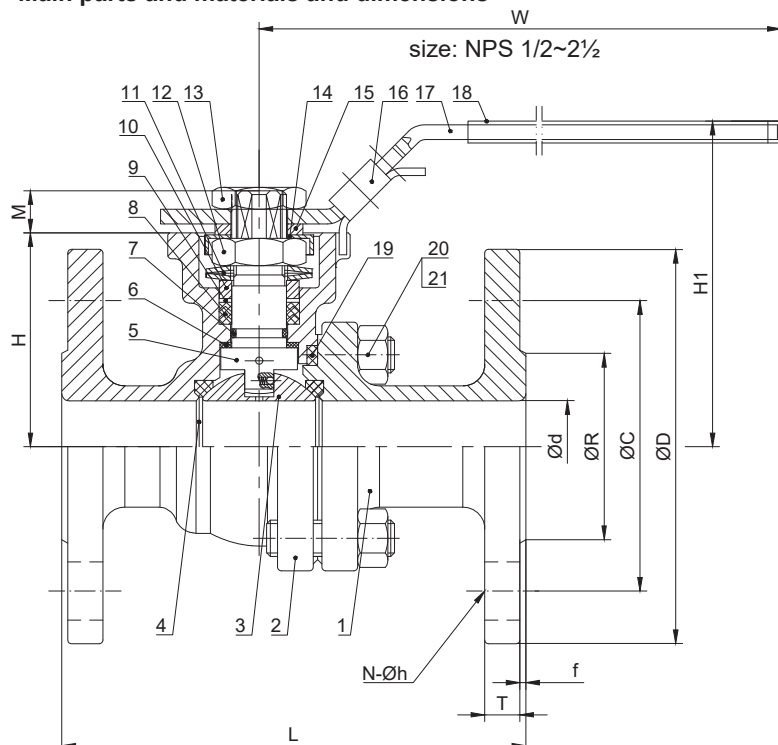
Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsible for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information

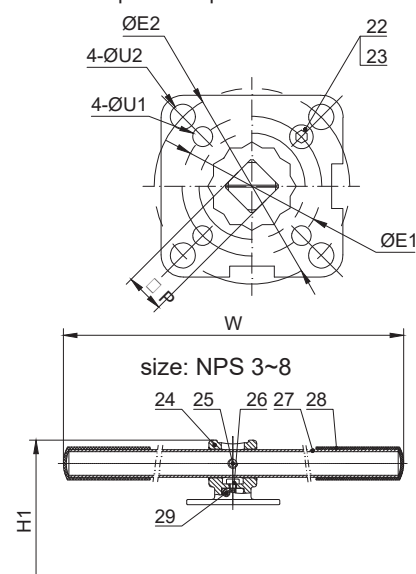


ANSI valves WCB / CF8M 150# & 300#

Main parts and materials and dimensions



Top works operation detail



NO.	PART NAME	Cast steel	Stainless steel	NO.	PART NAME	Cast steel	Stainless steel
1	End cap	ASTM A216 WCB	ASTM A351 CF8M	15	Handle gland		304
2	Body	ASTM A216 WCB	ASTM A351 CF8M	16	Lock device ¹		304
3	Ball	NPS 1/2"-4" ASTM A182 F304	ASTM A182 F316	17	Handle ¹		304
		NPS 5"-8" ASTM A351 CF8	ASTM A351 CF8M	18	Handle sleeve ¹		Vynil plastic
4	Ball seat	TFM1600 (option TFM4215)		19	Body gasket	316 spiral wound + graphite	
5	Stem (anti-static device)	ASTM A276 304	ASTM A276 316	20	Bolting	A193-B8 CL1	
		ASTM A276 32205 ³		21	Bolt nut	A194-8	
6	Thrust washer	TFM1600 (option TFM4215)		22	Stop bolt	A2-70	
7	O-ring	FKM	75A FKM	23	Stop nut	A2-70	
8	Packing	Graphite (API 622)		24	Handle adapter ²	CF8	
9	Bushing	304		25	Set screw ²	A2-70	
10	Gland	316		26	Bolting ²	A2-70	
11	Belleville washer	301		27	Pipe handle ²	A53+ plated Zn	
12	Stem nut	A194-8 (304)		28	Handle sleeve ²	Vynil plastic	
13	Handle nut ¹	A194-8 (304)		29	Set screw ²	A2-70	
14	Stop-lock-cap	304					

¹ For 1/2" to 2 1/2" / ² For 3" to 8" / ³ Only for 6"

ANSI valves WCB / CF8M 150#

NPS	d	L	R	D	C	T	f	N	h	H	H1	W	P	M	E1	E2	U1	U2	ISO5211
1/2	15	108	35	89	60,5	7,9	1,5	4	16	49	79	147	9	8	36	42	6	6	F03-F04
3/4	20	117	43	99	69,8	8,6	1,5	4	16	53	84	147	9	9	36	42	6	6	F03-F04
1	25	127	51	108	79,2	9,7	1,5	4	16	59	90	177	11	11	42	50	6	7	F04-F05
1 1/4	32	140	63,5	117	88,9	11,2	1,5	4	16	71	102	177	11	11	42	50	6	7	F04-F05
1 1/2	38	165	73,2	127	98,6	12,7	1,5	4	16	76	113	197	14	14	50	70	7	9	F05-F07
2	50	178	92	152	120,6	14,2	1,5	4	19	82	118	197	14	14	50	70	7	9	F05-F07
2 1/2	63,5	190	104,7	178	139,7	15,7	1,5	4	19	102	150	267	17	17	70	102	9	11	F07-F10
3	70	203	127	190	152,4	17,5	1,5	4	19	112	176	300	17	17	70	102	9	11	F07-F10
4	100	229	157	229	190,5	22,4	1,5	8	19	140	211	400	22	22	-	102	-	11	F10
5	125	356	186	254	215,9	22,4	1,5	8	22,3	183	263	600	27	27	-	125	-	14	F12
6	150	394	216	279	241,3	23,9	1,5	8	22,3	204	284	800	27	27	-	125	-	14	F12
8	200	457	270	343	298,4	26,9	1,5	8	22,3	253	352	800	36	36	-	140	-	18	F14

ANSI valves WCB / CF8M 300#

NPS	d	L	R	D	C	T	f	N	h	H	H1	W	P	M	E1	E2	U1	U2	ISO5211
1/2	15	140	35	95	66,5	12,7	1,5	4	16	49	79	147	9	8	36	42	6	6	F03-F04
3/4	20	152	43	117	82,6	14,2	1,5	4	19	58,5	89	147	9	9	36	42	6	6	F03-F04
1	25	165	51	124	88,9	15,7	1,5	4	19	63,5	95	177	11	11	42	50	6	7	F04-F05
1 1/4	32	178	63,5	133	98,6	17,5	1,5	4	19	71	102	177	11	11	42	50	6	7	F04-F05
1 1/2	38	190	73,2	155	114,3	19	1,5	4	22,3	80	113	197	14	14	50	70	7	9	F05-F07
2	50	216	92	165	127	20,6	1,5	8	19	85	118	197	14	14	50	70	7	9	F05-F07
2 1/2	63,5	241	104,7	190	149,4	23,9	1,5	8	22,3	102	150	267	17	17	70	102	9	11	F07-F10
3	70	282	127	210	168,1	26,9	1,5	8	22,3	112	176	300	17	17	70	102	9	11	F07-F10
4	100	305	157	254	200,2	30,2	1,5	8	22,3	140	211	400	22	22	-	102	-	11	F10
5	125	381	186	279	235	33,3	1,5	8	22,3	183	263	600	27	27	-	125	-	14	F12
6	150	403	216	318	269,7	35,1	1,5	12	22,3	204	284	800	27	27	-	125	-	14	F12
8	200	502	270	381	330,2	39,6	1,5	12	25,4	253	352	800	36	36	-	140	-	18	F14

Dimensions in mm. subject to manufacturing tolerance

Information / restriction of technical rules need to be observed!

Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

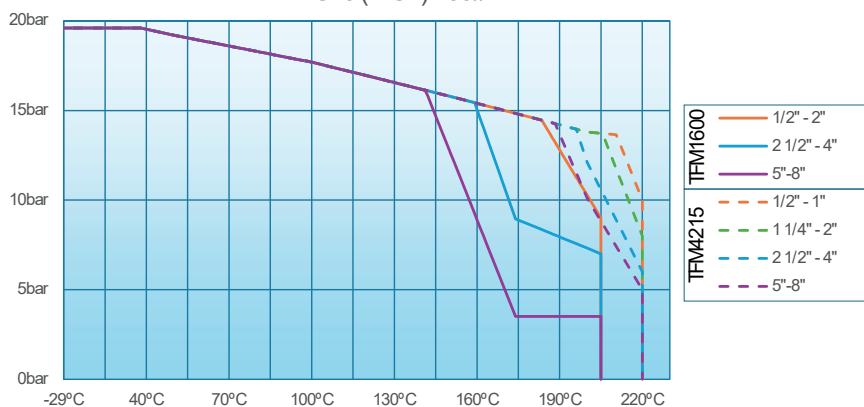
The engineer, designing a system or a plant, is responsible for the selection of the correct valve

Product suitability must be verified, contact manufacturer for information

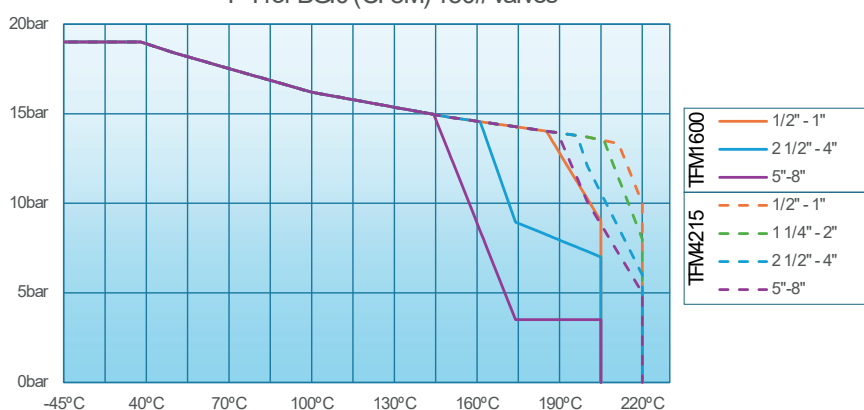


Pressure-temperature charts

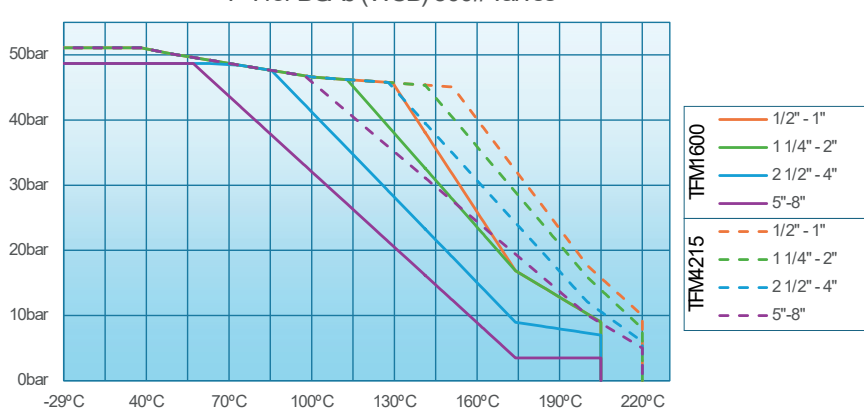
P-T for BGA0 (WCB) 150# valves



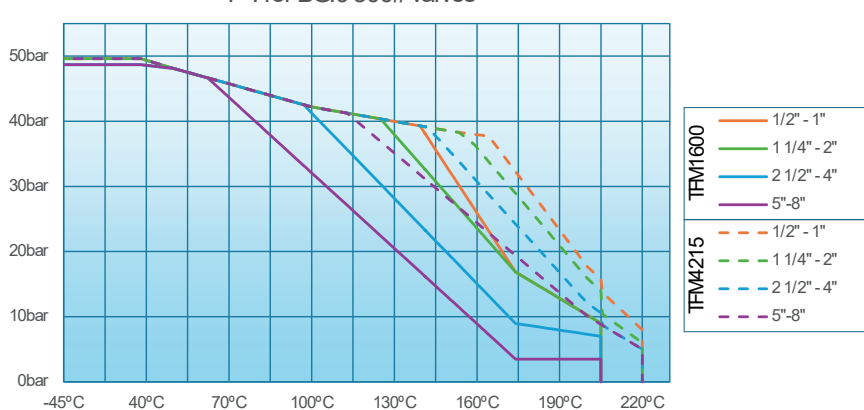
P-T for BGI0 (CF8M) 150# valves



P-T for BGA0 (WCB) 300# valves



P-T for BGI0 300# valves



Information / restriction of technical rules need to be observed!
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

The engineer, designing a system or a plant, is responsible for the selection of the correct valve
Product suitability must be verified, contact manufacturer for information



Torques

Maximum differential pressure in bar. Please consider a safety factor of 30% for lubricating fluid and 50% for non lubricating fluids

TFM1600 seats

NPS	DN	Max. ΔP (bar)					
		5	10	20	30	40	50
1/2	15	5	5	5	5	5	5
3/4	20	6	6	6	6	6	6
1	25	10	10	11	11	11	11
1¼	32	13	13	15	15	16	17
1½	38	19	19	22	23	23	24
2	50	25	29	32	33	34	35
2½	65	40	45	49	51	53	54
3	80	65	72	81	84	88	90
4	100	100	110	122	126	130	135
5	125	190	210	245	260	275	285
6	150	280	306	340	420	500	550
8	200	370	430	487	550	650	800

Torques in Nm.

TFM4215 seats

NPS	DN	Max. ΔP (bar)					
		5	10	20	30	40	50
1/2	15	6,5	6,5	6,5	6,5	6,5	6,5
3/4	20	7,8	7,8	7,8	7,8	7,8	7,8
1	25	13	13	14,3	14,3	14,3	14,3
1¼	32	16,9	16,9	19,5	19,5	20,8	22,1
1½	38	24,7	24,7	28,6	29,9	29,9	31,2
2	50	32,5	37,7	41,6	42,9	44,2	45,5
2½	65	52	58,5	63,7	66,3	68,9	70,2
3	80	84,5	93,6	105,3	109,2	114,4	117
4	100	130	143	158,6	163,8	169	175,5
5	125	247	273	318,5	338	357,5	370,5
6	150	364	397,8	442	504	600	605
8	200	481	559	633,1	660	780	880

Torques in Nm.

Kv and Cv

NPS	DN	KV	CV
1/2	15	26	30
3/4	20	48	55
1	25	83	96
1¼	32	147	170
1½	38	234	270
2	50	407	470
2½	65	675	780
3	80	995	1150
4	100	1817	2100
5	125	3028	3500
6	150	4325	5000
8	200	8218	9500

KV in m³/h. CV in GPM

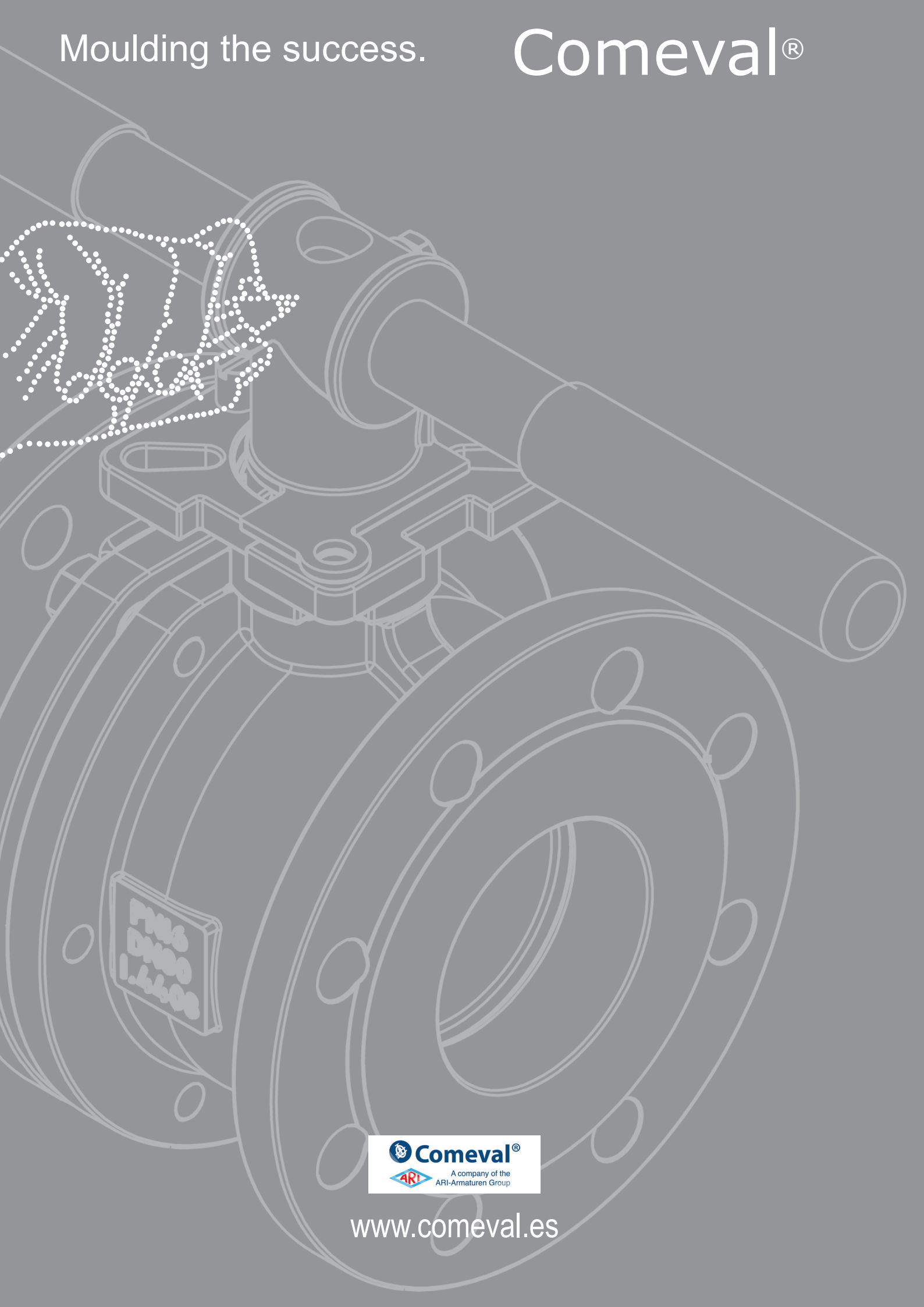
Weights

NPS	DN	PN16		PN40		150#		300#	
		bareshaft	with lever	bareshaft	with lever	bareshaft	with lever	bareshaft	with lever
1/2	15	2,35	2,45	2,35	2,45	1,4	1,5	2,5	2,6
3/4	20	3,13	3,23	3,13	3,23	2,2	2,3	3,5	3,6
1	25	4	4,2	4	4,2	2,8	3	4,3	4,5
1¼	32	5,4	5,6	5,4	5,6	3,3	3,5	5	5,2
1½	38	6,9	7,1	6,9	7,1	5,55	5,8	8,45	8,7
2	50	9,6	9,8	9,6	9,8	8,25	8,5	10,75	11
2½	65	13,4	13,9	14,6	15,1	14	14,5	15	15,5
3	80	18	18,9	19,35	20,3	17,1	18	26,1	27
4	100	24,3	25,6	28,2	29,5	29,8	31	40,8	42
5	125	48,5	51	57	59,5	48,5	51	65,5	68
6	150	71	73,8	83,2	86	73,2	76	99,2	102
8	200	119	122	146	149	129	132	169	172

Weights in Kg.

Moulding the success.

Comeval®



www.comeval.es