

Uniflow[®]



EN/ANSI Ball Valves, Investment casting,
Direct Mounting Series BV4M
www.comeval.es

Design Attributes

Series BV4M are floating type, quick closing 90° rotary ball valves, bidirectional, with tightness achieved by friction of the ball blind ends to the seat, devised for stopping the flow of the service fluid when necessary and not being suitable for regulation purposes. Valve closes by turning the handle lever clockwise. Their lost wax casting technology and stainless steel construction provides an excellent surface finish and a wide range of applications. They are designed for quick and easy automation when required.

Lever design for
DN15-DN50



Rugged and light
hand lever

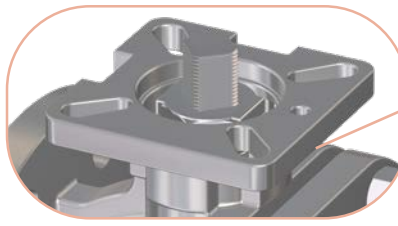
Lever design for
DN65-DN200



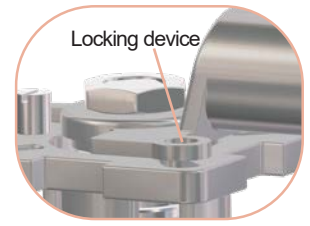
Locking device



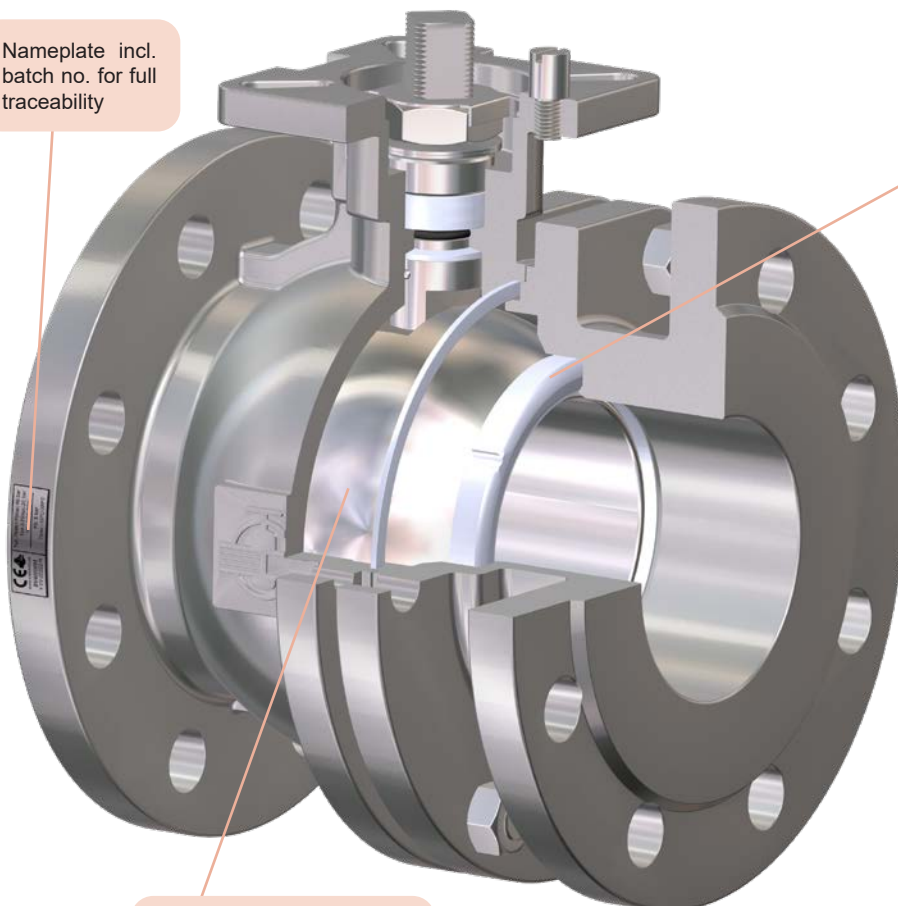
Direct mounting pad with
top flange and square
stem with bevelled edges
acc. to ISO 5211 to suit
actuators. Easy and
inexpensive automation
with no need for brackets



Locking device



Nameplate incl.
batch no. for full
traceability



Reliable 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

Floating ball, full bore, split body de-
sign, integral flanges, construction in
stainless steel

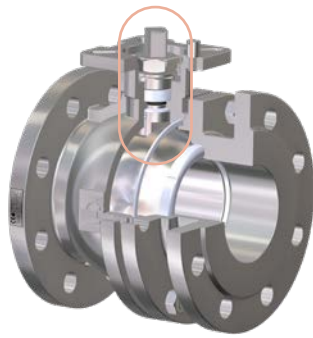
Precision machined components, for
optimal valve performance

Mirror polished st. steel
ball, solid type up to DN100.
Reduced operating torque
and full seat tightness

Low valve surface porosity and rough-
ness, thanks to lost wax casting tech-
nology, better aesthetic and less prone
to corrosion attack

Design Attributes

Stem/packing features



Blow out proof stem

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

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

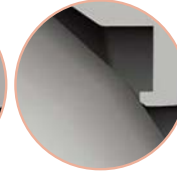
Double antistatic device

Fire safe design

Fire safe version of seat

Before fire

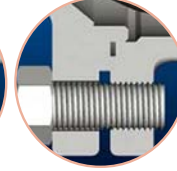
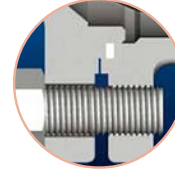
After fire



Fire safe version of bodies union

Before fire

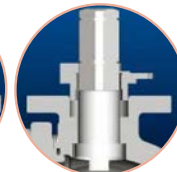
After fire



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)

Fire safe version. Certified tests to API 6FA - API 607 on request

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

Face to face length: PN40/16 — DN15-100: EN 558 S14 (DIN 3202 F4); DN125-200: EN 558 S15 (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)

Marking: EN 19

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

Anti rust protection by hot black oxide surface treatment. Colour black matt (for cast steel body 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

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 I; 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 I

Table 6: PS 50 bar (300#) DN15-25 (Art.4-Parr.3)
PS 40 bar DN15-25 (Art.4-Parr.3)
PS 25 bar DN32-40
PS 20 bar (150#) DN50
PS 16 bar DN50
PS 10 bar DN80-100

Table 7: PS 50 bar (300#) DN 15-100 (Art.4-Parr.3 DN15-32)
PS 40 bar DN 15-100 (Art.4-Parr.3 DN15-32)
PS 25 bar DN125
PS 20 bar (150#) DN150
PS 16 bar DN200

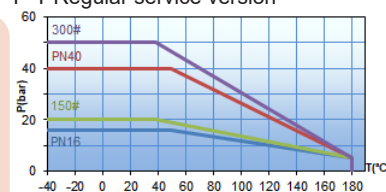
Table 8: PS 50 bar (300#) DN15-40 (Art.4-Parr.3)
PS 40 bar DN50 (Art.4-Parr.3)
PS 25 bar DN65-80 (Art.4-Parr.3)
PS 20 bar (150#) DN100 (Art.4-Parr.3)
PS 16 bar DN125 (Art.4-Parr.3)
PS 10 bar DN200 (Art.4-Parr.3)

Table 9: PS 50 bar (300#) DN15-200 (Art.4-Parr.3)
PS 40 bar DN15-200 (Art.4-Parr.3)
PS 20 bar (150#) DN15-200 (Art.4-Parr.3)
PS 16 bar DN15-200 (Art.4-Parr.3)

Questions referring to chemical resistance, please consult us
Observe also pressure/temperature limits on diagram

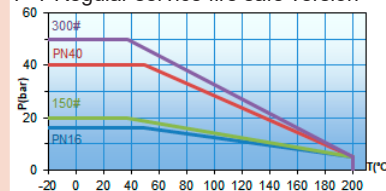
*Classification of fluids (group 1 or 2) acc. to Directive 2014/68/EU, Article 13

P-T Regular service version



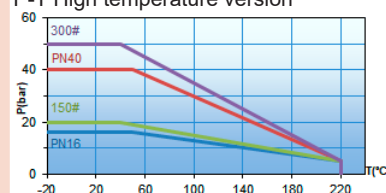
PSmax:
50bar (300#) / 40bar (PN40)
20bar (150#) / 16bar (PN16)
TS: 38°C (ANSI)/50°C (DIN)
PS: 5bar
TSMmax: 180°C
TSMmin: -40°C

P-T Regular service fire safe version



PSmax:
50bar (300#) / 40bar (PN40)
20bar (150#) / 16bar (PN16)
TS: 38°C (ANSI)/50°C (DIN)
PS: 5bar
TSMmax: 200°C
TSMmin: -20°C

P-T High temperature version



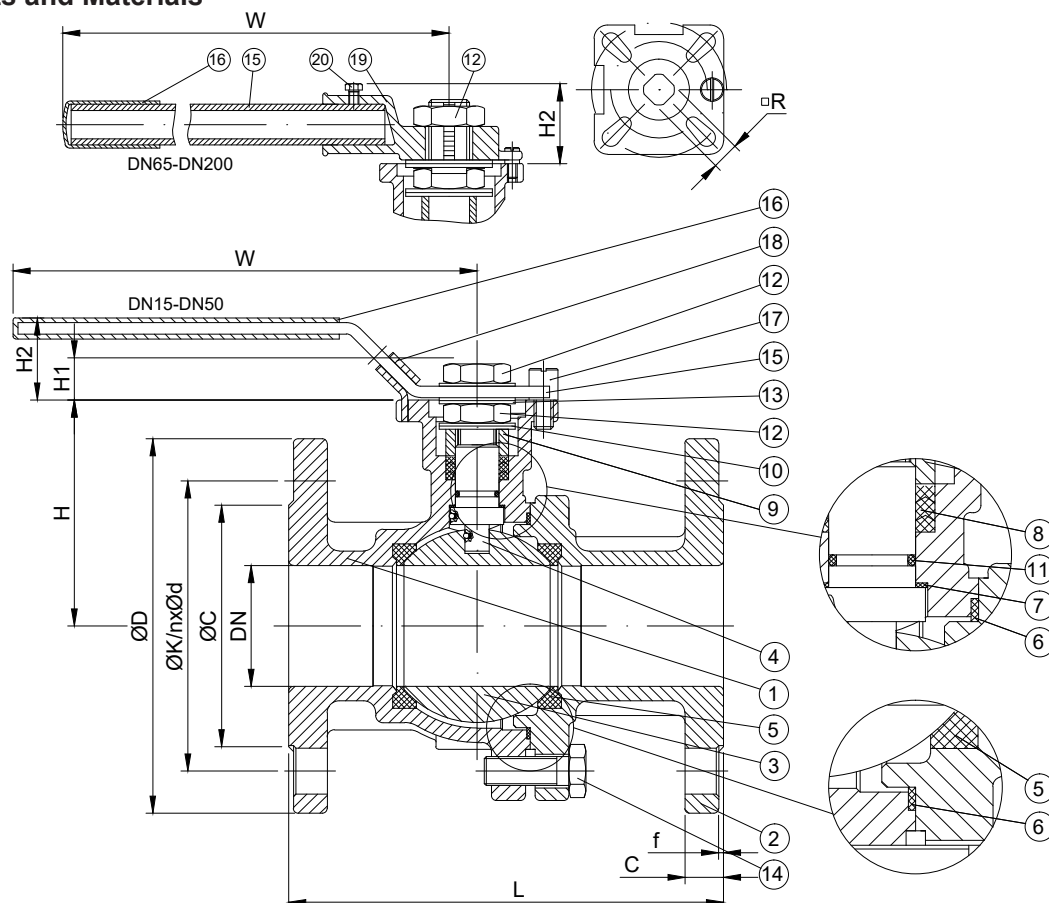
PSmax:
50bar (300#) / 40bar (PN40)
20bar (150#) / 16bar (PN16)
TS: 38°C (ANSI)/50°C (DIN)
PS: 5bar
TSMmax: 220°C
TSMmin: -20°C

Options

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

DIN PN16/40

Main Parts and Materials



Nº	PART	MATERIAL							
		Cast steel version				Stainless steel version			
		Regular service		High temperature service		Regular service		High temperature service	
		Standard BV4246T	Fire safe version BV424FT	Standard BV4246H	Fire safe version BV424FH	Standard BV4666T	Fire safe version BV466FT	Standard BV4666H	Fire safe version BV466FH
1	BODY	Cast steel 1.0619				St. steel 1.4408			
2	CAP	Cast steel 1.0619				St. steel 1.4408			
3	BALL	St. steel 1.4308				St. steel 1.4408			
4	STEM	St. steel SS304				St. steel SS316			
5	SEAT	TFM1600	TFM4215			TFM1600	TFM4215		
6	GASKET	TFM1600	SS304 + Graphite	TFM4215	SS304 + Graphite	TFM1600	SS304 + Graphite	TFM4215	SS304 + Graphite
7	THRUST WASHER	TFM4215							
8	PACKING	TFM1600	Graphite	TFM4215	Graphite	TFM1600	Graphite	TFM4215	Graphite
9	GLAND RING	St. steel SS304							
10	BELLEVILLE WASHER	St. steel SS301							
11	O-RING	Viton		FFKM		Viton		FFKM	
12	STEM NUT	St. steel SS304							
13	BLOCKING WASHER	St. steel SS304							
14	BOLTS-NUTS	Carbon steel				St. steel SS304			
15	HANDLE	SS304 (DN65-200 Galvanized steel)							
16	HANDLE SLEEVE	Plastic							
17	STOP PIN	St. steel SS304							
18	LOCKING DEVICE	St. steel SS304							
19	HANDLE HEAD	St. steel 1.4308							
20	HANDLE BOLT	St. steel SS304							

Main Valve Parameters

DN	15	20	25	32	40	50
L	115	120	125	130	140	150
H	55	66,5	66,5	74	85,5	92,5
H1	9	11	11	11	15	15
H2	35	35	35	35	40	40
W	125	125	160	160	190	190
ØD	95	105	115	140	150	165
ØK	65	75	85	100	110	125
nxØd	4x14	4x14	4x14	4x18	4x18	4x18
ØC	45	58	68	78	88	102
C	14	16	16	16	16	18
f	2	2	2	2	3	3
R	9	9	11	11	14	14
ISO-5211	F03-F04	F03-F04	F04-F05	F04-F05	F05-F07	F05-F07
Kvs-value	18	40	63	108	174	265
Approx. Weight	3	3,5	4,5	6	8	11

DN	65	80	100	125	150	200
L	170	180	190	325	350	400
H	113	124,5	142,5	182	201	259
H1	18	18	23	28	28	35
H2	70	70	70	80	80	80
W	355	355	400	770	770	1100
PN16	ØD	185	200	220	250	340
	ØK	145	160	180	210	295
	nxØd	4x18	8x18	8x18	8x22	12x22
	ØC	122	138	158	188	268
PN40	C	18	20	20	22	24
	ØD	185	200	235	270	375
	ØK	145	160	190	220	320
	nxØd	8x18	8x18	8x20	8x24	12x27
PN40	ØC	122	138	162	188	285
	C	22	24	24	26	34
	f	3	3	3	3	3
	R	17	17	22	27	36
ISO-5211	F07-F10	F07-F10	F10-F12	F10-F12	F10-F12	F14
Kvs-value	475	915	1510	2440	3890	8310
Approx. Weight	16	20,5	27	43	71	115

Dimensions in mm subject to manufacturing tolerance / Kvs-values in m³/h / Weights in kg

Operating Torques (Nm)

Size	Differential Pressure					Valve Connection
DN	5 bar	10 bar	16 bar	25 bar	40 bar	
15	14	14	14	15	18	F03-F04 S9 H9
20	17	17	18	18	22	F03-F04 S9 H11
25	20	20	22	23	27	F04-F05 S11 H11
32	21	31	33	36	42	F04-F05 S11 H11
40	36	37	39	43	48	F05-F07 S14 H15
50	45	47	51	56	64	F05-F07 S14 H15
65	65	68	72	80	90	F07-F10 S17 H18
80	100	110	120	130	155	F07-F10 S17 H18
100	130	160	175	190	210	F10-F12 S22 H23
125	190	210	240	280	350	F10-F12 S27 H28
150	310	325	350	380	520	F10-F12 S27 H28
200	530	610	680	720	840	F14 S36 H35

Minimum Recommended Safety factor for actuator selection: 30%

Above values are given for clean water at ambient temperature.

Operating Torque can be increased by many factors (dry gas, viscous liquid, temperature, etc.). Ask our technical department for selection.

Valves closed for a long period of time could need a higher breaking torque.

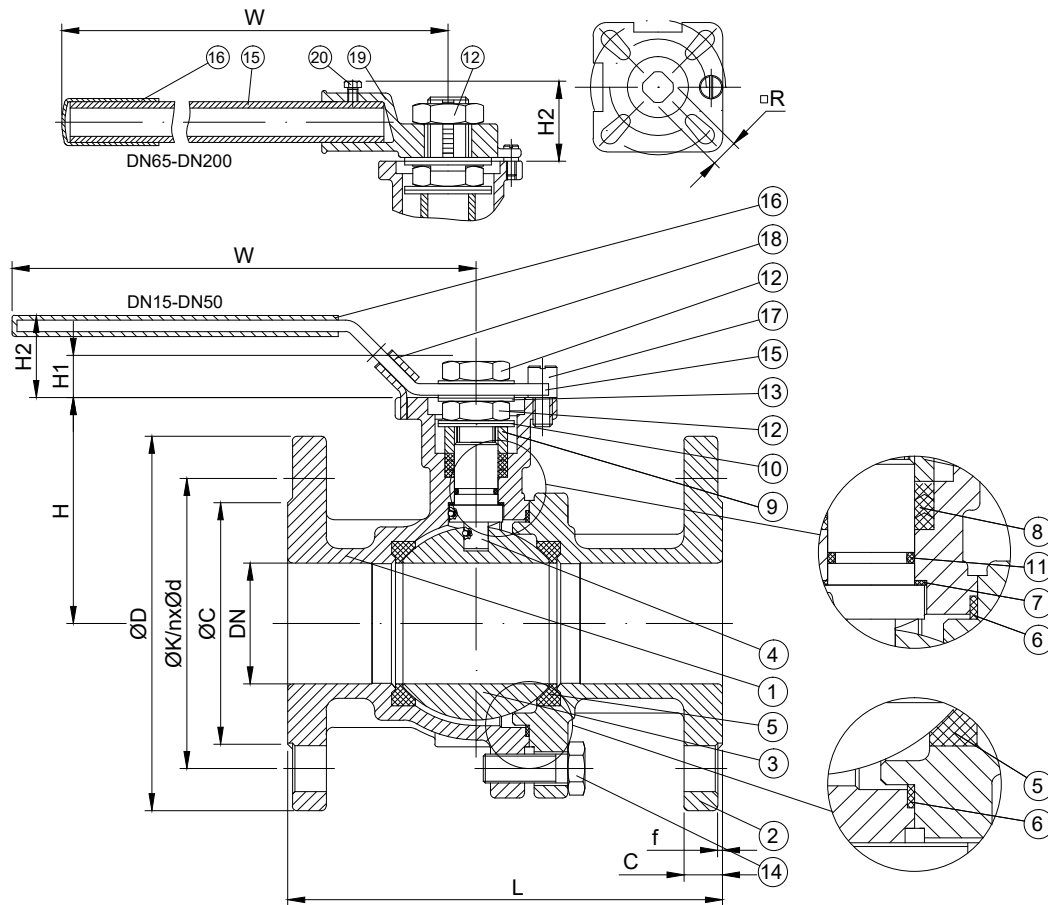
Information / restriction of technical rules need to be observed!

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 150

Main Parts and Materials



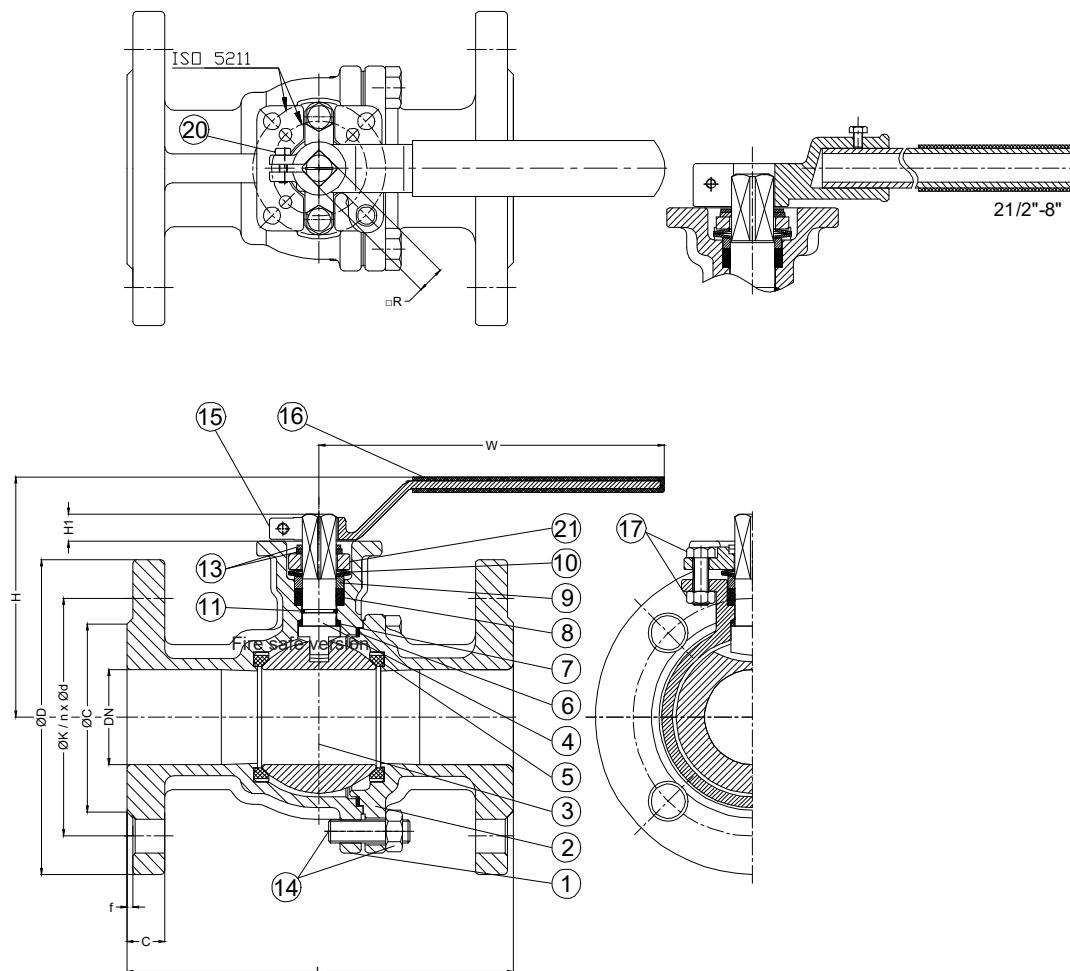
N°	PART	MATERIAL							
		Cast steel version				Stainless steel version			
		Regular service		High temperature service		Regular service		High temperature service	
		Standard BV4246T	Fire safe version BV424FT	Standard BV4246H	Fire safe version BV424FH	Standard BV4666T	Fire safe version BV466FT	Standard BV4666H	Fire safe version BV466FH
1	BODY	A216 WCB				A351 CF8			
2	CAP	A216 WCB				A351 CF8			
3	BALL	A351 CF8				A351 CF8			
4	STEM	St. steel SS304				St. steel SS316			
5	SEAT	TFM1600	TFM4215			TFM1600	TFM4215		
6	GASKET	TFM1600	SS304 + Graphite	TFM4215	SS304 + Graphite	TFM1600	SS304 + Graphite	TFM4215	SS304 + Graphite
7	THRUST WASHER	TFM4215							
8	PACKING	TFM1600	Graphite	TFM4215	Graphite	TFM1600	Graphite	TFM4215	Graphite
9	GLAND RING	St. steel SS304							
10	BELLEVILLE WASHER	St. steel SS301							
11	O-RING	Viton		FFKM		Viton		FFKM	
12	STEM NUT	St. steel SS304							
13	BLOCKING WASHER	St. steel SS304							
14	BOLTS-NUTS	Carbon steel				St. steel SS304			
15	HANDLE	SS304 (DN65-200 Galvanized steel)							
16	HANDLE SLEEVE	Plastic							
17	STOP PIN	St. steel SS304							
18	LOCKING DEVICE	St. steel SS304							
19	HANDLE HEAD	A351 CF8							
20	HANDLE BOLT	St. steel SS304							

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 300

Main Parts and Materials



N°	PART	MATERIAL							
		Cast steel version				Stainless steel version			
		Regular service		High temperature service		Regular service		High temperature service	
		Standard	Fire safe version	Standard	Fire safe version	Standard	Fire safe version	Standard	Fire safe version
		BV4246T	BV424FT	BV4246H	BV424FH	BV4666T	BV466FT	BV4666H	BV466FH
1	BODY	A216 WCB				A351 CF8			
2	CAP	A216 WCB				A351 CF8			
3	BALL	A351 CF8				A351 CF8			
4	STEM	St. steel SS304				St. steel SS316			
5	SEAT	TFM1600	TFM4215			TFM1600	TFM4215		
6	GASKET	TFM1600	SS304 + Graphite	TFM4215	SS304 + Graphite	TFM1600	SS304 + Graphite	TFM4215	SS304 + Graphite
7	THRUST WASHER	TFM4215							
8	PACKING	TFM1600	Graphite	TFM4215	Graphite	TFM1600	Graphite	TFM4215	Graphite
9	GLAND RING	St. steel SS304							
10	BELLEVILLE WASHER	St. steel SS301							
11	O-RING	Viton		FFKM		Viton		FFKM	
13	BLOCKING WASHER	St. steel SS304							
14	BOLTS-NUTS	Carbon steel				St. steel SS304			
15	HANDLE	SS304 (DN65-200 Galvanized steel)							
16	HANDLE SLEEVE	Plastic							
17	STOP PIN	St. steel SS304							
21	GLAND FLANGE	St. steel A351 CF8							

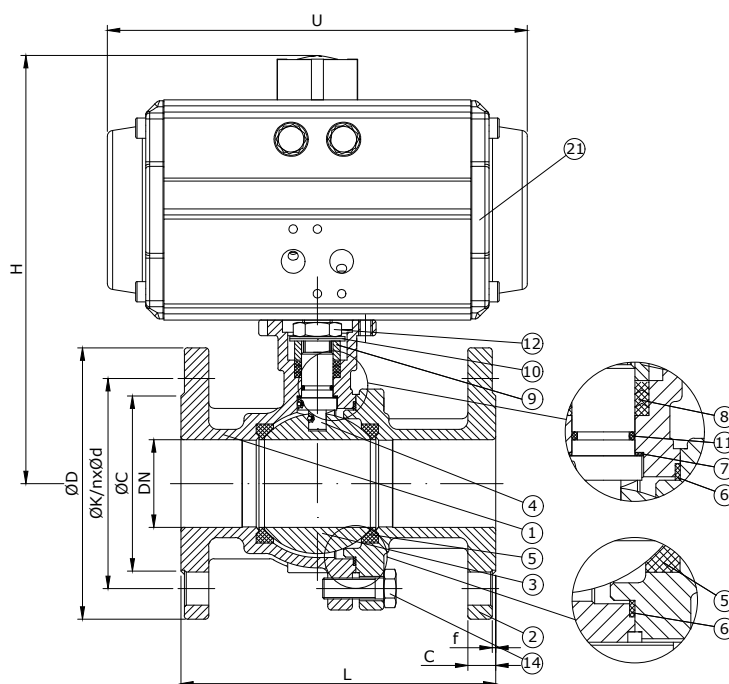
Main Valve Parameters

DN	15	20	25	32	40	50
inch	½"	¾"	1"	1 ¼"	1 ½"	2"
H	55	66,5	66,5	74	85,5	92,5
H1	9	9	11	11	14	14
H2	35	35	35	35	40	40
W	125	125	160	160	190	190
ANSI 150	L	108	117	127	140	178
	ØD	90	100	110	115	150
	ØK	60,3	69,9	79,4	88,9	120,7
	nxØd	4x16	4x16	4x16	4x16	4x19
	ØC	34,9	42,9	50,8	63,5	92,1
	C	10	10,9	11,6	13,2	16,3
	Torque	14	18	22	25	34
ANSI 300	L	140	152	165	190	216
	ØD	95	115	125	-	155
	ØK	66,7	82,6	88,9	-	114,3
	nxØd	4x16	4x20	4x20	-	8x20
	ØC	34,9	42,9	50,8	-	92,1
	C	14,7	16,3	17,9	-	22,7
	Torque	18	22	26	-	47
f	2	2	2	-	2	2
R	9	9	11	-	14	14
ISO-5211	F03-F04	F03-F04	F04-F05	F04-F05	F05-F07	F05-F07

DN	65	80	100	150	200
inch	2 ½"	3"	4"	6"	8"
H	113	124,5	142,5	201	259
H1	18	18	23	28	35
H2	70	70	70	80	80
W	355	355	400	770	1100
ANSI 150	L	190	203	229	394
	ØD	180	190	230	280
	ØK	139,7	152,4	190,5	241,3
	nxØd	4x19	4x19	8x19	8x22
	ØC	104,8	127	157,2	215,9
	C	17,9	19,5	24,3	25,9
	Torque	50	70	100	270
ANSI 300	L	140	152	165	-
	ØD	190	210	255	-
	ØK	149,2	168,3	200	-
	nxØd	8x23	8x23	8x23	-
	ØC	104,8	127	157,2	-
	C	25,9	29	32,2	-
	Torque	58	100	150	-
f	2	2	2	2	2
R	17	17	22	27	36
ISO-5211	F07-F10	F07-F10	F10-F12	F10-F12	F14

Dimensions in mm subject to manufacturing tolerance / Torque in Nm

Main Valve Parameters



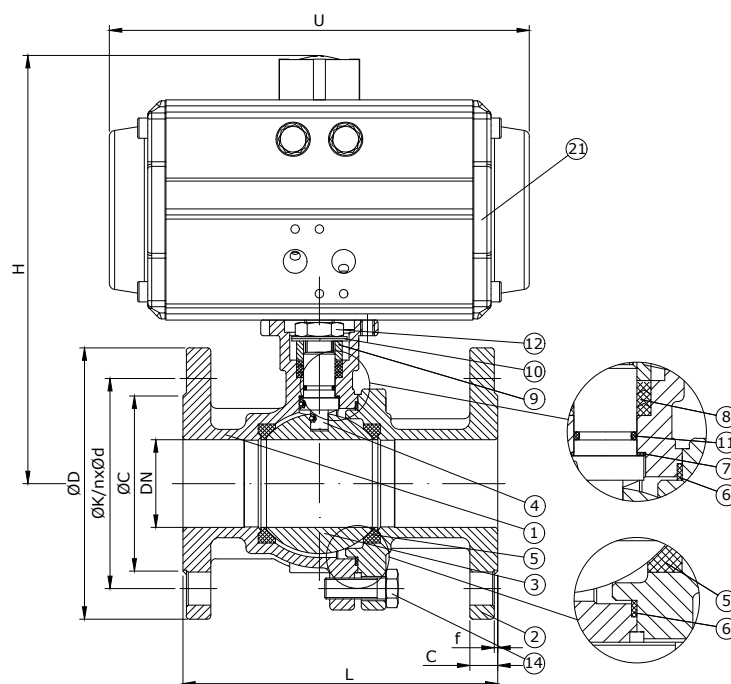
DN		15	20	25	32	40	50
inch		1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
PN		40	40	40	40	40	40
Double Acting	Type	CMVLCD063	CMVLCD063	CMVLCD052	CMVLCD063	CMVLCD063	CMVLCD075
	H	165	165	147	165	165	132
	U	163	175	159	182	194	212
Single Acting	Type	CMVLCS063	CMVLCS063	CMVLCS075	CMVLCS092	CMVLCS092	CMVLCS105
	H	165	165	132	262	262	270
	U	163	175	186	211	222	246

DN		65	80	100
inch		2 1/2"	3"	4"
PN		16	16	16
Double Acting	Type	CMVLCD83	CMVLCD092	CMVLCD105
	H	208	270	270
	U	242	261	278
Single Acting	Type	CMVLCS105	CMVLCS125	CMVLCS140
	H	270	301	395
	U	266	300	317

DN		125	150	200
inch		5"	6"	8"
PN		16	16	16
Double Acting	Type	CMVLCD140	CMVLCD140	CMVLCD160
	H	395	395	454
	U	374	393	476
Single Acting	Type	CMVLCS160	CMVLCS190	CMVLCS210
	H	454	528	536
	U	399	461	544

Dimensions in mm subject to manufacturing tolerance / Weights in kg

Main Valve Parameters



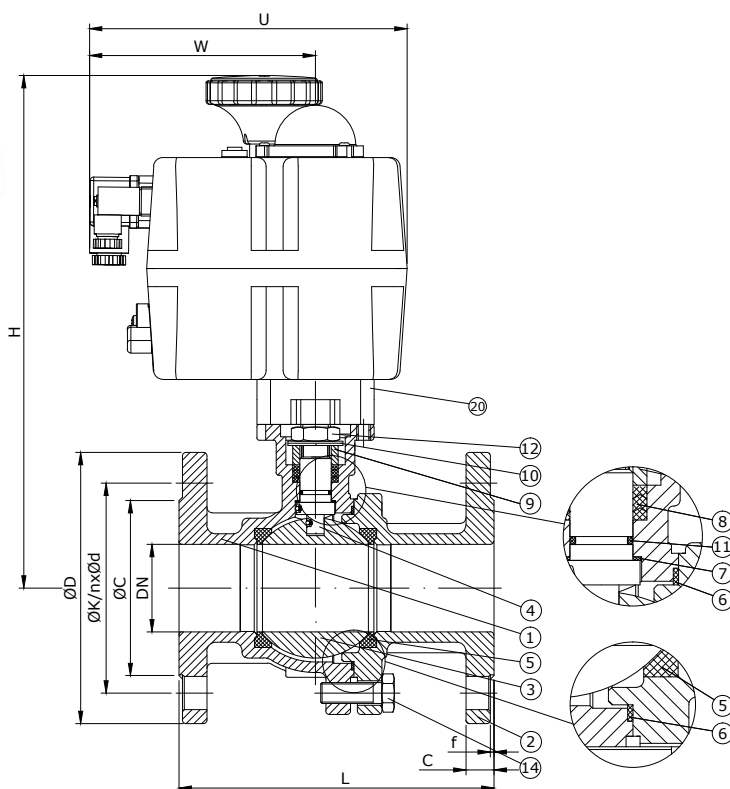
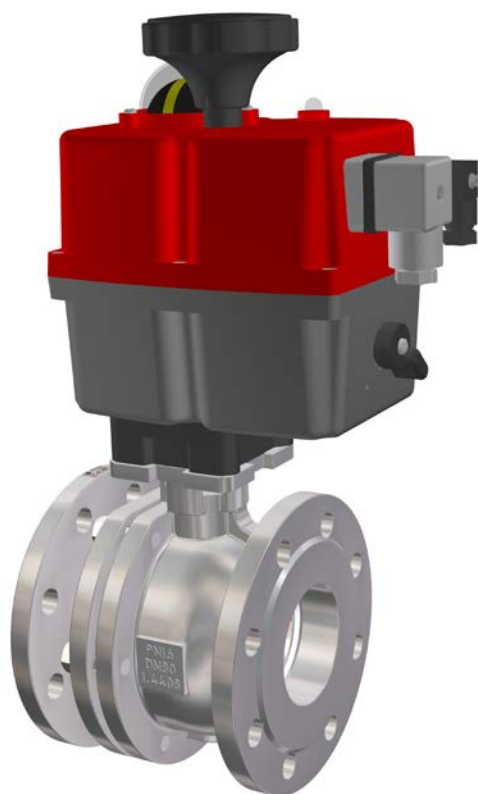
DN inch		15 1/2"		20 3/4"		25 1"		32 1 1/4"	
Rating		ANSI 150	ANSI 300	ANSI 150	ANSI 300	ANSI 150	ANSI 300	ANSI 150	ANSI 300
Double Acting	Type	CMVLCD052	CMVLCD052	CMVLCD052	CMVLCD052	CMVLCD052	CMVLCD052	CMVLCD063	-
	H	176	176	186	186	193	193	216	-
	U	147	147	147	147	147	147	165	-
Single Acting	Type	CMVLCS063	CMVLCS063	CMVLCS063	CMVLCS063	CMVLCS075	CMVLCS083	CMVLCS075	-
	H	192	192	202	202	220.5	230	227.5	-
	U	165	165	165	165	182	208	182	-

DN inch		40 1 1/2"		50 2"		65 2 1/2"		80 3"	
Rating		ANSI 150	ANSI 300	ANSI 150	ANSI 300	ANSI 150	ANSI 300	ANSI 150	ANSI 300
Double Acting	Type	CMVLCD063	CMVLCD075	CMVLCD075	CMVLCD075	CMVLCD075	CMVLCD083	CMVLCD092	CMVLCD105
	H	229	240.5	246.5	246.5	273.5	293	301.5	328
	U	165	182	182	182	182	208	262	270
Single Acting	Type	CMVLCS092		CMVLCS092	CMVLCS105	CMVLCS105	CMVLCS105	CMVLCS125	CMVLCS140
	H	257.5		263.5	280	307	317	340	367
	U	262		262	270	270	270	301	395

DN inch		100 4"		150 6"		200 8"	
Rating		ANSI 150	ANSI 300	ANSI 150	ANSI 300	ANSI 150	ANSI 300
Double Acting	Type	CMVLCD105	CMVLCD105	CMVLCD140	-	CMVLCD190	-
	H	336	346	440	-	564	-
	U	270	270	395	-	528	-
Single Acting	Type	CMVLCS140		CMVLCS160	-	CMVLCS210	-
	H	375	385	465	-	589	-
	U	395	395	454	-	536	-

Dimensions in mm subject to manufacturing tolerance / Weights in kg

Main Valve Parameters



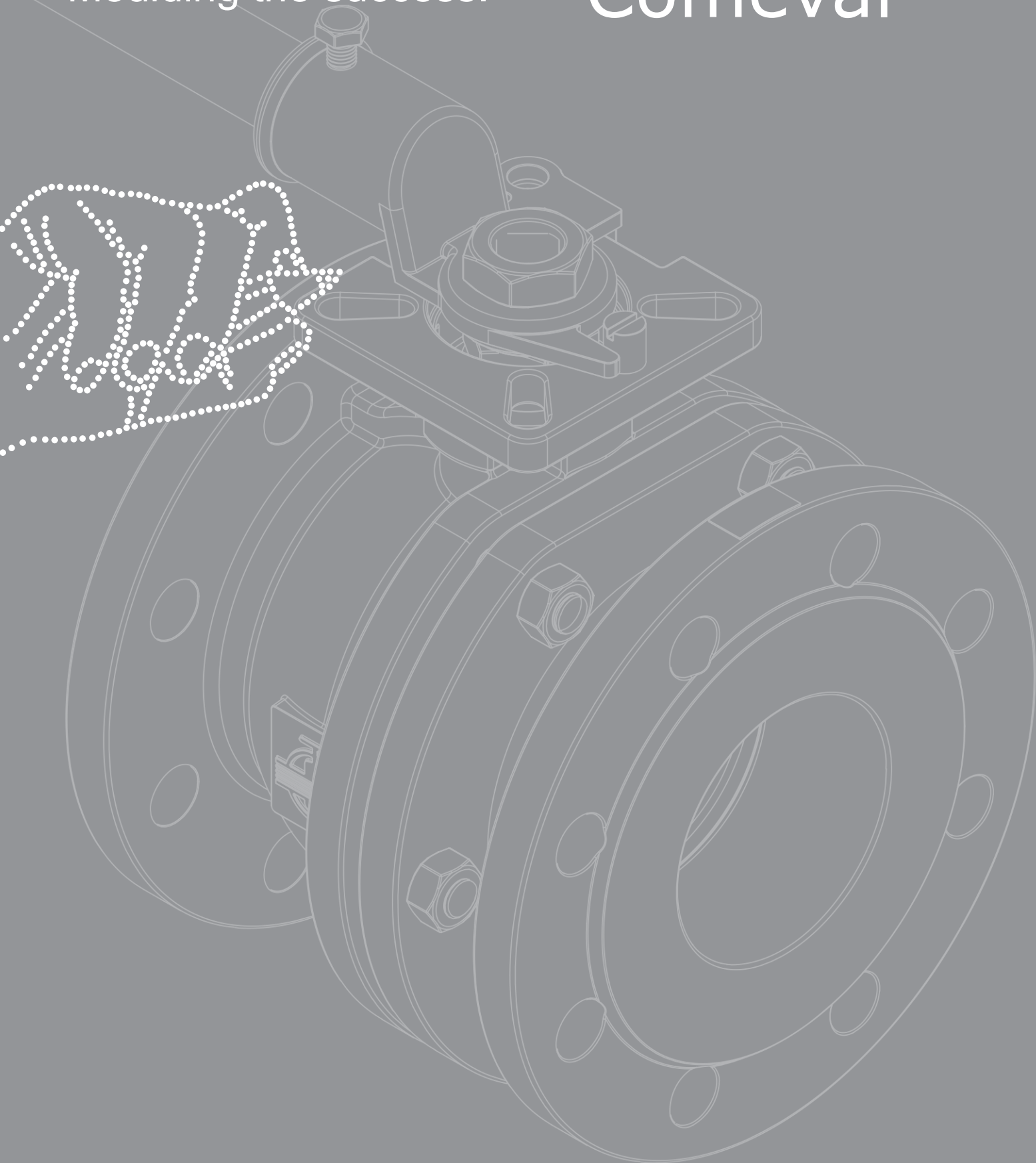
DN		15		20		25		32		40	
inch		½"		¾"		1"		1¼"		1½"	
DIN	Type	S20		S20		S20		S55		S55	
	H	232		245,5		245,5		281		296,5	
	U	181		181		181		181		181	
	W	130		130		130		130		130	
	App. Weight	4,8		5,3		6,3		8,4		10,4	
ANSI	Class	150#	300#	150#	300#	150#	300#	150#	300#	150#	300#
	Type	S20	S20	S20	S20	S35	S35	S35	-	S55	S55
	H	232	232	245,5	245,5	245,5	245,5	253	-	296,5	296,5
	U	181	181	181	181	181	181	181	-	181	181
	W	130	130	130	130	130	130	130	-	130	130
	App. Weight	4,8	4,8	5,3	5,3	6,4	6,4	7,9	-	10,4	10,4

DN		50		65		80		100		125
inch		2"		2½"		3"		4"		5"
DIN	Type	S85		S85		S140		S300		S300
	H	303,5		327		397,5		420,5		465
	U	181		181		235		235		235
	W	130		130		128		128		128
	App. Weight	14		19		25,7		23,2		48,2
ANSI	Class	150#	300#	150#	300#	150#	300#	150#	300#	-
	Type	S55	S85	S85	S85	S140	S140	S300	S300	-
	H	303,5	303,5	327	327	397,5	397,5	420,5	420,5	-
	U	181	181	181	181	235	235	235	235	-
	W	130	130	130	130	128	128	128	128	-
	App. Weight	13.4	14	19	19	25.7	25.7	32.2	32.2	-

Dimensions in mm subject to manufacturing tolerance / Weights in kg

Moulding the success.

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