

## BALL VALVE of stainless steel with welded / threaded / flanges ends

**440, 442, 443, 445 series**




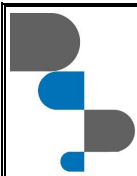
### Description

Edition 20-04-2011

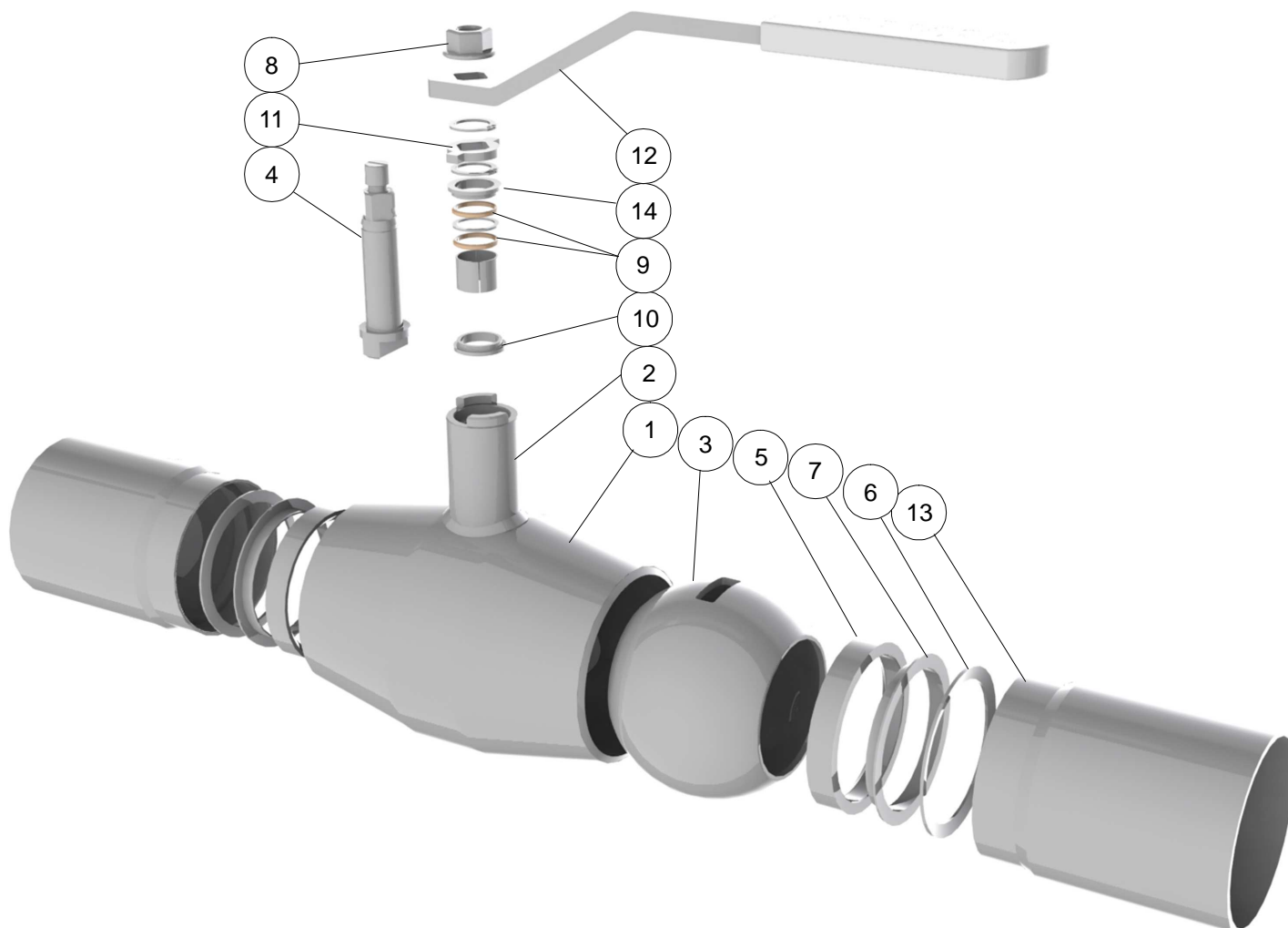
Stainless steel Ball valves 440-445 series used for on/off services a wide range of applications in the chemical and process industries. It is used for oil, acid-base liquid media, gases and air as well as in applications requires higher resistance against corrosion.

All-welded valves have stainless steel floating ball and blow-out proof stem . Ball sealing is of PTFE+C. Stem has O-rings.

Nominal dimensions:	440TS-N – DN 10 - 250
	442TS-N, 443TS-N – DN 10 – 50
	445TS-N – DN 15 - 250
Nominal pressure	440TS-N DN10-50 – PN 40 bar, DN65-100 – PN 25 bar, DN125-250 – PN16 bar
	442TS-N, DN10-50 –PN 40 bar
	443TS-N, DN10-50 –PN 40 bar
Connection	440TS-N – weld ends, 442TS-N – threaded socket / welded end, 443TS-N – threaded ends, 445TS-N – flanges in accordance to EN1092-1
	445TS-N DN10-50 – PN 40 bar, DN65-250 – PN 16 bar
Tightness class ISO 5208, EN 12266-1	RATE A
Working temperature of liquid media	-20°C... +200°C – standard -40°C... +200°C – option
Safety	Conform to the requirements of the Council Directive 97/23/EC on Pressure Equipment.  0575

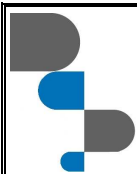


### Exploded view



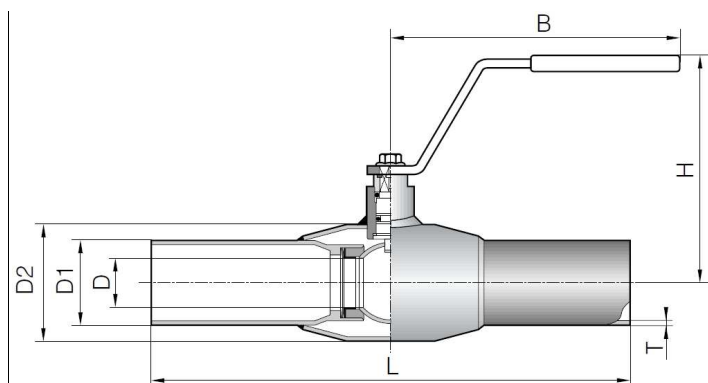
### Parts list and standard materials

Part	Material	
1	Body	Stainless steel 1.4404
2	Stem housing	Stainless steel 1.4404
3	Ball	Stainless steel 1.4404
4	Stem	Stainless steel 1.4404
5	Seal	Teflon PTFE+C
6	Bevel washer	Stainless steel 1.4404
7	Support ring	Stainless steel 1.4404
8	Screw	Stainless steel
9	O-ring	Viton FPM
10	Thrust washer	Teflon PTFE
11	Stop	Stainless steel 1.4404
12	Handle	Stainless steel (DN10-50) Zinc-plated steel (DN65-250)
13	Welding end	Stainless steel 1.4404
14	Bushing	Stainless steel 1.4305



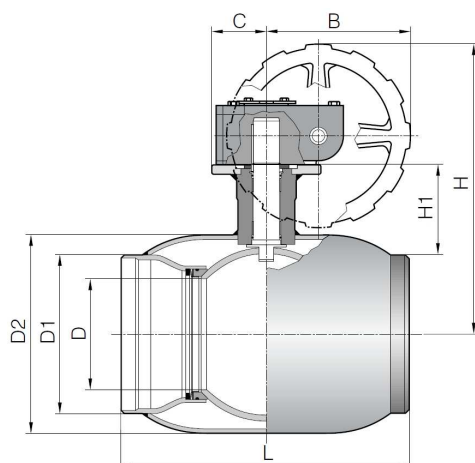
## Dimensions.

### Butt weld connection, 440TS-N series

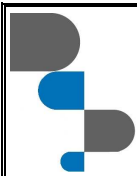


DN	L	D	D1	D2	H	B	T	Weight kg
10	230	10	17.2	33.7	98	145	2.0	0.5
15	230	10	21.3	33.7	98	145	2.0	0.5
20	230	15	26.9	42.4	103	145	2.0	0.7
25	230	20	33.7	48.3	112	145	2.0	0.9
32	260	25	42.4	60.3	116	145	2.0	1.1
40	260	32	48.3	70.0	111	188	2.5	1.8
50	300	40	60.3	88.9	118	188	3.0	2.6
65	300	50	76.1	114.3	150	277.5	3.0	3.5
80	300	65	88.9	131.0	160	277.5	3.0	5.5
100	325	80	114.3	156.0	175	278.5	3.0	8.0
125	325	100	139.7	177.8	220	400	3.3	13.0
150	350	125	168.3	219.1	240	600	4.0	17.0
200	390	150	219.1	273.0	270	900	4.5	38.0
250	520	200	273.0	355.6	345	1200	6.35	70.0

### 440TS-N series with manual gear

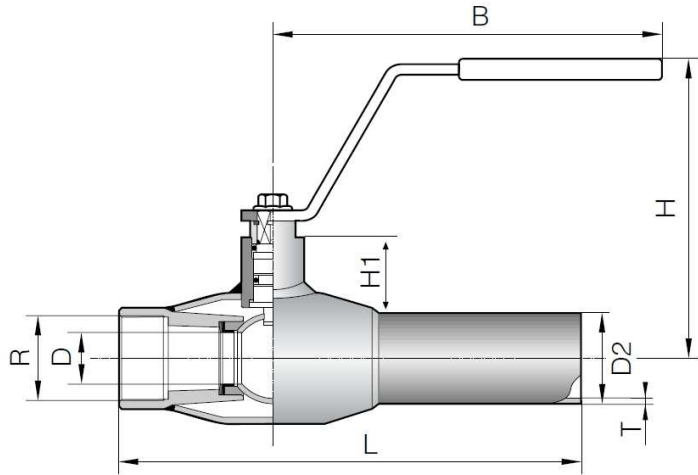


DN	L	D	D1	D2	H	H1	B	C	Weight kg
125	325	100	139.7	177.8	276	68	145	50	18
150	350	125	168.3	219.1	297	74	145	50	22
200	390	150	219.1	273.0	369	94	196	75	45
250	520	200	273.0	355.6	451	122	236	100	80

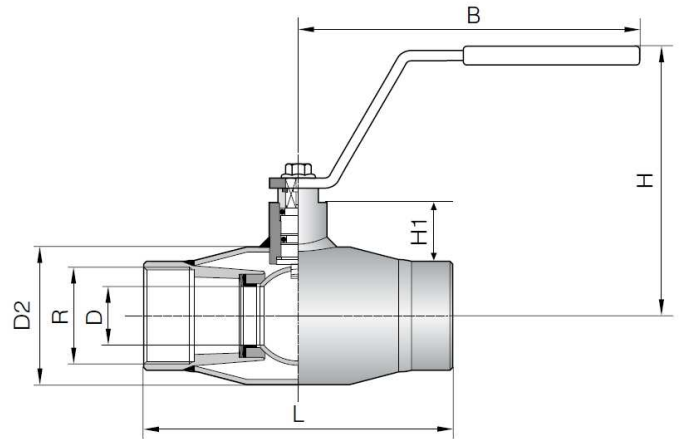


### Dimensions. 442TS-N and 443TS-N series valves

442TR-N DN 10 – 50



443TR-N DN 10 – 50

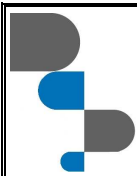


DN	L	D	R	D2	H	B	T	kg
10	153	10	R 3/8	17.2	98	145	2.0	0.48
15	158	10	R 1/2	21.3	98	145	2.0	0.48
20	168	15	R 3/4	26.9	103	145	2.0	0.35
25	172	20	R 1	33.7	112	145	2.0	0.76
32	195	25	R1 1/4	42.4	116	145	2.0	0.98
40	205	32	R1 1/2	48.3	111	188	2.5	1.67
50	240	40	R 2	60.3	118	188	3.0	2.18

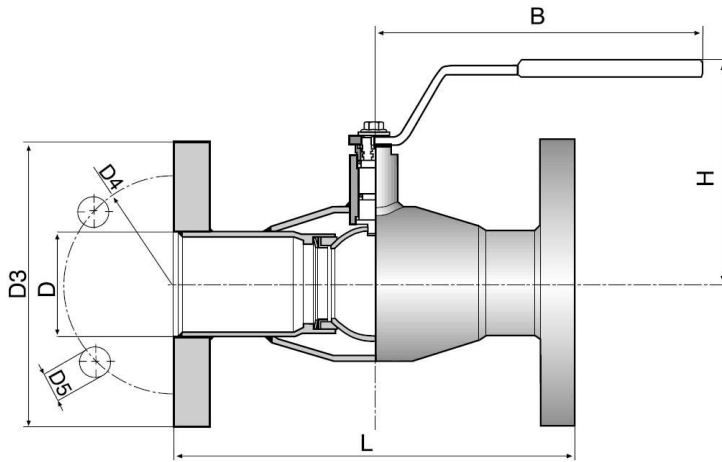
DN	L	D	R	D2	H	B	kg
10	75	10	R 3/8	33,7	98	145	0.46
15	85	10	R 1/2	33,7	98	145	0.43
20	100	15	R 3/4	42,4	103	145	0.49
25	115	20	R 1	48,3	112	145	0.78
32	130	25	R1 1/4	60,3	116	145	0.89
40	150	32	R1 1/2	76.1	111	188	1.50
50	180	40	R 2	88,9	118	188	2.09

The opening and closing of valves is stepless.

The valve is open when the handlever is in line with pipe.



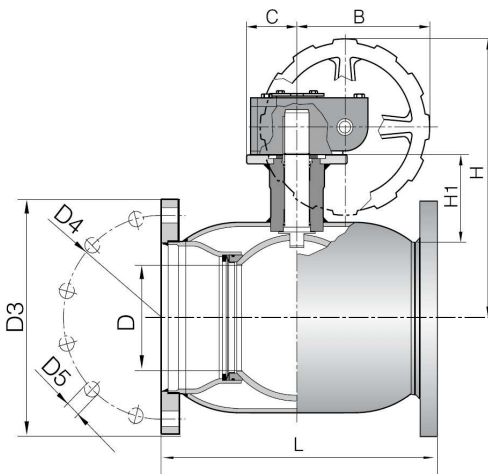
Connection with flanges, 445TS-N series valve.



Flanges: EN1092-1

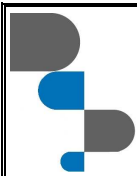
DN	PN	L	D	D3	D4	D5	H	B	Weight kg
15	40	130	10	95	65	14	98	145	2.1
20	40	150	15	105	75	14	103	145	2.7
25	40	160	20	115	85	14	112	145	3.3
32	40	180	25	140	100	18	116	145	4.8
40	40	200	32	150	110	18	111	188	5.8
50	40	230	40	165	125	18	118	188	7.9
65	16	290	50	185	145	18	150	277.5	11.0
80	16	310	65	200	160	18	160	277.5	12.5
100	16	350	80	220	180	18	175	278.5	16.7
125	16	325	100	250	210	18	220	400	21.0
150	16	350	125	285	240	22	240	600	25.0
200	16	400	150	340	295	22	271	900	50.0
250	16	530	200	405	355	26	345	1200	90.0

445TS-N series with manual gear



DN	PN	L	D	D3	D4	D5	H	B	C	H1	Weight kg
125	16	325	100	250	210	18	276	145	50	68	26
150	16	350	125	285	240	22	297	145	50	74	30
200	16	390	150	340	295	22	369	196	75	94	60
250	16	520	200	405	355	26	451	236	100	122	100

Flanges: EN1092-1

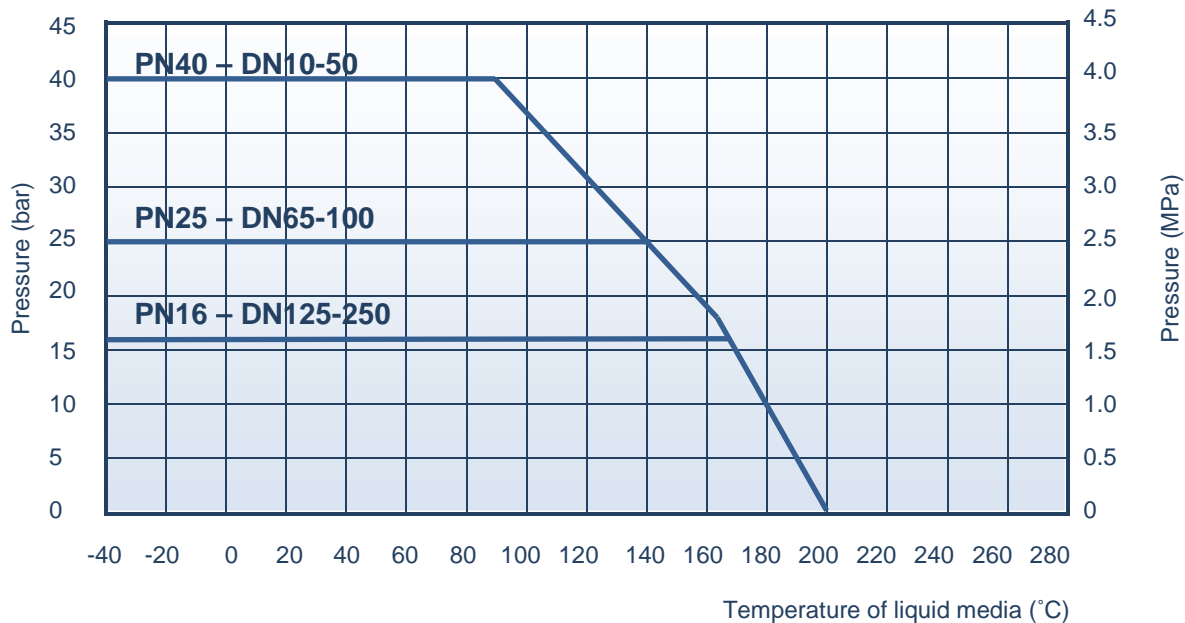


## Selection table of actuators(alternative manufacturers available)

DN	PN	Pneumatic, spring return Remote Control Sweden	Pneumatic, spring return Remote Control Sweden	Electric actuator Auma	Electric actuator Bernard
10	40	RC210-SR	RC205-DA	SG04	OA3/OA6
15	40	RC210-SR	RC205-DA	SG04	OA3/OA6
20	40	RC210-SR	RC210-DA	SG04	OA3/OA6
25	40	RC220-SR	RC210-DA	SG04	OA3/OA6
32	40	RC220-SR	RC210-DA	SG04	OA3/OA6
40	40	RC230-SR	RC220-DA	SG04	OA6
50	40	RC230-SR	RC220-DA	SG04	OA6
65	25	RC240-SR	RC230-DA	SG05	OA8
80	25	RC240-SR	RC230-DA	SG05	OA15
100	25	RC250-SR	RC240-DA	SG07	AS18
125	16	RC260-SR	RC240-DA	SG07	AS50
150	16	RC270-SR	RC260-DA	SG10	AS50
200	16	RC270-SR	RC260-DA	SG12	AS100
250	16	RC280-SR	RC270-DA	SA07.1-GS100.3	AS200

## Pressure / Temperature Rating

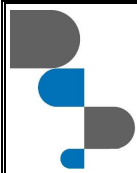
The max pressure difference depends on the working temperature.



If working temperature below -20°C, it must be mentioned in order.

## Kv value table

Size	DN10-15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN 250
Kv	6	14	26	41	67	105	182	315	420	650	1070	1420	2620



### How to order

		4	4	0	TS-N	M
Body material:	4 – Stainless steel					
Valve type:	4 - ball valve					
Connection:	0 - welded end 2 - welded end / threaded 3 - threaded 5 - flanged					
Design features	TS-N – acid proof ball					
Operation:	( _ ) - handlever, ( Z ) - bare shaft, ( M ) - manual gear					

### Product codes

	Ball valve series 440-445
Handlever	440TS-N _ _
Bare shaft	440TS-N _ _ Z
Manual gear	440TS-N _ _ M