

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

### 440, 442, 443, 445 series




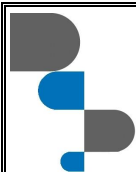
### Description

Edition 05-07-2016

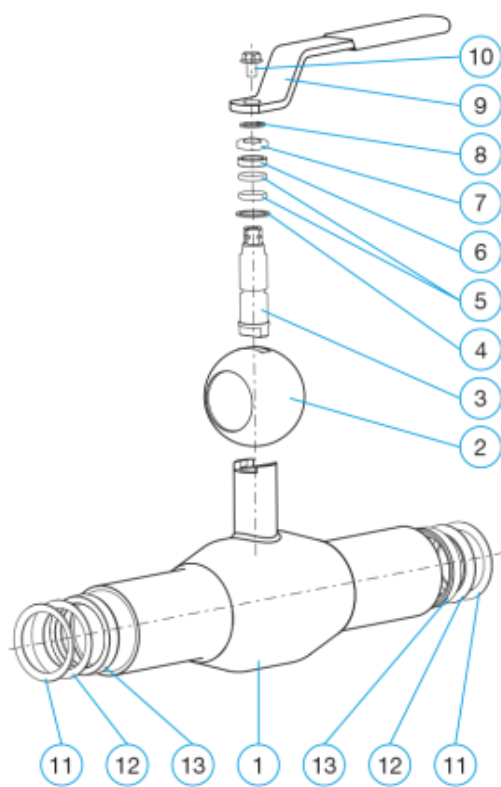
Ball valve of stainless steel 440-445 series used for on/off services a wide range of applications in the chemical and process industries. It is used for oil, acid-base liquid media, gases and air as well as in applications requires higher resistance against corrosion.

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

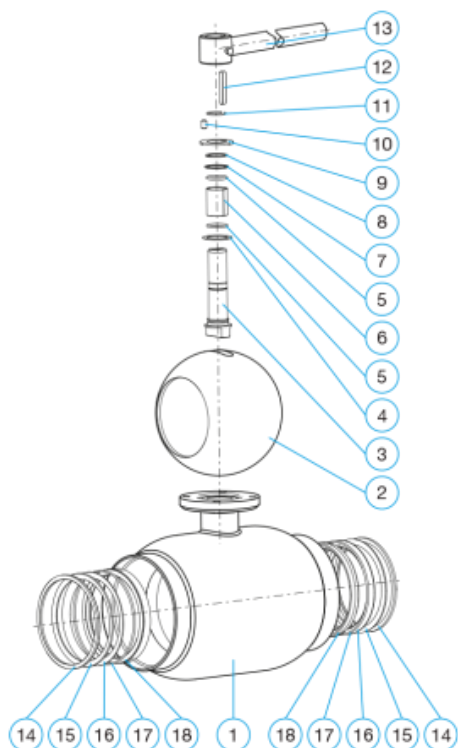
Nominal dimensions:	440TS-N – DN 10 - 250
	442TS-N, 443TS-N – DN 10 – 50
	445TS-N – DN 15 - 250
Nominal pressure	440TS-N DN 10 - 50 – PN 40 bar DN 65 - 250 – PN 25 bar DN 100 -250 – PN 16 bar
	442TS-N, DN 10 - 50 –PN 40 bar
	443TS-N, DN 10 - 50 –PN 40 bar
	445TS-N DN 10 - 50 – PN 40 bar, DN 65 - 250 – PN 16 or PN 25 bar according to flanges drilling (Available PN 10,16,25,40)
Connection	440TS-N – weld ends, 442TS-N – threaded socket / welded end, 443TS-N – threaded ends, 445TS-N – flanges in accordance to EN1092-1
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.  0496



## Exploded view, parts list

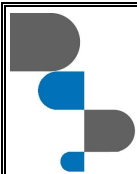


DN 10-150	
Part number	Part
1	Valve body
2	Ball
3	Stem
4	Sliding plate
5	O-ring
6	Bush
7	Block stop
8	Retaining ring
9	Handle
10	Hex flange bolt
11	Spring plate
12	Support plate
13	Ball seal



DN 200-250		
Part number	Part	Qty
1	Valve body	1
2	Ball	1
3	Stem	1
4	Sliding plate	1
5	O-ring	2
6	Sliding bearing	1
7	Top distance plate	1
8	Retaining ring	1
9	Block stop	1
10	Dowel pin	1
11	Retaining ring	1
12	Key	1
13	Handle *	1
14	Retaining ring	2
15	Spring plate	2
16	Support plate	2
17	O-ring	2
18	Ball seal	2

\* DN300 without handle

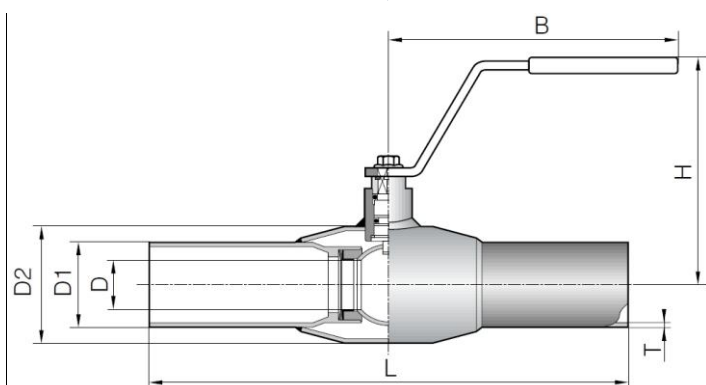


## Standard materials

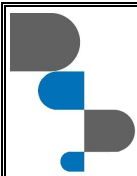
	DN 15-250
Body	Stainless steel 1.4404
Ball	Stainless steel 1.4404
Stem	Stainless steel 1.4404
Stem seals	FPM/NBR
Ball seals1	PTFE+C
Operation	DN 10-50 with stainless steel handle. DN 65-250 with galvanized steel handle. We recommend manual gear operation for sizes DN 125 and larger. Valves are available with manual gear, electric actuator or hydraulic actuator.

## Dimensions

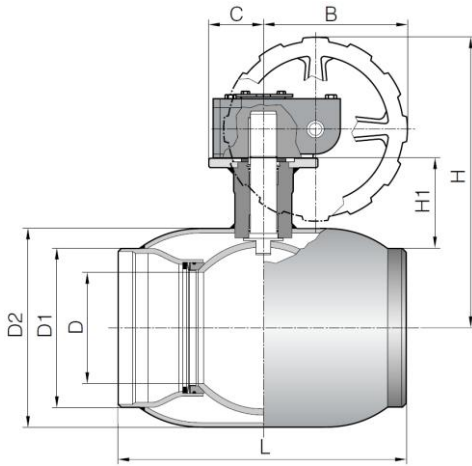
### Butt weld connection, 440TS-N series



DN	PN	L	D	D1	D2	H	B	T	Weight, kg
10	40	230	10	17,2	33,7	98	145	2	0,5
15	40	230	10	21,3	33,7	98	145	2	0,5
20	40	230	15	26,9	42,4	103	145	2	0,7
25	40	230	20	33,7	48,3	112	145	2	0,8
32	40	260	25	42,4	60,3	116	145	2	1,2
40	40	260	32	48,3	70	111	188	2,5	1,8
50	40	300	40	60,3	88,9	118	188	3	2,2
65	25	300	50	76,1	114,3	150	278	3	3,8
80	25	300	65	88,9	131	160	278	3	4,7
100	25	325	80	114,3	156	175	278	3	6,7
125	25	325	100	139,7	177,8	220	400	4	13
150	25	350	125	168,3	219,1	240	600	4	18
200	25	400	150	219,1	273	280	870	4	32
250	25	530	200	273	355,6	340	1200	4	63



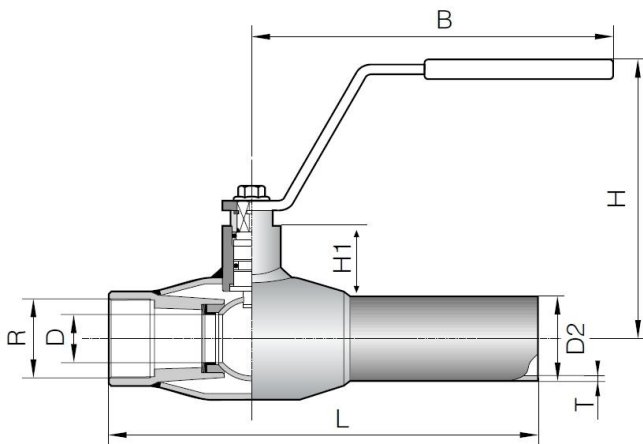
## 440TS-N series with manual gear



DN	PN	L	D	D1	D2	H	H1	B	C	Weight kg
100	16	16	325	80	114,3	156	221,5	68	115,5	53
125	16	16	325	100	139,7	178	283	79	153	53
150	16	16	350	125	168,3	219,1	303	85	153	53
200	25	25	400	150	219,1	273	369	92	194	69
250	25	25	530	200	273	355,6	444	108	247	97

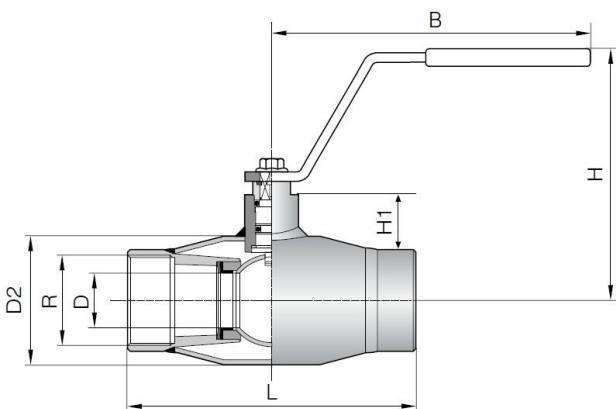
## Dimensions: 442TS-N and 443TS-N series valves

## 442TR-N

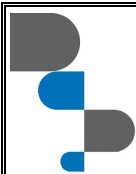


DN	PN	L	D	D1	D2	H	B	kg
10	40	153	10	R 3/8	17,2	99	145	0,5
15	40	158	10	R 1/2	21,3	99	145	0,5
20	40	165	15	R 3/4	26,9	103	145	0,7
25	40	172	20	R 1	33,7	113	145	0,8
32	40	195	25	R 1 1/4	42,4	116	145	1,2
40	40	205	32	R 1 1/2	48,3	112	188	1,8
50	40	240	40	R 2	60,3	118	188	2,8

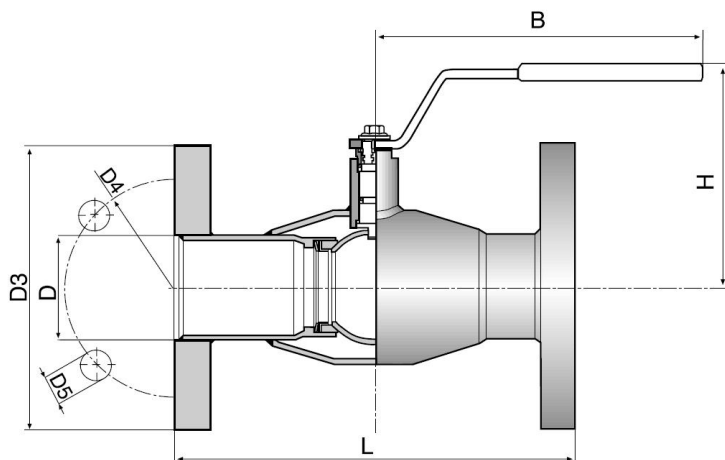
## 443TR-N



DN	PN	L	D	D1	D2	H	B	kg
10	40	75	10	R 3/8	33,7	99	145	0,4
15	40	85	10	R 1/2	33,7	99	145	0,4
20	40	100	15	R 3/4	42,4	103	145	0,5
25	40	115	20	R 1	48,3	113	145	0,8
32	40	130	25	R 1 1/4	60,3	116	145	1,1
40	40	150	32	R 1 1/2	70	112	188	1,7
50	40	180	40	R 2	88,9	118	188	2,7



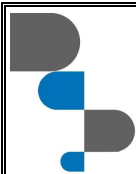
## Connection with flanges, 445TS-N series valve.



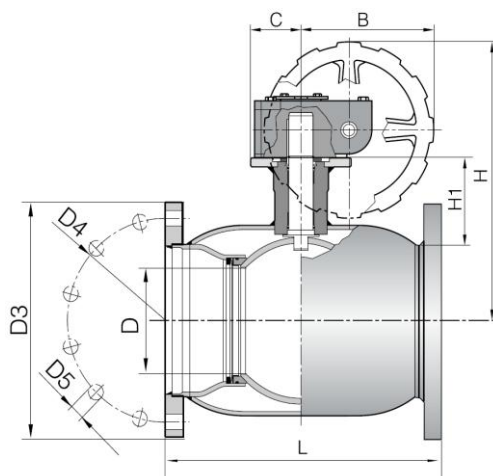
Flanges: EN1092-1

DN	L	D	D1		D2		D3		H	B	Weight kg	
			PN 40	PN 40	PN 40	PN 40	PN 40	PN 40				
15	130	10	95	65	14	99	145	1.9				
20	150	15	105	75	14	103	145	2.7				
25	160	20	115	85	14	113	145	3.4				
32	180	25	140	100	18	116	145	5.0				
40	200	32	150	110	18	112	188	6,1				
50	230	40	165	125	18	118	188	8,5				

DN	L	D	D1		D2		D3		H	B	Weight kg	
			PN 16	PN 25	PN 16	PN 25	PN 16	PN 25			PN 16	PN 25
65	270	50	185	185	145	145	18	18	148	278	10,5	11
80	280	65	200	200	160	160	18	18	160	278	12	13,3
100	300	80	220	235	180	190	18	22	171	278	15,5	18,9
125	325	100	250	270	210	220	18	26	220	400	21	27,7
150	350	125	285	300	240	250	22	26	240	600	25	35,9
200	400	150	340	360	295	310	22	26	281	870	50	59
250	550	200	405	425	355	370	26	30	343	1200	90	105



## 445TS-N series with manual gear

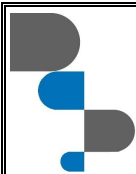


Flanges: EN1092-1

DN	L	D	D3		D4		D5		H	B	H1		Paino kg	
			PN 16	PN 25	PN 16	PN 25	PN 16	PN 25			PN 16	PN 25	PN 16	PN 25
100	300	80	220	235	180	190	18	22	221,5	115,5	68	68	21	28
125	325	100	250	270	210	220	18	26	283	153	79	79	29	34
150	350	125	285	300	240	250	22	26	303	153	85	85	34	40
200	400	150	340	360	295	310	22	26	369	194	92	92	57	66
250	500	200	405	425	355	370	26	30	451	247	108	108	105	120

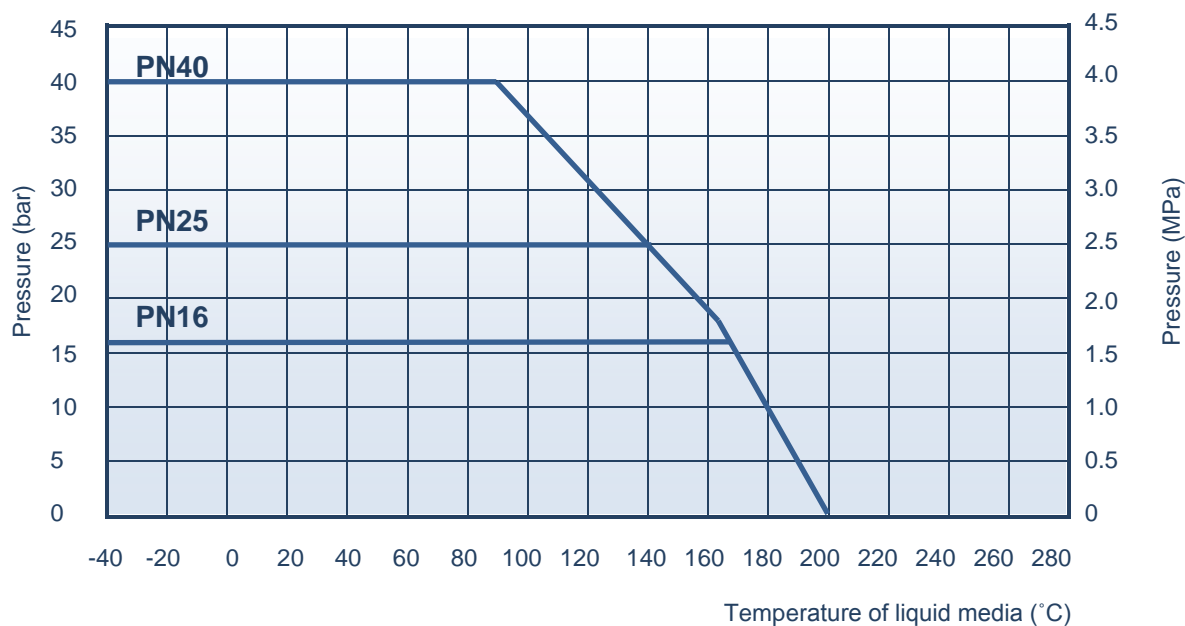
## Selection table of actuators

DN	Pneumatic, spring return Remote Control Sweden	Manual gear	Electric actuator Auma
10	RC210-SR(RC205-DA)		SG04
15	RC210-SR(RC205-DA)		SG04
20	RC210-SR(RC210-DA)		SG04
25	RC220-SR(RC210-DA)		SG04
32	RC220-SR(RC210-DA)		SG04
40	RC230-SR(RC220-DA)		SG04
50	RC230-SR(RC220-DA)		SG04
65	RC240-SR(RC230-DA)		SG05
80	RC240-SR(RC230-DA)		SG05
100	RC250-SR(RC240-DA)		SG07
125	RC260-SR(RC240-DA)		SG07
150	RC270-SR(RC260-DA)		SG10
200	RC270-SR(RC260-DA)	Q-800S-W250/15	SG12.1
250	RC280-SR(RC270-DA)	Q-2000S-W300/20	SA07.1-GS100.3



## 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