

**BALL VALVE**  
of carbon steel  
with welded ends / threaded ends / flanges  
**34000 - 34500 series**



**Operation**

Edition 05-07-2016

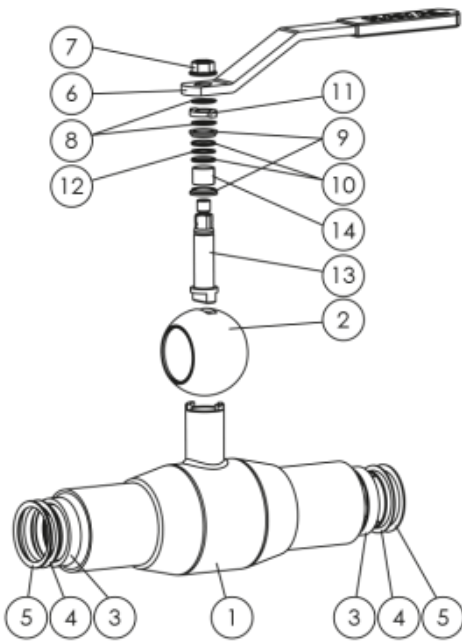
Ball valve series 34000 - 34500 is a tight on-off valve and suitable for liquid and air pipe systems. This valve is suitable for District Heating (CHP) installations, Heat Transfer piping, oil lines and oxygen-free water lines.

Nominal dimensions:	34000TR-N – DN 10 - 800,
	34200TR-N, 34300TR-N – DN 10 - 50,
	34500TR-N – DN 15 - 600
Nominal pressure	34000TR-N, DN 10 - 50 – PN 40 bar, DN 65 - 800 – PN 25 bar, DN 125 - 250 – PN 16 bar
	34200TR-N, DN 10 - 50 – PN 40 bar
	34300TR-N, DN 10 - 50 – PN 40 bar
	34500TR-N, DN 15 - 50 – PN 40 bar, DN 65 - 600 – PN 16 or PN 25 bar according to flanges drilling (Available PN 10,16,25,40)
Connection	34000TR-N series – welded ends, 34200TR-N series – threaded socket / welded end, 34300TR-N series – threaded ends, 34500TR-N series – flanges: 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 2014/68/EU on Pressure Equipment, marking: Class: gas, group 1. Explosion-proof design is available as per special order.

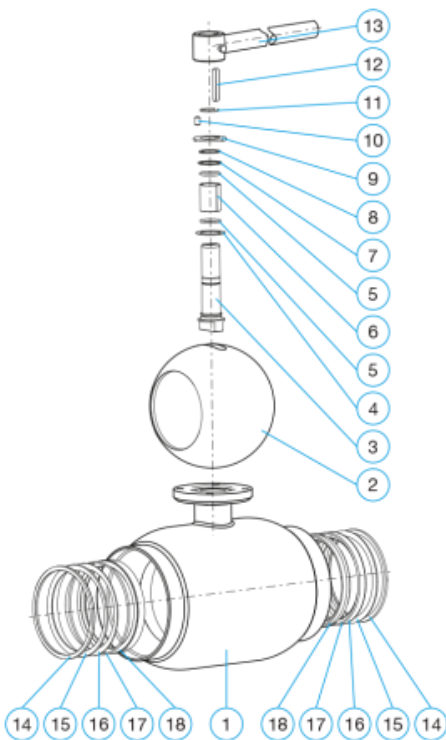




Exploded view, parts list

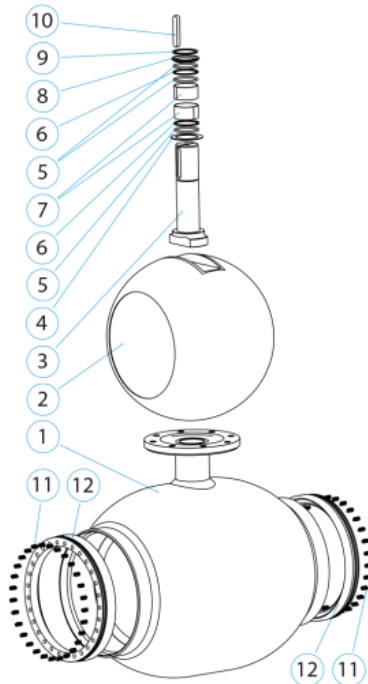


DN 10-150	
Part number	Part
1	Valve body
2	Ball
3	Ball seal
4	Support ring
5	Spring plate
6	Handle
7	Nut
8	Retaining ring
9	Bush
10	O-ring
11	Block stop
12	Distance plate
13	Stem
14	Bush

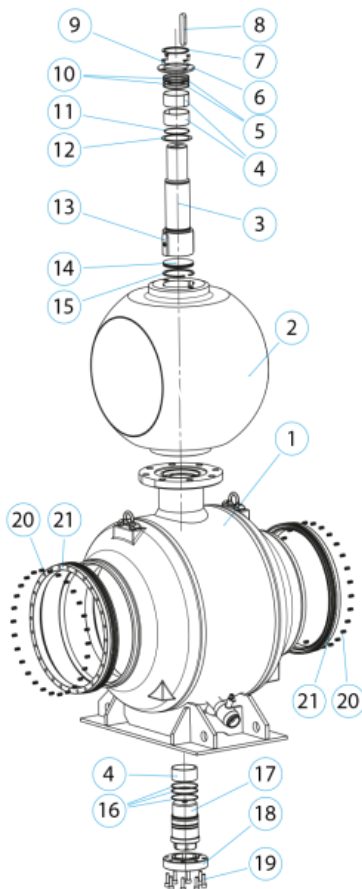


DN 200-300		
Part number	Part	Qty
1	Valve body	1
2	Ball	1
3	Stem	1
4	Sliding plate	1
5	O-ring	2
6	Sliding bearing	1
7	Top distance plate	1
8	Retaining ring	1
9	Block stop	1
10	Dowel pin	1
11	Retaining ring	1
12	Key	1
13	Handle *	1
14	Retaining ring	2
15	Spring plate	2
16	Support plate	2
17	O-ring	2
18	Ball seal	2

\* DN300 without handle



DN 350-500		
Part number	Part	Qty
1	Valve body	1
2	Ball	1
3	Stem	1
4	Sliding plate	1
5	O-ring	3
6	Distance plate	2
7	Sliding bearing	2
8	Stem sealing bush	1
9	Retaining ring	1
10	Key	1
11	Spring	n*
12	Ball seat	2
*Depends on valve size		



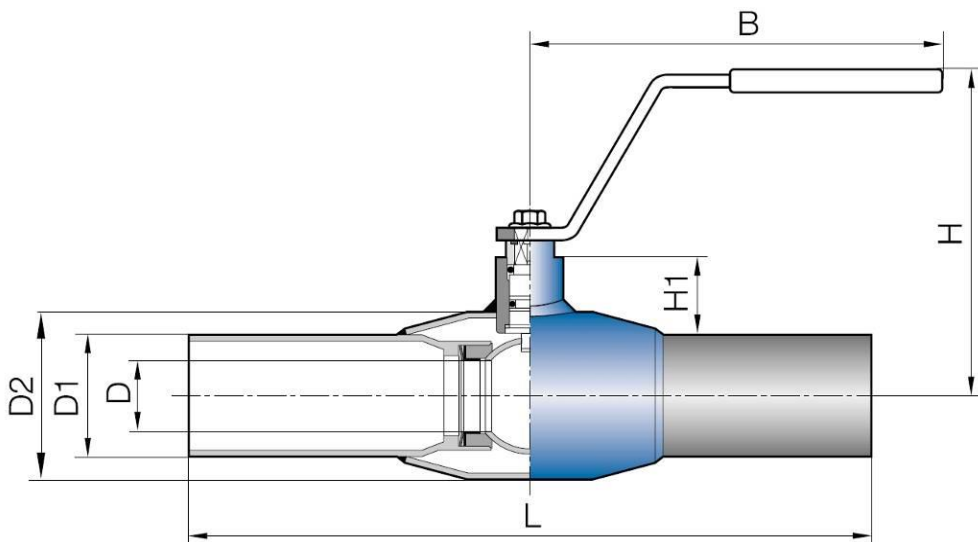
DN 600-800		
Part number	Part	Qty
1	Valve body	1
2	Ball	1
3	Operating stem	1
4	Sliding bearing	3
5	Distance plate	2
6	Stem sealing bush	1
7	Retaining ring	1
8	Key	1
9	Socket countersunk head screw	n*
10	O-ring	2
11	O-ring	1
12	Sliding plate	1
13	Key	2
14	Support plate	1
15	Retaining ring	1
16	O-ring	n*
17	Bearing stem	1
18	Blind flange	1
19	Hex socket head screw	n*
20	Spring	n*
21	Ball seat	2
*Depends on valve size		



**Materials**

	DN 15-500	DN 600-800
Body	Steel P235GH	Steel P355 NL1 / GP240GH
Ball	Stainless steel 1.4301	Steel ASTM A350 LF2 + Ni
Stem	Stainless steel 1.4305	Stainless steel 1.4305
Stem seals	FPM	FPM
Ball seals	PTFE+C	PTFE+C
Operation	DN 10 - 250 with galvanized steel handle. We recommend manual gear operation for sizes DN 125 and larger. DN 250 and larger without handle. Valves are available with manual gear, electric actuator or hydraulic actuator.	

**Dimensions. 34000TR-N series valve**



DN	L	D	D1	D2	H	B	H1	Weight kg
10	230	10	17.2	33.7	98	145	22	0.6
15	230	10	21.3	33.7	98	145	22	0.6
20	230	15	26.9	42.4	103	145	23	0.8
25	230	20	33.7	48.3	118	145	34	1.0
32	260	25	42.4	60.3	121	145	33	1.4
40	260	32	48.3	70.0	120	188	43	1.8
50	300	40	60.3	88.9	127	188	44	2.6
65	300	50	76.1	101.6	159	277.5	62	4.0



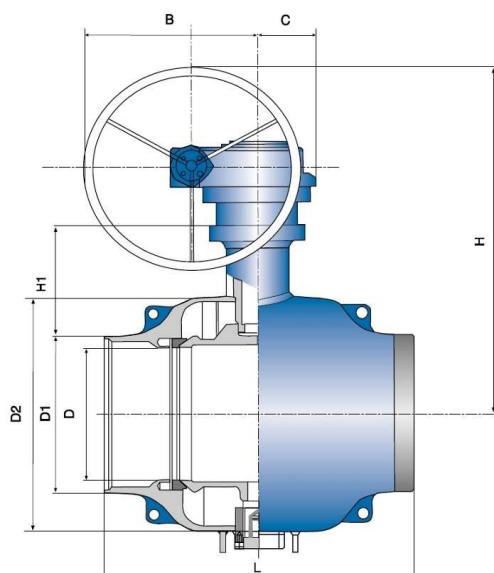
80	300	65	88.9	121.0	171	277.5	68	5.3
100	325	80	114.3	146.0	218	278.5	101	8.3
125	325	100	139.7	177.8	252	400	101	13.4
150	350	125	168.3	219.1	272	600	107	18.0
200	400	150	219.1	273.0	280	870	92	39.0
250	530	200	273.0	355.6	350	1200	108	74.0

Sizes, DN 25 - 250 can be operated with handlever. We recommend to use a manual gear from the size DN125 and larger.

The opening and closing of valves is stepless.

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

## Manual gear, 34000 TR-N



DN	L	D	D1		D2	H	B	C	H1	Weight, kg
			DIN	GOST						
100	325	80	114,3	-	146	258,5	115,5	53	105	18
125	325	100	139.7	-	177,8	316	153	53	112	20
150	350	125	168.3	-	219,1	336	153	53	118	25
200	400	150	219.1	273	273	369	194	69	92	49
250	530	200	273.0	355,6	355.6	444	247	97	108	94
300	550	250	323.9	457	457	593	367	117	132	152
350	686	290	355.6	508	508	668	367	117	192	212
400	762	340	406.4	610	610	750	388	138	242	293
500	914	390	508	660	660	827	430	180	259	467
600	1065	489	610	813	813	894	430	180	274	1025
700	1205	589	711	720	965	1128	603	222	336	2700
800	1330	684	813	820	1125	1208	603	222	365	4050

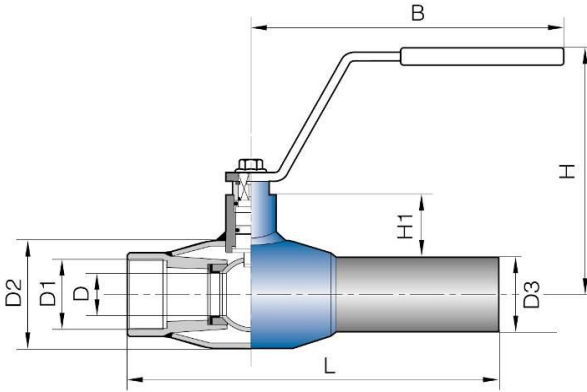
Opening and closing of the valves from the hand wheel.

The position of ball can be seen on a position indicator on top of the gear.



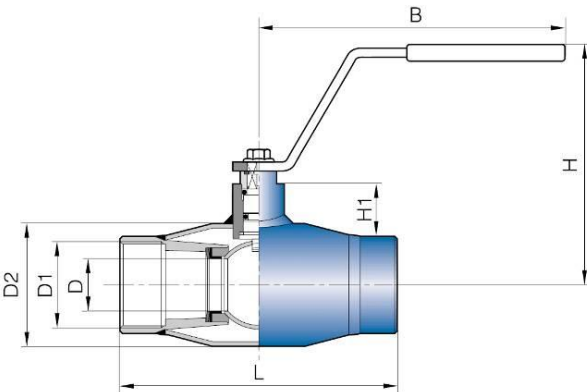
Dimensions. 34200TR-N and 34300TR-N series valves

34200TR-N



DN	PN	L	D	D1	D2	D3	H	B	H1	kg
10	40	153	10	R 3/8	33.7	17.2	98	145	22	0.6
15	40	158	10	R 1/2	33.7	21.3	98	145	22	0.6
20	40	168	15	R 3/4	42.4	26.9	103	145	23	0.8
25	40	172	20	R 1	48.3	33.7	118	145	34	1,1
32	40	195	25	R11/4	60.3	42.4	121	145	33	1.4
40	40	205	32	R11/2	70.0	48.3	120	188	43	1.9
50	40	240	40	R 2	88.9	60.3	127	188	44	2.7

34300TR-N



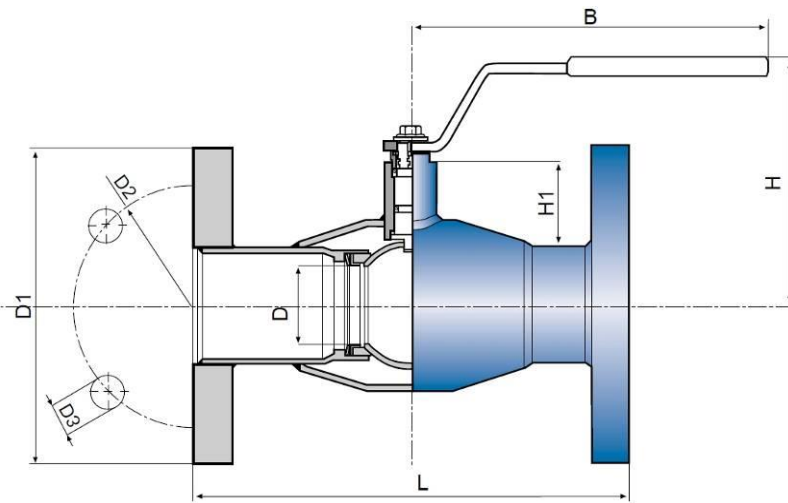
DN	PN	L	D	D1	D2	H	B	H1	kg
10	40	75	10	R 3/8	33.7	98	145	22	0.5
15	40	85	10	R 1/2	33.7	98	145	22	0.5
20	40	100	15	R 3/4	42.4	103	145	23	0.6
25	40	115	20	R 1	48.3	118	145	34	1
32	40	130	25	R1 1/4	60.3	121	145	33	1,2
40	40	150	32	R1 1/2	70.0	120	188	43	1.8
50	40	180	40	R 2	88.9	127	188	44	2.6

The opening and closing of valves is stepless.

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



## Dimensions. 34500TR-N series valve



DN	L	D	D1		D2		D3		H	B	H1		Weight, kg	
			PN 40	PN 40	PN 40	PN 40	PN 40	PN 40			PN 40			
15	130	10	95	65	14	98	145	22	1.8					
20	150	15	105	75	14	103	145	23	2.5					
25	160	20	115	85	14	118	145	34	3.3					
32	180	25	140	100	18	121	145	33	5.0					
40	200	32	150	110	18	120	188	43	5.8					
50	230	40	165	125	18	127	188	44	7.8					

DN	L	D	D1		D2		D3		H	B	H1		Weight, kg	
			PN 16	PN 25	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	159	277.5	62	62	10.5	11.3
80	280	65	200	200	160	160	18	18	171	277.5	68	68	12.5	14.9
100	300	80	220	235	180	190	18	22	218	278.5	101	101	17.0	19
125	325	100	250	270	210	220	18	26	252	400	101	101	25.0	29
150	350	125	285	300	240	250	22	26	272	600	107	107	33	37
200	400	150	340	360	295	310	22	26	280	870	92	92	58	67
250	500	200	405	425	355	370	26	30	350	1200	108	108	102	114

Sizes DN 25 - 250 can be operated with handlever. We recommend to use a manual gear from the size DN125 and larger.

The opening and closing of valves is stepless.

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

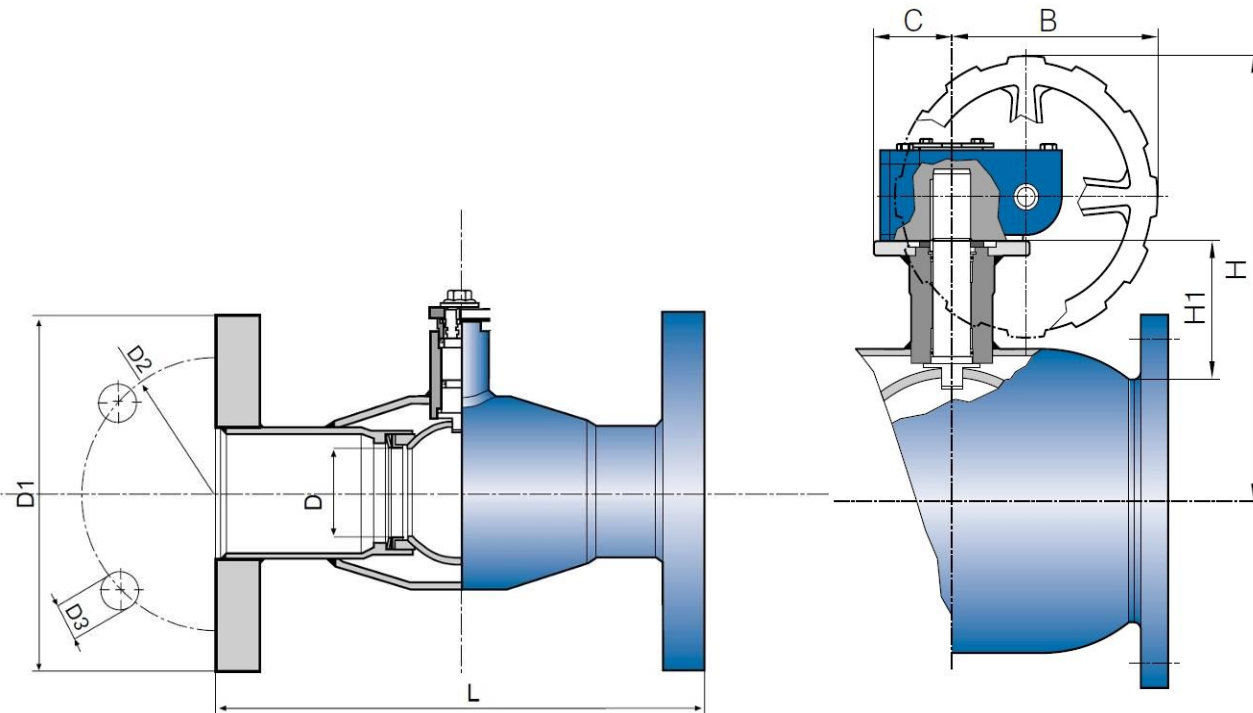
**Flanges:**

DIN 2501, ISO 2084, SFS 2123, SS 335, EN 1092-1.

Face to face dimensions according to: EN 588-1



Manual gear, 34500 TR-N



DN	L	D	D1		D2		D3		H	B	C	H1	Weight kg	
			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	268,5	115,5	53	114	23	26
125	325	100	250	270	210	220	18	26	316	153	53	112	30	35
150	350	125	285	300	240	250	22	26	336	153	53	118	37	44
200	400	150	340	360	295	310	22	26	393	194	69	92	68	78
250	500	200	405	425	355	370	26	30	451	247	97	108	122	134
300	500	250	460	485	410	430	26	30	613	368	138	115	190	205
350	706	290	520	555	470	490	26	33	668	368	138	192	268	295
400	810	340	580	620	525	550	30	36	750	388	138	242	365	408
500	978	390	715	730	650	660	33	36	827	430	180	259	595	640
600	1130	489	840	845	770	770	36	39	894	430	180	274	1230	1280
700	1245	589	910	960	840	875	36	42	1128	603	222	325	2900	3100
800	1385	684	1025	1085	950	990	39	48	1208	603	222	358	4200	4400

Opening and closing of the valves from the hand wheel.

The position of ball can be seen on a position indicator on top of the gear.

**Flanges:**

DIN 2501, ISO 2084, SFS 2123, SS 335, EN 1092-1.

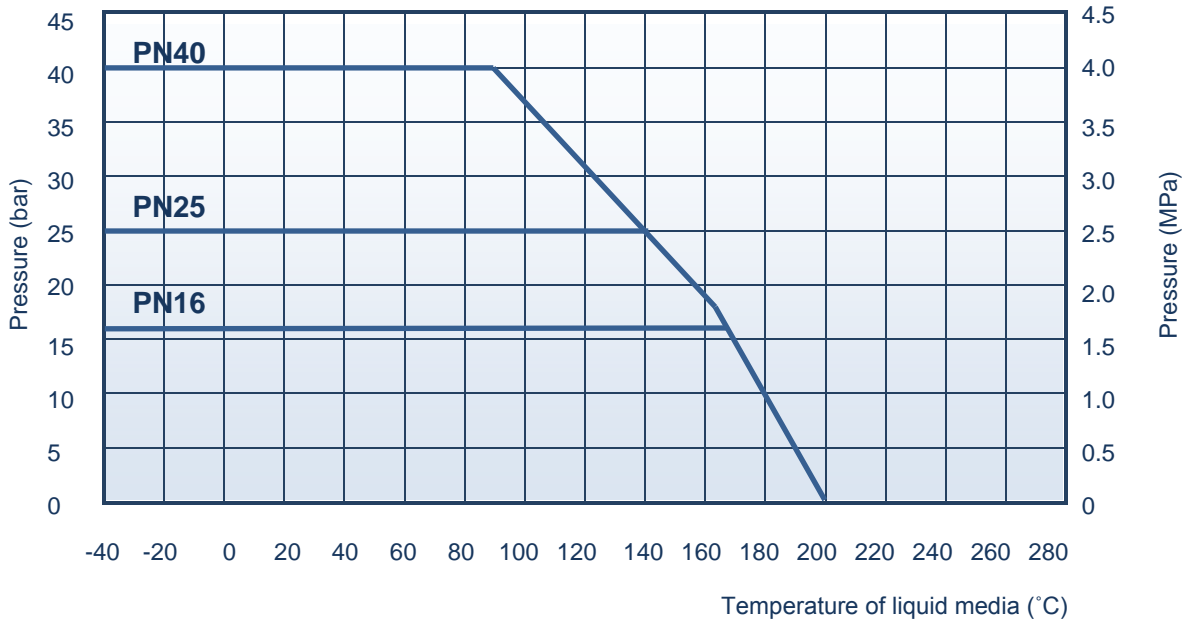
**Face to face dimensions according to:** EN 588-1





### Pressure / Temperature Rating

The max pressure difference depends on the working temperature.



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



## Operation torque, Nm

DN	PN 16	PN 25	PN 40
10, 15	12	13	15
20	15	16	18
25	19	21	24
32	25	27	30
40	39	43	43
50	50	55	60
65	68	75	-
80	98	110	-
100	150	250	-
125	270	390	-
150	520	750	-
200	900	1200	-
250	1900	2500	-
300	3000	4000	-
350	2800	4000	-
400	4500	12000	-
500	9000	12000	-
600	9000	15000	18000
700	11250	23350	28000
800	17500	31250	37500

## Operation

According to customer's needs the butterfly valve is delivered with:

- bare shaft (not recommended),
- manual gear,
- hand lever,
- electric actuator,
- pneumatic or hydraulic actuator.

**BLUE LINE****BALL VALVE  
of carbon steel**

Valves

**34000TR-N / 34200TR-N / 34300TR-N / 34500TR-N series**

05-07-2016

**Table of recommended actuators**

DN	Pneumatic actuator RC spring return			Manual gear	Electric actuator AUMA	
	PN 40	PN 25	PN 16		PN 40	PN 25/16
10	RC210-SR (RC205-DA)				SG04.3	
15	RC210-SR (RC205-DA)				SG04.3	
20	RC210-SR (RC210-DA)				SG04.3	
25	RC220-SR (RC210-DA)				SG04.3	
32	RC220-SR (RC210-DA)				SG04.3	
40	RC230-SR (RC220-DA)				SG04.3	
50	RC230-SR (RC220-DA)				SG04.3	
65		RC240-SR (RC230-DA)				SG05.1
80		RC240-SR (RC230-DA)				SG05.1
100		RC250-SR (RC240-DA)				SG07.1
125			RC260-SR (RC250-DA)			SG10.1/SG07.1
150			RC270-SR (RC260-DA)			SG12.1/SG10.1
200			RC270-SR (RC260-DA)	Q-800S-W250/15		SQ12.2-63-D400/50
250			RC280-SR (RC270-DA)	Q-2000S- W300/20		SA07.6-VZ4.3/GS100.3
300			RC280-DA	Q-4000S-W600		SA10.2-VZ4.3/GS125.3
350				Q-4000S-W600		SA10.2-VZ4.3/GS125.3
400				Q-6500S- W500/20		SA10.2-VZ4.3/GS125.3
500				Q-12000S- W500/20		SA10.2-GZ160.3/GS160.3
600				Q-12000S- W500/20		SA10.2-GZ160.3/GS160.3
700				Q-24000S- W700/25		SA10.2-GZ200.3/GS200.3
800				Q-32000S- W700/25		SA10.2-GZ250.3/GS250.3



BLUE LINE

**BALL VALVE**  
of carbon steel



Valves

**34000TR-N / 34200TR-N / 34300TR-N / 34500TR-N series**

05-07-2016

## How to order

		3	4	000	M
Body material:	3 - Carbon steel				
Valve type:	4 - ball valve				
Connection:	000 - welded end 200 - welded end / threaded 300 - threaded 500 - flanged				
Actuation:	( _ ) - handlever, ( Z ) - bare shaft, ( M ) - manual gear				

## Product codes

	Ball valve series 34000-34500
Handlever	34000TR-N _ _
Bare shaft	34000TR-N _ _ Z
Manual gear	34000TR-N _ _ M