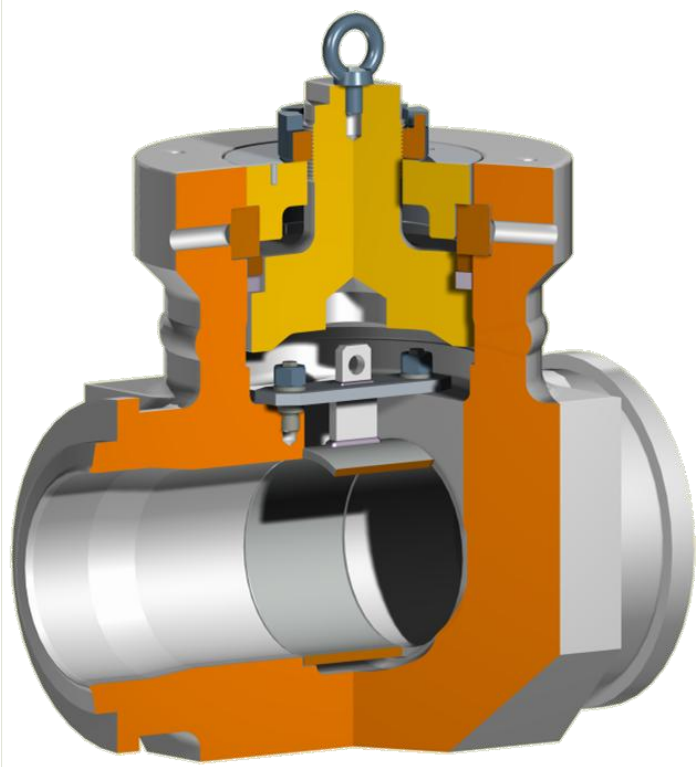

MPOWER

Type K07

DN 125 – 500
PN 63 – 400

Pressure Lock

With cover flange, with pressure-tight cover

Data Sheet
Edition: EN 9 / 2015

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Content

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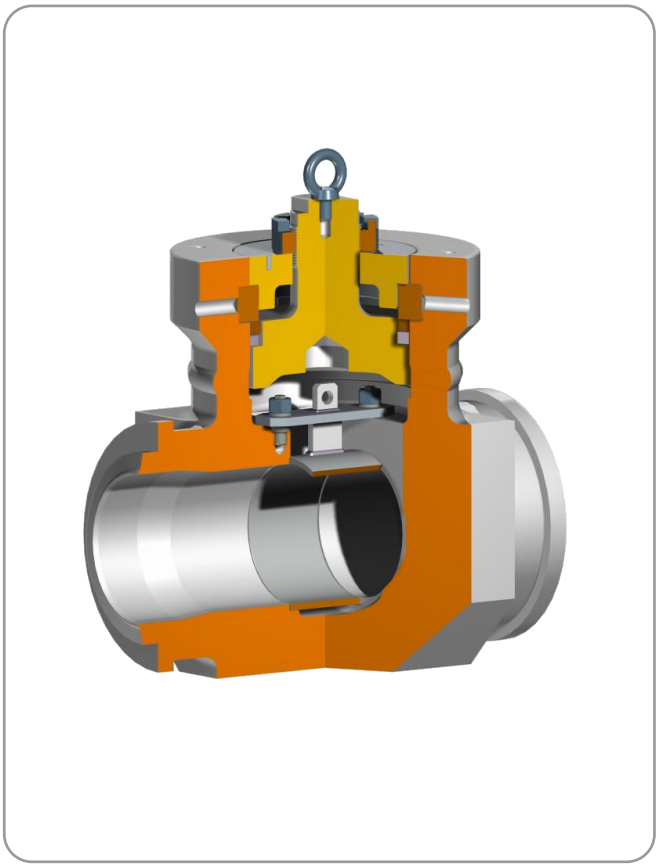
Application

- Depending on its assembly, this special valve provides for chemical cleaning, pressure test, and equipment operation, primarily for boiler systems
- **Fluids**
  Water, steam and non-aggresive fluids, other as requested
- **Industry**
  Conventional power,water-supply, heat stations, chemical and industry equipment



Technical description

- Body is die forging or smith forging
- Sealing surfaces for the chemical cleaning and pressurizing are sealed with a sealing ring
- The sealing rings are made from TEMAPLUS and expanded graphite
- Asbestos-free sealing
- There are three design versions of the inner fitting:
  - ✓ **operation fitting** – the inner body part without flow tapering
  - ✓ **pressure test fitting** – allows for pressure tests of boiler systems not only during the power unit construction, but also within the following pressure tests, if any, after the boiler pressure system repair
  - ✓ **chemical cleaning fitting** – allows for the piping line chemical cleaning before the pressure test; the inner part layout is identical with the pressure test fitting inner part

Connection

- But-welded ends or flanged according to CSN, EN, ANSI, GOST, DIN or on demand

Installation

- The pressure locks are only mounted to horizontal piping with upper covers

Testing

- Pressure locks are tested with water for strength, impermeability, operational capacity and tightness depending on the operating parameters and body material according to EN 12266-1
- Minimum pressure for the strength test1.5 x PN
- Strength welds are checked by radiography

Operation

- Self-operated

Advantages

- Seismic resistance
- Special design for chemical cleaning and pressure testing
- No flow restriction in the piping line during normal operation
- During the chemical cleaning and testing, no interventions to the piping and no special modifications of other valves are required

Operating parameters

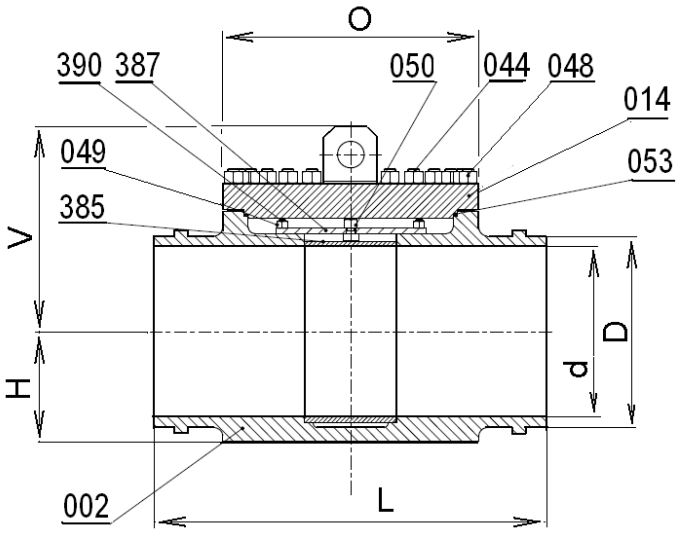
Material of body	PN	Working pressure MPa / Working temperature °C											
		200	250	300	350	400	450	500	520	540	560	580	600
P250GH (C22.8) (W.Nr. 1.0460)	**63**	6,3	5,7	4,9	4,2	3,3	2,5	-	-	-	-	-	-
	100	10,0	9,0	7,8	6,7	5,2	4,0	-	-	-	-	-	-
	160	16,0	14,4	12,5	10,7	8,3	6,4	-	-	-	-	-	-
	250	25,0	22,5	19,6	16,7	13,0	10,0	-	-	-	-	-	-
	320	32,0	28,8	25,0	21,3	16,7	12,8	-	-	-	-	-	-
	400	40,0	35,9	31,3	26,7	20,9	16,0	-	-	-	-	-	-
11416	**63**	6,3	5,9	5,2	4,3	3,8	2,5	-	-	-	-	-	-
	100	10,0	9,4	8,2	6,8	6,0	4,0	-	-	-	-	-	-
	160	16,0	15,0	13,2	10,9	9,6	6,4	-	-	-	-	-	-
	250	25,0	23,5	20,6	17,1	14,9	10,0	-	-	-	-	-	-
	320	32,0	30,1	26,3	21,9	19,1	12,8	-	-	-	-	-	-
	400	40,0	37,6	32,9	27,4	23,9	16,0	-	-	-	-	-	-
15NiCuMoNb5 (W.Nr. 1.6368)	**63**	6,3	6,3	6,3	6,3	6,3	6,3	-	-	-	-	-	-
	100	10,0	10,0	10,0	10,0	10,0	10,0	-	-	-	-	-	-
	160	16,0	16,0	16,0	16,0	16,0	16,0	-	-	-	-	-	-
	250	25,0	25,0	25,0	25,0	25,0	25,0	-	-	-	-	-	-
	320	32,0	32,0	32,0	32,0	32,0	32,0	-	-	-	-	-	-
	400	40,0	40,0	40,0	40,0	40,0	40,0	-	-	-	-	-	-
16Mo3 (15Mo3) (W.Nr. 1.5415)	**63**	6,3	6,3	5,5	5,3	5,1	4,9	3,4	2,2	-	-	-	-
	100	10,0	10,0	8,7	8,4	8,1	7,8	5,4	3,4	-	-	-	-
	160	16,0	16,0	13,9	13,4	13,0	12,5	8,6	5,5	-	-	-	-
	250	25,0	25,0	21,7	21,0	20,3	19,6	13,5	8,6	-	-	-	-
	320	32,0	32,0	27,8	26,9	26,0	25,0	17,3	10,9	-	-	-	-
	400	40,0	40,0	34,8	33,6	32,5	31,3	21,6	13,7	-	-	-	-
13CrMo4-5 (W.Nr. 1.7335)	**63**	6,3	6,3	6,3	6,3	6,0	5,7	5,0	3,4	2,2	1,5	-	-
	100	10,0	10,0	10,0	10,0	9,6	9,0	7,9	5,4	3,5	2,3	-	-
	160	16,0	16,0	16,0	16,0	15,3	14,4	12,7	8,7	5,7	3,7	-	-
	250	25,0	25,0	25,0	25,0	23,9	22,5	19,9	13,6	8,8	5,8	-	-
	320	32,0	32,0	32,0	32,0	30,6	28,8	25,4	17,4	11,3	7,4	-	-
	400	40,0	40,0	40,0	40,0	38,3	35,9	31,8	21,8	14,1	9,3	-	-
11CrMo9-10 (W.Nr. 1.7383)	**63**	6,3	6,3	6,3	6,3	6,3	6,3	4,9	3,8	2,8	2,1	1,6	1,2
	100	10,0	10,0	10,0	10,0	10,0	10,0	7,8	6,0	4,5	3,4	2,6	2,0
	160	16,0	16,0	16,0	16,0	16,0	16,0	12,5	9,6	7,2	5,4	4,1	3,2
	250	25,0	25,0	25,0	25,0	25,0	25,0	19,6	14,9	11,3	8,4	6,4	4,9
	320	32,0	32,0	32,0	32,0	32,0	32,0	25,0	19,1	14,5	10,8	8,2	6,3
	400	40,0	40,0	40,0	40,0	40,0	40,0	31,3	23,9	18,1	13,4	10,2	7,9
10CrMo9-10) (W.Nr. 1.7380)	**63**	6,3	6,3	6,3	6,3	6,3	6,0	4,9	3,8	2,8	2,1	1,6	1,2
	100	10,0	10,0	10,0	10,0	10,0	9,6	7,8	6,0	4,5	3,4	2,6	2,0
	160	16,0	16,0	16,0	16,0	16,0	15,3	12,5	9,6	7,2	5,4	4,1	3,2
	250	25,0	25,0	25,0	25,0	25,0	23,9	19,6	14,9	11,3	8,4	6,4	4,9
	320	32,0	32,0	32,0	32,0	32,0	30,6	25,0	19,1	14,5	10,8	8,2	6,3
	400	40,0	40,0	40,0	40,0	40,0	38,3	31,3	23,9	18,1	13,4	10,2	7,9
14MoV6-3 (W.Nr. 1.7715)	**63**	6,3	6,3	6,3	6,3	6,3	6,3	6,3	5,4	4,1	3,1	-	-
	100	10,0	10,0	10,0	10,0	10,0	10,0	10,0	8,6	6,6	5,0	-	-
	160	16,0	16,0	16,0	16,0	16,0	16,0	16,0	13,8	10,5	8,0	-	-
	250	25,0	25,0	25,0	25,0	25,0	25,0	25,0	21,6	16,4	12,5	-	-
	320	32,0	32,0	32,0	32,0	32,0	32,0	32,0	27,6	21,0	16,0	-	-
	400	40,0	40,0	40,0	40,0	40,0	40,0	40,0	34,6	26,2	19,9	-	-
15128	**63**	6,3	6,3	6,3	6,3	6,3	6,3	6,2	4,8	3,7	2,8	2,2	1,6
	100	10,0	10,0	10,0	10,0	10,0	10,0	9,8	7,6	5,9	4,5	3,5	2,6
	160	16,0	16,0	16,0	16,0	16,0	16,0	15,7	12,2	9,4	7,2	5,6	4,2
	250	25,0	25,0	25,0	25,0	25,0	25,0	24,5	19,0	14,6	11,3	8,7	6,5
	320	32,0	32,0	32,0	32,0	32,0	32,0	31,4	24,3	18,7	14,5	11,1	8,3
	400	40,0	40,0	40,0	40,0	40,0	40,0	39,2	30,4	23,4	18,1	13,9	10,4

Material of body	PN	Working pressure MPa / Working temperature °C											
		200	250	300	350	400	450	500	520	540	560	580	600
X10CrMoVNb9-1 (W.Nr. 1.4903)	63	6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3	6,3	5,5	4,4	3,4
	100	10,0	10,0	10,0	10,0	10,0	10,0	10,0	10,0	10,0	8,7	7,0	5,4
	160	16,0	16,0	16,0	16,0	16,0	16,0	16,0	16,0	16,0	13,9	11,1	8,7
	250	25,0	25,0	25,0	25,0	25,0	25,0	25,0	25,0	25,0	21,7	17,4	13,6
	320	32,0	32,0	32,0	32,0	32,0	32,0	32,0	32,0	32,0	27,8	22,3	17,4
	400	40,0	40,0	40,0	40,0	40,0	40,0	40,0	40,0	40,0	34,8	27,8	21,8
X6CrNiTi18-10 (W.Nr. 1.4541)	63	6,1	5,4	5,0	4,7	4,6	4,4	4,3	4,3	4,3	4,3	3,9	3,1
	100	9,7	8,5	7,9	7,5	7,2	7,0	6,9	6,9	6,9	6,8	6,2	5,0
	160	15,5	13,6	12,6	12,1	11,6	11,2	11,0	11,0	11,0	10,9	9,9	8,0
	250	24,2	21,3	19,7	18,8	18,1	17,5	17,2	17,2	17,1	17,1	15,5	12,5
	320	31,0	27,3	25,2	24,1	23,2	22,4	22,1	22,1	21,9	21,9	19,8	16,0
	400	38,7	34,1	31,5	30,1	29,0	28,1	27,6	27,5	27,4	27,4	24,8	19,9
08X18H10T	63	6,0	5,6	5,4	5,0	4,8	4,5	4,1	3,8	3,5	3,1	2,8	2,5
	100	9,5	8,8	8,5	7,9	7,7	7,1	6,6	6,0	5,5	5,0	4,5	4,0
	160	15,2	14,1	13,6	12,7	12,2	11,4	10,5	9,6	8,8	8,0	7,2	6,5
	250	23,8	22,0	21,3	19,9	19,1	17,8	16,4	15,0	13,7	12,5	11,3	10,1
	320	30,4	28,2	27,3	25,4	24,5	22,8	21,0	19,3	17,5	15,9	14,4	12,9
	400	38,0	35,2	34,1	31,8	30,6	28,5	26,2	24,1	21,9	19,9	18,1	16,2

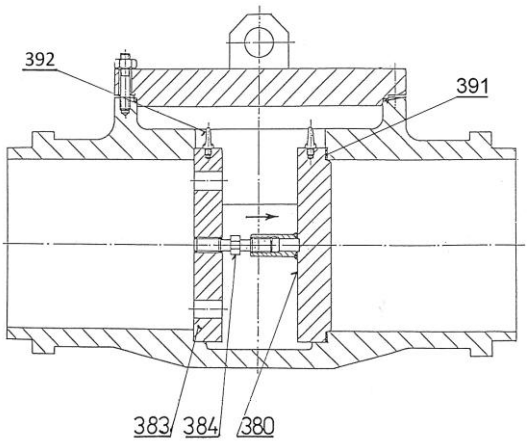
Materials of main parts / Dimensions according to EN

DN 300 – 500, PN 63 – 100

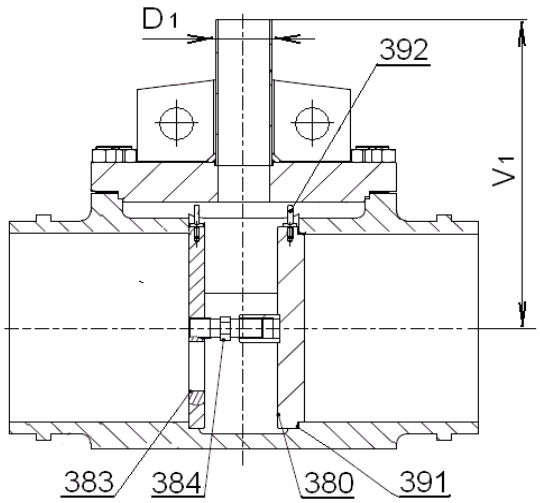
P – operation fitting



T – pressurizing fitting



CH – chemical cleaning fitting



Materials of main parts

Pos.	Name	Material			
		Non-alloyed	Low alloyed	High alloyed	Stainless
002	**Body**	11 416 P250GH(C22.8)	15 128, 14MoV6-3 16Mo3 (15Mo3) 13CrMo4-5 11CrMo9-10 (10CrMo910)	15NiCuMoNb5-6-4 X10CrMo VNb9-1	X6CrNiTi18-10 08X18H10T
014	**Cap**				
385	**Insert**				
044	**Bolt**	15320, 24CrMoV5-5			
048	**Nut**	15236			
053	**Sealing ring**	Expanded graphite			
390	**Screw**	15320, 24CrMoV5-5			17134, 14X
387	**Plate**	15128, 11CrMo9-10			X6, 08X
049	**Nut**	15236.3			ISO 4032-A2
050	**Nut**				
053	**Sealing ring**	Expanded graphite			
380	**Sealing plate**	15128, 11CrMo9-10			
383	**Thrust plate**	15128, 11CrMo9-10			
384	**Distance bolt**	15320, 24CrMoV5-5			
391	**Sealing ring**	TEMAPLUS			
392	**Suspension bolt**	DIN 580			

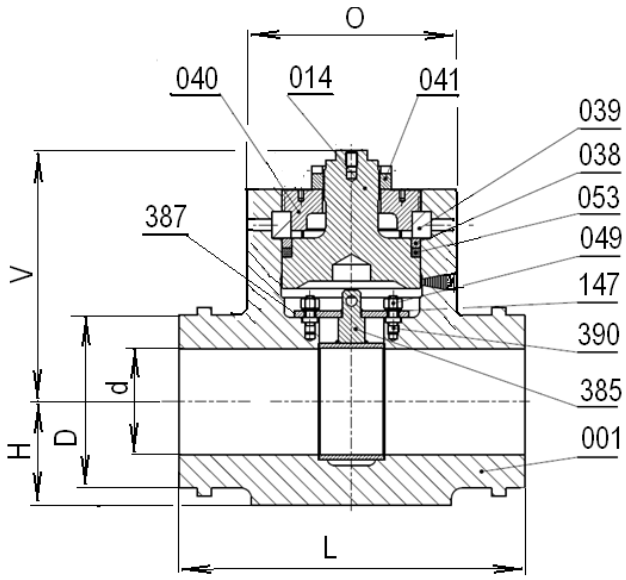
Dimensions according to EN

PN	DN	D1	H	L	O	V	V1	P kg	T kg	CH kg
63 ÷ 100	**300**	114,3x5	220	900	540	490	560	655	685	670
	350	114,3x5	235	1000	570	510	575	690	995	685
	400	114,3x5	255	1100	650	540	640	1285	1325	1270
	450	114,3x5	280	1160	630	570	640	1075	1170	1150
	500	114,3x5	320	1360	700	595	670	2030	2215	2225

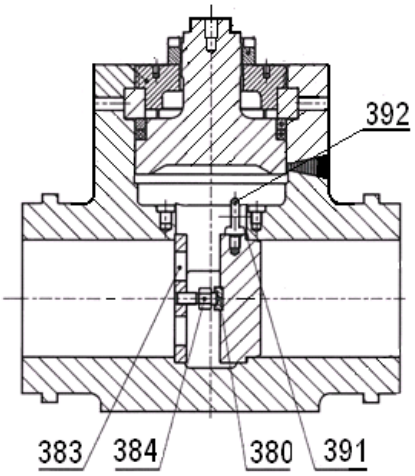
Note: Min. dimension for dismantling is V + 1000 mm

DN 125 – 300, PN 160 – 400

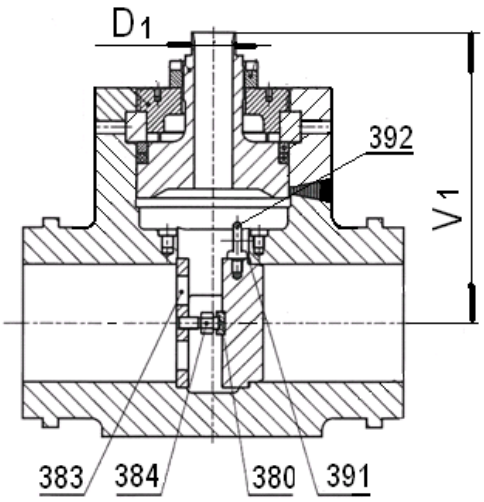
P – operation fitting



T – pressurizing fitting



CH – chemici cleaning fitting



Materials of main parts

Pos.	Name	Material			
		Non-alloyed	Low-alloyed	High alloyed	Stainless
001	**Body**	11 416, P250GH(C22.8)	15 128, 14MoV6-3, 16Mo3 (15Mo3), 13CrMo4-5 11CrMo9-10 (10CrMo910)	15NiCuMoNb5-6-4 X10CrMo VNb9-1	X6CrNiTi18-10 08X18H10T
385	**Insert**				
014	**Pressure-tight cover**		11CrMo9-10 (10CrMo910)		
038	**Support ring**				
039	**Split ring**				
040	**Plate**		15128, 11CrMo9-10		
387	**Plate**	15128, 11CrMo9-10			X6, 08X
041	**Nut**	11600.1, E335			
049	**Nut**	15236.3			ISO 4032-A2
390	**Screw**	15320, 24CrMoV5-5			17134, 14X
147	**Lock washer**	DIN 463			X6, 08X
380	**Sealing plate**	15128, 11CrMo9-10			
383	**Thrust plate**				
384	**Distance bolt**	15320, 24CrMoV5-5			
391	**Sealing ring**	TEMAPLUS			
392	**Suspension bolt**	DIN 580			

Dimensions according to EN

PN	DN	D1	H	L	O	V	V1	P kg	T kg	CH kg
160 ÷ 400	**125**	60,3x3,2	105	500	255	320	345	118	117	115
	200	76,1x3,2	155	650	330	365	420	222	209	207
	225	76,1x3,2	160	650	415	430	455	401	411	408
	250	76,1x3,2	190	650	415	470	485	487	500	490
	300	139,7x5,6	230	1000	625	690	715	1590	1615	1600
	350	139,7x5,6	230	100	625	795				

Note: Min. dimension for dismantling for DN 125-250 is V + 800 mm, for DN 300-500 is V + 1000 mm

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