

Check Valves

Type 05412 - Check Valve



Cryogenic-Check Valves, PN50

Bronze body and cap
with spring, opening pressure ca. 0.1 bar
"cleaned and degreased for oxygen service"

Part No. 05412.X.0001

Socket end for copper pipes acc. to DIN EN 12449 or ASTM B88

Available options - on request only:

- Socket end for stainless steel pipes acc. to ISO 1127

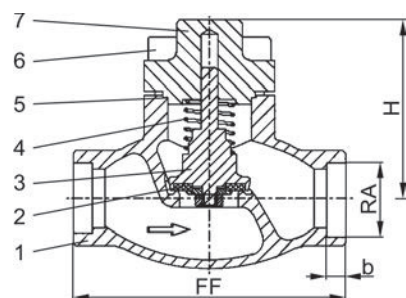


Applications:

Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	CC491K	B 62 UNS C83600
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW614N	B 283 UNS C38500
4 Spring	CW452K	B 159 UNS C51900
5 Bonnet gasket	PTFE	
6 Bolts	1.4301/A2 A 194 B8	
7 Cap	CC493K	B 505 UNS C93200



Standard marking acc. to Pressure Equipment Directive 97/23/EC (PED).



Type 05412 - Standard design	Technical data							
Nominal size	DN	10	15	20	25	32	40	50
Dimension code	.X.	X=DNRA, Example: valve DN10 for copper pipe RAØ12mm. X=1012						
Face-to-face dimension	FF	60	85	85	115	115	140	160
Height	H	71	71	72	75	87	95	95
Outside pipe-Ø	RA	dependent on order						
Socket depth	b	6	6	8	8	10	13	20
Weight	ca. kg	0.7	1.0	1.3	1.6	2.4	3.9	5.7
Kvs-Value	m ³ /h	1.6	4.3	6.7	11.5	12.1	22.6	37.1
Cv-Value	gal/min	1.9	5.0	7.8	13.4	14.1	26.3	43.2

Dimensions in mm.

Check Valves

Type 05412 - Check Valve

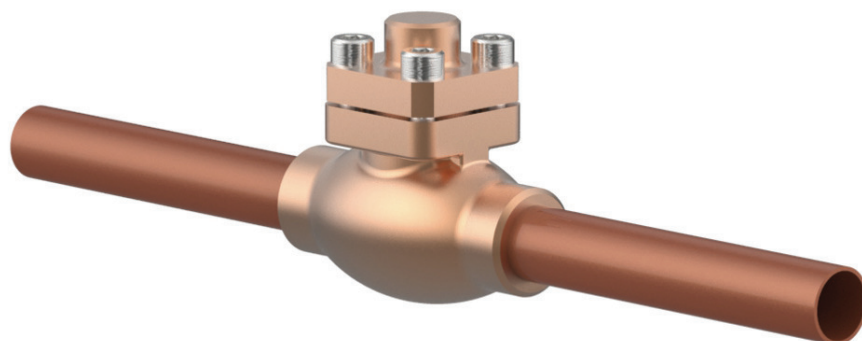


Cryogenic-Check Valves, PN50

Bronze body and cap
with spring, opening pressure ca. 0.1 bar
"cleaned and degreased for oxygen service"

Part No. 05412.X.0008

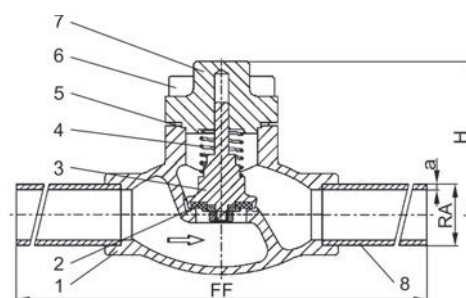
Complete with brazed copper stubs acc. to DIN EN 12449



Applications:

Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.
Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	CC491K	B 62 UNS C83600
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW614N	B 283 UNS C38500
4 Spring	CW452K	B 159 UNS C51900
5 Bonnet gasket	PTFE	
6 Bolts	1.4301/A2 A 194 B8	
7 Cap	CC493K	B 505 UNS C93200
8 Copper stubs	CW024A	B 152 UNS C12200



Standard marking acc. to Pressure Equipment Directive 97/23/EC (PED).



Type 05412 - Standard design	Technical data								
Nominal size	DN	10	15	15	20	25	32	40	50
Dimension code	.X.	1012	1515	1518	2022	2528	3235	4042	5054
Face-to-face dimension	FF	360	385	385	385	415	415	420	460
Height	H	71	71	71	72	75	87	95	95
Outside pipe-Ø	RA	12.0	15.0	18.0	22.0	28.0	35.0	42.0	54.0
Wall thickness pipe	a	1.0	1.5	1.5	1.5	1.5	1.5	1.5	2.0
Weight	ca. kg	0.8	1.1	1.1	1.4	2.0	2.8	4.5	6.5
Kvs-Value	m ³ /h	2.2	4.3	4.3	6.7	11.5	12.1	22.6	37.1
Cv-Value	gal/min	2.6	5.0	5.0	7.8	13.4	14.1	26.3	43.2

Dimensions in mm.

Check Valves

Type 05412 - Check Valve

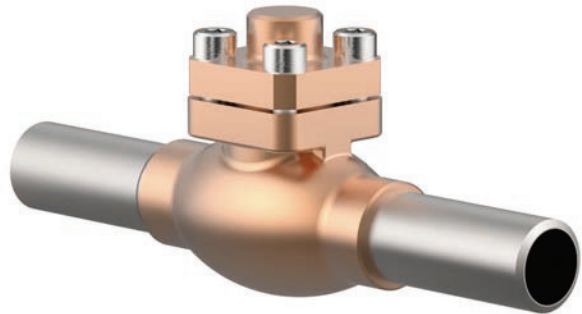


Cryogenic-Check Valves, PN50

Bronze body and cap
with spring, opening pressure ca. 0.1 bar
"cleaned and degreased for oxygen service"

Part No. 05412.X.0007

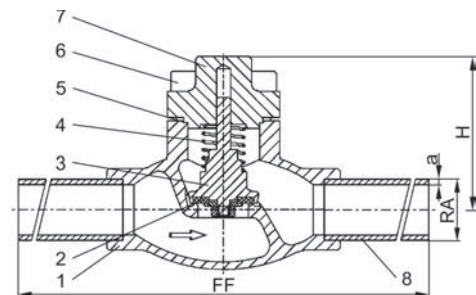
Complete with brazed stainless steel stubs acc. to DIN EN 10216-5 or ASTM A312



Applications:

Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.
Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	CC491K	B 62 UNS C83600
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW614N	B 283 UNS C38500
4 Spring	CW452K	B 159 UNS C51900
5 Bonnet gasket	PTFE	
6 Bolts	1.4301/A2	A 194 B8
7 Cap	CC493K	B 505 UNS C93200
8 Stainless steel stubs	1.4306	A 312 TP304L



Standard marking acc. to Pressure Equipment Directive 97/23/EC (PED).



Type 05412 - Standard design	Technical data								
Nominal size	DN	10	10	15	20	25	32	40	50
Dimension code	.X.	1012	1017	1521	2027	2533	3242	4048	5060
Face-to-face dimension	FF	210	210	235	235	265	265	290	310
Height	H	71	71	71	72	75	87	95	95
Outside pipe-Ø ISO 1127	RA	12.0	17.2	21.3	26.9	33.7	42.4	48.3	60.3
Wall thickness pipe ISO 1127	a	1.0	2.3	2.6	2.9	3.2	3.2	3.6	3.6
Outside pipe-Ø ASTM A312	RA	-	17.15	21.34	26.67	33.40	42.16	48.26	60.33
Wall thickness pipe ASTM A312	a	dimensions acc. to S10 or S40							
Weight	ca. kg	0.8	0.8	1.1	1.4	2.0	2.8	4.5	6.5
Kvs-Value	m ³ /h	2.2	2.2	4.3	6.7	11.5	12.1	22.6	37.1
Cv-Value	gal/min	2.6	2.6	5.0	7.8	13.4	14.1	26.3	43.2

Dimensions in mm.

Check Valves

Type 05413 - Check Valve



Cryogenic-Check Valves, PN50

Bronze body and cap
with spring, opening pressure ca. 0.1 bar
"cleaned and degreased for oxygen service"

Part No. 05413.X.0001

Female thread connection (G) acc. to ISO 228/1

Part No. 05413.X.0006

Female thread connection NPT acc. to ANSI B 1.20.1

Available options - on request only:

· Female thread connection (R) acc. to ISO 7-Rc

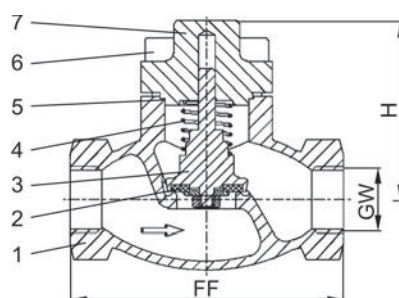


Applications:

Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	CC491K	B 62 UNS C83600
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW614N	B 283 UNS C38500
4 Spring	CW452K	B 159 UNS C51900
5 Bonnet gasket	PTFE	
6 Bolts	1.4301/A2 A 194 B8	
7 Cap	CC493K	B 505 UNS C93200



Standard marking acc. to Pressure Equipment Directive 97/23/EC (PED).



Type 05413 - Standard design	Technical data								
Nominal size	DN	10	10	15	20	25	32	40	50
Thread size	GW	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Dimension code	.X.	0200	0300	0400	0600	1000	1200	1400	2000
Face-to-face dimension	FF	60	60	85	85	115	115	140	160
Height	H	71	71	71	72	75	87	95	95
Weight	ca. kg	0.7	0.7	1.0	1.3	1.6	2.4	3.9	5.7
Kvs-Value	m ³ /h	1.6	2.2	4.3	6.7	11.5	20.6	22.6	37.1
Cv-Value	gal/min	1.9	2.6	5.0	7.8	13.4	23.9	26.3	43.2

Dimensions in mm.

Check Valves

Type 05411 - Check Valve



Cryogenic-Check Valves, PN50

Bronze body and cap
with spring, opening pressure ca. 0.1 bar
"cleaned and degreased for oxygen service"

Part No. 05411.X.0001

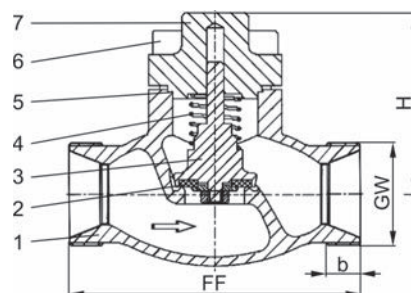
Male thread for union connection



Applications:

Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.
Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	CC491K	B 62 UNS C83600
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW614N	B 283 UNS C38500
4 Spring	CW452K	B 159 UNS C51900
5 Bonnet gasket	PTFE	
6 Bolts	1.4301/A2 A 194 B8	
7 Cap	CC493K	B 505 UNS C93200



Standard marking acc. to Pressure Equipment Directive 97/23/EC (PED).



Type 05411 - Standard design	Technical data					
Nominal size	DN	10	20	32	40	50
Dimension code	.X.	0100	0200	0320	0400	0500
Face-to-face dimension	FF	60	85	115	140	160
Height	H	71	72	87	95	95
Union thread	GW	M26x1.5	M40x2.0	M55x2.0	M65x2.0	M78x2.0
Thread length	b	7	11	14	17	20
Weight	ca. kg	0.7	1.3	2.4	3.9	5.7
Kvs-Value	m ³ /h	2.2	6.7	12.1	22.6	37.1
Cv-Value	gal/min	2.6	7.8	14.1	26.3	43.2

Dimensions in mm.

Check Valves

Type 05411 - Check Valve

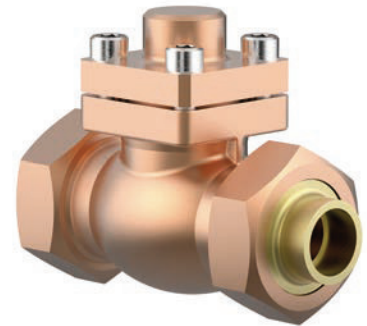


Cryogenic-Check Valves, PN50

Bronze body and cap
with spring, opening pressure ca. 0.1 bar
"cleaned and degreased for oxygen service"

Part No. 05411.X.0008

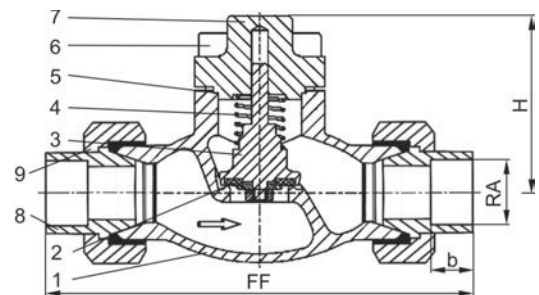
Completed with union type braze fittings for copper pipes acc. to DIN EN 12449 or ASTM B88



Applications:

Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.
Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	CC491K	B 62 UNS C83600
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW614N	B 283 UNS C38500
4 Spring	CW452K	B 159 UNS C51900
5 Bonnet gasket	PTFE	
6 Bolts	1.4301/A2 A 194 B8	
7 Cap	CC493K	B 505 UNS C93200
8 Braze fitting	CC493K	B 505 UNS C93200
9 Union nut	CC493K	B 505 UNS C93200



Standard marking acc. to Pressure Equipment Directive 97/23/EC (PED).



Type 05411 - Standard design	Technical data								
Nominal size	DN	10	10	20	20	32	32	40	50
Dimension code	.X.	1012	1015	1518	2022	2528	3235	4042	5054
Face-to-face dimension	FF	98	98	132	132	171	171	230	230
Height	H	71	71	72	72	87	87	95	95
Outside pipe-Ø	RA	12.0	15.0	18.0	22.0	28.0	35.0	42.0	54.0
Socket depth	b	11	11	14	14	17	17	17	17
Weight	ca. kg	0.9	0.9	2.0	2.0	3.6	3.6	6.0	8.5
Kvs-Value	m ³ /h	1.6	2.2	6.0	6.7	11.5	12.1	22.6	37.1
Cv-Value	gal/min	1.9	2.6	7.1	7.8	13.4	14.1	26.3	43.2

Dimensions in mm.

Check Valves

Type 05411 - Check Valve

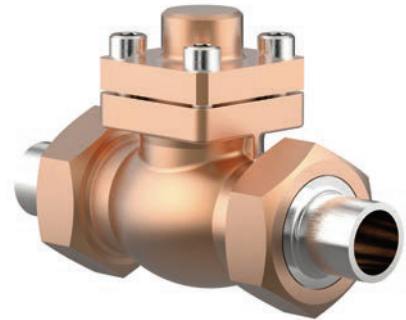


Cryogenic-Check Valves, PN50

Bronze body and cap
with spring, opening pressure ca. 0.1 bar
"cleaned and degreased for oxygen service"

Part No. 05411.X.0007

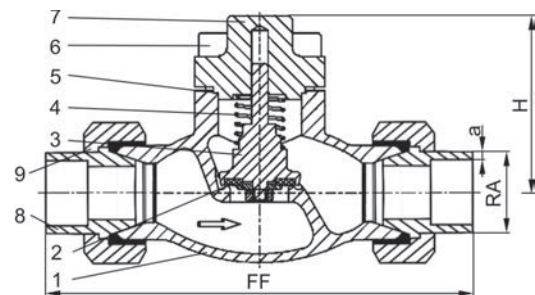
Completed with union type butt weld fittings for stainless steel pipes
acc. to ISO 1127 or ASTM A312



Applications:

Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.
Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	CC491K	B 62 UNS C83600
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW614N	B 283 UNS C38500
4 Spring	CW452K	B 159 UNS C51900
5 Bonnet gasket	PTFE	
6 Bolts	1.4301/A2 A 194 B8	
7 Cap	CC493K	B 505 UNS C93200
8 Weld fitting	1.4301	A 276 Grade 304
9 Union nut	CC493K	B 505 UNS C93200



Standard marking acc. to Pressure Equipment Directive 97/23/EC (PED).



Type 05411 - Standard design	Technical data								
Nominal size	DN	10	10	20	20	32	32	40	50
Dimension code	.X.	1012	1017	1521	2027	2533	3242	4048	5060
Face-to-face dimension	FF	137	141	168	168	203	203	230	263
Height	H	71	71	72	72	87	87	95	95
Outside pipe-Ø ISO 1127	RA	12.0	17.2	21.3	26.9	33.7	42.4	48.3	60.3
Wall thickness pipe ISO 1127	a	1.0	2.3	2.6	2.0	3.2	2.0	3.6	3.6
Outside pipe-Ø ASTM A312	RA	-	17.15	21.34	26.67	33.40	42.16	48.26	60.33
Wall thickness pipe ASTM A312	a	dimensions acc. to S10 or S40							
Weight	ca. kg	0.9	0.9	2.0	2.0	3.6	3.6	6.0	8.5
Kvs-Value	m ³ /h	1.6	2.2	6.7	6.7	12.1	12.1	22.6	37.1
Cv-Value	gal/min	1.9	2.6	7.8	7.8	14.1	14.1	26.3	43.2

Dimensions in mm.

Check Valves

Type 05416 - Check Valve



Cryogenic-Check Valves, PN50 (DN100/150=PN40)

Stainless steel body and bronze cap
with spring, opening pressure ca. 0.1 bar
"cleaned and degreased for oxygen service"

Part No. 05416.X.000*

* Butt weld connection for stainless steel pipes acc. to ISO 1127 or ASTM A312

Part No. 05416.X.0004

Socket weld connection for stainless steel pipes acc. to ISO 1127 or ASTM A312

Available options - on request only:

· Welded stainless steel stubs acc. to ISO 1127 or ASTM A312 - length FF + 200mm

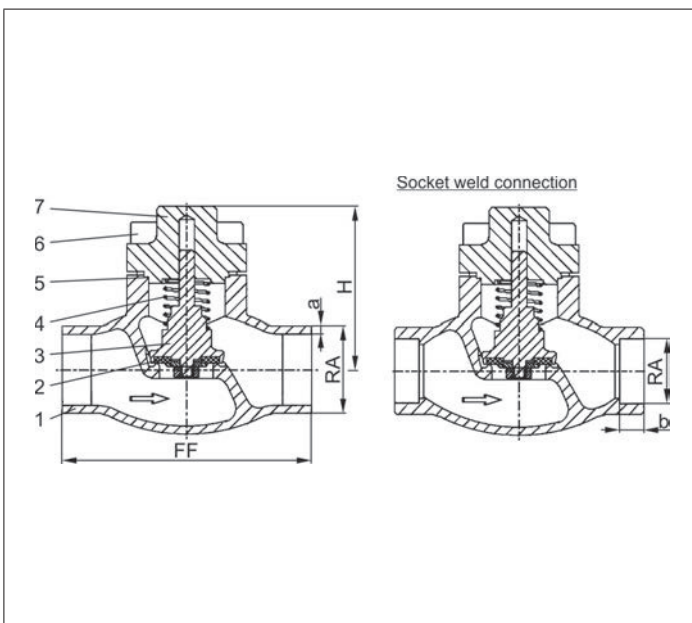


Applications:

Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	1.4308	A 351 CF8
2 Valve seal up to DN50	PTFE / Carbon filled (25%)	
2a Valve seal from DN65	PTFE	
3 Disc	CW614N	B 283 UNS C38500
4 Spring	CW452K	B 159 UNS C51900
5 Bonnet gasket	PTFE	
6 Bolts	1.4301/A2	A 194 B8
7 Cap	CC493K	B 505 UNS C93200



Standard marking acc. to Pressure Equipment Directive 97/23/EC (PED).



Type 05416 - Standard	Technical data													
Nominal size	DN	10	15	15	20	25	32	40	40	50	65	80	100	150
Dimension code	.X.	1012	1517	1521	2026	2533	3238	4042	4048	5060	657x	8088	0114	0168
Face-to-face dimension	FF	70	85	85	100	115	115	130	130	155	205	245	280	400
Height	H	71	71	71	72	75	87	95	95	95	125	150	185	215
Outside pipe-Ø ISO 1127	RA	12.0	17.2	21.3	26.9	33.7	38.0	42.4	48.3	60.3	76.1	88.9	114.3	168.3
Wall thickness pipe ISO 1127	a	1.0	1.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.6	3.2	6.0	7.1
Outside pipe-Ø ASTM A312	RA	13.72	17.15	21.34	26.67	33.40	-	42.16	48.26	60.33	73.03	88.90	114.3	168.3
Wall thickness pipe ASTM A312	a	dimensions acc. to S10 or S40												
Socket depth	b	6	10	10	13	13	-	13	13	16	16	16	20	20
Weight	ca. kg	0.7	0.95	1.0	1.3	1.6	2.4	3.9	3.9	5.7	9.6	14.6	20.0	51.0
Kvs-Value	m ³ /h	1.6	3.8	4.3	6.7	11.5	14.0	20.6	22.6	37.1	71.1	104.0	170.0	350.0
Cv-Value	gal/min	1.9	4.4	5.0	7.8	13.4	16.2	23.9	26.3	43.2	82.7	120.9	195.2	401.8

Dimensions in mm. Compliance of tightness requirements acc. to EN 1626 for DN150 up to 20 bar differential pressure.

Check Valves

Type 05415 - Check Valve



Cryogenic-Check Valves, PN50

Stainless steel body and bronze cap
with spring, opening pressure ca. 0.1 bar
"cleaned and degreased for oxygen service"

Part No. 05415.X.0001

Female thread connection (G) acc. to ISO 228/1

Part No. 05415.X.0006

Female thread connection NPT acc. to ANSI B 1.20.1

Available options - on request only:

- Female thread connection (R) acc. to ISO 7-Rc

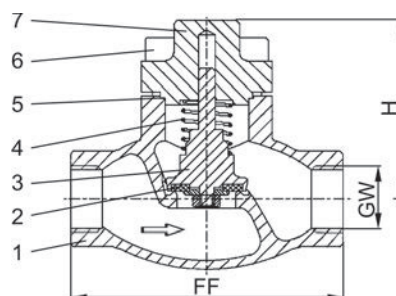


Applications:

Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	1.4308	A 351 CF8
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW614N	B 283 UNS C38500
4 Spring	CW452K	B 159 UNS C51900
5 Bonnet gasket	PTFE	
6 Bolts	1.4301/A2 A 194 B8	
7 Cap	CC493K	B 505 UNS C93200



Standard marking acc. to Pressure Equipment Directive 97/23/EC (PED).



Type 05415 - Standard design	Technical data								
Nominal size	DN	10	10	15	20	25	32	40	50
Thread size	GW	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Dimension code	.X.	0200	0300	0400	0600	1000	1200	1400	2000
Face-to-face dimension	FF	70	70	85	100	115	130	130	155
Height	H	71	71	71	72	75	95	95	95
Weight	ca. kg	0.7	0.7	1.0	1.3	1.6	3.9	3.9	5.7
Kvs-Value	m ³ /h	1.6	2.2	4.3	6.7	11.5	20.6	22.6	37.1
Cv-Value	gal/min	1.9	2.6	5.0	7.8	13.4	23.9	26.3	43.2

Dimensions in mm.

Check Valves

Type 05418 - Check Valve, DIN EN Flanges



Cryogenic-Check Valves, PN40

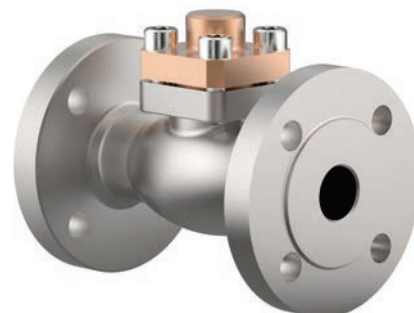
Stainless steel body and bronze cap
with spring, opening pressure ca. 0.1 bar
"cleaned and degreased for oxygen service"

Part No. 05418.X.0002

Flanged connection acc. to DIN EN 1092-1 PN40

Available options - on request only:

· Nominal sizes DN15, DN20 and DN150 with welding-neck flange

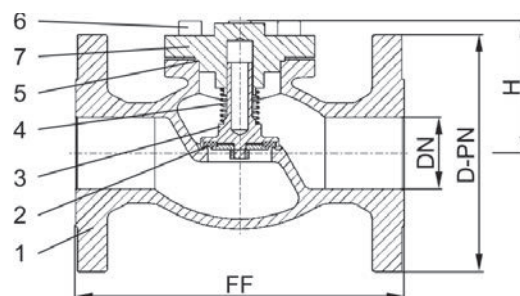


Applications:

Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	1.4308	A 351 CF8
2 Valve seal up to DN50	PTFE / Carbon filled (25%)	
2a Valve seal from DN65	PTFE	
3 Disc	CW614N	B 283 UNS C38500
4 Spring	CW452K	B 159 UNS C51900
5 Bonnet gasket	PTFE	
6 Bolts	1.4301/A2	A 194 B8
7 Cap	CC493K	B 505 UNS C93200



Standard marking acc. to Pressure Equipment Directive 97/23/EC (PED).



Type 05418 - Standard design	Technical data						
Nominal size	DN	25	40	50	65	80	100
Dimension code - Flange EN 1092-1 PN40	.X.	0250	0400	0500	0650	0800	1000
Flange-Ø	D-PN	115	150	165	185	200	235
Face-to-face dimension	FF	160	200	230	290	310	350
Height	H	75	95	90	125	150	165
Weight	ca. kg	4.4	6.4	11.6	19.2	25.2	39.8
Kvs-Value	m ³ /h	11.5	22.6	37.1	71.1	104.0	170.0
Cv-Value	gal/min	13.4	26.3	43.2	82.7	120.9	195.2

Dimensions in mm.

Check Valves

Type 05418 - Check Valve, ANSI Flanges



Cryogenic-Check Valves, class 300

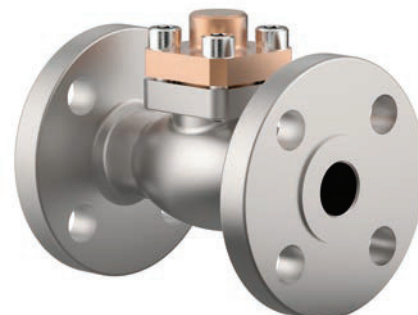
Stainless steel body and bronze cap
with spring, opening pressure ca. 0.1 bar
"cleaned and degreased for oxygen service"

Part No. 05418.X.0003

Flanged connection acc. to ANSI B16.5 class 300

Available options - on request only:

- Nominal sizes DN15, DN20 and DN150 with welding-neck flange

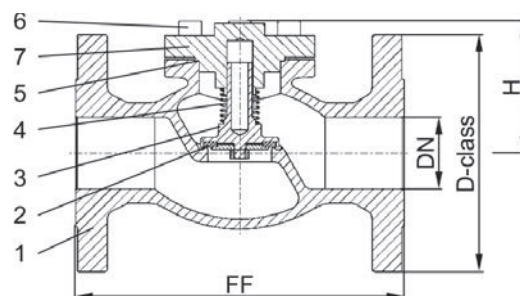


Applications:

Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	1.4308	A 351 CF8
2 Valve seal up to DN50	PTFE / Carbon filled (25%)	
2a Valve seal from DN65	PTFE	
3 Disc	CW614N	B 283 UNS C38500
4 Spring	CW452K	B 159 UNS C51900
5 Bonnet gasket	PTFE	
6 Bolts	1.4301/A2	A 194 B8
7 Cap	CC493K	B 505 UNS C93200



Standard marking acc. to Pressure Equipment Directive 97/23/EC (PED).



Type 05418 - Standard design	Technical data						
Nominal size	DN	25	40	50	65	80	100
Dimension code - Flange ANSI B16.5 class 300	.X.	1000	1400	2000	2400	3000	4000
Flange-Ø	D-class	123.9	155.4	165	190.5	209.5	254
Face-to-face dimension	FF	160	200	230	290	310	350
Height	H	75	95	90	125	150	165
Weight	ca. kg	4.4	6.4	11.6	19.2	25.2	39.8
Kvs-Value	m ³ /h	11.5	22.6	37.1	71.1	104.0	170.0
Cv-Value	gal/min	13.4	26.3	43.2	82.7	120.9	195.2

Dimensions in mm.

Check Valves

Type 05414 - Check Valve



Cryogenic-Check Valves, PN50 (DN100/150=PN40)

Stainless steel body and cap
with spring, opening pressure ca. 0.1 bar
"cleaned and degreased for oxygen service"

Part No. 05414.X.000*

* Butt weld connection for stainless steel pipes acc. to ISO 1127 or ASTM A312

Part No. 05414.X.0004

Socket weld connection for stainless steel pipes acc. to ISO 1127 or ASTM A312

Available options - on request only:

· Welded stainless steel stubs acc. to ISO 1127 or ASTM A312 - length FF + 200mm

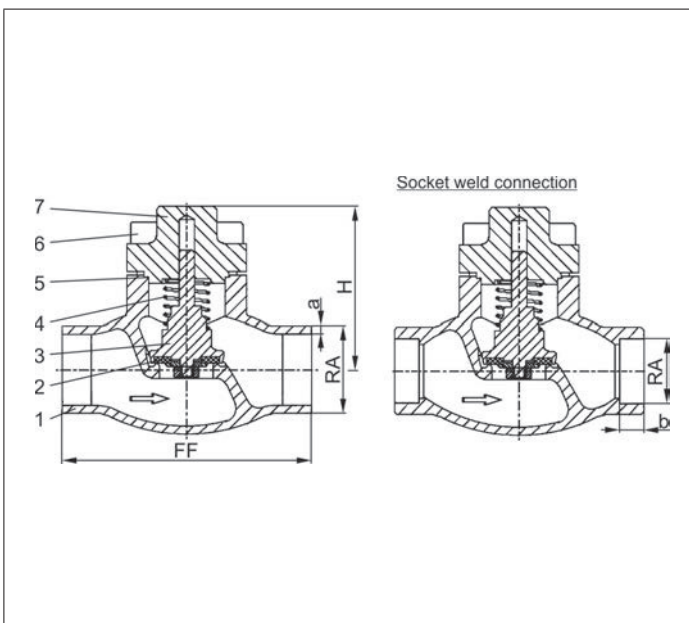


Applications:

Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	1.4308	A 351 CF8
2 Valve seal up to DN50	PTFE / Carbon filled (25%)	
2a Valve seal from DN65	PTFE	
3 Disc	1.4301	A 276 Grade 304
4 Spring	1.4571	A 313 Grade 316Ti
5 Bonnet gasket	PTFE	
6 Bolts	1.4301/A2	A 194 B8
7 Cap	1.4301	A 276 Grade 304



Standard marking acc. to Pressure Equipment Directive 97/23/EC (PED).



Type 05414 - Standard	Technical data													
Nominal size	DN	10	15	15	20	25	32	40	40	50	65	80	100	150
Dimension code	.X.	1012	1517	1521	2026	2533	3238	4042	4048	5060	657x	8088	0114	0168
Face-to-face dimension	FF	70	85	85	100	115	115	130	130	155	205	245	280	400
Height	H	71	71	71	72	75	87	95	95	95	125	150	185	215
Outside pipe-Ø ISO 1127	RA	12.0	17.2	21.3	26.9	33.7	38.0	42.4	48.3	60.3	76.1	88.9	114.3	168.3
Wall thickness pipe ISO 1127	a	1.0	1.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.6	3.2	6.0	7.1
Outside pipe-Ø ASTM A312	RA	13.72	17.15	21.34	26.67	33.40	-	42.16	48.26	60.33	73.03	88.90	114.3	168.3
Wall thickness pipe ASTM A312	a	dimensions acc. to S10 or S40												
Socket depth	b	6	10	10	13	13	-	13	13	16	16	16	20	20
Weight	ca. kg	0.7	0.95	1.0	1.3	1.6	2.4	3.9	3.9	5.7	9.6	14.6	20.0	51.0
Kvs-Value	m ³ /h	1.6	3.8	4.3	6.7	11.5	14.0	20.6	22.6	37.1	71.1	104.0	170.0	350.0
Cv-Value	gal/min	1.9	4.4	5.0	7.8	13.4	16.2	23.9	26.3	43.2	82.7	120.9	195.2	401.8

Dimensions in mm. Compliance of tightness requirements acc. to EN 1626 for DN150 up to 20 bar differential pressure.

Check Valves

Type 05417 - Check Valve



Cryogenic-Check Valves, PN50

Stainless steel body and cap
with spring, opening pressure ca. 0.1 bar
"cleaned and degreased for oxygen service"

Part No. 05417.X.0001

Female thread connection (G) acc. to ISO 228/1

Part No. 05417.X.0006

Female thread connection NPT acc. to ANSI B 1.20.1

Available options - on request only:

- Female thread connection (R) acc. to ISO 7-Rc

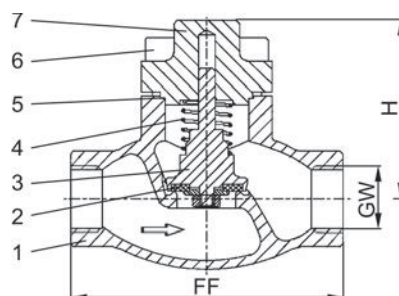


Applications:

Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	1.4308	A 351 CF8
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	1.4301	A 276 Grade 304
4 Spring	1.4571	A 313 Grade 316Ti
5 Bonnet gasket	PTFE	
6 Bolts	1.4301/A2	A 194 B8
7 Cap	1.4301	A 276 Grade 304



Standard marking acc. to Pressure Equipment Directive 97/23/EC (PED).



Type 05417 - Standard design	Technical data								
Nominal size	DN	10	10	15	20	25	40	40	50
Thread size	GW	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Dimension code	.X.	0200	0300	0400	0600	1000	1200	1400	2000
Face-to-face dimension	FF	70	70	85	100	115	130	130	155
Height	H	71	71	71	72	75	95	95	95
Weight	ca. kg	0.7	0.7	1.0	1.3	1.6	3.9	3.9	5.7
Kvs-Value	m ³ /h	1.6	2.2	4.3	6.7	11.5	20.6	22.6	37.1
Cv-Value	gal/min	1.9	2.6	5.0	7.8	13.4	23.9	26.3	43.2

Dimensions in mm.

Check Valves

Type 05419 - Check Valve, DIN EN Flanges



Cryogenic-Check Valves, PN40

Stainless steel body and cap
with spring, opening pressure ca. 0.1 bar
"cleaned and degreased for oxygen service"

Part No. 05419.X.0002

Flanged connection acc. to DIN EN 1092-1 PN40

Available options - on request only:

· Nominal sizes DN15, DN20 and DN150 with welding-neck flange

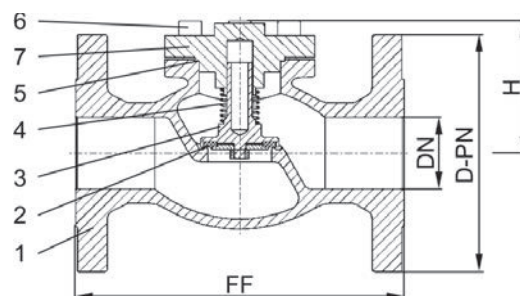


Applications:

Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	1.4308	A 351 CF8
2 Valve seal up to DN50	PTFE / Carbon filled (25%)	
2a Valve seal from DN65	PTFE	
3 Disc	1.4301	A 276 Grade 304
4 Spring	1.4571	A 313 Grade 316Ti
5 Bonnet gasket	PTFE	
6 Bolts	1.4301/A2	A 194 B8
7 Cap	1.4301	A 276 Grade 304



Standard marking acc. to Pressure Equipment Directive 97/23/EC (PED).



Type 05419 - Standard design	Technical data						
Nominal size	DN	25	40	50	65	80	100
Dimension code - Flange EN 1092-1 PN40	.X.	0250	0400	0500	0650	0800	1000
Flange-Ø	D-PN	115	150	165	185	200	235
Face-to-face dimension	FF	160	200	230	290	310	350
Height	H	75	95	90	125	150	165
Weight	ca. kg	4.4	6.4	11.6	19.2	25.2	39.8
Kvs-Value	m ³ /h	11.5	22.6	37.1	71.1	104.0	170.0
Cv-Value	gal/min	13.4	26.3	43.2	82.7	120.9	195.2

Dimensions in mm.

Check Valves

Type 05419 - Check Valve, ANSI Flanges



Cryogenic-Check Valves, class 300

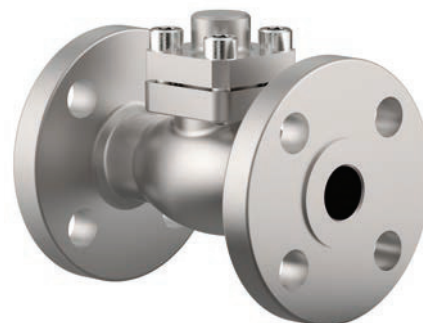
Stainless steel body and cap
with spring, opening pressure ca. 0.1 bar
"cleaned and degreased for oxygen service"

Part No. 05419.X.0003

Flanged connection acc. to ANSI B16.5 class 300

Available options - on request only:

- Nominal sizes DN15, DN20 and DN150 with welding-neck flange

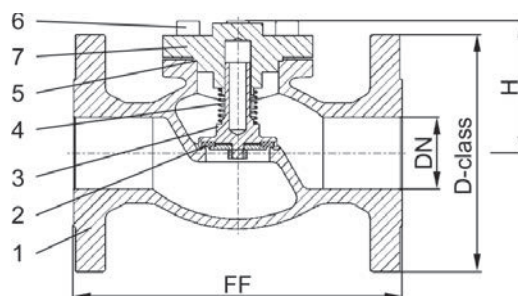


Applications:

Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

Materials	DIN EN	ASTM
1 Body	1.4308	A 351 CF8
2 Valve seal up to DN50	PTFE / Carbon filled (25%)	
2a Valve seal from DN65	PTFE	
3 Disc	1.4301	A 276 Grade 304
4 Spring	1.4571	A 313 Grade 316Ti
5 Bonnet gasket	PTFE	
6 Bolts	1.4301/A2	A 194 B8
7 Cap	1.4301	A 276 Grade 304



Standard marking acc. to Pressure Equipment Directive 97/23/EC (PED).



Type 05419 - Standard design	Technical data						
Nominal size	DN	25	40	50	65	80	100
Dimension code - Flange ANSI B16.5 class 300	.X.	1000	1400	2000	2400	3000	4000
Flange-Ø	D-class	123.9	155.4	165	190.5	209.5	254
Face-to-face dimension	FF	160	200	230	290	310	350
Height	H	75	95	90	125	150	165
Weight	ca. kg	4.4	6.4	11.6	19.2	25.2	39.8
Kvs-Value	m ³ /h	11.5	22.6	37.1	71.1	104.0	170.0
Cv-Value	gal/min	13.4	26.3	43.2	82.7	120.9	195.2

Dimensions in mm.

Spare Parts Check Valves

Type 28205 and 28206 - Check Disc complete



for Cryogenic-Check Valves

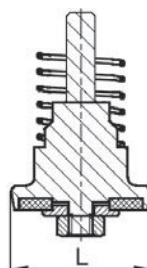
brass check disc CW614N

"cleaned and degreased for oxygen service"

Part No. 28205.X.0000

suitable for:

Type	Nominal size
05411, 05412, 05413, 05415	DN10 - DN50
05416	DN10 - DN150
05418	DN25 - DN100



Type 28205.X.0000	Technical data											
Nominal size	DN	10	15	20	25	32	40	50	65	80	100	150
Dimension code	.X.	0100	0150	0200	0250	0320	0400	0500	0650	0800	1000	1500
Disc Ø	L	23	25	30	34.5	42	47	55	73	86	104	155
Weight	ca. kg	0.05	0.07	0.09	0.10	0.15	0.20	0.34	0.48	0.66	1.05	3.28

Dimensions in mm.

for Cryogenic-Check Valves

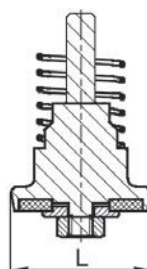
stainless steel check disc 1.4301

"cleaned and degreased for oxygen service"

Part No. 28206.X.0000

suitable for:

Type	Nominal size
05414	DN10 - DN150
05417	DN10 - DN50
05419	DN25 - DN100



Type 28206.X.0000	Technical data											
Nominal size	DN	10	15	20	25	32	40	50	65	80	100	150
Dimension code	.X.	0100	0150	0200	0250	0320	0400	0500	0650	0800	1000	1500
Disc Ø	L	23	25	30	34.5	42	47	55	73	86	104	155
Weight	ca. kg	0.05	0.07	0.09	0.10	0.15	0.20	0.34	0.48	0.66	1.05	3.28

Dimensions in mm.

Spare Parts Check Valves

Type 30514 - Sealing spare part kit



for Cryogenic-Globe Valves

"cleaned and degreased for oxygen service"

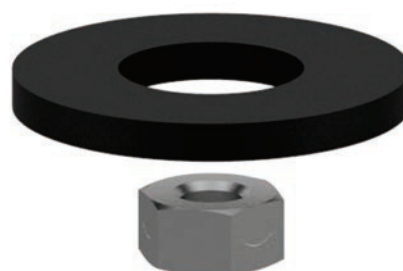
Part No. 30514.X.0000

consisting of:

- 2x Bonnet gasket PTFE
- 1x Disc seal PTFE/Carbon filled (25%)
- 1x Disc nut 1.4301

passend zu:

Type	Nominal size
05412, 05411, 05413	DN10 - DN50
05416, 05414	DN10 - DN150
05415, 05417	DN10 - DN50
05418, 05419	DN10 - DN100



Bonnet gasket
(PTFE)



Disc seal
(PTFE-25% carbon)



Disc nut - self locking

Type 30514	Technical data											
Nominal size	DN	10	15	20	25	32	40	50	65	80	100	150
Dimension code	.X.	0100	0150	0200	0250	0320	0400	0500	0650	0800	1000	1500
Weight	ca. kg	0.02	0.02	0.03	0.04	0.06	0.07	0.11	0.16	0.22	0.30	0.34

Dimensions in mm.

Edition 2015-04

Spare Parts Check Valves

Type 31514 - KEL-F (PCTFE) Disc Sealing spare part kit



for Cryogenic Globe Valves and Check Valves

"cleaned and degreased for oxygen service"

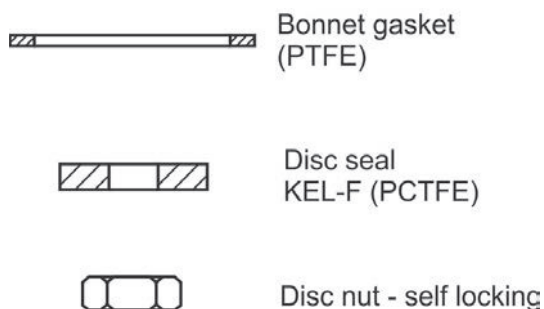
Part No. 31514.X.PCTFE

consisting of:

- 2x Bonnet gasket PTFE
- 1x Disc seal KEL-F (PCTFE)
- 1x Disc nut 1.4301

suitable for disc's for the following types:

Type	Nominal size
05412, 05411, 05413	DN10 - DN50
05416, 05414	DN10 - DN100
05415, 05417	DN10 - DN50
05418, 05419	DN10 - DN100



Type 31514	Technical data										
Nominal size	DN	10	15	20	25	32	40	50	65	80	100
Dimension code	.X.	0100	0150	0200	0250	0320	0400	0500	0650	0800	1000
Weight	ca. kg	0.02	0.02	0.03	0.04	0.06	0.07	0.11	0.16	0.22	0.30

Dimensions in mm.