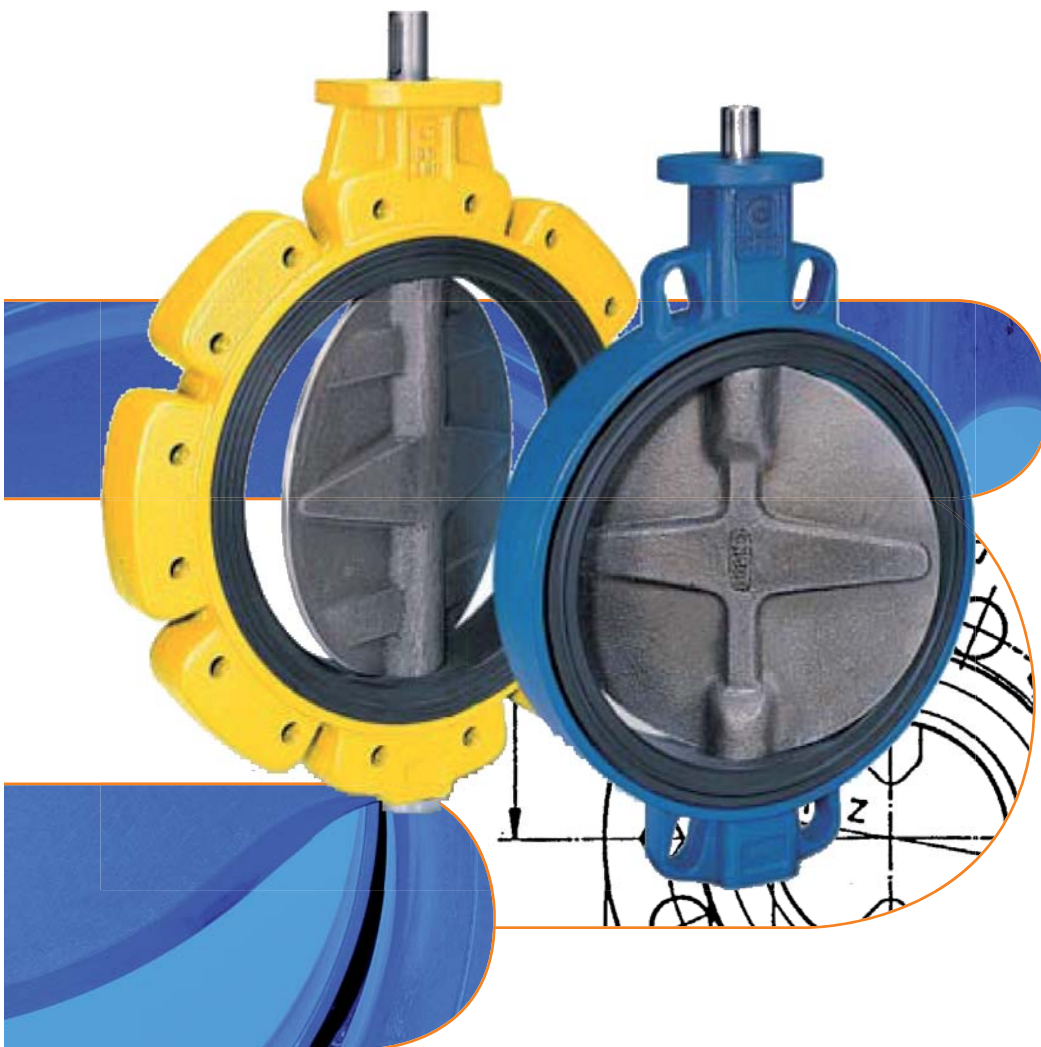


Valves

# Butterfly Valves



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**BVPD - Wafer BLPD - Lug**  
DN 50 - 500 • 2" - 20"

**BVKI - Wafer BLKI - Lug**  
DN 40 - 800 • 1 1/2" - 32"

**BFKI - double flange**  
DN 80 - 600 • 3" - 24"

**Max working pressure:**

BVPD/BLPD DN 50÷500: **6 Bar**  
Flange: **PN 6-10-16 • A150**  
BVKI/BLKI DN 40÷500: **16 Bar**  
Flange: **PN 10-16 • A150**  
BVKI/BLKI DN 600÷800: **10 Bar**  
Flange: **PN 6-10-16 • A150**  
BFKI DN 80÷600: **16 Bar**  
Flange: **PN 6-10-16 • A150**

**KI series to be used also with vacuum**

**Design:**

EN 593 ~ EN 736 ~ EN 12516 ~ EN 1092  
ISO 5211 ~ DIN 3337 ~ API 609  
PED 97/23/EC(cat III) Mod H

**Face to face:**

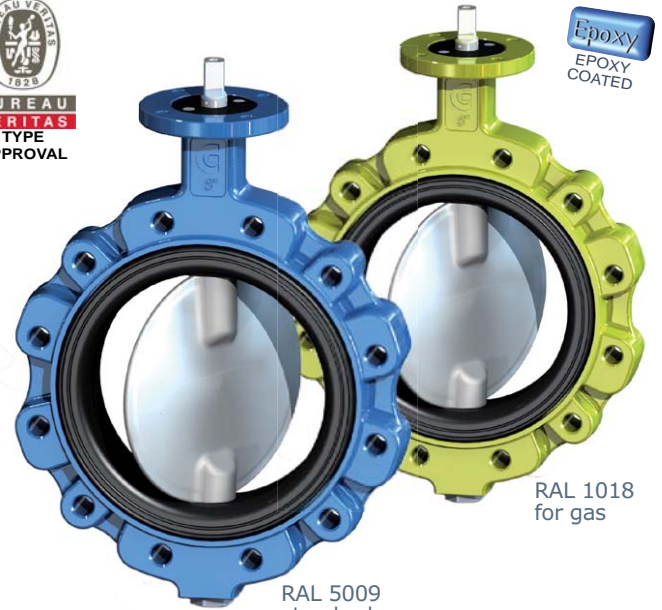
DIN EN 558-1 Series 20 ~ ISO 5752 Series 20  
BS-5155 Series 4 ~ MSS-SP67  
API609 cat.A ~ NFE 29305-1

**Testing:**

EN 12266-1 Rate A ~ ISO 5208 Rate A  
DIN 3230 ~ API 598

**Tag:**

EN 19 ~ MSS SP-25



All valves are supplied with a metallic label in compliance with PED directive.

BODY			BVPD	BVKI / BLKI	BFKI
material	references	standard coating	DN	DN	DN
Ductile iron	EN-GJS 400-15 (GS400)	Epoxy RAL 5009	50-500	40-800	80-600
Carbon steel	ASTM A216-WCB	Epoxy RAL 9005	50-500	40-800	-
Stainless steel	ASTM A351 CF8M (A316)	-	50-500	40-800	-
Aluminium-bronze	ASTM B148-C958.00	-	50-500	40-800	-
Aluminium (P <sub>max</sub> 10Bar)	EN AB 46400	Epoxy RAL 7024	50-500	40-500	-

DISC			BVPD	BVKI / BLKI	BFKI
material	references	standard coating	DN	DN	DN
Steel	ASTM A105	Zinc	50-100	50-100	80-100
Ductile iron	EN-GJS 400-15 (GS400)	Zinc	125-500	125-800	125-600
Stainless steel	ASTM A351 CF8M (A316)	-	50-500	40-800	80-600
Aluminium-bronze	ASTM B148-C958.00	-	50-500	40-800	80-600
Hastelloy®	ASTM A494 CX2MW	-	50-500	40-800	80-600
Monel®	ASTM A494 M35-1	-	50-500	40-800	80-600

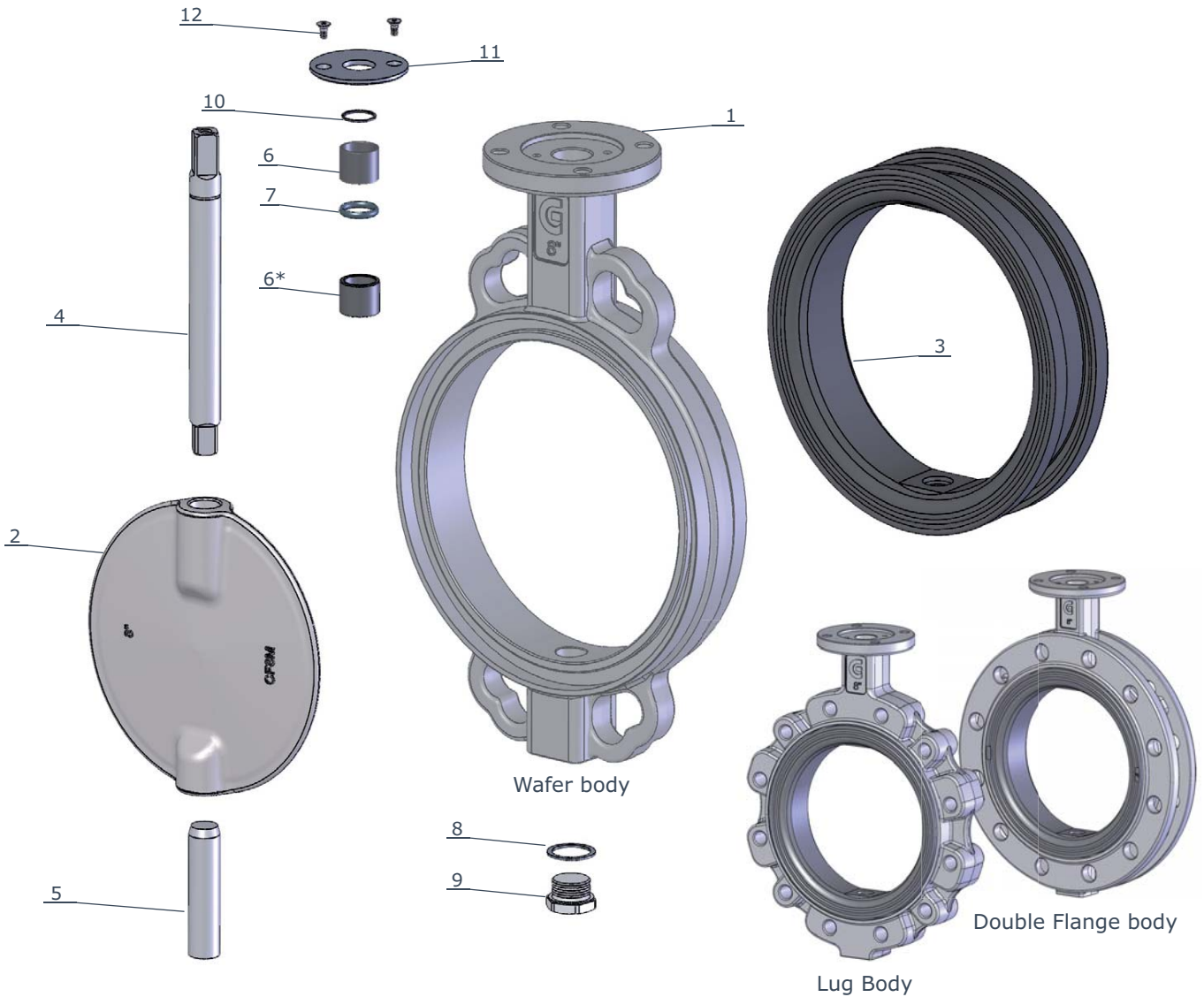
BODY RUBBER SEAT		DN 40/500 replaceable - DN 600/800 vulcanized not replaceable		
ref.	designation	trade name	working temp.	applications
NBR	nitrile rubber	BUNA®	-25°C / +100°C	oils, hydrocarbons, gas, air, water
EPDM	copolymer EPDM	-	-35°C / +130°C	water, sea water, steam, diluted acids
EPDM HT	copolimery EPDM HT	-	-30°C / +135°C	water, sea water, steam, diluted acids
CO	carboxide	-	-25°C / +100°C	dust, air
FKM	fluoroelastomer	VITON®	-20°C / +200°C	oils, acids, hydrocarbons
CR	polychloroprene	NEOPRENE®	-20°C / +100°C	alkali, bases, water
NR	natural rubber	-	-40°C / + 80°C	glycols, abrasive media
MVQ	silicon rubber	SILOPREN®	-60°C / +190°C	water, food, drinks
CSM	chlorosulfonated polyethylene	HYPALON®	-20°C / +125°C	acids, mineral bases, alcohols, hydrocarbons

On request can be supplied other materials as: LCB, Hastelloy, Monel, Uranus, Alloy, DUPLEX, Special steels, Special bronzes.  
Coating on request: RILSAN®, Halar®, Chenisil®

**BVPD - Wafer BLPD - Lug**  
 DN 50 - 300 • 2" - 12"  
 PN 6-10-16 • ANSI 150

**BVKI - Wafer BLKI - Lug**  
 DN 40 - 300 • 1"1/1 - 12"  
 PN 10-16 • ANSI 150

**BFKI - double flange**  
 DN 80 - 300 • 3" - 12"  
 PN 6-10-16 • ANSI 150



item	q.ty	part	material	item	q.ty	part	material
1	1	body (BFKI only GS400)	<ul style="list-style-type: none"> <li>ductile iron GS400</li> <li>A216 - WCB</li> <li>A352 - LCB</li> <li>A351 - CF8M (AISI 316)</li> <li>aluminium-bronze</li> <li>aluminium (only WAFER)</li> </ul>	4	1	upper shaft	<ul style="list-style-type: none"> <li>AISI 430</li> <li>AISI 316 (on request)</li> </ul>
2	1	disc	<ul style="list-style-type: none"> <li>ductile iron GS400</li> <li>A351 - CF8M (AISI 316)</li> <li>aluminium-bronze</li> <li>Hastelloy®</li> <li>Monel®</li> </ul>	5	1	lower shaft	<ul style="list-style-type: none"> <li>AISI 430</li> <li>AISI 316 (on request)</li> </ul>
◇3	1	body seat (replaceable)	<ul style="list-style-type: none"> <li>NBR (BUNA®)</li> <li>EPDM</li> <li>EPDM HT</li> <li>FKM (VITON®)</li> <li>carboxide</li> <li>polychloroprene (NEOPRENE®)</li> <li>natural rubber</li> <li>silicon</li> </ul>	◇6	1	bush	bronze
				◇6*	1	bush	bronze
				◇7	1	shaft packing	<ul style="list-style-type: none"> <li>NBR (BUNA®)</li> <li>FKM (VITON®) on request</li> </ul>
				8	1	plug packing	aluminium
				9	1	threaded plug	zinc plated steel
				10	1	stop ring	steel
				11	1	upper flange	<ul style="list-style-type: none"> <li>IXEF (DN 40-150)</li> <li>aluminium (DN 200-300)</li> </ul>
				12	2	screw	zinc plated steel

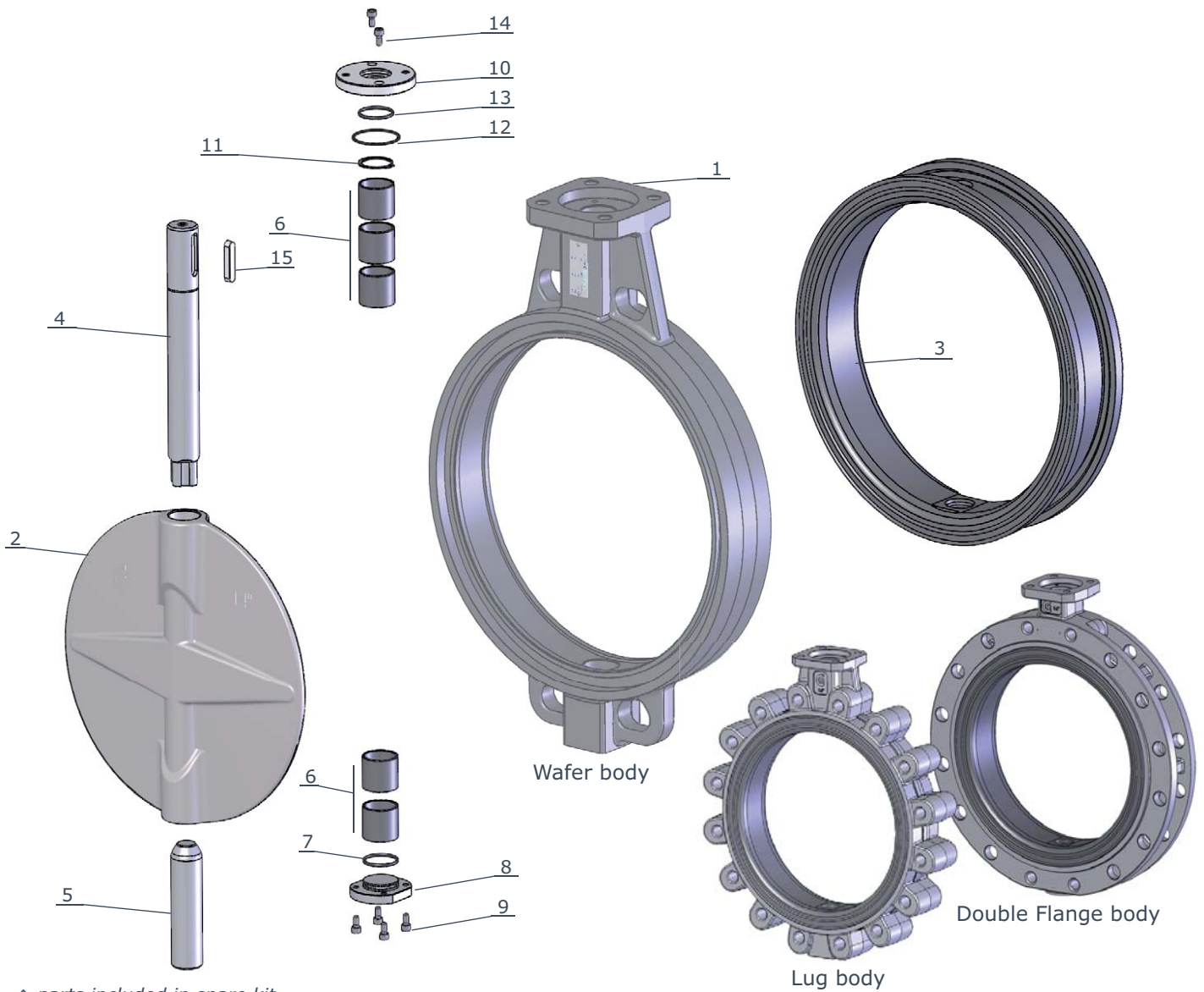
◇ parts included in spare kit

\* only for DN300

**BVPD - Wafer BLPD - Lug**  
 DN 350 - 500 • 14" - 20"  
 PN 6-10-16 • ANSI 150

**BVKI - Wafer BLKI - Lug**  
 DN 350 - 500 • 14" - 20"  
 PN 10-16 • ANSI 150

**BFKI - double flange**  
 DN 350 - 500 • 14" - 20"  
 PN 6-10-16 • ANSI 150

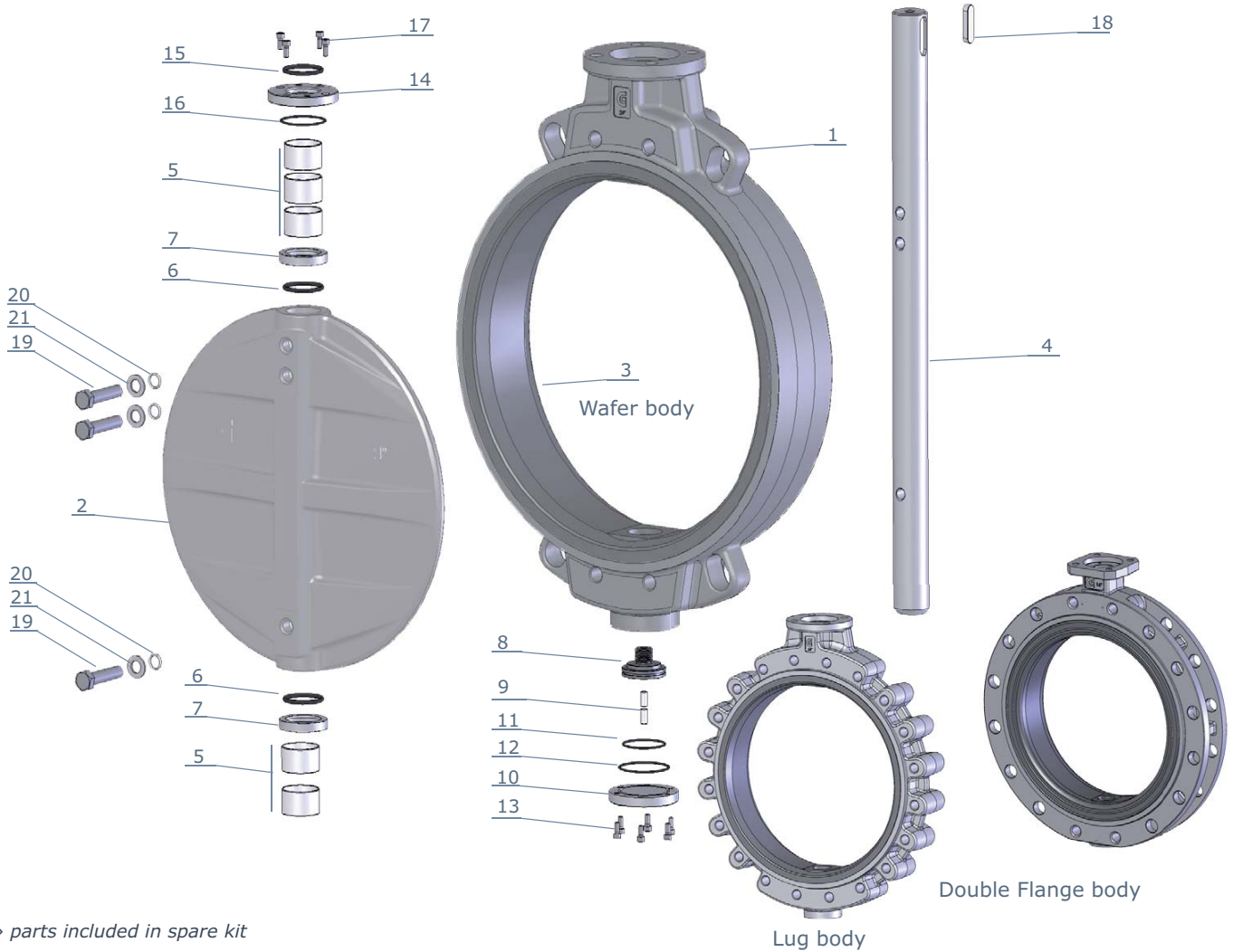


◇ parts included in spare kit

item	q.ty	part	material	item	q.ty	part	material
1	1	body (BFKI only GS400)	<ul style="list-style-type: none"> <li>ductile iron GS400</li> <li>A216-WCB</li> <li>A352-LCB</li> <li>A351-CF8M (AISI 316)</li> <li>aluminium-bronze</li> <li>aluminium (only WAFER)</li> </ul>	5	1	lower shaft	<ul style="list-style-type: none"> <li>AISI 430</li> <li>AISI 316 (on request)</li> </ul>
2	1	disc	<ul style="list-style-type: none"> <li>ductile iron GS400</li> <li>A351-CF8M (AISI 316)</li> <li>aluminium-bronze</li> <li>Hastelloy®</li> <li>Monel®</li> </ul>	◇6	5	bush	<ul style="list-style-type: none"> <li>bronze</li> <li>steel+PTFE (DN 450-500)</li> </ul>
◇3	1	body seat (replaceable)	<ul style="list-style-type: none"> <li>NBR (BUNA®)</li> <li>EPDM</li> <li>EPDM HT</li> <li>FKM (VITON®)</li> <li>carboxide</li> <li>polychloroprene (NEOPRENE®)</li> <li>natural rubber</li> <li>silicon</li> </ul>	◇7	1	packing lower flange	<ul style="list-style-type: none"> <li>NBR (BUNA®)</li> </ul>
4	1	upper shaft	<ul style="list-style-type: none"> <li>AISI 430</li> <li>AISI 316 (on request)</li> </ul>	8	1	lower flange	<ul style="list-style-type: none"> <li>zinc plated steel</li> </ul>
				9	4	screw	<ul style="list-style-type: none"> <li>zinc plated steel</li> </ul>
				10	1	upper flange	<ul style="list-style-type: none"> <li>zinc plated steel</li> </ul>
				11	1	stop ring	<ul style="list-style-type: none"> <li>steel</li> </ul>
				◇12	1	O.Ring	<ul style="list-style-type: none"> <li>NBR (BUNA®)</li> </ul>
				◇13	1	O.Ring	<ul style="list-style-type: none"> <li>NBR (BUNA®)</li> </ul>
				14	2	screw	<ul style="list-style-type: none"> <li>zinc plated steel</li> </ul>
				15	1	key	<ul style="list-style-type: none"> <li>steel C40</li> </ul>

**BVKI - Wafer BLKI - Lug**  
 DN 600 - 800 • 24" - 32"  
 PN 6-10-16 • ANSI 150

**BFKI - double flange**  
 DN 600 • 24"  
 PN 6-10-16 • ANSI 150



◇ parts included in spare kit

item	q.ty	part	material	item	q.ty	part	material
1	1	body (BFKI only GS400)	<ul style="list-style-type: none"> <li>ductile iron GS400</li> <li>A216-WCB</li> <li>A352-LCB</li> <li>A351-CF8M (AISI 316)</li> <li>aluminium-bronze</li> </ul>	7	2	O.ring housing	• AISI 316
2	1	disc	<ul style="list-style-type: none"> <li>ductile iron GS400</li> <li>A351 - CF8M (AISI 316)</li> <li>aluminium-bronze</li> <li>Hastelloy®</li> <li>Monel®</li> </ul>	8	1	shaft support	• Bronze
3	1	body seat (vulcanized not replaceable)	<ul style="list-style-type: none"> <li>NBR (BUNA®)</li> <li>EPDM</li> <li>EPDM HT</li> <li>FKM (VITON®)</li> </ul>	9	2	adjusting screw	• AISI 316
4	1	shaft	<ul style="list-style-type: none"> <li>AISI 303</li> <li>AISI 316 (on request)</li> </ul>	10	1	lower flange	• zinc plated steel
◇5	5	bush	• steel + PTFE	◇11	1	O.ring	• NBR (BUNA®)
◇6	2	shaft O.ring	<ul style="list-style-type: none"> <li>NBR (BUNA®)</li> <li>FKM (VITON®) on request</li> </ul>	◇12	1	O.ring	• NBR (BUNA®)
				13	6	screw	• zinc plated steel
				14	1	upper flange	• zinc plated steel
				◇15	1	O.ring	• NBR (BUNA®)
				◇16	1	O.ring	• NBR (BUNA®)
				17	4	screw	• zinc plated steel
				18	1	key	• steel
				19	3	screw	• AISI 316
				◇20	3	O.ring	• PTFE
				21	3	washer	• AISI 316

**BVKA - Wafer BLKA - Lug**  
DN 40 - 800 • 1"1/2 - 32"

**BVKX - Wafer**  
DN 50 - 250 • 2" - 10"

**BLKX - Lug**  
DN 50 - 200 • 2" - 8"

**Max working pressure:**

BVKA/BLKA DN 40÷800: **20 Bar**  
Flange: **PN 10-16 • A150**  
BVKX DN 50÷250: **25 Bar**  
BLKX DN 50÷200: **25 Bar**  
Flange: **PN 16-25 • A150**  
To be used also with vacuum

**Design:**

EN 593 ~ EN 736 ~ EN 12516 ~ EN 1092  
ISO 5211 ~ DIN 3337 ~ API 609  
PED 97/23/EC(cat III) Mod H

**Face to face:**

DIN EN 558-1 Series 20 ~ ISO 5752 Series 20  
BS-5155 Series 4 ~ MSS-SP67  
API609 cat.A ~ NFE 29305-1

**Testing:**

EN 12266-1 Rate A ~ ISO 5208 Rate A  
DIN 3230 ~ API 598

**Tag:**

EN 19 ~ MSS SP-25



All valves are supplied with a metallic label in compliance with PED directive.

BODY			BVKA/BLKA	BVKX	BLKX
material	references	standard coating	DN	DN	DN
Ductile iron	EN-GJS 400-15 (GS400)	Epoxy RAL 5009	40-800	50-250	50-200
Carbon steel	ASTM A216-WCB	Epoxy RAL 9005	40-800	50-100	50-100
Stainless steel	ASTM A351 CF8M (A316)	-	40-800	50-100	50-100
Aluminium-bronze	ASTM B148-C958.00	-	40-800	50-100	50-100

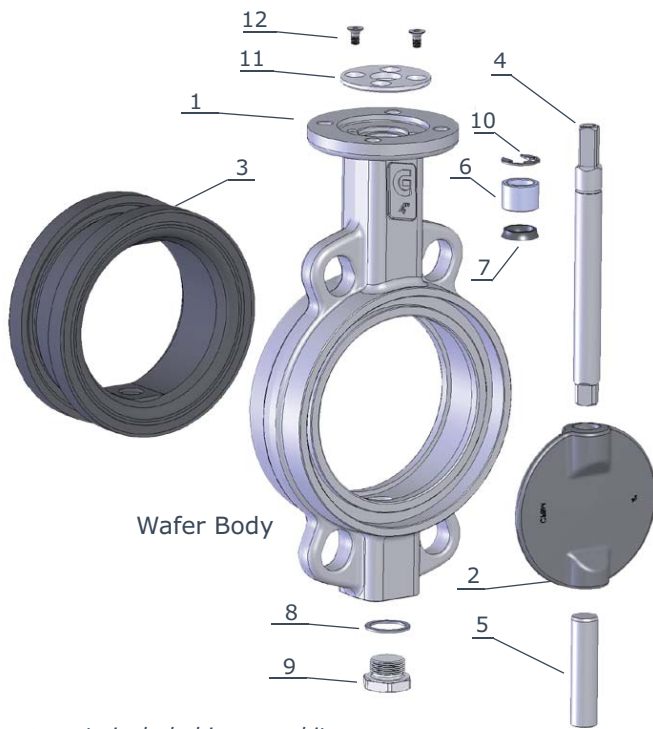
DISC			BVKA/BLKA	BVKX	BLKX
material	references	standard coating	DN	DN	DN
Stainless steel	ASTM A351 CF8M (A316)	-	40-800	50-250	50-200
Aluminium-bronze	ASTM B148-C958.00	-	40-800	50-250	50-200
Hastelloy®	ASTM A494 CX2MW	-	40-800	50-250	50-200
Monel®	ASTM A494 M35-1	-	40-800	50-250	50-200

BODY RUBBER SEAT				
		KA DN 40/150 replaceable - DN 200/800 vulcanized not replaceable		
		KX DN 50/250 vulcanized not replaceable		
ref.	designation	trade name	working temp.	applications
NBR	nitrile rubber	BUNA®	-25°C / +100°C	oils, hydrocarbons, gas, air, water
EPDM	copolymer EPDM	-	-35°C / +130°C	water, sea water, steam, diluted acids
EPDM HT	copolimery EPDM HT	-	-30°C / +135°C	water, sea water, steam, diluted acids
FKM	fluoroelastomer	VITON®	-20°C / +200°C	oils, acids, hydrocabons

On request can be supplied other materials as: LCB, Hastelloy, Monel, Uranus, Alloy, DUPLEX, Special steels, Special bronzes.  
Coating on request: RILSAN®, Halar®, Chenisil®



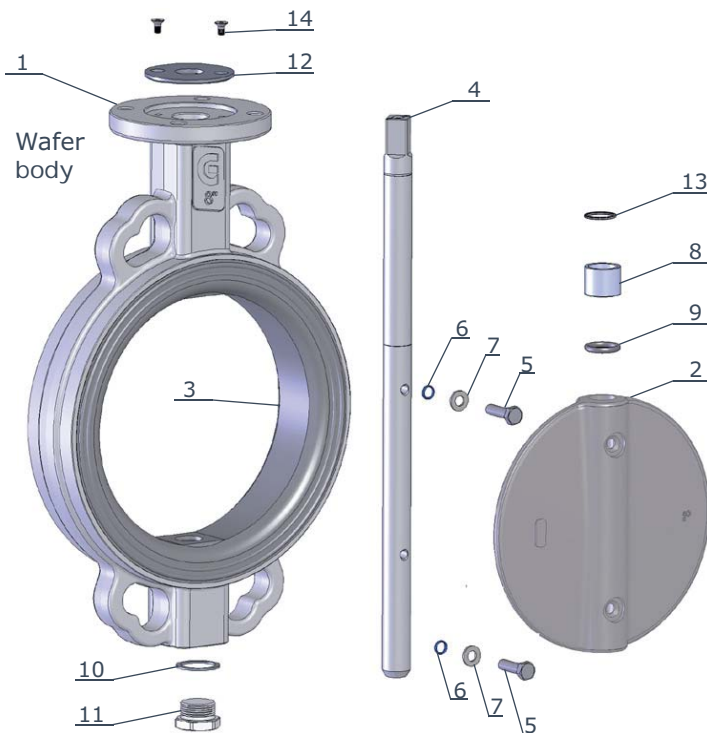
**BVKA - Wafer BLKA - Lug**  
 DN 40 - 150 • 1 1/2" - 6"  
 PN 10-16 • ANSI 150



item	q.ty	part	material
1	1	body	<ul style="list-style-type: none"> <li>ductile iron GS400</li> <li>A216 - WCB</li> <li>A352 - LCB</li> <li>A351 - CF8M (AISI 316)</li> <li>A351 - CF8M (AISI 316)</li> <li>aluminium-bronze</li> <li>Hastelloy®</li> <li>Monel®</li> </ul>
2	1	disc	<ul style="list-style-type: none"> <li>A351-CF8M (AISI 316)</li> <li>aluminium-bronze</li> <li>Hastelloy®</li> <li>Monel®</li> </ul>
◇3	1	body seat (replaceable)	<ul style="list-style-type: none"> <li>NBR (BUNA®)</li> <li>EPDM</li> <li>EPDM HT</li> <li>FKM (VITON®)</li> </ul>
4	1	upper shaft	<ul style="list-style-type: none"> <li>AISI 430</li> <li>AISI 316 (on request)</li> </ul>
5	1	lower shaft	<ul style="list-style-type: none"> <li>AISI 430</li> <li>AISI 316 (on request)</li> </ul>
◇6	1	bush	<ul style="list-style-type: none"> <li>bronze</li> </ul>
◇7	1	shaft packing	<ul style="list-style-type: none"> <li>NBR (BUNA®)</li> <li>FKM (VITON®) (on request)</li> </ul>
8	1	plug packing	<ul style="list-style-type: none"> <li>aluminium</li> </ul>
9	1	threaded plug	<ul style="list-style-type: none"> <li>zinc plated steel</li> </ul>
10	1	stop ring	<ul style="list-style-type: none"> <li>steel</li> </ul>
11	1	upper flange	<ul style="list-style-type: none"> <li>IXEF (DN 40-150)</li> </ul>
12	2	screw	<ul style="list-style-type: none"> <li>zinc plated steel</li> </ul>

◇ parts included in spare kit

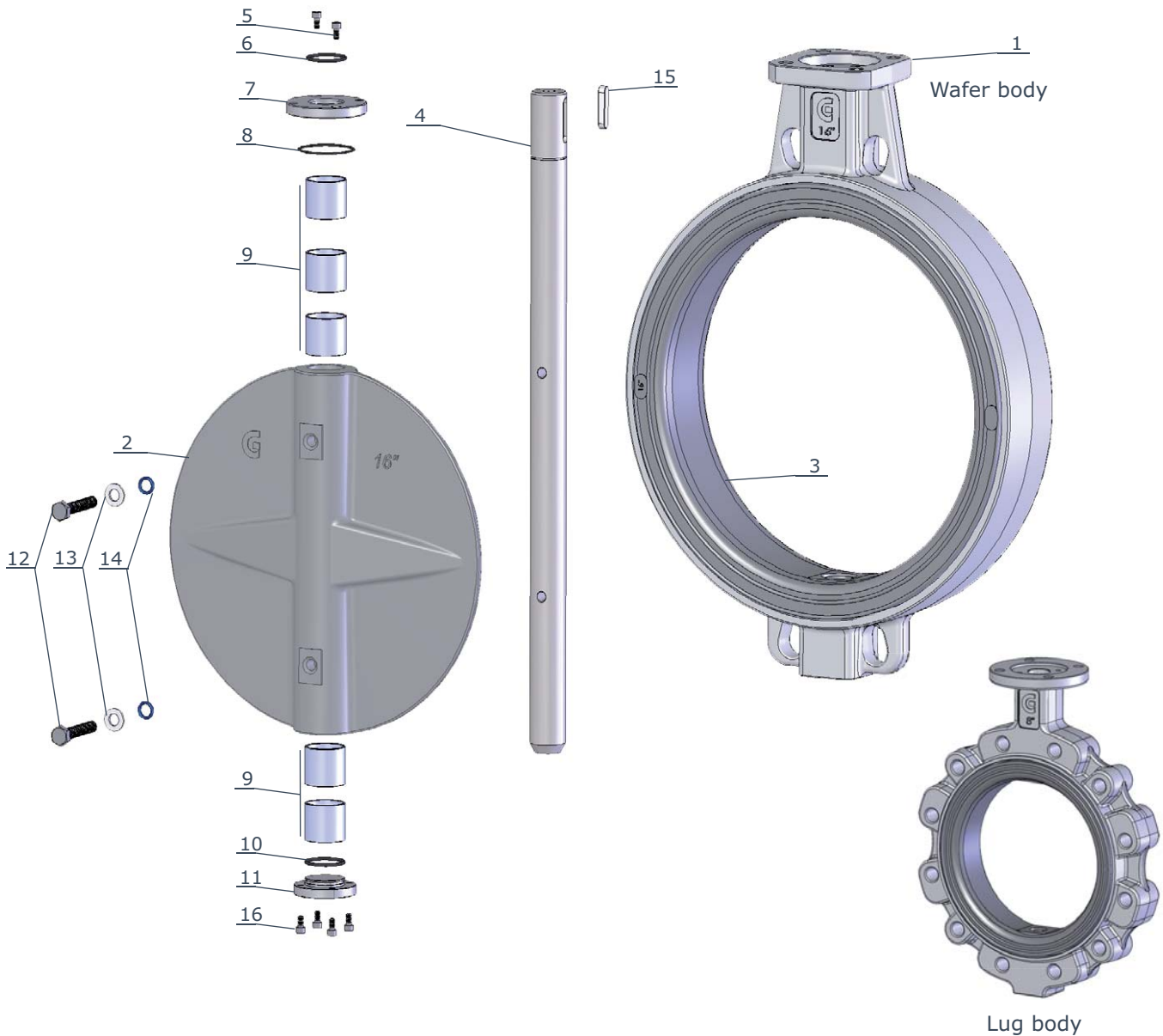
**BVKA - Wafer BLKA - Lug**  
 DN 200 - 300 • 8" - 12"  
 PN 10-16 • ANSI 150



item	q.ty	part	material
1	1	body	<ul style="list-style-type: none"> <li>ductile iron GS400</li> <li>A216-WCB</li> <li>A352-LCB</li> <li>A351-CF8M (AISI 316)</li> <li>aluminium-bronze</li> </ul>
2	1	disc	<ul style="list-style-type: none"> <li>A351-CF8M (AISI 316)</li> <li>aluminium-bronze</li> <li>Hastelloy®</li> <li>Monel®</li> </ul>
3	1	body seat (vulcanized not replaceable)	<ul style="list-style-type: none"> <li>NBR (BUNA®)</li> <li>EPDM</li> <li>EPDM HT</li> <li>FKM (VITON®)</li> </ul>
4	1	shaft	<ul style="list-style-type: none"> <li>AISI 430</li> <li>AISI 316 (on request)</li> </ul>
5	2	screw	<ul style="list-style-type: none"> <li>AISI 316</li> </ul>
◇6	2	O.Ring	<ul style="list-style-type: none"> <li>PTFE</li> </ul>
7	2	washer	<ul style="list-style-type: none"> <li>AISI 316</li> </ul>
◇8	1	bush	<ul style="list-style-type: none"> <li>bronze</li> </ul>
◇9	1	shaft packing	<ul style="list-style-type: none"> <li>NBR (BUNA®)</li> <li>FKM (VITON®) (on req.)</li> </ul>
10	1	plug packing	<ul style="list-style-type: none"> <li>aluminium</li> </ul>
11	1	threaded plug	<ul style="list-style-type: none"> <li>zinc plated steel</li> </ul>
12	1	upper flange	<ul style="list-style-type: none"> <li>aluminium</li> </ul>
13	1	stop ring	<ul style="list-style-type: none"> <li>steel</li> </ul>
14	2	screw	<ul style="list-style-type: none"> <li>zinc plated steel</li> </ul>

◇ parts included in spare kit

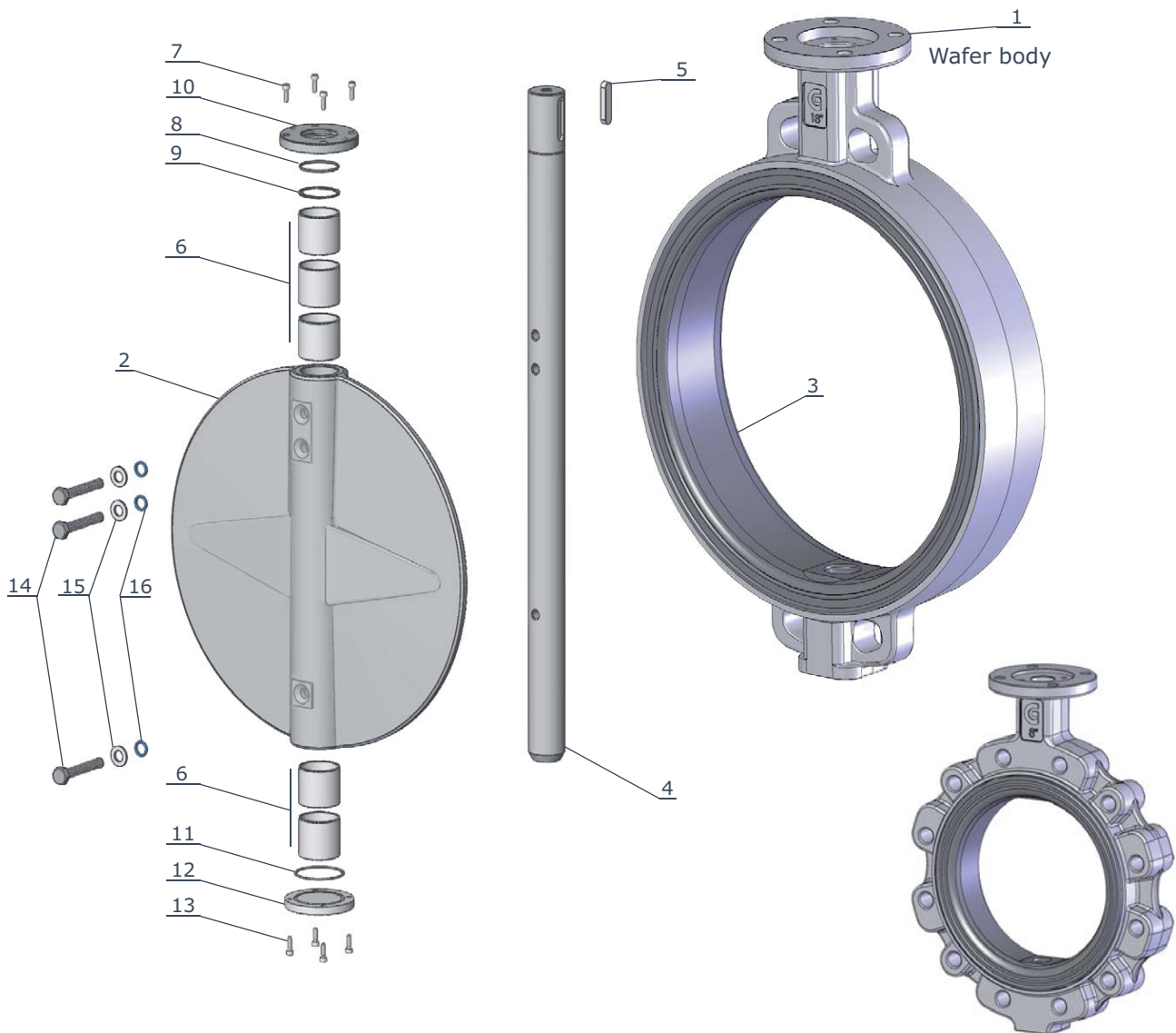
**BVKA - Wafer BLKA - Lug**  
 DN 350 - 400 • 14" - 16"  
 PN 10-16 • ANSI 150



◇ parts included in spare kit

item	q.ty	part	material	item	q.ty	part	material
1	1	body	<ul style="list-style-type: none"> <li>ductile iron GS400</li> <li>A216-WCB</li> <li>A352-LCB</li> <li>A351-CF8M (AISI 316)</li> <li>aluminium-bronze</li> </ul>	5	2	screw	zinc plated steel
2	1	disc	<ul style="list-style-type: none"> <li>A351 - CF8M (AISI 316)</li> <li>aluminium-bronze</li> <li>Hastelloy®</li> <li>Monel®</li> </ul>	◇6	1	O.ring	NBR (BUNA®)
3	1	body seat (vulcanized not replaceable)	<ul style="list-style-type: none"> <li>NBR (BUNA®)</li> <li>EPDM</li> <li>EPDM HT</li> <li>FKM (VITON®)</li> </ul>	7	1	upper flange	zinc plated steel
4	1	shaft	<ul style="list-style-type: none"> <li>AISI 430</li> <li>AISI 316 (on request)</li> </ul>	◇8	1	O.ring	NBR (BUNA®)
				◇9	5	bush	bronze
				◇10	1	O.ring	NBR (BUNA®)
				11	1	lower flange	zinc plated steel
				12	2	screw	AISI 316
				13	2	washer	AISI 316
				◇14	2	O. ring	PTFE
				15	1	key	steel C40
				16	4	screw	zinc plated steel

**BVKA - Wafer BLKA - Lug**  
 DN 450 - 500 • 18" - 20"  
 PN 10-16 • ANSI 150

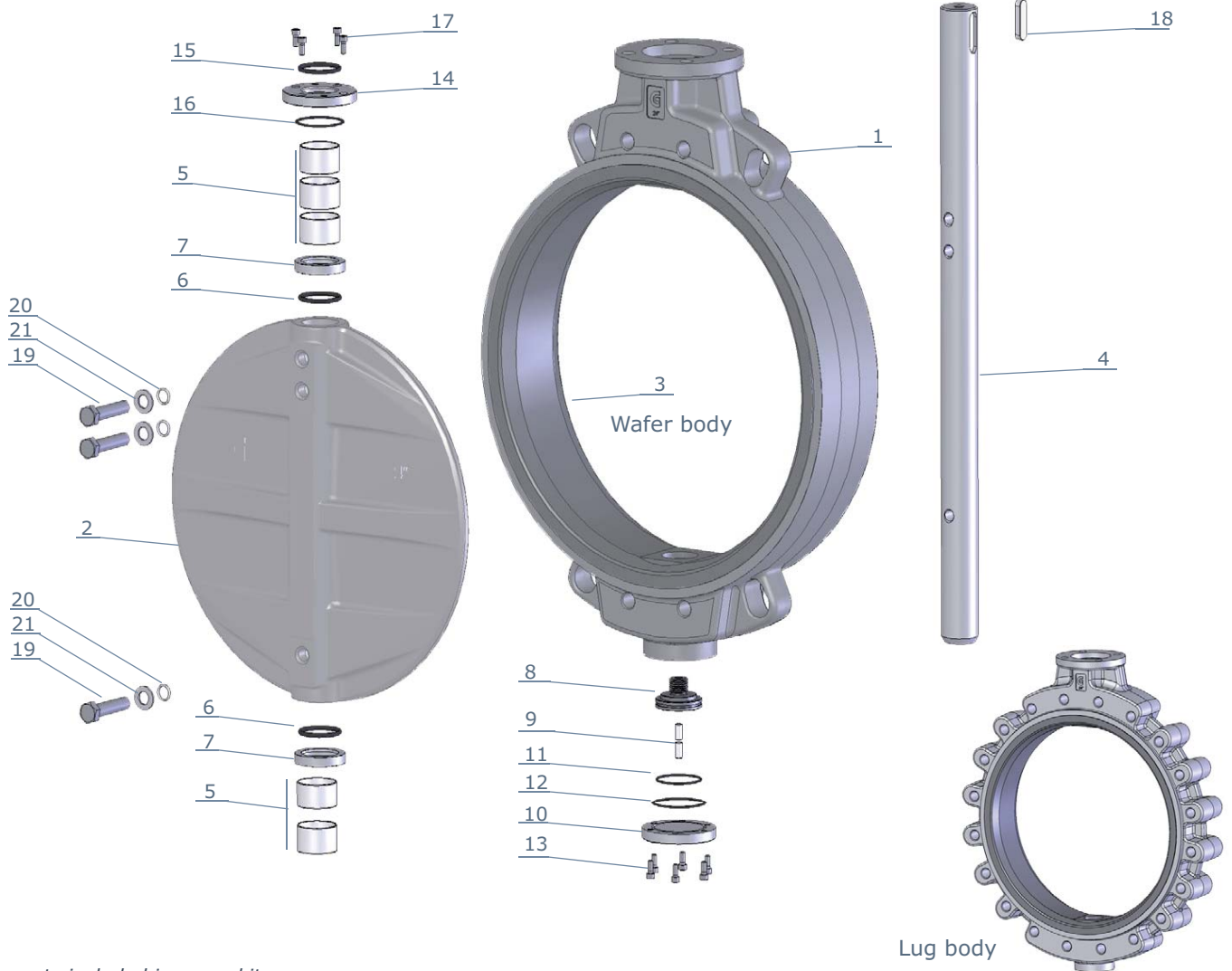


Lug body

◇ parts included in spare kit

item	q.ty	part	material	item	q.ty	part	material
1	1	body	<ul style="list-style-type: none"> <li>• ductile iron GS400</li> <li>• A216-WCB</li> <li>• A352-LCB</li> <li>• A351-CF8M (AISI 316)</li> <li>• aluminium-bronze</li> </ul>	◇6	5	bush	• steel + PTFE
2	1	disc	<ul style="list-style-type: none"> <li>• A351 - CF8M (AISI 316)</li> <li>• aluminium-bronze</li> <li>• Hastelloy®</li> <li>• Monel®</li> </ul>	7	4	screw	• zinc plated steel
3	1	body seat (vulcanized not replaceable)	<ul style="list-style-type: none"> <li>• NBR (BUNA®)</li> <li>• EPDM</li> <li>• EPDM HT</li> <li>• FKM (VITON®)</li> </ul>	◇8	1	O.ring	• NBR (BUNA®)
4	1	shalt	<ul style="list-style-type: none"> <li>• AISI 430</li> <li>• AISI 316 (on request)</li> </ul>	9	5	stop ring	• steel
5	1	key	• steel C40	10	1	upper flange	• zinc plated steel
				◇11	1	O.ring	• NBR (BUNA®)
				12	1	lower flange	• zinc plated steel
				13	4	screw	• steel
				14	2	screw	• AISI 316
				15	2	washer	• AISI 316
				◇16	2	O. ring	• PTFE

BVKA - Wafer BLKA - Lug  
 DN 600 - 800 • 24" - 32"  
 PN 16 • ANSI 150



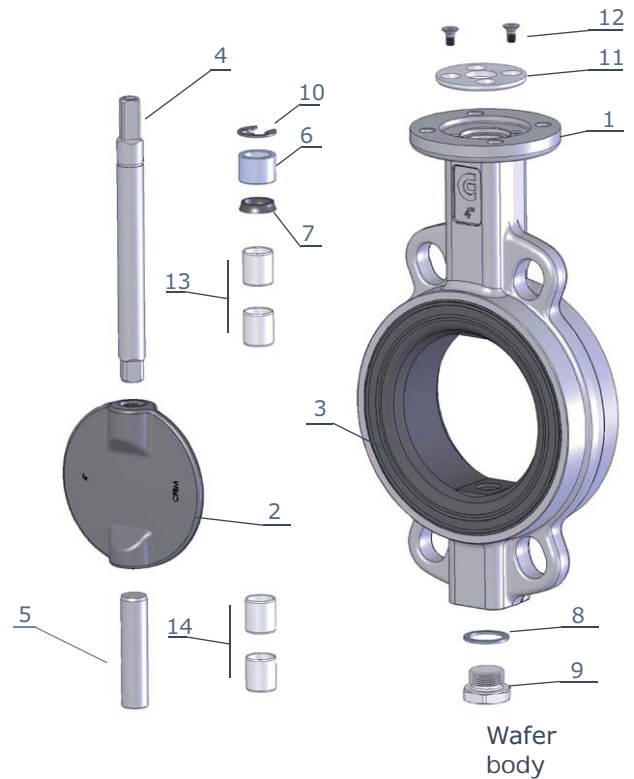
◇ parts included in spare kit

item	q.ty	part	material	item	q.ty	part	material
1	1	body	<ul style="list-style-type: none"> <li>ductile iron GS400</li> <li>A216-WCB</li> <li>A352-LCB</li> <li>A351-CF8M (AISI 316)</li> <li>aluminium-bronze</li> </ul>	7	2	O.ring housing	<ul style="list-style-type: none"> <li>AISI 316</li> </ul>
2	1	disc	<ul style="list-style-type: none"> <li>ductile iron GS400</li> <li>A351 - CF8M (AISI 316)</li> <li>aluminium-bronze</li> <li>Hastelloy®</li> <li>Monel®</li> </ul>	8	1	shaft support	<ul style="list-style-type: none"> <li>Bronze</li> </ul>
3	1	body seat (vulcanized not replaceable)	<ul style="list-style-type: none"> <li>NBR (BUNA®)</li> <li>EPDM</li> <li>EPDM HT</li> <li>FKM (VITON®)</li> </ul>	9	2	adjusting screw	<ul style="list-style-type: none"> <li>AISI 316</li> </ul>
4	1	shaft	<ul style="list-style-type: none"> <li>AISI 303</li> <li>AISI 316 (on request)</li> </ul>	10	1	lower flange	<ul style="list-style-type: none"> <li>zinc plated steel</li> </ul>
◇5	5	bush	<ul style="list-style-type: none"> <li>steel + PTFE</li> </ul>	◇11	1	O.ring	<ul style="list-style-type: none"> <li>NBR (BUNA®)</li> </ul>
◇6	2	O.ring	<ul style="list-style-type: none"> <li>NBR (BUNA®)</li> <li>FKM (VITON®) on request</li> </ul>	◇12	1	O.ring	<ul style="list-style-type: none"> <li>NBR (BUNA®)</li> </ul>
				13	6	screw	<ul style="list-style-type: none"> <li>zinc plated steel</li> </ul>
				14	1	upper flange	<ul style="list-style-type: none"> <li>zinc plated steel</li> </ul>
				◇15	1	O.ring	<ul style="list-style-type: none"> <li>NBR (BUNA®)</li> </ul>
				◇16	1	O.ring	<ul style="list-style-type: none"> <li>NBR (BUNA®)</li> </ul>
				17	4	screw	<ul style="list-style-type: none"> <li>zinc plated steel</li> </ul>
				18	1	key	<ul style="list-style-type: none"> <li>steel</li> </ul>
				19	3	screw	<ul style="list-style-type: none"> <li>AISI 316</li> </ul>
				◇20	3	O.ring	<ul style="list-style-type: none"> <li>PTFE</li> </ul>
				21	3	washer	<ul style="list-style-type: none"> <li>AISI 316</li> </ul>

**BVKX - Wafer BLKX - Lug**

DN 50 - 100 • 2" - 4"  
PN 16-25 • ANSI 150

item	q.ty	part	material
1	1	body	<ul style="list-style-type: none"> <li>ductile iron GS400</li> <li>A216 - WCB</li> <li>A352 - LCB</li> <li>A351 - CF8M (AISI 316)</li> </ul>
2	1	disc	<ul style="list-style-type: none"> <li>A351 - CF8M (AISI 316)</li> <li>aluminium-bronze</li> <li>Hastelloy®</li> <li>Monel®</li> </ul>
3	1	body seat (vulcanized not replaceable)	<ul style="list-style-type: none"> <li>NBR (BUNA®)</li> <li>EPDM</li> <li>EPDM HT</li> <li>FKM (VITON®)</li> </ul>
4	1	upper shaft	<ul style="list-style-type: none"> <li>AISI 430</li> <li>AISI 316 (on request)</li> </ul>
5	1	lower shaft	<ul style="list-style-type: none"> <li>AISI 430</li> <li>AISI 316 (on request)</li> </ul>
◇6	1	bush	bronze
◇7	1	shaft packing	<ul style="list-style-type: none"> <li>NBR (BUNA®)</li> <li>FKM (VITON®) on req.</li> </ul>
8	1	plug packing	aluminium
9	1	threaded plug	zinc plated steel
10	1	stop ring	steel
11	1	upper flange	IXEF (DN 50-100)
12	2	screw	zinc plated steel
◇13	2	upper bush	steel + PTFE
◇14	2	lower bush	steel + PTFE



◇ parts included in spare kit

**BVKX - Wafer**

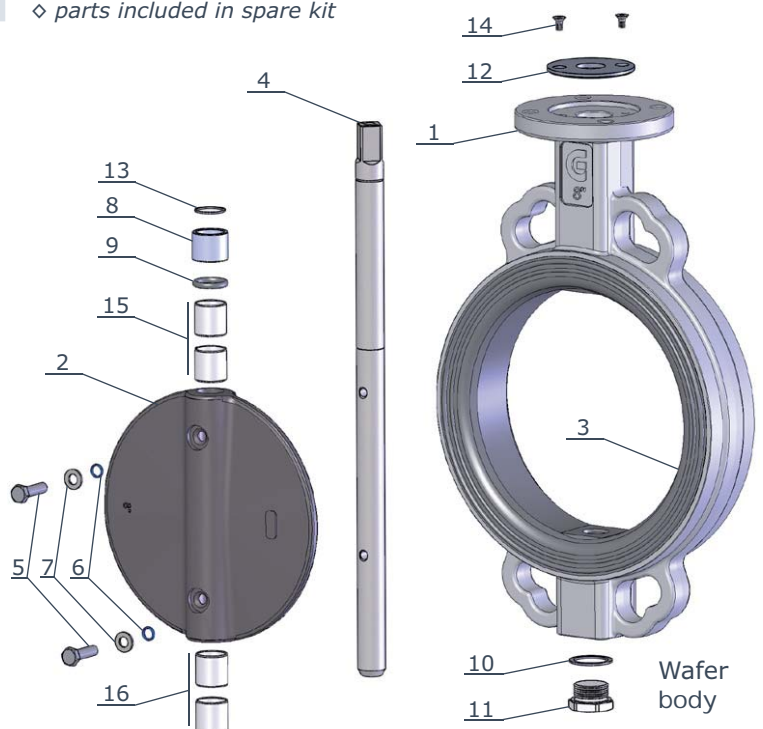
DN 125 - 250 • 5" - 10"  
PN 16-25 • ANSI 150

**BLKX - Lug**

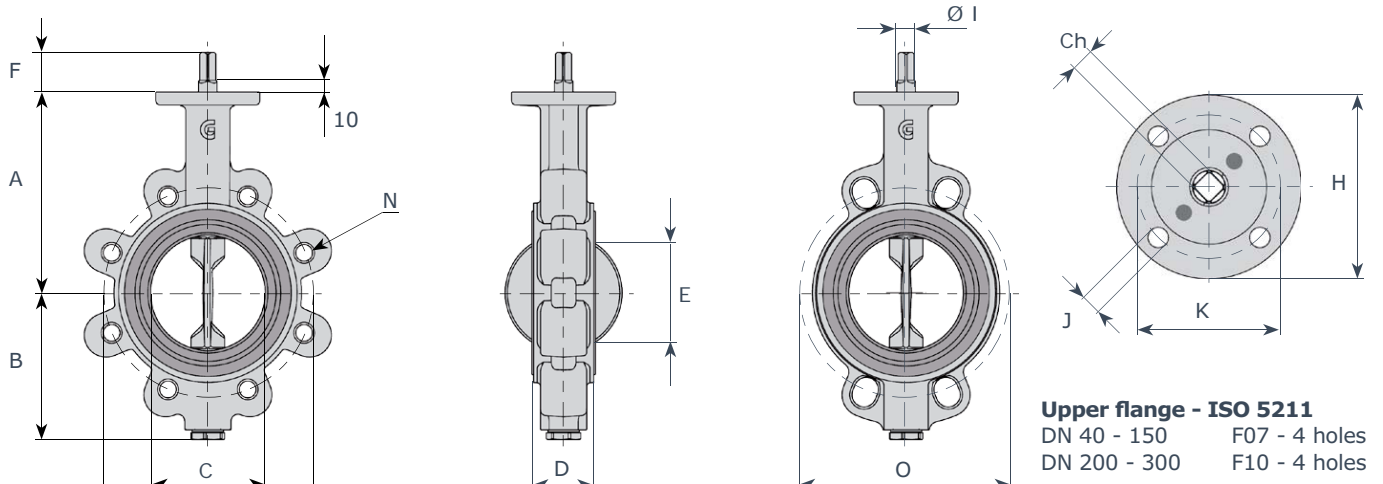
DN 125 - 200 • 5" - 8"  
PN 16-25 • ANSI 150

item	q.ty	part	material
1	1	body	<ul style="list-style-type: none"> <li>ductile iron GS400</li> </ul>
2	1	disc	<ul style="list-style-type: none"> <li>A351-CF8M (AISI 316)</li> <li>aluminium-bronze</li> <li>Hastelloy®</li> <li>Monel®</li> </ul>
3	1	body seat (vulcanized not replaceable)	<ul style="list-style-type: none"> <li>NBR (BUNA®)</li> <li>EPDM</li> <li>EPDM HT</li> <li>FKM (VITON®)</li> </ul>
4	1	shaft	<ul style="list-style-type: none"> <li>AISI 430</li> <li>AISI 316 (on request)</li> </ul>
5	2	screw	AISI 316
◇6	2	O.Ring	PTFE
7	2	washer	AISI 316
◇8	1	bush	bronze
◇9	1	shaft packing	<ul style="list-style-type: none"> <li>NBR (BUNA®)</li> <li>FKM (VITON®) (on req.)</li> </ul>
10	1	plug packing	aluminium
11	1	threaded plug	zinc plated steel
12	1	upper flange	<ul style="list-style-type: none"> <li>IXEF (DN 125-150)</li> <li>aluminium (DN 200-250)</li> </ul>
13	1	stop ring	steel
14	2	screw	zinc plated steel
◇15	2	upper bush	steel + PTFE
◇16	2	lower bush	steel + PTFE

◇ parts included in spare kit



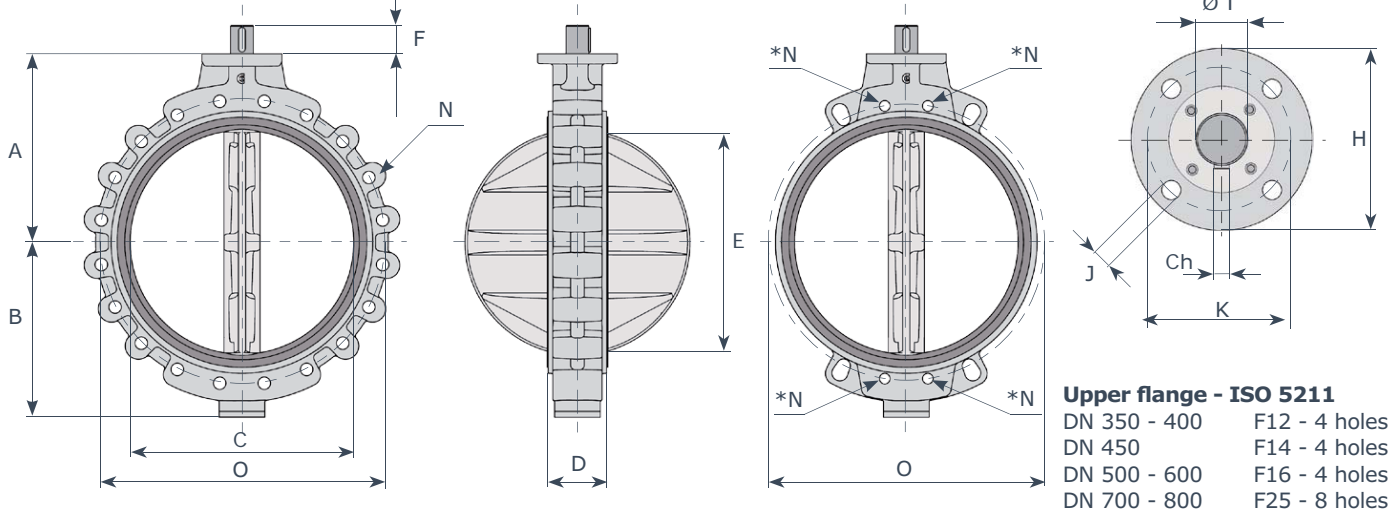
BVPD - Wafer BLPD - Lug | BVKI - Wafer BLKI - Lug | BVKA - Wafer BLKA - Lug



Note: in case of ANSI150 flanges, threading can be: 1 1/2" ÷ 12" ANSI B1.1UNC2B

**Upper flange - ISO 5211**  
 DN 40 - 150 F07 - 4 holes  
 DN 200 - 300 F10 - 4 holes

DN	A	B	C	D	E	F	Ø I	Ch	H	K	J	Kg															
												PN 6			PN 10			PN 16			ANSI 150			PD-KI		KA	
												N	n.	O	N	n.	O	N	n.	O	N	n.	O	W	L	W	L
40	130	75	49	33	36	34	14	11	90	70	9	-	-	-	M16	4	110	M16	4	110	M14	4	98.4	2.2	3	2.2	3
50	138	81	55	43	35	34	14	11	90	70	9	M12	4	110	M16	4	125	M16	4	125	M16	4	120.6	2.8	3.7	2.8	3.7
65	144	98	68	46	50	34	14	11	90	70	9	M12	4	130	M16	8	145	M16	8	145	M16	4	139.7	3.7	5.3	3.7	5.3
80	158	110	81	46	67	34	14	11	90	70	9	M16	4	150	M16	8	160	M16	8	160	M16	4	152.4	4	6.1	4	6.1
100	173	128	101	52	87	34	16	11	90	70	9	M16	4	170	M16	8	180	M16	8	180	M16	8	190.5	6	8.1	6	8.1
125	186	140	126	56	113	34	18	14	90	70	9	M16	8	200	M16	8	210	M16	8	210	M20	8	215.9	7.2	9.7	7.2	9.7
150	202	155	150	56	140	34	18	14	90	70	9	M16	8	225	M20	8	240	M20	8	240	M20	8	241.3	9.1	11.5	9.5	11.8
200	240	190	200	60	191	38	22	17	125	102	11	M16	8	280	M20	8	295	M20	12	295	M20	8	298.4	14	27	16	29
250	270	220	250	68	241	38	30	22	125	102	11	M16	12	335	M20	12	350	M24	12	355	M22	12	361.9	22	34	26	38
300	300	247	298	78	289	38	30	22	125	102	11	M20	12	395	M20	12	400	M24	12	410	M22	12	431.8	32	49	36	53



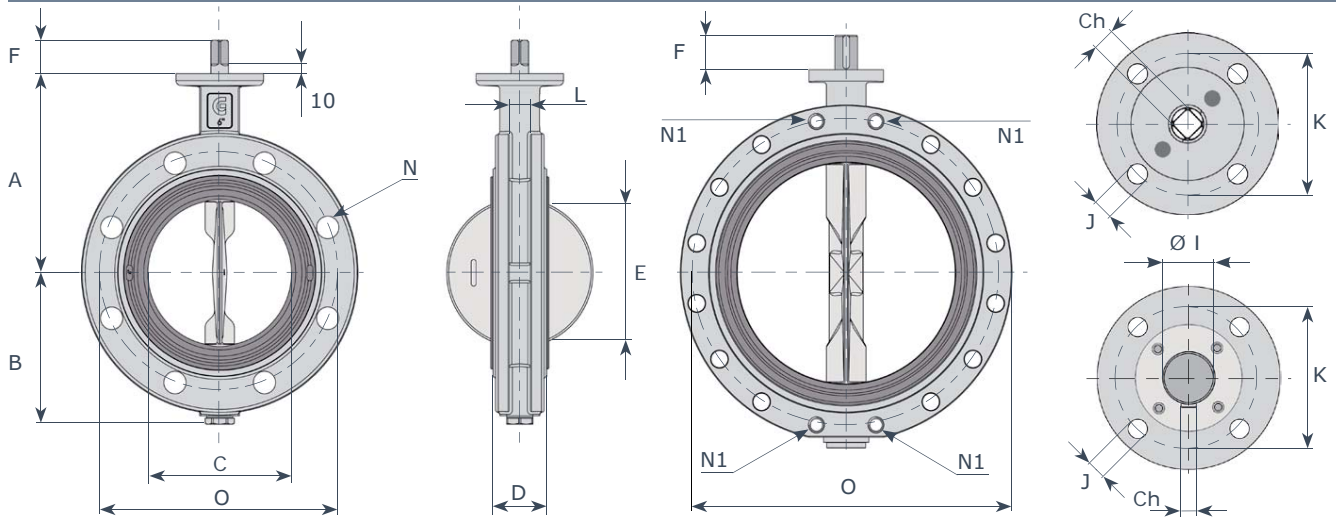
**Upper flange - ISO 5211**  
 DN 350 - 400 F12 - 4 holes  
 DN 450 F14 - 4 holes  
 DN 500 - 600 F16 - 4 holes  
 DN 700 - 800 F25 - 8 holes

Note: in case of ANSI150 flanges, threading can be: 14" ANSI B1.1UNC2B 16" ÷ 32" ANSI B1.1-8 UNC2B

\*Note: WAFER bodies DN 600 - 700 - 800 have 4 holes N threaded as relevant LUG version

DN	A	B	C	D	E	F	Ø I	Ch	H	K	J	Kg															
												PN 6			PN 10			PN 16			ANSI 150			PD-KI		KA	
												N	n.	O	N	n.	O	N	n.	O	N	n.	O	W	L	W	L
350	330	280	341	78	332	60	35	10	150	125	14	M20	12	445	M20	16	460	M24	16	470	M24	12	476.2	42	62	55	75
400	355	305	390	102	376	60	40	12	150	125	14	M20	16	495	M24	16	515	M27	16	525	M27	16	539.7	76	90	94	104
450	400	343	444	114	430	60	45	12	175	140	18	M20	16	550	M24	20	565	M27	20	585	M27	16	577.8	110	170	135	195
500	422	366	495	127	479	60	45	12	210	165	22	M20	20	600	M24	20	620	M30	20	650	M27	20	635.0	140	180	165	205
600	495	460	595	154	575	75	60	18	210	165	22	M24	20	705	M27	20	725	M33	20	770	M33	20	749.3	220	290	220	290
700	550	506	690	165	670	90	70	20	300	254	18	M24	24	810	M27	24	840	M33	24	840	M33	28	863.6	300	415	300	415
800	640	590	780	190	757	100	80	22	300	254	18	M27	24	920	M30	24	950	M36	24	950	M39	28	977.9	444	570	465	570

**BFKI - Double Flange**

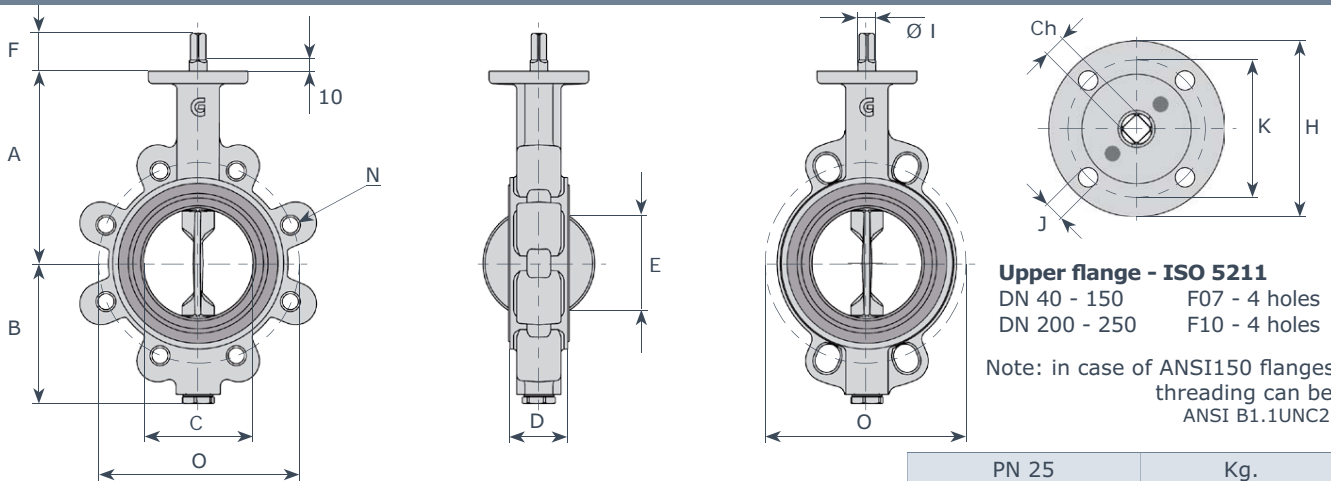


**Upper flange - ISO 5211**  
 DN 80 - 150 F07 - 4 holes  
 DN 200 - 300 F10 - 4 holes  
 DN 350 - 400 F12 - 4 holes  
 DN 450 F14 - 4 holes  
 DN 500 - 600 F16 - 4 holes

Note: in case of ANSI150 flanges, threading can be: 16"÷24" ANSI B1.1-8 UNC2B

DN	"	A	B	C	D	E	F	Ø I	Ch	K	J	L	PN 6				PN 10				PN 16				ANSI 150				Kg.
													N	N1	n.	O	N	N1	n.	O	N	N1	n.	O	N	N1	n.	O	
80	3	158	110	81	46	67	34	14	11	70	9	14	18	--	4	150	18	--	8	160	18	--	8	160	18	--	4	152.4	6.5
100	4	173	128	101	52	87	34	16	11	70	9	16	18	--	4	170	18	--	8	180	18	--	8	180	18	--	8	190.5	8
125	5	186	140	126	56	113	34	18	14	70	9	18	18	--	8	200	18	--	8	210	18	--	8	210	22	--	8	215.9	10
150	6	202	155	150	56	140	34	18	14	70	9	18	18	--	8	225	22	--	8	240	22	--	8	240	22	--	8	241.3	12
200	8	240	190	200	60	191	38	22	17	102	11	22	18	--	8	280	22	--	8	295	22	--	12	295	22	--	8	298.4	20
250	10	270	220	250	68	241	38	30	22	102	11	30	18	--	12	335	22	--	12	350	25	--	12	355	25	--	12	361.9	30
300	12	300	247	298	78	289	38	30	22	102	11	30	22	--	12	395	22	--	12	400	25	--	12	410	25	--	12	431.8	46
350	14	330	285	341	78	332	60	35	10	125	14	35	22	--	12	445	22	--	16	460	25	--	16	470	28	--	12	476.2	65
400	16	355	310	390	102	376	60	40	12	125	14	40	22	M20	16	495	25	M24	16	515	30	M27	16	525	30	M27	16	539.7	85
450	18	400	343	444	114	430	60	45	12	140	18	45	22	M20	16	550	25	M24	20	565	30	M27	20	585	30	M27	16	577.8	120
500	20	422	375	495	127	479	60	45	12	165	22	45	22	M20	20	600	25	M24	20	620	33	M30	20	650	30	M27	20	635.0	180
600	24	495	460	595	154	575	75	60	18	165	22	60	25	M24	20	705	30	M27	20	725	36	M33	20	770	36	M33	20	749.3	270

**BVKX - Wafer BLKX - Lug**



**Upper flange - ISO 5211**  
 DN 40 - 150 F07 - 4 holes  
 DN 200 - 250 F10 - 4 holes

Note: in case of ANSI150 flanges, threading can be: ANSI B1.1UNC2B

DN	"	A	B	C	D	E	F	Ø I	Ch	H	K	J	PN 25			Kg.	
													N	n.	O	wafer	lug
50	2	138	81	55	43	35	34	14	11	90	70	9	M16	4	125	2.8	3.7
65	2 1/2	144	98	68	46	50	34	14	11	90	70	9	M16	8	145	3.7	5.3
80	3	158	110	81	46	67	34	14	11	90	70	9	M16	8	160	4	6.1
100	4	173	128	101	52	87	34	16	11	90	70	9	M20	8	190	6	8.1
125	5	186	140	126	56	113	34	18	14	90	70	9	M24	8	220	7.2	9.7
150	6	202	155	150	56	140	34	18	14	90	70	9	M24	8	250	9.5	11.8
200	8	240	190	200	60	191	38	22	17	125	102	11	M24	12	310	16	29
250	10	270	220	250	68	241	38	30	22	125	102	11	--	--	370	25	--

**PD Series - Torque values - Nm - safety factor excluded**

Seat body NBR/EPDM/Carboxide						fluid H <sub>2</sub> O - 20°C			Seat body FKM/natural rubber						fluid H <sub>2</sub> O - 20°C		
working pressure BAR									working pressure BAR								
DN	0	6	DN	0	6	DN	0	6	DN	0	6	DN	0	6	DN	0	6
50/65	4	6	150	40	49	350	345	370	50/65	6	9	150	52	65	350	465	495
80	5	7	200	47	58	400	382	405	80	7	11	200	62	78	400	515	540
100	8	12	250	89	100	450	427	465	100	11	16	250	120	134	450	578	627
125	22	31	300	167	180	500	450	500	125	29	42	300	225	241	500	607	675

**KI Series - Torque values - Nm - safety factor excluded**

Seat body NBR/EPDM					fluid H <sub>2</sub> O - 20°C					fluid H <sub>2</sub> O - 20°C				
working pressure BAR					working pressure BAR					working pressure BAR				
DN	0	6	10	16	DN	0	6	10	16	DN	0	6	10	16
40	11	11	13	14	150	55	60	84	90	450	480	520	720	1050
50	11	12	13	15	200	100	107	180	210	500	550	600	810	1600
65	11	16	16	18	250	160	175	220	320	600	1650	1960	2300	-
80	20	30	36	40	300	260	270	320	390	700	2270	3000	3350	-
100	40	43	45	48	350	410	450	590	850	800	3200	3400	4000	-
125	48	52	52	70	400	450	480	650	900					

Seat body FKM/natural rubber					fluid H <sub>2</sub> O - 20°C					fluid H <sub>2</sub> O - 20°C				
working pressure BAR					working pressure BAR					working pressure BAR				
DN	0	6	10	16	DN	0	6	10	16	DN	0	6	10	16
40	14	14	16	17	150	66	72	101	108	450	580	630	880	1310
50	14	15	16	18	200	120	129	216	252	500	660	740	990	2020
65	14	20	20	22	250	192	210	264	386	600	1980	2380	2760	-
80	24	36	44	48	300	312	330	396	480	700	2750	3680	4040	-
100	48	52	54	58	350	498	545	728	1050	800	3880	4120	4860	-
125	60	62	64	84	400	550	584	798	1120					

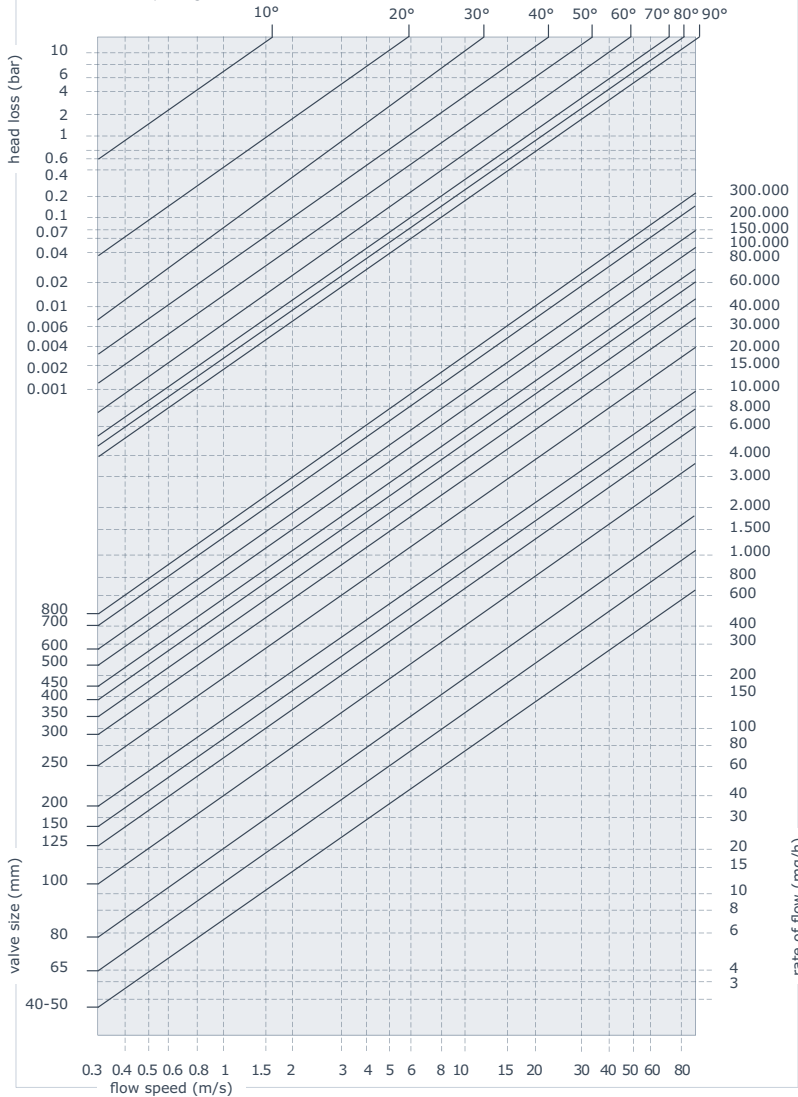
**KA/KX Series - Torque values - Nm - safety factor excluded**

Seat body NBR/EPDM							fluid H <sub>2</sub> O - 20°C						
working pressure BAR							working pressure BAR						
DN	0	6	10	16	20	25	DN	0	6	10	16	20	
40	12	12	14	15	15	-	300	272	294	362	410	429	
50	12	13	14	16	17	20	350	431	557	714	1071	1122	
65	12	17	17	19	20	31	400	683	767	893	1470	1540	
80	21	32	38	42	44	49	450	1000	1208	1313	1995	2090	
100	42	45	47	50	53	65	500	1155	1418	1733	2625	2750	
125	50	55	55	74	77	82	600	2300	2800	3700	4800	5280	
150	58	63	88	95	99	103	700	3800	5050	5600	6900	7590	
200	105	112	189	221	231	320	800	5200	6800	7900	10300	11330	
250	175	190	231	336	352	440							



Head losses

notes: values indicated in this page is only for information  
disc opening valve



Formulae for calculation of rate flow

**Liquids:** 
$$Q = \frac{KV}{\sqrt{\frac{PS}{\Delta P}}}$$

- Q rate of flow (m<sup>3</sup>/h)
- PS specific gravity (water=1)
- ΔP pressure drop (bar)

**Gas:** 
$$Q = 28.5 \frac{KV}{\sqrt{P_2 \cdot \Delta P}} \cdot \sqrt{\frac{PS}{P_2}}$$

- Q rate of flow (m<sup>3</sup>/h)
- PS specific gravity (air=1)
- ΔP pressure drop (bar) (less than 1/2 inlet pressure)
- P<sub>2</sub> outlet pressure

**Steam:** 
$$Q = 22.5 \cdot KV \cdot \sqrt{P_2 \cdot \Delta P}$$

- Q rate of flow (Kg/h)
- ΔP pressure drop (bar) (less than 1/2 inlet pressure)
- P<sub>2</sub> outlet pressure

Calculation of the rate of flow equivalent to H<sub>2</sub>O:

$$Q_e = Q \sqrt{\frac{d}{1000}}$$

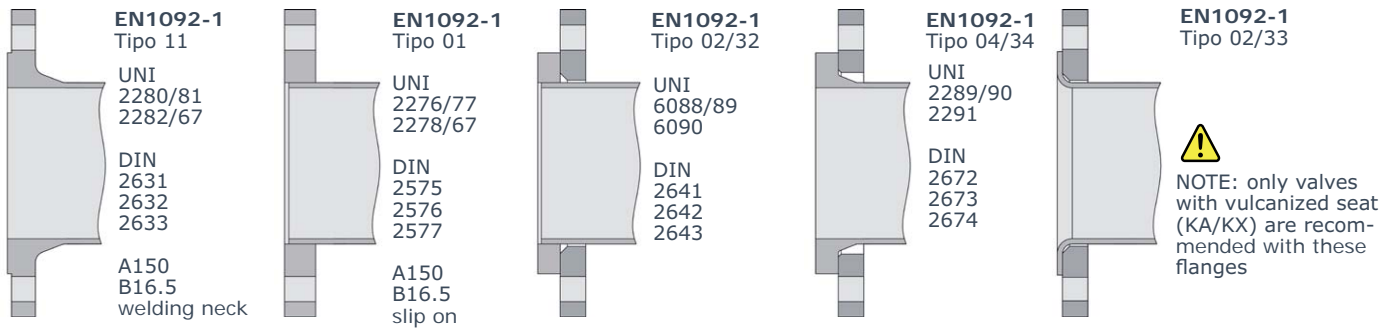
For different liquid, gas or steam head losses are determined by equivalent water of flow, as follows:

- Q<sub>e</sub> equivalent water flow (mc/l o l/s)
- Q fluid flow (mc/l o l/s)
- d fluid specific gravity (Kg/mc)

Values KV (CV = 1,16 KV)

angle	40/50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800
5°	-	-	-	-	-	-	-	-	-	53	68	85	106	151	206	270
10°	-	-	-	-	-	-	-	21	49	123	161	199	246	354	482	629
15°	0,2	0,6	1,8	2,4	4,2	5,6	14	80	188	228	299	369	457	658	900	1168
20°	0,9	2,5	5,2	9,5	15	23	110	156	280	315	412	511	630	907	1234	2010
25°	3	6,1	12	22	38	61	125	225	354	457	597	740	914	1314	1789	2735
30°	6,1	11	21	39	69	112	211	310	381	661	863	1069	1320	1899	2585	5080
35°	9,9	18	33	60	105	166	303	433	521	890	1162	1440	1778	2560	3484	6254
40°	15	27	49	88	148	228	405	591	742	1184	1547	1916	2366	3407	4638	9700
45°	21	38	68	121	199	303	528	774	987	1552	2028	2512	3102	4466	6079	11581
50°	29	51	91	159	262	394	679	988	1252	2008	2620	3248	4010	5774	7860	15000
55°	39	68	119	207	338	505	863	1247	1571	2548	3318	4123	5090	7329	9976	17765
60°	53	90	156	269	434	641	1085	1591	2059	3225	4202	5218	6442	9277	12627	22200
65°	72	121	209	357	565	820	1364	2065	2807	3983	5196	6445	7957	11457	15595	26077
70°	92	161	283	487	768	1097	1788	2715	3744	5195	6775	8412	10377	14944	20341	34500
75°	109	209	381	662	1059	1507	2425	3625	4935	6964	9084	11269	13912	20032	27267	39546
80°	115	240	457	815	1303	1861	3043	4768	6831	9301	12142	15048	18578	26752	36413	47560
85°	115	253	502	906	1457	2008	3642	4890	8230	10280	13408	16632	20533	29568	40246	52566
90°	116	257	508	925	1492	2168	3838	5010	9233	10792	14082	17840	22024	31715	43166	56381

Flanges to be used



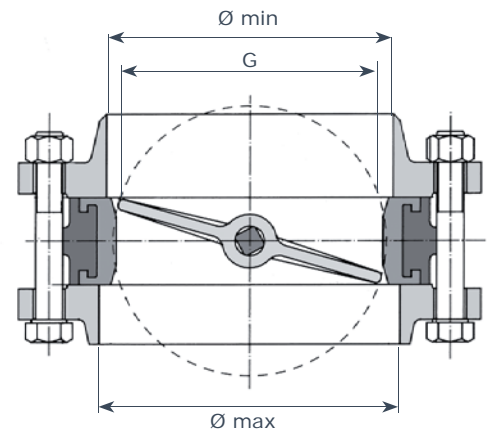
Bolts and rods dimensions

DN	Wafer valves											
	PN 6			PN 10			PN 16			ANSI 150		
	Bolts	Rods	N°	Bolts	Rods	N°	Bolts	Rods	N°	Bolts	Rods	N°
40	M12x80	M12x90	4	M16x90	M16x100	4	M16x90	M16x100	4	M14x90	M14x110	4
50	M12x90	M12x100	4	M16x100	M16x120	4	M16x100	M16x120	4	M16x100	M16x130	4
65	M12x100	M12x110	4	M16x110	M16x130	8	M16x110	M16x130	8	M16x110	M16x140	4
80	M16x100	M16x120	4	M16x110	M16x130	8	M16x110	M16x130	8	M16x120	M16x150	4
100	M16x110	M16x120	4	M16x120	M16x140	8	M16x120	M16x140	8	M16x120	M16x150	8
125	M16x120	M16x140	8	M16x120	M16x150	8	M16x120	M16x150	8	M20x130	M20x160	8
150	M16x120	M16x140	8	M20x130	M20x160	8	M20x130	M20x160	8	M20x140	M20x160	8
200	M16x130	M16x150	8	M20x140	M20x170	8	M20x140	M20x170	12	M20x150	M20x170	8
250	M16x140	M16x160	12	M20x150	M20x180	12	M24x150	M24x180	12	M22x160	M22x190	12
300	M20x150	M20x180	12	M20x160	M20x190	12	M24x160	M24x190	12	M22x170	M22x210	12
350	M20x150	M20x180	12	M20x160	M20x190	16	M24x170	M24x200	16	M24x180	M24x220	12
400	M20x180	M20x210	16	M24x190	M24x220	16	M27x210	M27x240	16	M27x210	M27x250	16
450	M20x190	M20x220	16	M24x200	M24x230	20	M27x220	M27x250	20	M27x230	M27x270	16
500	M20x210	M20x240	20	M24x210	M24x240	20	M30x240	M30x280	20	M27x250	M27x290	20
600	M24x240	M24x270	20	M27x250	M27x290	20	M33x270	M33x320	20	M33x290	M33x340	20
700	M24x250	M24x280	24	M27x260	M27x310	24	M33x280	M33x330	24	M33x350	M33x400	28
800	M27x280	M27x320	24	M30x290	M30x350	24	M36x320	M36x360	24	M39x400	M33x460	28

DN	Lug valves - Double Flange valves							
	PN 6		PN 10		PN 16		ANSI 150	
	Bolts	N°	Bolts	N°	Bolts	N°	Bolts	N°
40	M12x30	8	M16x30	8	M16x30	8	M14x30	8
50	M12x35	8	M16x35	8	M16x35	8	M16x35	8
65	M12x35	8	M16x40	16	M16x40	16	M16x40	8
80	M16x40	8	M16x40	16	M16x40	16	M16x40	8
100	M16x40	8	M16x40	16	M16x40	16	M16x45	16
125	M16x45	16	M16x45	16	M16x45	16	M20x50	16
150	M16x45	16	M20x45	16	M20x45	16	M20x50	16
200	M16x50	16	M20x50	16	M20x50	24	M20x55	16
250	M16x55	24	M20x55	24	M24x55	24	M22x60	24
300	M20x60	24	M20x60	24	M24x60	24	M22x60	24
350	M20x60	24	M20x60	32	M24x65	32	M24x65	24
400	M20x70	32	M24x70	32	M27x70	32	M27x80	32
450	M20x80	32	M24x80	40	M27x80	40	M27x80	32
500	M20x80	40	M24x80	40	M30x80	40	M27x90	40
600	M24x90	40	M27x90	40	M33x100	40	M33x100	40
700	M24x100	48	M27x100	48	M33x110	48	M33x130	56
800	M27x110	48	M30x120	48	M36x130	48	M39x150	56

NOTE 1: Screw and rod dimensions have been calculated with WELDING NECK flanges PN 6/10/16 (EN1092-1 Tipe 11) ANSI150 (ANSI B16.5)

NOTE 2: Number of nuts should be double when WAFER valves are assembled with threaded rods.



DN	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800
G	36	35	50	67	87	113	140	191	241	289	332	376	430	475	575	670	757
Ø min	46	44	60	75	98	122	148	196	244	296	342	378	440	485	585	681	782
Ø max	49	62	80	93	118	146	175	225	275	330	372	422	450	500	600	717	815

Compatibility flanges - body Wafer

DN	EN 1092-1 / EN 1092-2					ASME/ANSI			BS 10		JIS B2220		
	PN 6	PN 10	PN 16	PN 25	PN 40	class 125	class 150	class 300	tab D	tab E	5K	10K	16K
40	☐	✓	✓	✓	✓	✓	✓	●	✓	✓	✓	✓	✓
50	☐	✓	✓	✓	✓	✓	✓	●	●	●	●	☐	✗
65	☐	✓	✓	✓	✓	✓	✓	●	●	●	✓	☐	☐
80	☐	✓	✓	✓	✓	✓	✓	●	●	●	●	●	✓
100	☐	✓	✓	●	●	✓	✓	✗	●	✓	✗	●	✓
125	☐	✓	✓	● (1)	● (1)	✓	✓	✗	✓	✓	☐	✓	● (1)
150	☐	✓	✓	● (1)	● (1)	✓	✓	✗	●	●	✓	✓	✗
200	☐	✓	✓	✓ (2)	✗	✓	✓	✗	✓	✓	●	✓	✓ (2)
250	☐	✓	✓	●	✗	✓	✓	✗	✗	✓	●	✓	✗
300	☐	✓	✓	✓ (2)	✗	✓	✓	✗	✓	✓	●	●	✓ (2)
350	☐	✓	✓	●	✗	✓	✓	✗	✓	✓	●	●	●
400	☐	✓	✓	●	✗	✓	✓	✗	✗	✗	●	●	✓
450	☐	✓	✓	●	✗	✓	✓	✗	✗	●	●	✓	✗
500	☐	✓	✓	●	✗	✓	✓	✗	✗	✗	●	✓	✓
600	☐	✓	✓	●	✗	✓	✓	✗	✗	✗	●	✗	✗
700	☐	✓	✓	✗	✗		✓	✗			●	✓	✗
800	☐	✓	✓	✗	✗		✓	✗			●	✓	✗

✓ standard  
 ☐ only body PN 6 version  
 ● on request  
 ✗ not possible

(1) only with ductile iron bodies  
 (2) standard with ductile iron and steel bodies, on request with different materials

Compatibility flanges - body Lug

DN	EN 1092-1 / EN 1092-2					ASME/ANSI			BS 10		JIS B2220		
	PN 6	PN 10	PN 16	PN 25	PN 40	class 125	class 150	class 300	tab D	tab E	5K	10K	16K
40	☐	✓	✓	✓	✓	✓	✓	●	☐	☐	●	●	●
50	☐	✓	✓	✓	✓	✓	✓	●	●	●	●	●	✗
65	☐	✓	✓	✓	✓	✓	✓	●	●	●	●	●	●
80	☐	✓	✓	✓	✓	✓	✓	●	●	●	●	●	✓
100	☐	✓	✓	●	●	✓	✓	✗	●	✓	✗	●	●
125	☐	✓	✓	● (1)	● (1)	✓	✓	✗	✓	✓	✓	✓	● (1)
150	☐	✓	✓	● (1)	● (1)	✓	✓	✗	●	●	●	✓	✗
200	☐	✓	✓	●	✗	✓	✓	✗	●	●	●	✓	✗
250	☐	✓	✓	✗	✗	✓	✓	✗	✗	●	●	✓ (1)	✗
300	☐	✓	✓	✗	✗	✓	✓	✗	●	●	●	●	✗
350	☐	✓	✓	✗	✗	✓	✓	✗	●	●	●	●	✗
400	☐	✓	✓	✗	✗	✓	✓	✗	●	●	●	●	●
450	☐	✓	✓	✗	✗	✓	✓	✗	✗	●	●	✓	✗
500	☐	✓	✓	✗	✗	✓	✓	✗	✗	✗	●	✓	✗
600	☐	✓	✓	●	✗	✓	✓	✗	✗	✗	●	✗	✗
700	☐	✓	✓	✗	✗		✓	✗			●	✓	✗
800	☐	✓	✓	✗	✗		✓	✗			●	✓	✗

✓ standard  
 ☐ only body PN 6 version  
 ● on request  
 ✗ not possible

(1) only with ductile iron bodies  
 (2) standard with ductile iron and steel bodies, on request with different materials

Test

GHIBSON valves are built according to following international standards:

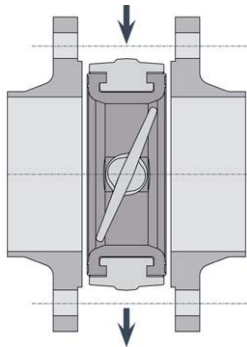
Body test pressure:	DIN 3230BA - API598	DIN 3230	body test	hydraulic test	pneu test
Hydraulic test pressure:	DIN 3230BN1 - API598	PN6	9 bar	7 bar	6 bar
Pneumatic test pressure:	DIN 3230BO1 - API598	PN10	15 bar	11 bar	6 bar
Test certificates:	UNI EN 10204 2.2 (standard)	PN16	24 bar	17,6 bar	6 bar
	UNI EN 10204 3.1 (on request)	PN25	38 bar	27,5 bar	6 bar
	UNI EN 10204 3.2 (on request)				

Test duration is indicated by API598 standard

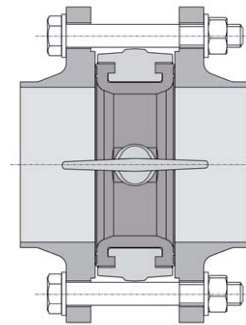
Body test pressure:	Hydraulic test pressure:	Pneumatic test pressure:	API598	body test	hydraulic test
< DN 65 = 15 sec.	< DN 65 = 15 sec.	< DN 65 = 15 sec.	ANSI125	21 bar	18 bar
DN 65 / DN 200 = 80 sec.	DN 65 / DN 200 = 30 sec.	DN 65 / DN 200 = 30 sec.	ANSI150	30 bar	22 bar
> DN 200 = 180 sec.	> DN 200 = 60 sec	> DN 200 = 60 sec	ANSI300	78 bar	58 bar

Installation

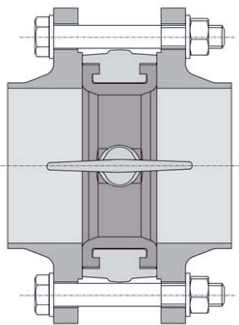
Assembly



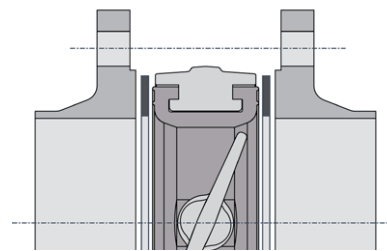
1 - Leave a space between flanges so that valve can be easily inserted and removed.



2 - Open completely the valve before tightening flanges.



3 - Tighten bolts till flanges are in contact with valve body.

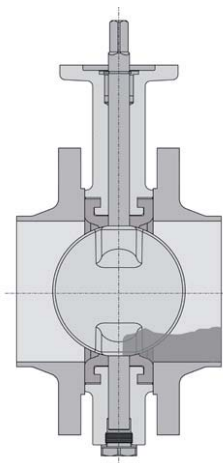


4 - NOTE: do not insert other packing between flange and valve.

NOTE: Weld the pipe only in spots with the valve between flanges. Remove the valve before finishing welding to avoid that heat damage the seat. Clean carefully the welding to avoid that slags damage the seat.

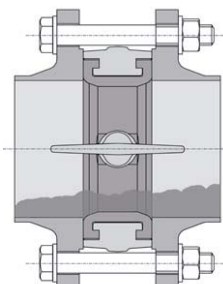
Installation for powders and muddy fluids

In case of use with powders or muddy fluids, install the valve with horizontal rotation axis, to allow sediments to flow easily on opening.



**Wrong**  
Vertical rotation axis

←  
powders or muddy fluids



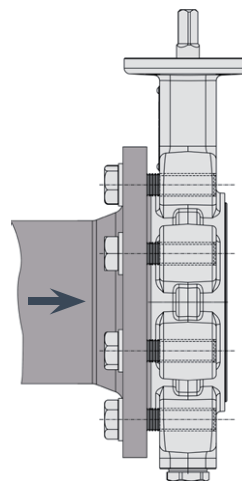
**Right**  
Horizontal rotation axis

←  
powders or muddy fluids

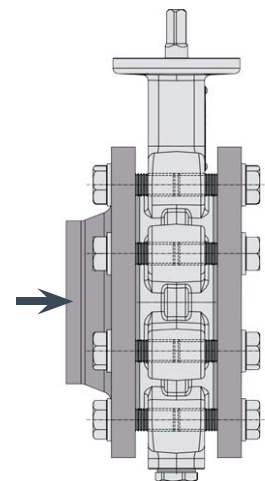
This type of installation is always advisable with valve diameters over DN 400.

End piping installation

When valves are installed end of piping, a counterflange as per dwg type B is needed to secure tightness at max pressure.



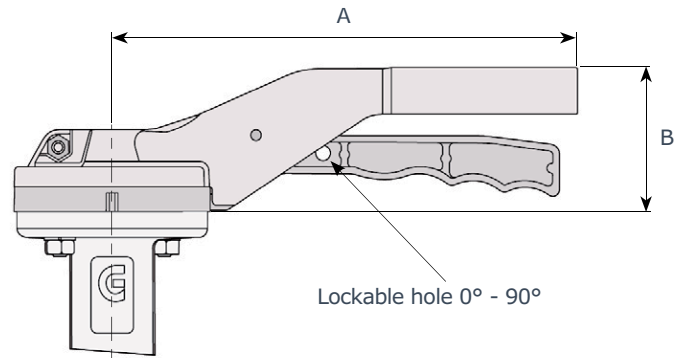
Type A installation without end piping



Type B installation with end piping

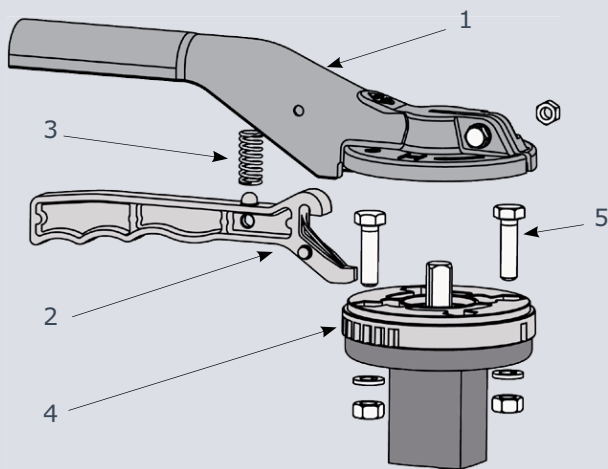
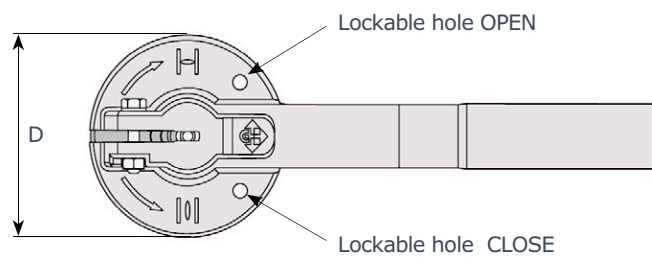
valve type	P <sub>max</sub> (Bar)	
	type A installation	type B installation
BLPD	4	6
BLKI	6	16
BLKA	16	20
BLKX	16	25

Handlevers



DN	A	B	D	Kg
40 - 100	220	67	93	0.6
125 - 150	275	67	93	0.65
200 - 300	340	76	125	1

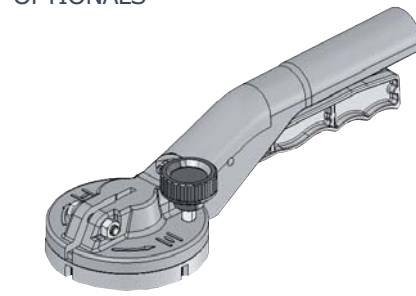
Note:  
DN 250 - 300 handlever not recommended  
(PD series excluded)



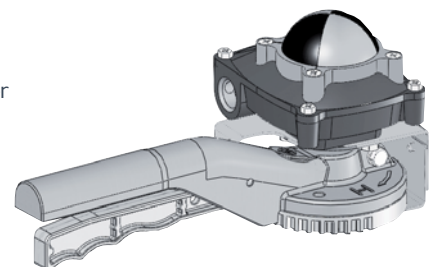
1	lever	aluminium
2	trigger	aluminium
3	spring	stainless steel
4	disc positioning	aluminium
5	screws	steel

\* others material on request

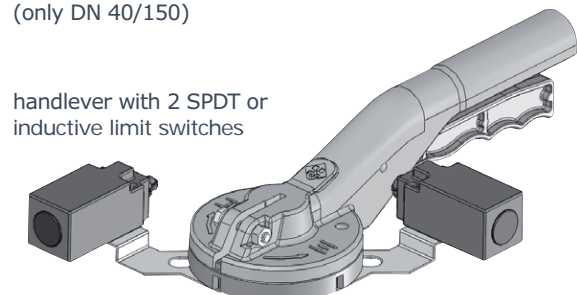
OPTIONALS



Adjustable handlever

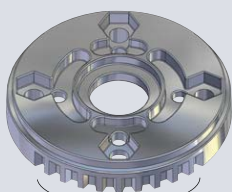


handlever with switch box  
(only DN 40/150)

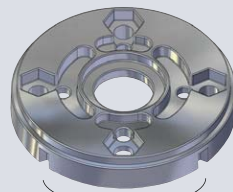


handlever with 2 SPDT or  
inductive limit switches

positioning disc DN 40 - 150 designed for flanges ISO 5211 F05/F07



10 positions



Open - Closed

positioning disc with two types of regulation: 10 positions or Open/Close

**Gearboxes**

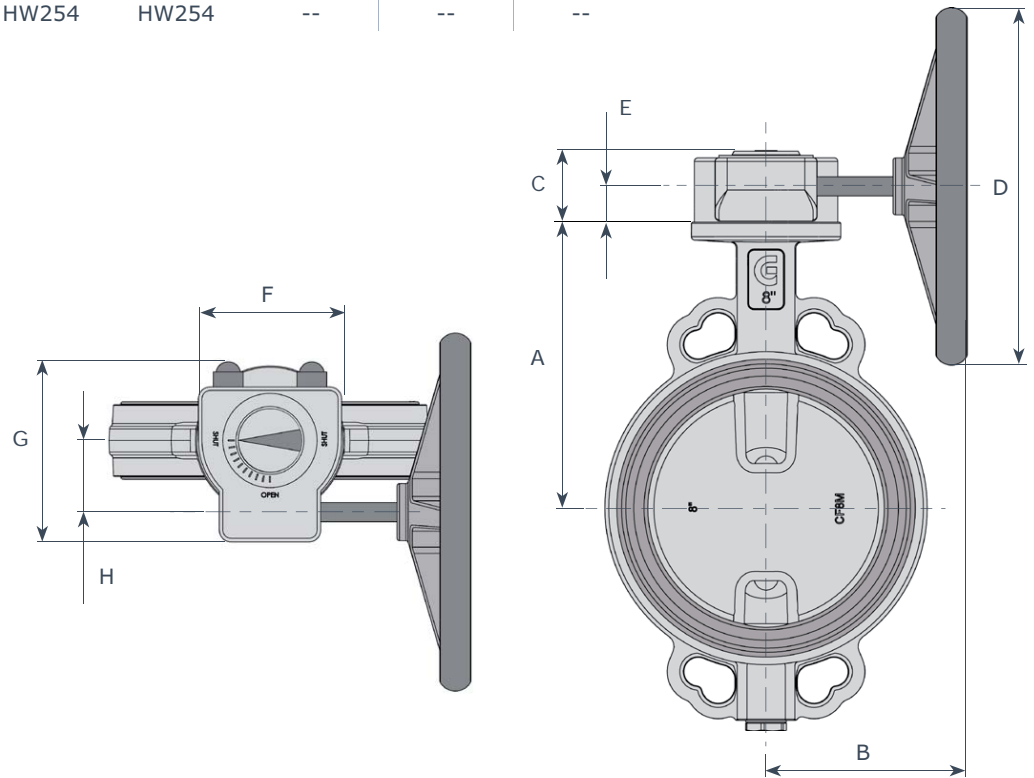
Aluminium body - HW Series

**Coupling valve - actuators**

DN	"	PD	KI			KA	KX
			p = 6 bar	p = 10 bar	p = 16 bar		
40	1 <sup>1/2</sup>	--	HW070	HW070	HW070	--	--
50	2	HW070	HW070	HW070	HW070	HW070	HW070
65	2 <sup>1/2</sup>	HW070	HW070	HW070	HW070	HW070	HW070
80	3	HW070	HW070	HW070	HW070	HW070	HW070
100	4	HW070	HW070	HW070	HW070	HW070	HW070
125	5	HW070	HW070	HW070	HW070	HW070	HW070
150	6	HW070	HW070	HW070	HW070	HW070	HW070
200	8	HW102	HW102	HW102	HW102	HW102	HW102
250	10	HW102	HW102	HW102	HW102	HW102	--
300	12	HW102	HW102	HW102	HW102	HW102	--
350	14	HW140	HW140	HW140	HW140	HW140	--
400	16	HW140	HW140	HW140	HW140	HW165	--
450	18	HW165	HW165	HW165	HW165	HW165	--
500	20	HW165	HW165	HW165	HW165	HW254	--
600	24	--	HW254	HW254	--	--	--
700	28	--	HW254	HW254	--	--	--
800	32	--	HW254	HW254	--	--	--

**HW series**  
 body: aluminium  
 worm gears: steel  
 sector gear: ductile iron  
 shaft: stainless steel  
 handwheel: steel  
 protection: IP65  
 T: -20 / +120 °C

DN	"	A
40	1 <sup>1/2</sup>	130
50	2	138
65	2 <sup>1/2</sup>	144
80	3	158
100	4	173
125	5	186
150	6	202
200	8	240
250	10	270
300	12	300
350	14	330
400	16	355
450	18	400
500	20	422
600	24	495
700	28	550
800	32	640



Mod.	B	C	D	E	F	G	H	Kg
HW070	160	48	140	27	80	115	42	1.6
HW102	215	56	250	33	120	150	60	3
HW140	325	95	400	51	185	225	80	10
HW165	395	105	600	61	230	268	105	20
HW254	416	125	700	80	265	332	130	25

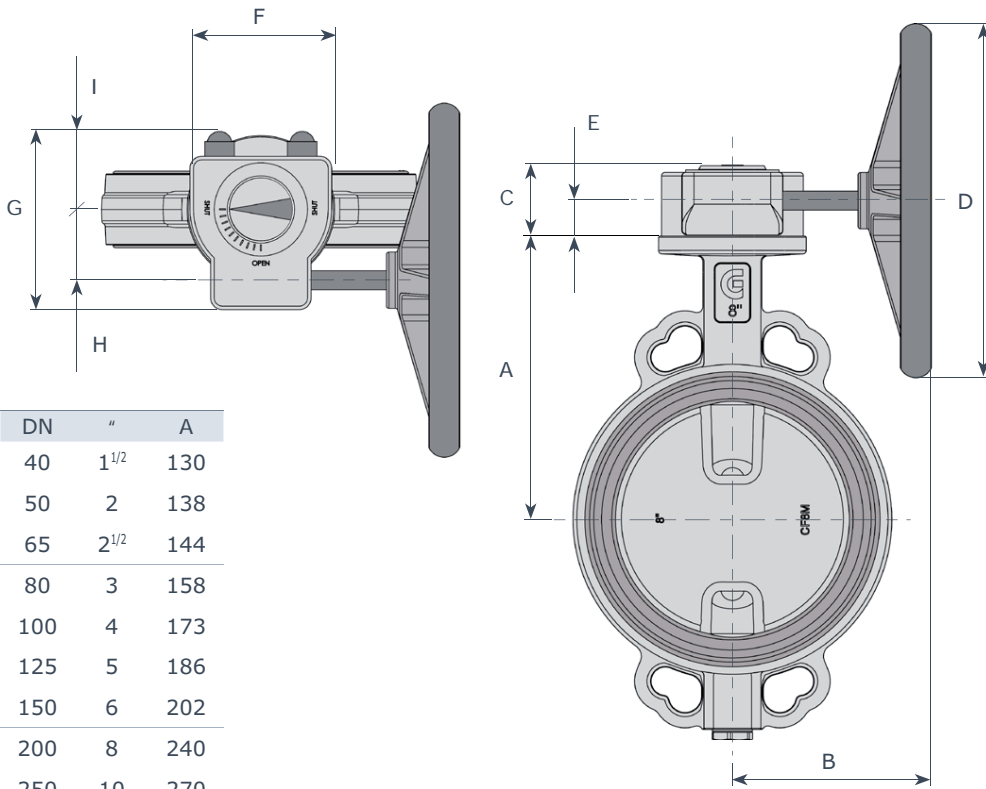
**Gearboxes**  
Cast Iron body - AB Series

**Coupling valve - actuators**

DN	"	PD	KI			KA	KX
			p = 6 bar	p = 10 bar	p = 16 bar		
40	1 1/2	AB150	AB150	AB150	AB150	AB150	AB150
50	2	AB150	AB150	AB150	AB150	AB150	AB150
65	2 1/2	AB150	AB150	AB150	AB150	AB150	AB150
80	3	AB150	AB150	AB150	AB150	AB150	AB150
100	4	AB150	AB150	AB150	AB150	AB150	AB150
125	5	AB150	AB150	AB150	AB150	AB150	AB150
150	6	AB150	AB150	AB150	AB150	AB150	AB150
200	8	AB215	AB215	AB215	AB215	AB215	AB215
250	10	AB550	AB550	AB550	AB550	AB550	AB550
300	12	AB550	AB550	AB550	AB550	AB550	AB550
350	14	AB880	AB880	AB880	AB880	AB880	AB880
400	16	AB880	AB880	AB880	AB880	AB880	AB880
450	18	AB880	AB880	AB880	AB880	AB1250	--
500	20	AB880	AB880	AB880	AB880	AB1250	--
600	24	--	AB1250	AB1250	--	AB1954	--
700	28	--	AB1950	AB1950	--	AB6804	--
800	32	--	AB1950	AB1954	--	AB6806	--

**AB series**

body: cast iron GG25  
 worm gears: steel  
 sector gear: ductile iron  
 shaft: steel  
 handwheel: steel  
 protection: IP67  
 T: -20 / +120 °C  
 low/high temperature execution on request



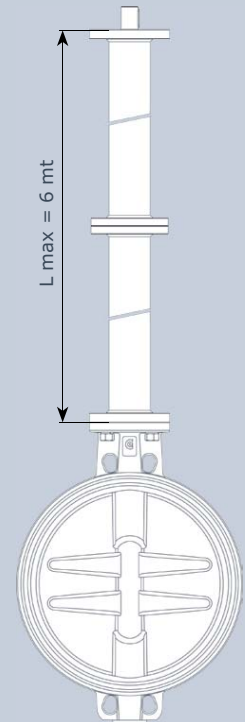
DN	"	A
40	1 1/2	130
50	2	138
65	2 1/2	144
80	3	158
100	4	173
125	5	186
150	6	202
200	8	240
250	10	270
300	12	300
350	14	330
400	16	355
450	18	400
500	20	422
600	24	495
700	28	550
800	32	640

Mod.	B	C	D	E	F	G	H	I	Kg
AB150	134	55	125	27	80	124	43	58	2.2
AB215	197	63	200	29	102	128	52	48	3.5
AB550	292	88	300	41	138	174	71	69	8.5
AB880	319	93	400	42	200	226	86	100	14
AB1250	380	102	500	48	220	258	105	110	22
AB1950	425	126	600	52	285	323	130	143	32
AB1954	485	126	600	52	285	323	211	143	45
AB6804	538	159	600	59	370	407	263	170	70
AB6806	579	159	600	59	370	407	278	170	81

**Waterproof valve shaft extension**

When necessary, it's possible to extend the valve shaft as indicated in the figure. Construction is in carbon steel with protective paint (on request stainless steel). Max length to be supplied is 6 meters from the flange plane to the valve.

"L" measure should be indicated when ordering.



Our technical department is available to solve special applications.

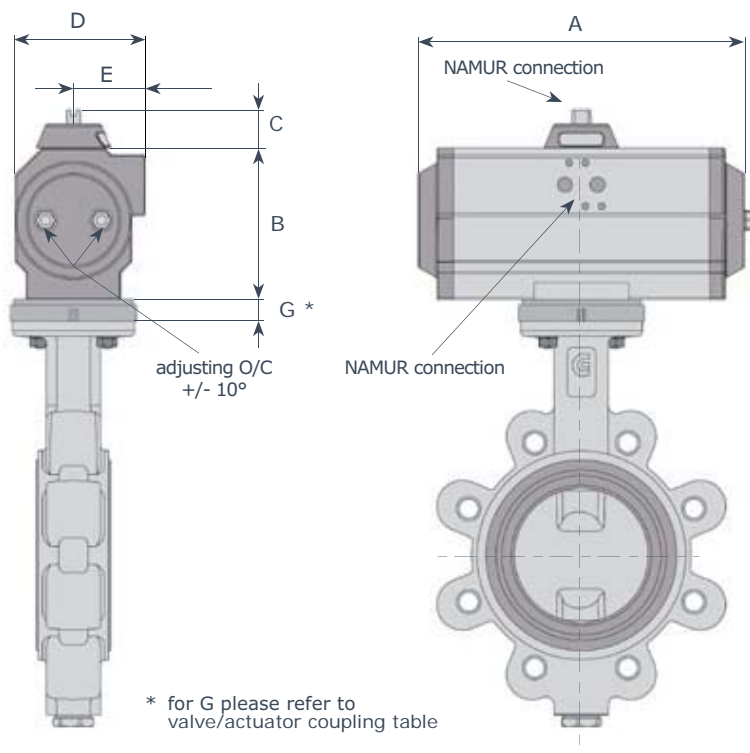
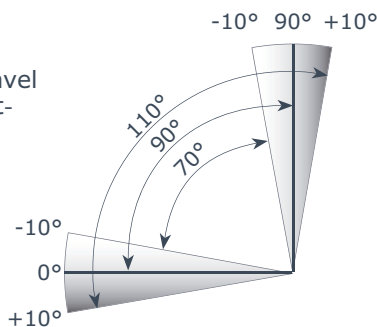
**Pneumatic Actuators**  
DA double acting - SR spring return

**Features:**

Max air pressure: **10 bar**  
 Temperature: **-20°C / +80°C**  
*on request:* **-50°C / +150°C**  
 torque at 5.6 Bar: **31 Nm / 3564 Nm**  
 Double travel stop open/close: **±10°**

UT series actuators feature a bi-directional travel stop. Side located stops allow a ±10° adjustment in both closing and opening directions, so guarantee a range of adjustment between 70° and 110° of actuator stroke.

Stops can be modified on request to allow higher closing/opening angles



**Operating media:**

dry/clear air : P max 10 Bar

**Temperature:**

O-Rings NBR -20° C/+100° C

O-Rings FKM -15° C/+150° C

O-Rings Silicon -50° C/+ 80° C

Rotation: 90°

Regulation range: +/- 10°

Lubrication For Life

**Flange:**

ISO 5211/DIN 3337

connection for solenoid valve,

switches box:

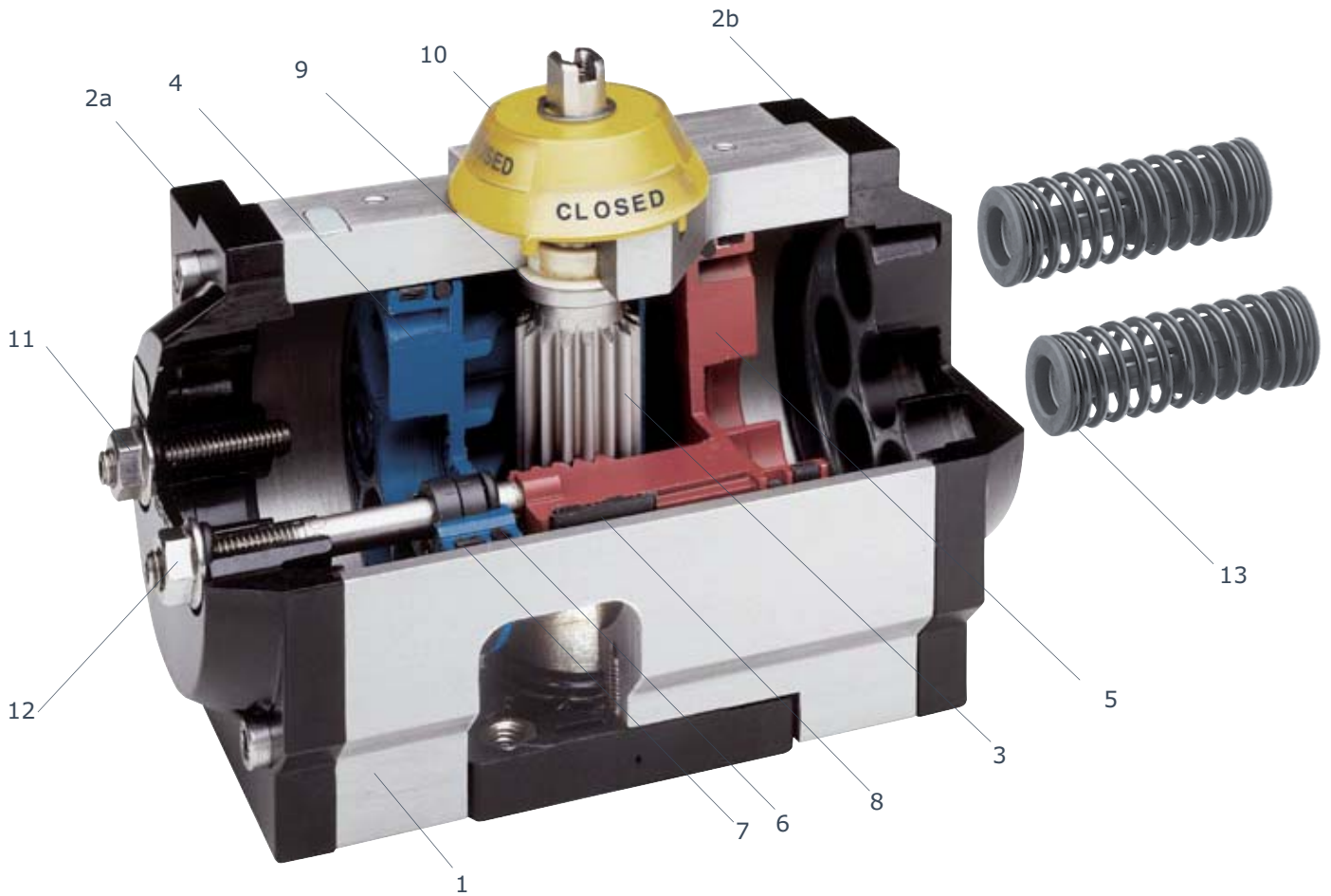
NAMUR VDI / VDE 3845

Mod. UT: double acting  
 Mod. UTS: single acting spring return

DA	SR	A	B	C	D	E	DA	SR	A	B	C	D	E
UT 10	UTS 10	119	70	20	67	27	UT 45	UTS 45	351	168.5	30	145	73
UT 15	UTS 15	165	81	30	81	47	UT 50	UTS 50	361	202	30	181	91
UT 17	UTS 17	197	81	30	81	47	UT 55	UTS 55	418	202	30	181	91
UT 20	UTS 20	177	98	30	96	54	UT 60	UTS 60	444	274	30	232	116
UT 25	UTS 25	239	98	30	96	54	UT 65	UTS 65	502	274	30	232	116
UT 30	UTS 30	230	117	30	114	62	UT 70	UTS 70	587	332	30	332	166
UT 35	UTS 35	246	154	30	131	65.5	UT 75	UTS 75	677	332	30	332	166
UT 40	UTS 40	290	154	30	131	65.5	* UTS / UTS4 : same dimensions						



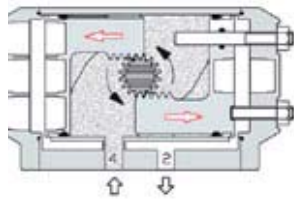
Pneumatic actuators rack & pinion - UT series



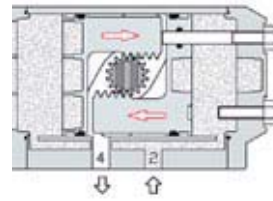
item.	part	material
1	body	<ul style="list-style-type: none"> <li>• anodized aluminium ASTM B210</li> </ul>
2a	left end cap	<ul style="list-style-type: none"> <li>• die-cast aluminium UNI 5076</li> </ul>
2b	right end cap	<ul style="list-style-type: none"> <li>• die-cast aluminium UNI 5076</li> </ul>
3	pinion	<ul style="list-style-type: none"> <li>• steel SAE 11L14</li> <li>• nickel coated steel acc. to ASTM B733</li> </ul>
4	left piston	<ul style="list-style-type: none"> <li>• die-cast aluminium UNI 5076</li> </ul>
5	right piston	<ul style="list-style-type: none"> <li>• die-cast aluminium UNI 5076</li> </ul>
6	piston O-ring	<ul style="list-style-type: none"> <li>• NBR</li> </ul>
7	bearing pad	<ul style="list-style-type: none"> <li>• techno-polymer</li> </ul>
8	piston skate	<ul style="list-style-type: none"> <li>• techno-polymer</li> </ul>
9	bearing pad upper pinion	<ul style="list-style-type: none"> <li>• techno-polymer</li> </ul>
10	position indicator	<ul style="list-style-type: none"> <li>• techno-polymer</li> </ul>
11	open travel stop	<ul style="list-style-type: none"> <li>• stainless steel AISI 304</li> </ul>
12	close travel stop	<ul style="list-style-type: none"> <li>• stainless steel AISI 304</li> </ul>
13	spring SR mod.	<ul style="list-style-type: none"> <li>• spring steel</li> </ul>

Options body and end cap: hard anodizing or PTFE coating or epoxy powder coated units or electroless nickel plating.

Torque chart - double acting - Nm



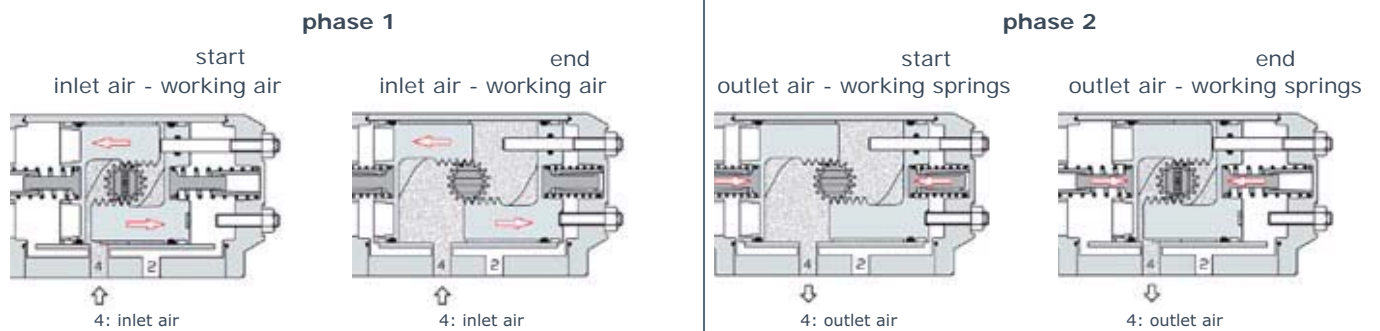
4: inlet air / 2: outlet air



2: inlet air / 4: outlet air

TIPO/TYPE	2 Bar	3 Bar	4 Bar	5 Bar	5,62 Bar	6 Bar	7 Bar	8 Bar	9 Bar	10 Bar
UT 10	2.52	5.0	10.1	12.6	14.1	15.1	17.6	10.5	--	--
UT 15	11	17	22	28	31	33	39	44	50	55
UT 17	15	22	29	36	41	44	51	58	65	73
UT 20	20	30	40	50	57	60	70	80	90	100
UT 25	30	45	60	76	85	91	106	121	136	151
UT 30	40	60	80	101	113	121	141	161	181	201
UT 35	64	97	129	161	180	193	226	258	290	322
UT 40	81	121	161	202	226	242	282	323	363	403
UT 45	126	189	252	315	353	377	440	503	566	629
UT 50	181	272	362	453	509	544	634	725	815	906
UT 55	242	362	483	604	676	725	846	966	1087	1208
UT 60	366	550	733	916	1030	1099	1282	1466	1649	1832
UT 65	483	725	966	1208	1358	1450	1691	1933	2174	2416
UT 70	946	1419	1892	2365	2658	2838	3311	3784	--	--
UT 75	1268	1903	2537	3171	3564	3805	4439	5074	--	--

Torque chart - single acting 90° - Nm

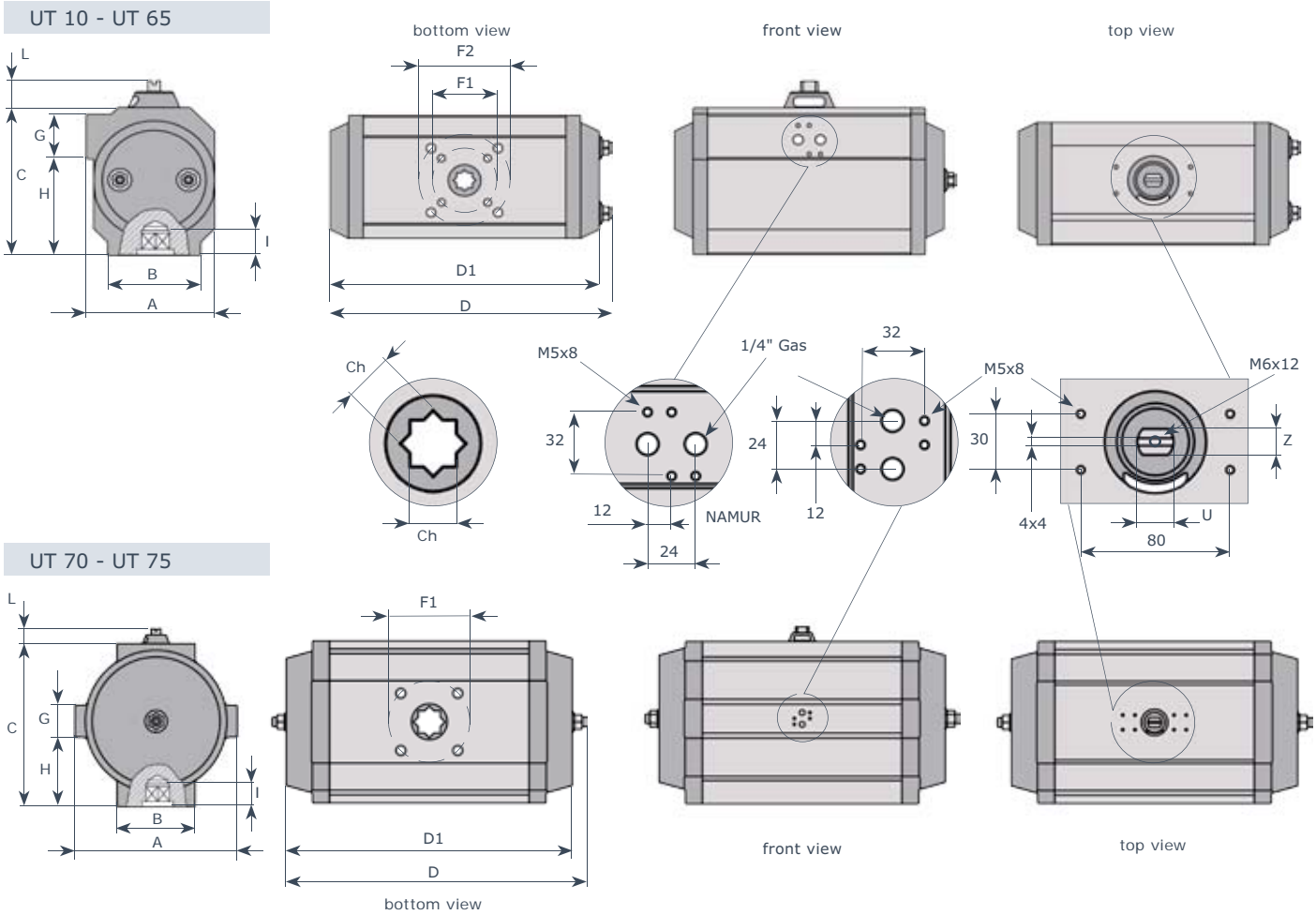


type	springs	phase 1														phase 2	
		3 bar		4 bar		5 bar		5.6 bar		6 bar		7 bar		8 Bar		start	end
UT 10	1+1	5,1	3,9	7,6	6,4	10,1	8,9	11,6	10,4	12,6	11,4	15,1	13,9	17,7	13,9	3,7	2,5
	2+2	2,6	0,2	5,1	2,7	7,6	5,2	9,1	6,7	10,1	7,7	12,6	10,2	15,2	10,2	7,4	5,0
	3+3	--	--	--	--	5,1	1,5	6,6	3,0	7,6	4,0	10,1	6,5	12,7	6,5	11,2	7,5
UT 15	2+2	10,5	8,1	16,0	13,6	21,5	19,1	24,6	22,5	27	24,6	32,5	30,1	38	35,6	8,4	6,0
	3+3	7,4	3,9	12,9	9,4	18,4	14,9	21,8	18,3	23,9	20,4	29,4	25,9	34,9	31,4	12,6	9,1
	4+4	--	--	9,9	5,1	15,4	10,6	18,8	14	20,9	16,1	26,4	21,6	31,9	27,1	16,9	12,1
	5+5	--	--	6,9	0,9	12,4	6,4	15,8	9,8	17,9	11,9	23,4	17,4	28,9	22,9	21,1	15,1
UT 17	7+5	--	--	--	--	9,4	2,2	12,8	5,6	14,9	7,7	20,4	13,2	25,9	18,7	25,3	18,1
	2+2	14,5	11,2	21,8	18,5	29,0	25,7	33,4	30,1	36,3	33	43,5	40,2	50,8	47,5	10,5	7,2
	3+3	10,9	6,0	18,2	13,3	25,4	20,5	29,8	24,9	32,7	27,8	39,9	35	47,2	42,3	15,7	10,8
	4+4	7,3	0,8	14,6	8,1	21,8	15,3	26,2	19,7	29,1	22,6	36,3	29,8	43,6	37,1	20,9	14,4
UT 20	5+5	--	--	10,9	2,9	18,1	10,1	22,5	14,5	25,4	17,4	32,6	24,6	39,9	31,9	26,1	18,1
	7+5	--	--	--	--	14,5	4,8	18,9	9,2	21,8	12,1	29	19,3	36,3	26,6	31,4	21,7
	2+2	19,6	16,2	29,6	26,2	39,6	36,2	46,1	42,7	49,6	46,2	59,6	56,2	69,6	66,2	13,8	10,4
	3+3	14,4	9,2	24,4	19,2	34,4	29,2	40,9	35,7	44,4	39,2	54,4	49,2	64,4	59,2	20,8	15,6
UT 20	4+4	9,2	2,3	19,2	12,3	29,2	22,3	35,7	28,8	39,2	32,3	49,2	42,3	59,2	52,3	27,7	20,8
	5+5	--	--	14,0	5,4	24,0	15,4	30,5	21,9	34	25,4	44	35,4	54	45,4	34,6	26,0
	7+5	--	--	--	--	18,8	8,4	25,3	14,9	28,8	18,4	38,8	28,4	48,8	38,4	41,6	31,2

**Torque chart - single acting 90° - Nm**

type	springs	phase 1														phase 2	
		3 bar		4 bar		5 bar		5.2 bar		6 bar		7 bar		8 Bar		start	end
		start	end	start	end	start	end	start	end	start	end	start	end	start	end		
UT 25	2+2	31,3	23,2	46,4	38,3	61,5	53,4	70,5	62,4	76,6	68,5	91,7	83,6	106,8	98,7	22,1	14,0
	3+3	24,4	12,1	39,5	27,2	54,6	42,3	63,6	51,3	69,7	57,4	84,8	72,5	99,9	87,6	33,2	20,9
	4+4	17,4	1,1	32,5	16,2	47,6	31,3	56,6	40,3	62,7	46,4	77,8	61,5	92,9	76,6	44,2	27,9
	5+5	--	--	25,5	5,1	40,6	20,2	49,6	29,2	55,7	35,3	70,8	50,4	85,9	65,5	55,3	34,9
	7+5	--	--	--	--	33,6	9,2	42,6	18,2	48,7	24,3	63,8	39,4	78,9	54,5	66,3	41,9
UT 30	2+2	39,2	32,0	59,3	52,1	79,4	72,2	91,6	84,4	99,5	92,3	119,6	112,4	139,7	132,5	28,3	21,1
	3+3	28,7	17,9	48,8	38,0	68,9	58,1	81,4	70,3	89	78,2	109,1	98,3	129,2	118,4	42,4	31,6
	4+4	18,1	3,7	38,2	23,8	58,3	43,9	70,5	56,1	78,4	64	98,5	84,1	118,6	104,2	56,6	42,2
	5+5	--	--	27,7	9,7	47,8	29,8	60	42	67,9	49,9	88	70	108,1	90,1	70,7	52,7
	7+5	--	--	--	--	37,3	15,6	49,5	27,8	54,7	35,7	77,5	55,8	97,6	75,9	84,9	63,2
UT 35	2+2	62,0	50,1	94,2	82,3	126,5	114,6	145,8	133,9	158,7	146,8	190,9	179	223,1	211,2	46,5	34,6
	3+3	44,6	26,9	76,8	59,1	109,1	91,4	128,4	110,7	141,3	123,6	173,5	155,8	205,7	188	69,7	52,0
	4+4	27,2	3,6	59,5	35,8	91,8	68,1	111,1	87,4	124	100,3	156,2	132,5	188,4	164,7	93,0	69,3
	5+5	--	--	42,2	12,6	74,5	44,9	93,8	64,2	106,7	77,1	138,9	109,3	171,1	141,4	116,2	86,6
	7+5	--	--	--	--	57,1	21,6	76,4	40,9	89,3	53,8	121,5	86	153,7	118,2	139,5	104,0
UT 40	2+2	79,0	63,9	119,3	104,2	159,6	144,5	183,8	168,7	199,9	184,8	240,3	225,2	280,6	265,5	57,0	41,9
	3+3	58,1	35,4	98,4	75,7	138,7	116	162,9	140,2	179	156,3	219,4	196,7	259,7	237	85,5	62,8
	4+4	37,2	6,8	77,5	47,1	117,8	87,4	142	111,6	158,1	127,7	198,5	168,1	238,8	208,4	114,1	83,7
	5+5	--	--	56,5	18,6	96,8	58,9	121	83,1	137,1	99,2	177,5	139,6	217,8	179,9	142,6	104,7
	7+5	--	--	--	--	75,9	30,4	100,1	54,6	116,2	70,7	156,6	111,1	196,9	151,4	171,1	125,6
UT 45	2+2	125,6	88,3	188,5	151,2	251,4	214,1	289,6	252,3	314,3	277	377,2	339,9	440,1	402,8	100,4	63,1
	3+3	94,0	38,1	156,9	101,0	219,8	163,9	258	202,1	282,7	226,8	345,6	289,7	408,5	352,6	150,6	94,7
	4+4	--	--	125,4	50,8	188,3	113,7	226,5	151,9	251,2	176,6	314,1	239,5	377	302,4	200,8	126,2
	5+5	--	--	--	--	156,7	63,5	194,9	101,7	219,6	126,4	282,5	189,3	345,4	252,2	251,0	157,8
	7+5	--	--	--	--	125,2	13,3	163,4	51,5	188,1	76,2	251	139,1	313,9	202	301,2	189,3
UT 50	2+2	173,7	147,5	264,3	238,1	354,9	328,7	411,1	384,9	445,5	419,3	536,1	509,9	626,7	600,5	124,3	98,1
	3+3	124,6	85,3	215,2	175,9	305,8	266,5	362	322,7	396,4	357,1	487	447,7	577,6	538,2	186,5	147,2
	4+4	--	--	166,2	113,8	256,8	204,4	313	260,6	347,4	295	438	385,6	528,6	476,2	248,6	196,2
	5+5	--	--	117,1	51,6	207,7	142,2	263,9	198,4	298,3	232,8	388,9	323,4	479,5	414	310,8	245,3
	7+5	--	--	--	--	158,7	80,1	214,9	136,3	249,3	170,7	339,9	261,3	430,5	351,9	372,9	294,3
UT55	2+2	243,2	194,4	364,0	315,2	484,8	436	557,3	508,5	605,6	556,8	726,4	677,6	847,2	798,4	167,9	119,1
	3+3	183,6	110,5	304,0	231,3	425,2	352,1	497,7	424,6	546	472,9	666,8	593,7	787,6	714,5	251,8	178,7
	4+4	124,0	26,6	244,8	147,4	365,6	268,2	438,1	340,7	486,4	389	607,2	509,8	728	630,6	335,7	238,3
	5+5	--	--	185,3	63,4	306,1	184,2	378,6	256,7	426,8	305	547,7	425,8	668,5	546,6	419,7	297,8
	7+5	--	--	--	--	246,5	100,3	319	172,8	367,3	221,1	488,1	341,9	608,9	462,7	503,6	357,4
UT 60	2+2	356,5	307,4	539,7	490,6	722,9	763,8	836,5	787,4	906,1	857	1089,3	1040,2	1272,5	1223,4	242,2	193,1
	3+3	260,0	186,2	443,2	369,4	626,4	552,6	740	666,2	812,6	735,8	992,8	919	1176	1102,2	363,4	289,6
	4+4	163,4	65,1	346,6	248,3	529,8	431,5	643,4	545,1	713	614,7	896,2	797,9	1079,4	981,1	484,5	386,2
	5+5	--	--	250,1	127,2	433,3	310,4	546,9	424	616,5	493,6	799,7	676,8	982,9	860	605,6	482,7
	7+5	--	--	153,5	6,2	336,7	189,4	450,3	303	519,9	372,6	703,1	555,8	886,3	739	726,6	579,3
UT 65	2+2	489,6	404,7	731,2	649,3	972,8	890,9	1122,6	1040,7	1214,4	1132,5	1456,6	1374,1	1697,6	1615,5	317,1	235,2
	3+3	372	249,1	613,6	490,7	855,2	732,3	1005	882,1	1096,8	973,9	1338,4	1215,5	1580	1457,1	475,7	352,8
	4+4	254,3	90,6	495,9	332,2	737,5	573,8	887,3	723,6	979,1	815,4	1220,7	1057	1462,3	1298,6	634,2	470,5
	5+5	--	--	378,3	173,6	619,9	415,2	769,7	565	861,5	656,8	1103,1	898,4	1344,7	1140	792,8	588,1
	7+5	--	--	260,8	14,8	502,4	256,4	652,2	406,2	744	498	985,6	739,6	1227,2	981,2	951,6	705,6
UT 70	2+2	1073	940	1546	1413	2019	1886	2312	2179	2492	2359	2965	2832	3438	3305	479	346
	3+3	900	700	1373	1173	1846	1646	2139	1939	2319	2119	2792	2592	3265	3065	719	519
	4+4	727	461	1200	934	1673	1407	1966	1700	2146	1880	2619	2353	3092	2826	958	692
	5+5	--	--	1026	694	1499	1167	1792	1460	1972	1640	2445	2113	2918	2586	1198	866
	6+6	--	--	853t	454	1326	927	1619	1220	1799	1400	2272	1873	2745	2346	1438	1039
	7+7	--	--	--	--	1153	688	1446	981	1626	1161	2099	1634	2572	2107	1677	1212
	8+8	--	--	--	--	--	--	1273	741	1453	921	1926	1394	2399	1867	1917	1385
	9+9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UT 75	2+2	1500	1261	2134	1895	2768	2529	3161	2922	3402	3163	4036	3797	4671	4432	642	403
	3+3	1299	940	1933	1574	2567	2208	2960	2601	3201	2842	3835	3476	4470	4111	936	604
	4+4	1098	619	1732	1253	2366	1887	2759	2280	3000	2521	3634	3155	4269	3790	1284	805
	5+5	--	--	1530	933	2164	1567	2557	1960	2798	2201	3432	2835	4067	3470	1604	1007
	6+6	--	--	1329	612	1963	1246	2356	1639	2597	1880	3231	2514	3866	3149	1925	1208
	7+7	--	--	--	--	1761	925	2154	1318	2395	1559	3029	2193	3664	2828	2246	1410
	8+8	--	--	--	--	1560	604	1953	997	2194	1238	2828	1872	3463	2507	2567	1611
	9+9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Pneumatic actuators - dimensions



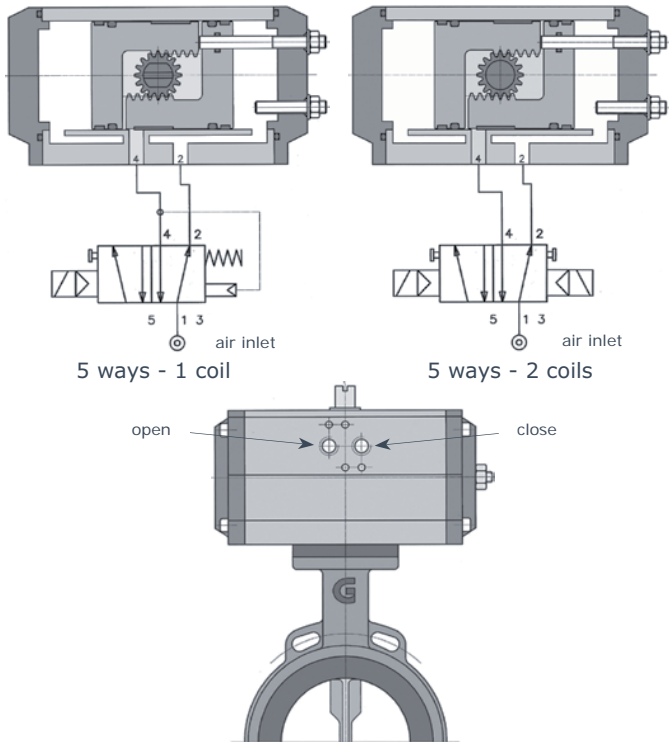
tipo/type	A	B	C	D	D1	F1	F2	G	H	I	Ch	L	U	Z
	UT10	-	53	71	119	-	-	F03	45	26	12,5	11	20	12/14
UT15	81	62	81	175	165	F05	F07	45	36	19	14	30	12	10
UT17	81	62	81	207	197	F05	F07	45	36	19	14	30	12	10
UT20	96	76,5	98	186	177	F05	F07	45	53	19	17	30	14	10
UT25	96	76,5	98	248	239	F05	F07	45	53	23	17	30	14	10
UT30	114	90,5	117	241	230	F05	F07	45	72	23	17	30	19,5	14
UT35	131	95,5	154	261	246	F07	F10	45	109	30	22	30	19,5	14
UT40	131	95,5	154	305	290	F07	F10	45	109	30	22	30	19,5	14
UT45	145	98,5	168,5	367	351	F07	F10	45	123.5	30	22	30	28	20
UT50	181	124,5	202	380,5	361	F10	F12	45	157	31	27	30	28	20
UT55	181	124,5	202	428	418	F10	F12	45	157	37	27	30	28	20
UT60	232	140	274	467	444	F10	F14	45	212	41	36	30	28	20
UT65	232	140	274	525	502	F10	F14	45	212	50	36	30	28	20
UT70	332	160	332	636	587	F16	//	55	283	64	46	30	45	36
UT75	332	160	332	734	677	F16	//	55	283	64	46	30	45	36

Weight and air consumption - full cycle

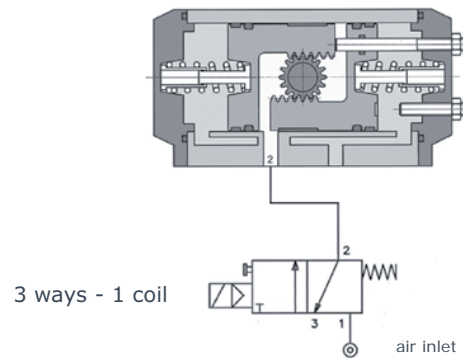
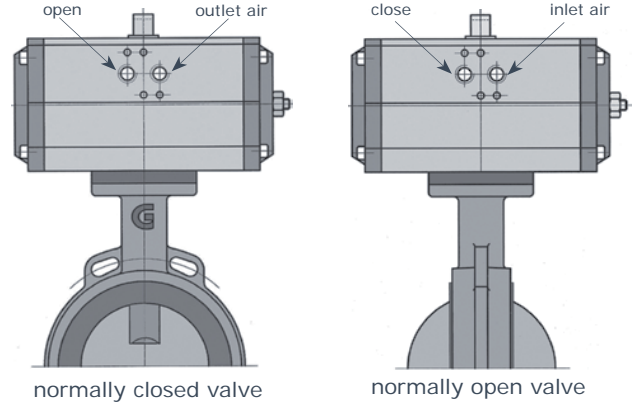
type	weight (kg)		air consumption (N Lt)		type	weight (kg)		air consumption (N Lt)	
	DA	SR	DA	SR		DA	SR	DA	SR
UT10	0.570	0.655	0.22	0.13	UT45	11.17	13.73	4.40	1.85
UT15	1.60	1.79	0.41	0.18	UT50	16.20	19,56	4.60	2.50
UT17	1.92	2.16	0.55	0.25	UT55	19.90	24.72	9.00	4.10
UT20	2.35	2.73	0.71	0.29	UT60	27.95	37.73	12.50	6.50
UT25	3.25	3.77	1.10	0.48	UT65	38.40	48.00	16.60	7.10
UT30	4.15	4.88	1.40	0.65	UT70	66.80	82.96	27.10	9.60
UT35	6.80	8.24	2.45	1.20	UT75	81.60	98.00	31.40	11.70
UT40	8.10	9.78	3.05	1.60					

**Pneumatic actuators**  
Double - Single acting

double acting actuator - 5 ways solenoid valve



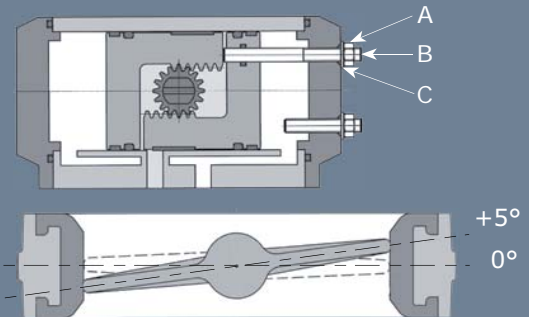
single acting actuator - 3 ways solenoid valve



**Adjustment of valve closing angle**

Gibson butterfly valves are tested and supplied with a closing angle adjustment at +5°. In case this angle should be modified, operate as follows:

1. let the valve in semi-open position,
2. close compressed air supply,
3. loosen nut A,
4. rotate B screws anticlockwise to reduce closing angle, or clockwise to enlarge it,
5. tighten A nut, paying attention that C packing is not damaged,
6. re-connect compressed air and close the valve.







**DOUBLE ECCENTRIC**

**HD Series**

• technical data	<b>202</b>
• components DN 50-300	202
RTFE seat	203
Inconel seat	203
"FIRE SAFE" seat	204



**TABLES**

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• tests	206

<b>Gearboxes</b>	<b>207</b>
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**BVHD - Wafer BLHD- Lug**  
 DN 50 - 300 • 2" - 12"

Max working pressure:

BVHD/BLHD DN 50÷300: **25 Bar**

Flanges: DN 50 ÷ 250: **PN 10-16-25•A150**  
 DN 300: **PN 10-16•A150**

Design:

EN 593~EN 736

EN 12516~EN 1092~EN12266

ISO 5211~DIN 3337~API 609~ASME B16.34

PED 97/23/EC (cat III) Mod H

Face to face:

DIN EN 558-1 Series 20~ISO 5752 Series 20

BS-5155 Series 4~MSS-SP67

API 609 cat.A~NFE 29305-1

Testing:

EN 12266-1 Rate A ~ ISO 5208 Rate A

DIN 3230 ~ API 598

FIRE TEST API607 VI Ed. September

Tag:

EN 19 ~ MSS SP-25



All valves are supplied with a metallic label in compliance with PED directive.



**BODY**

material	references	standard coating	DN
Carbon steel (wafer, lug)	ASTM A216-WCB	High-temp coating grey color	50-300
Stainless steel (wafer, lug)	ASTM A351 CF8M (A316)	-	50-300
DUPLEX	ASTM A890 Gr. 4A	-	50-300
SUPERDUPLEX	ASTM A890 Gr. 5A	-	50-300

**DISC**

material	references	DN
Stainless steel	ASTM A351 CF8M (A316)	50-300
DUPLEX	ASTM A890 Gr. 4A	50-300
SUPERDUPLEX	ASTM A890 Gr. 5A	50-300

**BODY SEAT**

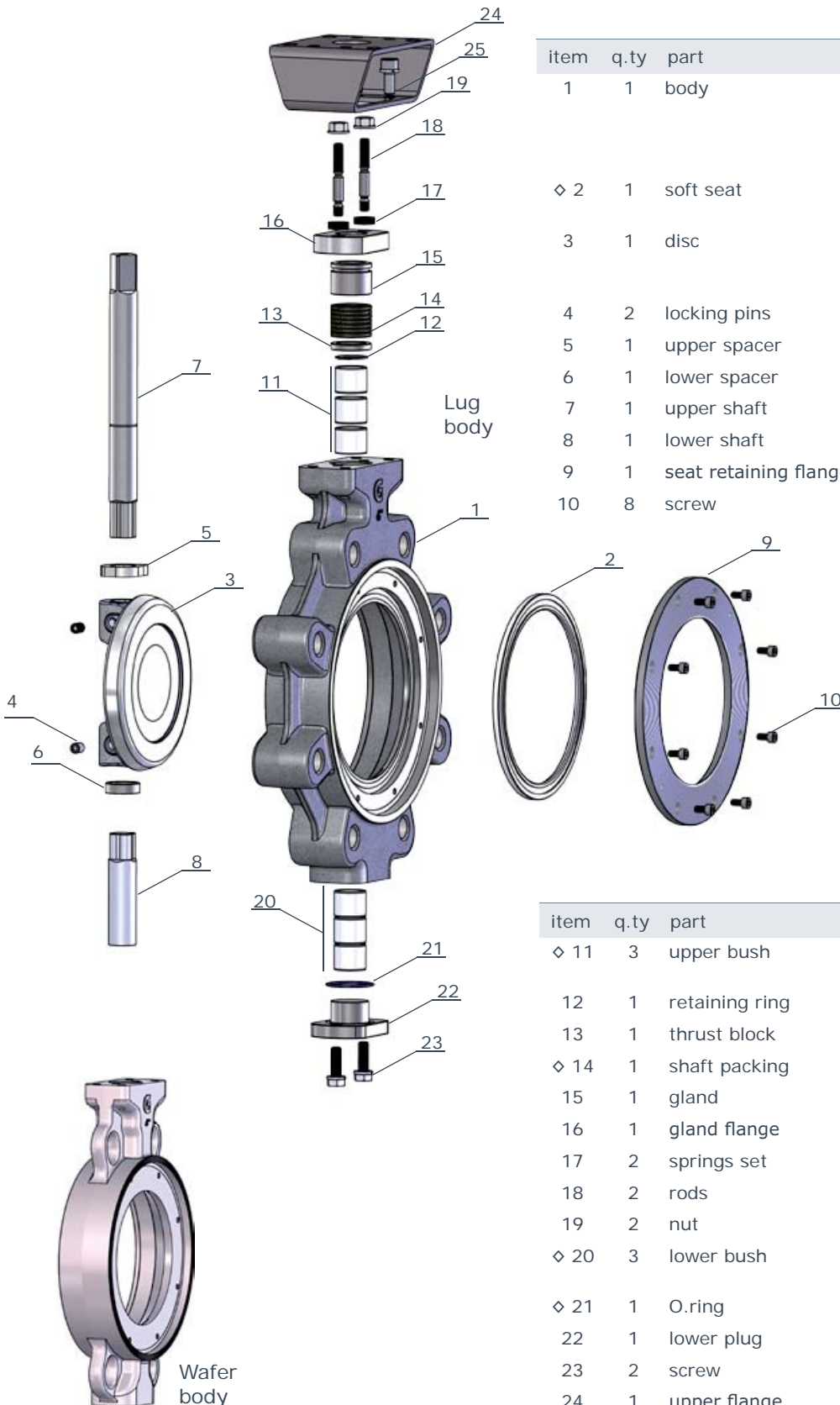
ref.	material	working temp.
RT	RTFE (PTFE reinforced)	-60°C / +230°C
MT	Inconel 625	-60°C / +450°C

On request can be supplied other materials as: LCB, Hastelloy, Monel, Uranus, Alloy, DUPLEX, Special steels, Special bronzes.  
 Coating on request: RILSAN®, Halar®, Chenisil®

**NOTE:** in case of gas application, please contact our technical dpt.



**BVHD - Wafer BLHD - Lug • RTFE seat**  
 DN 50 - 300 • 2" - 12"  
 PN 10 - 16 - 25 • ANSI 150



item	q.ty	part	material
1	1	body	<ul style="list-style-type: none"> <li>• A216 - WCB</li> <li>• A351 - CF8M (AISI 316)</li> <li>• ASTM A890 Gr.4A(DUPLEX)</li> <li>• ASTM A890 Gr.5A(S.DUPLEX)</li> </ul>
◇ 2	1	soft seat	<ul style="list-style-type: none"> <li>• PTFE</li> <li>• RTFE (PTFE reinforced)</li> </ul>
3	1	disc	<ul style="list-style-type: none"> <li>• A351 - CF8M (AISI 316)</li> <li>• ASTM A890 Gr.4A(DUPLEX)</li> <li>• ASTM A890 Gr.5A(S.DUPLEX)</li> </ul>
4	2	locking pins	• AISI316
5	1	upper spacer	• AISI316
6	1	lower spacer	• AISI316
7	1	upper shaft	• ASTM A564 Gr630
8	1	lower shaft	• ASTM A564 Gr630
9	1	seat retaining flange	• AISI 316
10	8	screw	• AISI 316

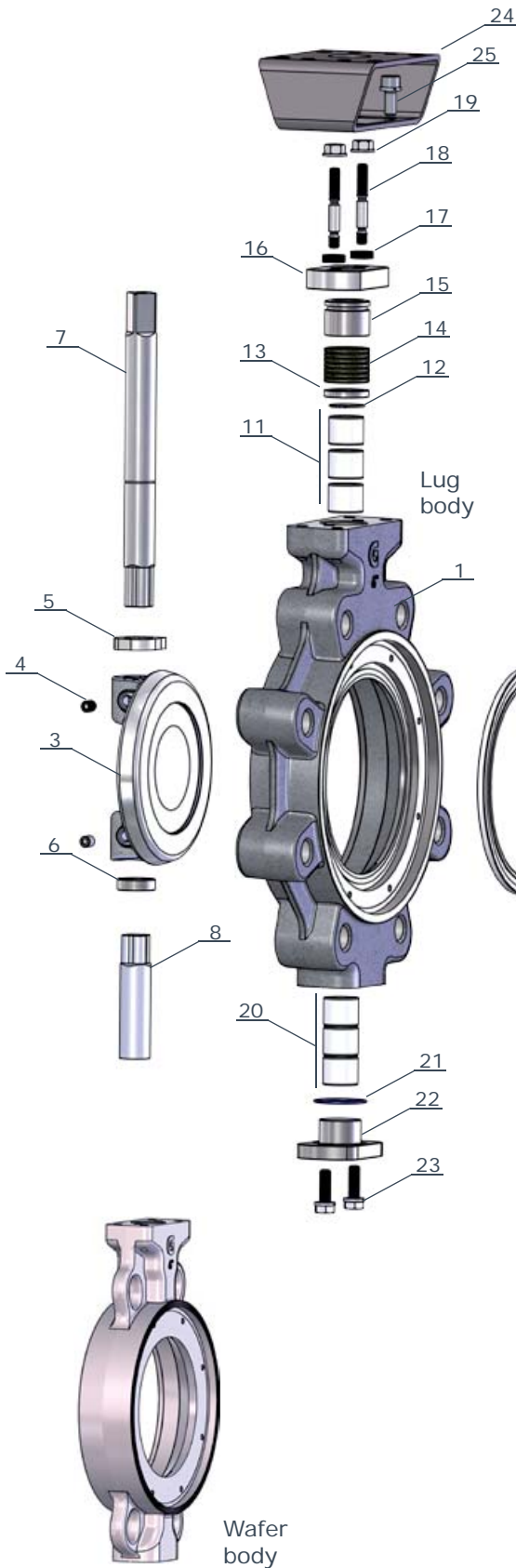
item	q.ty	part	material
◇ 11	3	upper bush	<ul style="list-style-type: none"> <li>• stainless steel + PTFE</li> <li>• steel + PTFE</li> </ul>
12	1	retaining ring	• A 316
13	1	thrust block	• A 316
◇ 14	1	shaft packing	• graphite
15	1	gland	• AISI316
16	1	gland flange	• AISI316
17	2	springs set	• stainless steel
18	2	rods	• AISI 316
19	2	nut	• AISI 316
◇ 20	3	lower bush	<ul style="list-style-type: none"> <li>• stainless steel + PTFE</li> <li>• steel + PTFE</li> </ul>
◇ 21	1	O.ring	• PTFE
22	1	lower plug	• AISI 316
23	2	screw	• AISI 316
24	1	upper flange	• steel epoxy coated
25	4	screw	• AISI 316

**BVHD - Wafer BLHD - Lug • Inconel seat**  
 DN 50 - 300 • 2" - 12"  
 PN 10 - 16 - 25 • ANSI 150

item	q.ty	part	material
1	1	body	<ul style="list-style-type: none"> <li>• A216 - WCB</li> <li>• A351 - CF8M (AISI 316)</li> <li>• ASTM A890 Gr.4A(DUPLEX)</li> <li>• ASTM A890 Gr.5A(S.DUPLEX)</li> </ul>
◇ 2	1	metallic seat	• Inconel 625 + graphite
3	1	disc	<ul style="list-style-type: none"> <li>• A351 - CF8M (AISI 316)</li> <li>• ASTM A890 Gr.4A(DUPLEX)</li> <li>• ASTM A890 Gr.5A(S.DUPLEX)</li> </ul>
4	2	locking pins	• AISI316
5	1	upper spacer	• AISI316
6	1	lower spacer	• AISI316
7	1	upper shaft	• ASTM A564 Gr630
8	1	lower shaft	• ASTM A564 Gr630
9	1	seat retaining flange	• AISI 316
10	8	screw	• AISI 316
11	3	upper bush	<ul style="list-style-type: none"> <li>• stainless steel + PTFE</li> <li>• steel + PTFE</li> </ul>
12	1	retaining ring	• A 316
13	1	thrust block	• A 316
◇ 14	1	shaft packing	• graphite
15	1	gland	• AISI316
16	1	gland flange	• AISI316
17	2	springs set	• stainless steel
18	2	rods	• AISI 316
19	2	nut	• AISI 316
◇ 20	3	lower bush	<ul style="list-style-type: none"> <li>• stainless steel + PTFE</li> <li>• steel + PTFE</li> </ul>
◇ 21	1	packing	• graphite
22	1	lower plug	• AISI 316
23	2	screw	• AISI 316
24	1	upper flange	• steel epoxy coated
25	4	screw	• AISI 316

◇ parts included in spare kit

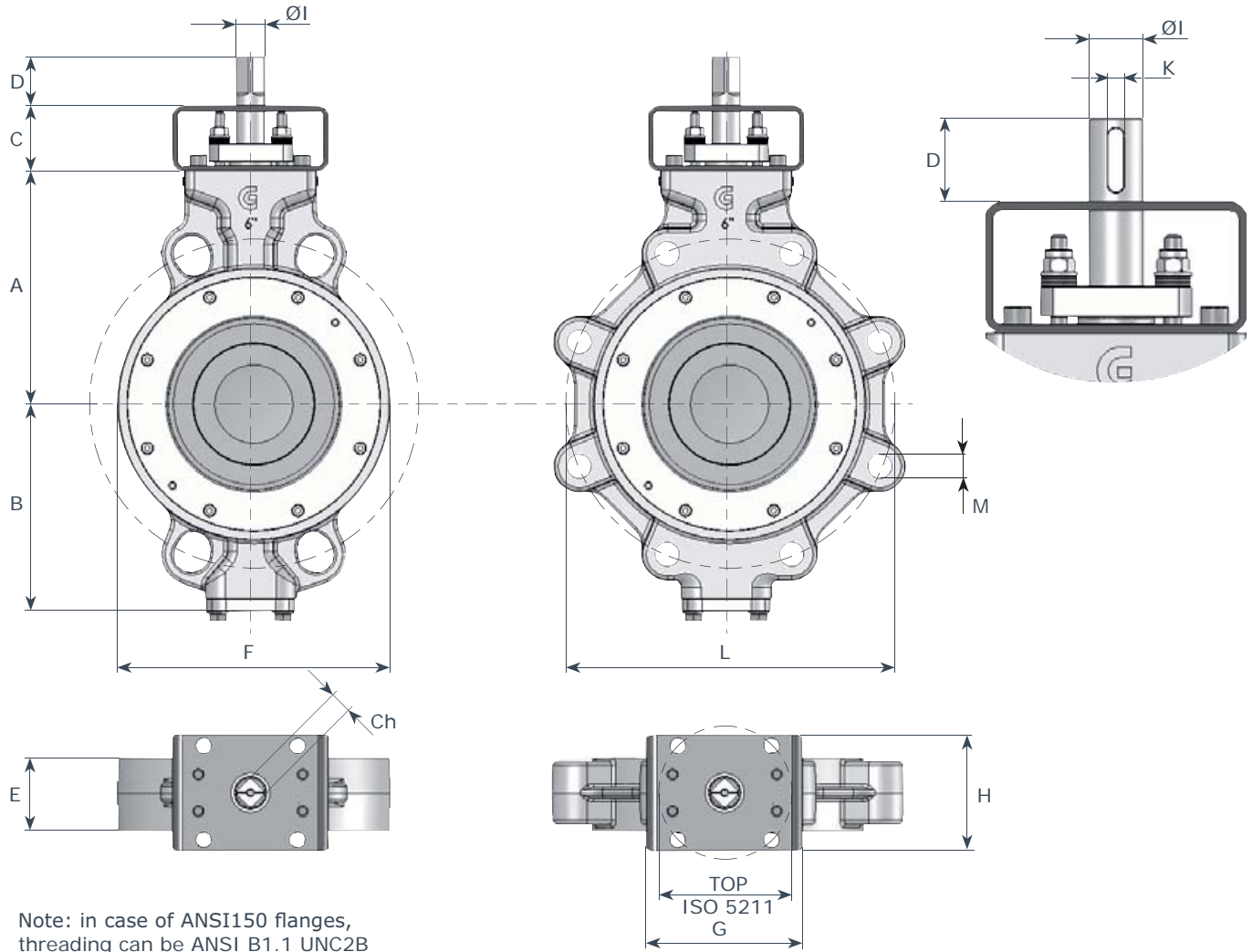
**BVHD - Wafer BLHD - Lug • "FIRE SAFE" seat**  
 DN 50 - 300 • 2" - 12"  
 PN 10 - 16 - 25 • ANSI 150



item	q.ty	part	material
1	1	body	<ul style="list-style-type: none"> <li>• A216 - WCB</li> <li>• A351 - CF8M (AISI 316)</li> <li>• ASTM A890 Gr.4A(DUPLEX)</li> <li>• ASTM A890 Gr.5A(S.DUPLEX)</li> </ul>
◇ 2A	1	soft seat	• RTFE (PTFE reinforced)
◇ 2B	1	metallic seat	• Inconel 625 + graphite
3	1	disc	<ul style="list-style-type: none"> <li>• A351 - CF8M (AISI 316)</li> <li>• ASTM A890 Gr.4A(DUPLEX)</li> <li>• ASTM A890 Gr.5A(S.DUPLEX)</li> </ul>
4	2	locking pins	• AISI316
5	1	upper spacer	• AISI316
6	1	lower spacer	• AISI316
7	1	upper shaft	• ASTM A564 Gr630
8	1	lower shaft	• ASTM A564 Gr630
9	1	seat retaining flange	• AISI 316
10	8	screw	• AISI 316

item	q.ty	part	material
◇ 11	3	upper bush	<ul style="list-style-type: none"> <li>• stainless steel + PTFE</li> <li>• steel + PTFE</li> </ul>
12	1	retaining ring	• A 316
13	1	thrust block	• A 316
◇ 14	1	shaft packing	• graphite
15	1	gland	• AISI316
16	1	gland flange	• AISI316
17	2	springs set	• stainless steel
18	2	rods	• AISI 316
19	2	nut	• AISI 316
◇ 20	3	lower bush	<ul style="list-style-type: none"> <li>• stainless steel + PTFE</li> <li>• steel + PTFE</li> </ul>
◇ 21	1	packing	• graphite
22	1	lower plug	• AISI 316
23	2	screw	• AISI 316
24	1	upper flange	• steel epoxy coated
25	4	screw	• AISI 316

BVHD/BLHD dimensions



Note: in case of ANSI150 flanges, threading can be ANSI B1.1 UNC2B

DN	"	A	B	C	D	E	F	G	H	Ø I	Ch	K	TOP
50	2	117	81	50	34	43	95	100	70	14	11	-	F07
65	2 <sup>1/2</sup>	120	93	50	34	46	105	100	70	14	11	-	F07
80	3	129	101	50	34	46	127	100	70	14	11	-	F07
100	4	160	128	50	34	52	150	100	70	18	14	-	F07
125	5	170	159	50	38	56	174	120	90	22	17	-	F10
150	6	179	168	50	38	56	210	120	90	22	17	-	F10
200	8	218	207	60	40	61	270	120	90	25	-	8	F10
250	10	257	232	80	60	69	325	160	130	30	-	10	F12
300	12	300	270	80	60	78	378	160	130	35	-	10	F12

DN	PN 10			PN 16			PN 25			ANSI 150			Kg.	
	M	n.	L	M	n.	L	M	n.	L	M	n.	L	wafer	lug
50	M16	4	125	M16	4	125	M16	4	125	M16	4	120.6	3.5	5.7
65	M16	8	145	M16	8	145	M16	8	145	M16	4	139.7	4.0	7
80	M16	8	160	M16	8	160	M16	8	160	M16	4	152.4	4.8	7.6
100	M16	8	180	M16	8	180	M20	8	190	M16	8	190.5	8	9.7
125	M16	8	210	M16	8	210	M24	8	220	M20	8	215.9	10.1	14.8
150	M20	8	240	M20	8	240	M24	8	250	M20	8	241.3	13.5	17.6
200	M20	8	295	M20	12	295	M24	12	310	M20	8	298.4	22	32
250	M20	12	350	M24	12	355	M27	12	370	M22	12	361.9	35	46
300	M20	12	400	M24	12	410	≈	≈	≈	M22	12	431.8	50	62

compatible flanges JIS B2220 :2004

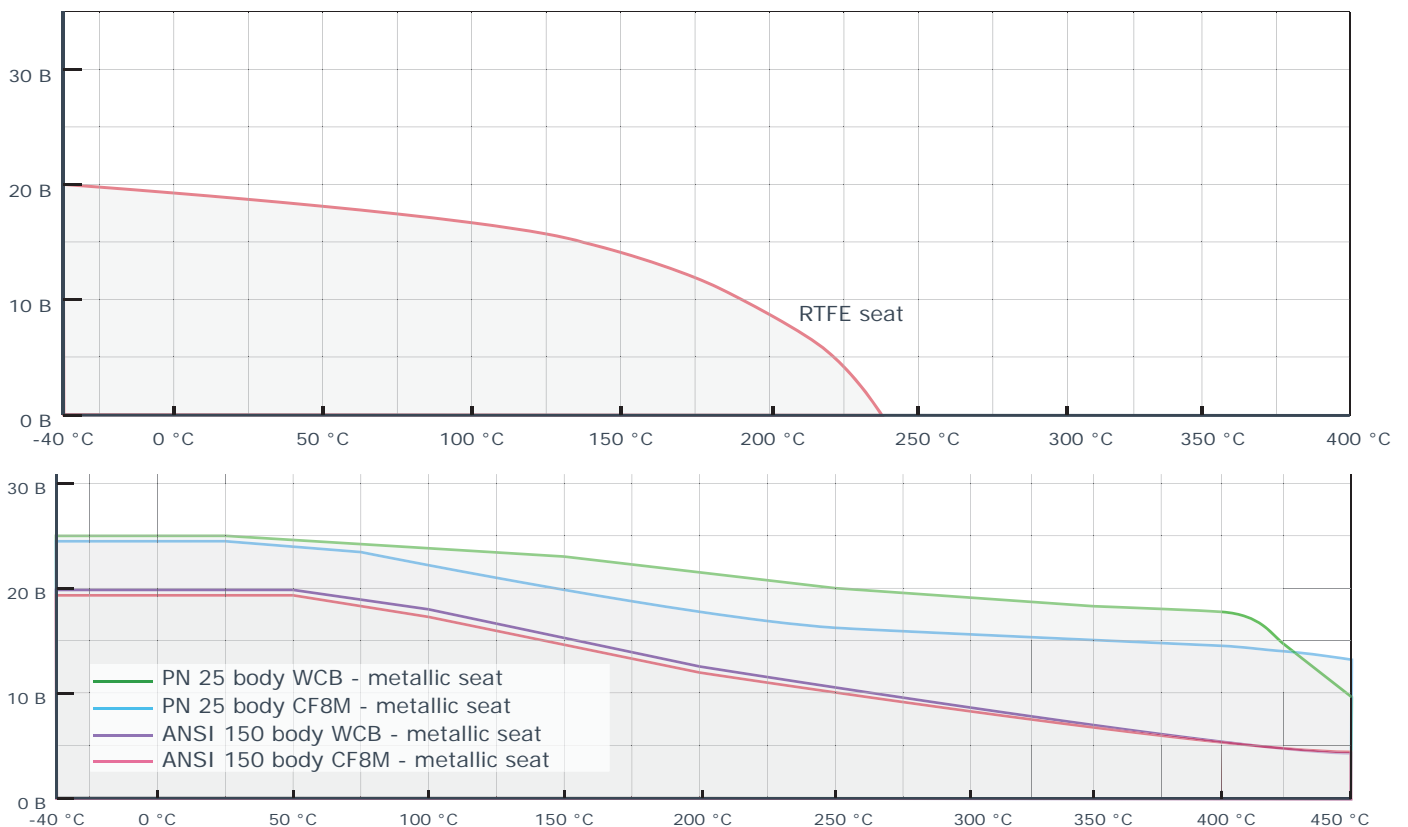
DN	BVHD - wafer (Pmax = 25bar)					BLHD - lug (Pmax = 25bar)				
	JIS 5K	JIS 10K	JIS 16K	JIS 20K	JIS 30K	JIS 5K	JIS 10K	JIS 16K	JIS 20K	JIS 30K
50	✗	✓	●	●	●	✗	●	●	●	✗
65	●	✓	●	●	✗	●	●	●	●	✗
80	●	●	●	●	✗	●	●	●	●	●
100	✗	●	✓	✓	✓	✗	●	●	●	●
125	●	●	✓	✓	✓	●	●	●	●	●
150	●	✓	✗	✗	✗	●	✓	✗	✗	✗
200	✗	●	✓	✓	●	✗	●	●	●	●
250	●	✓	✗	✗	✗	●	●	✗	✗	✗
300	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗

✓ standard  
 ● on request  
 ✗ not possible

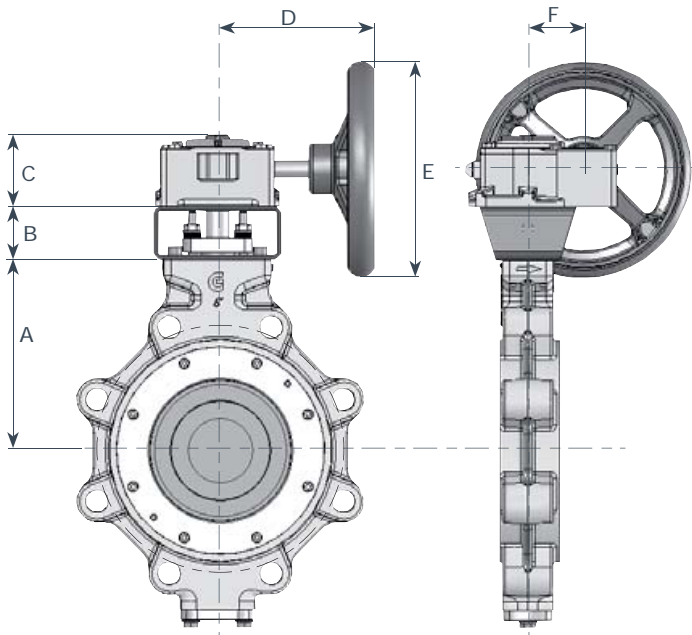
HD Series - Torque values - Nm

seat: RTFE fluid: H <sub>2</sub> O - 20°C					seat: INCONEL fluid: H <sub>2</sub> O - 20°C				
DN	working pressure: BAR				DN	working pressure: BAR			
	10	16	20	25		10	16	20	25
50	24	30	40	47	50	36	44	58	68
65	34	38	48	60	65	51	56	70	86
80	38	45	54	68	80	57	67	78	97
100	45	56	62	81	100	68	83	89	114
125	85	90	105	120	125	124	133	154	168
150	130	145	170	210	150	186	212	248	302
200	180	240	270	390	200	261	350	392	570
250	330	450	520	580	250	480	668	765	848
300	580	640	740	850	300	848	941	1085	1244

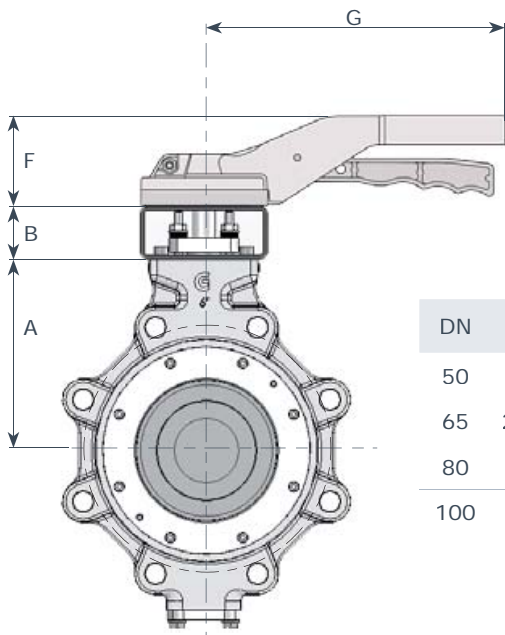
Pressure / Temperature



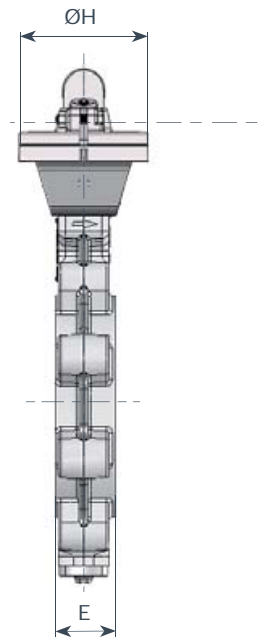
Gearboxes



DN	"	A	B	C	D	E	F	type
50	2	117	50	55	157.5	200	43	AB150
65	2 <sup>1/2</sup>	120	50	55	157.5	200	43	AB150
80	3	129	50	55	157.5	200	43	AB150
100	4	160	50	55	157.5	200	43	AB150
125	5	170	50	63	217	200	52	AB215
150	6	179	50	63	217	200	52	AB215
200	8	218	60	63	217	200	52	AB215
250	10	257	80	88	292	300	71	AB550
300	12	300	80	88	292	300	71	AB550



DN	"	A	B	E	F	G	ØH
50	2	117	50	43	67	220	93
65	2 <sup>1/2</sup>	120	50	46	67	220	93
80	3	129	50	46	67	220	93
100	4	160	50	52	67	275	93



Test

**GHIBSON valves are built according to following international standards:**

Body test pressure: DIN 3230BA - API598  
 Hydraulic test pressure: DIN 3230BN1 - API598  
 Pneumatic test pressure: DIN 3230BO1 - API598  
 Test certificates: UNI EN 10204 2.2 (standard)  
 UNI EN 10204 3.1 (on request)  
 UNI EN 10204 3.2 (on request)

DIN	body test	hydraulic test	pneu test
3230			
PN6	9 bar	7 bar	6 bar
PN10	15 bar	11 bar	6 bar
PN16	24 bar	17,6 bar	6 bar
PN25	38 bar	27,5 bar	6 bar

**Test duration is indicated by API598 standard**

Body test pressure: < DN 65 = 15 sec.  
 DN 65 / DN 200 = 80 sec.  
 > DN 200 = 180 sec.  
 Hydraulic test pressure: < DN 65 = 15 sec.  
 DN 65 / DN 200 = 30 sec.  
 > DN 200 = 60 sec.  
 Pneumatic test pressure: < DN 65 = 15 sec.  
 DN 65 / DN 200 = 30 sec.  
 > DN 200 = 60 sec

API598	body test	hydraulic test
ANSI125	21 bar	18 bar
ANSI150	30 bar	22 bar
ANSI300	78 bar	58 bar

**PTFE SEATED****TT Series**

• technical data	210
• components DN 50-300	211
Stainless steel disc	211
Stainless steel + PTFE disc	212

**tables**

• components DN 350-500	213
• dimensions	214
• torque values	215

<b>Installation instructions</b>	<b>216</b>
<b>Tests</b>	<b>216</b>
<b>Handlever</b>	<b>218</b>
<b>Gearbox</b>	<b>219</b>

**BVTT - Wafer**  
DN 50 - 500 • 2" - 20"

**BLTT - Lug**  
DN 50 - 500 • 2" - 20"

Max working pressure:

BVTT/BLTT DN 50÷400: **10 Bar**  
Flange: **PN 10-16-A150**

BVTT/BLTT DN 500: **6 Bar**  
Flange: **PN 10-16-A150**

To be used for vacuum (not with PTFE disc)

Design:

EN 593 ~ EN 736 ~ EN 12516 ~ EN 1092  
ISO 5211 ~ DIN 3337 ~ API 609  
PED 97/23/EC (cat III) Mod H

Face to face:

DIN EN 558-1 Series 20 ~ ISO 5752 Series 20  
BS-5155 Series 4 ~ MSS-SP67  
API 609 cat. A ~ NFE 29305-1

Testing:

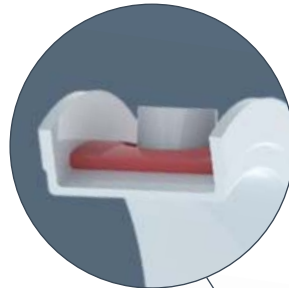
EN 12266-1 Rate A ~ ISO 5208 Rate A  
DIN 3230 ~ API 598

Tag:

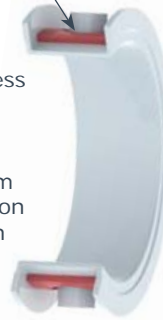
EN 19 ~ MSS SP-25



All the valves are supplied with a metallic label in compliance with PED directive.



The thickness of the PTFE body seat varies from 2,5 to 3 mm depending on the position



Epoxy  
EPOXY  
COATED



**BODY**

material	references	standard coating	lug	wafer
Ductile iron (wafer, lug)	EN-GJS 400-15 (GS400)	Epoxy RAL 5009	50-500	50-500
Carbon steel (wafer)	ASTM A216-WCB	Epoxy RAL 9005	-	50-500
Stainless steel (wafer)	ASTM A351 CF8M (A316)	-	-	50-500

**DISC**

material	references	standard coating	coating on request	DN
Stainless steel	ASTM A351 CF8M (A316)	-	HALAR®	50-500
Stainless steel	ASTM A564 Type 630	PTFE	-	50-300
Hastelloy®	ASTM A494 CX2MW	-	-	50-500
Monel®	ASTM A494 M35-1	-	-	50-500

**BODY SEAT**

ref.	designation	trade name	working temp.	applications
PTFE	polytetrafluorethylene	TEFLON®	-60°C / +190°C	acids, foods, solvents

On request can be supplied other materials as: LCB, Hastelloy, Monel, Uranus, Alloy, DUPLEX, Special steels, Special bronzes.  
Coating on request: RILSAN®, Halar®, Chenisil®

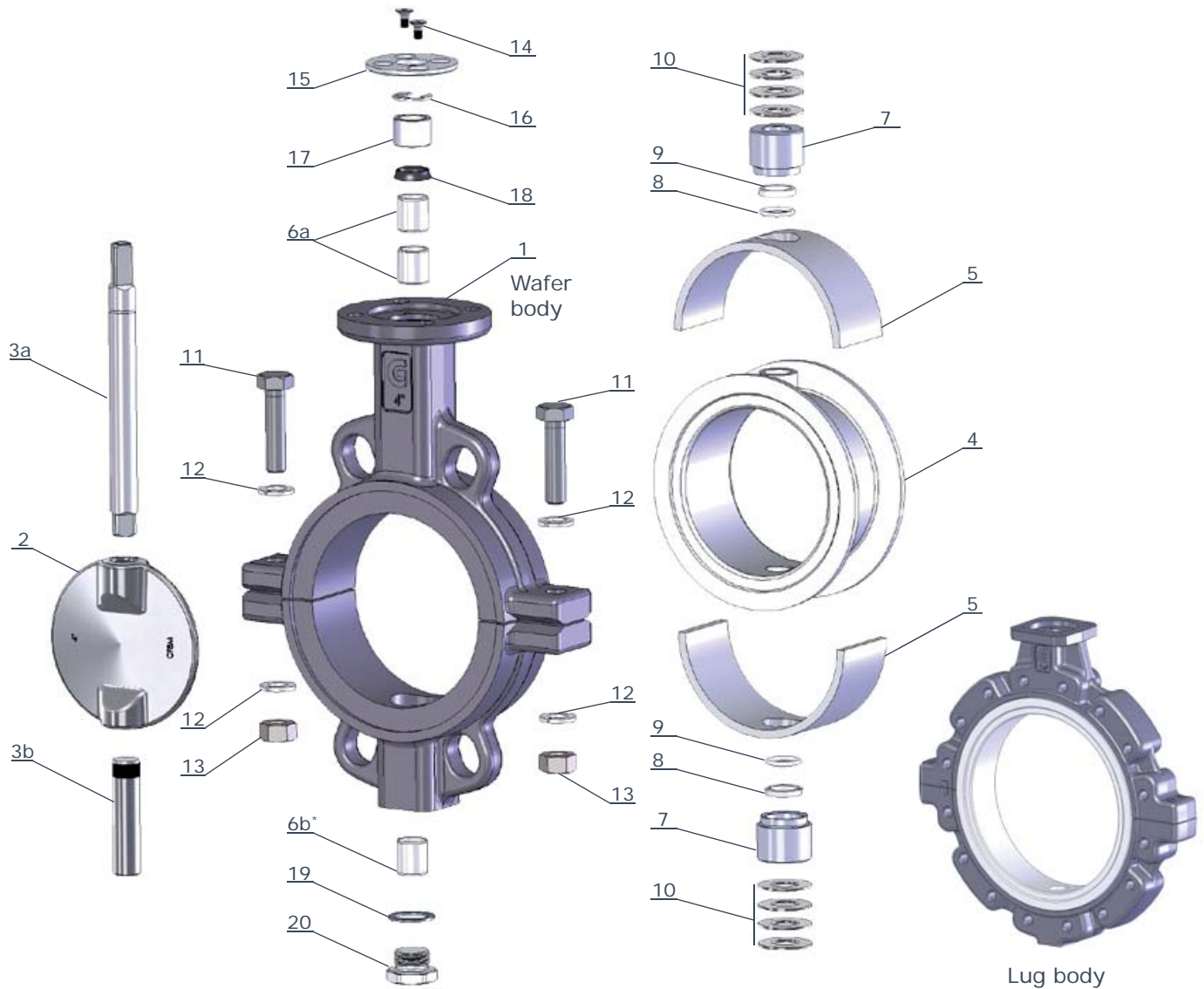


BVTT - Wafer BLTT - Lug

DN 50 - 300 • 2" - 12"

PN 10-16 • ANSI 150

Stainless steel (ASTM A351 CF8M) disc



item	q.ty	part	material	item	q.ty	part	material
1	1	body	<ul style="list-style-type: none"> <li>ductile iron GS400</li> <li>A216 - WCB</li> <li>A351 - CF8M (AISI 316)</li> </ul>	11	2	screw	<ul style="list-style-type: none"> <li>zinc plated steel</li> <li>AISI 316 (body AISI 316)</li> </ul>
2	1	disc	<ul style="list-style-type: none"> <li>A351 - CF8M (AISI 316)</li> <li>HALAR® (on request)</li> </ul>	12	4	washer	<ul style="list-style-type: none"> <li>zinc plated steel</li> <li>AISI 316 (body AISI 316)</li> </ul>
3a	1	upper shaft	<ul style="list-style-type: none"> <li>AISI 316</li> </ul>	13	2	screw nut	<ul style="list-style-type: none"> <li>zinc plated steel</li> <li>AISI 316 (body AISI 316)</li> </ul>
3b	1	lower shaft	<ul style="list-style-type: none"> <li>AISI 316</li> </ul>	14	2	screw	<ul style="list-style-type: none"> <li>zinc plated steel</li> <li>AISI 316 (body AISI 316)</li> </ul>
◇4	1	body seat	<ul style="list-style-type: none"> <li>PTFE</li> </ul>	15	1	upper flange	<ul style="list-style-type: none"> <li>IXEF (DN 50/150)</li> <li>aluminium (DN 200/300)</li> </ul>
◇5	1	elastic support	<ul style="list-style-type: none"> <li>silicon</li> </ul>	16	1	stop ring	<ul style="list-style-type: none"> <li>steel</li> </ul>
6a	2	bush upper shaft	<ul style="list-style-type: none"> <li>steel + PTFE</li> </ul>	◇17	1	upper bush	<ul style="list-style-type: none"> <li>PTFE</li> </ul>
6b*	1*	bush lower shaft	<ul style="list-style-type: none"> <li>steel + PTFE</li> </ul>	◇18	1	O. Ring	<ul style="list-style-type: none"> <li>FKM (VITON®)</li> </ul>
7	2	housing	<ul style="list-style-type: none"> <li>AISI 316</li> </ul>	19	1	plug paking	<ul style="list-style-type: none"> <li>aluminium</li> <li>PTFE (body AISI 316)</li> </ul>
◇8	2	O. Ring	<ul style="list-style-type: none"> <li>FEP + FKM (VITON®)</li> </ul>	20	1	threaded plug	<ul style="list-style-type: none"> <li>zinc plated steel</li> <li>AISI 316 (body AISI 316)</li> </ul>
◇9	2	C. Ring	<ul style="list-style-type: none"> <li>PTFE</li> </ul>				
10	2	springs set	<ul style="list-style-type: none"> <li>steel</li> </ul>				

\* only DN200/300

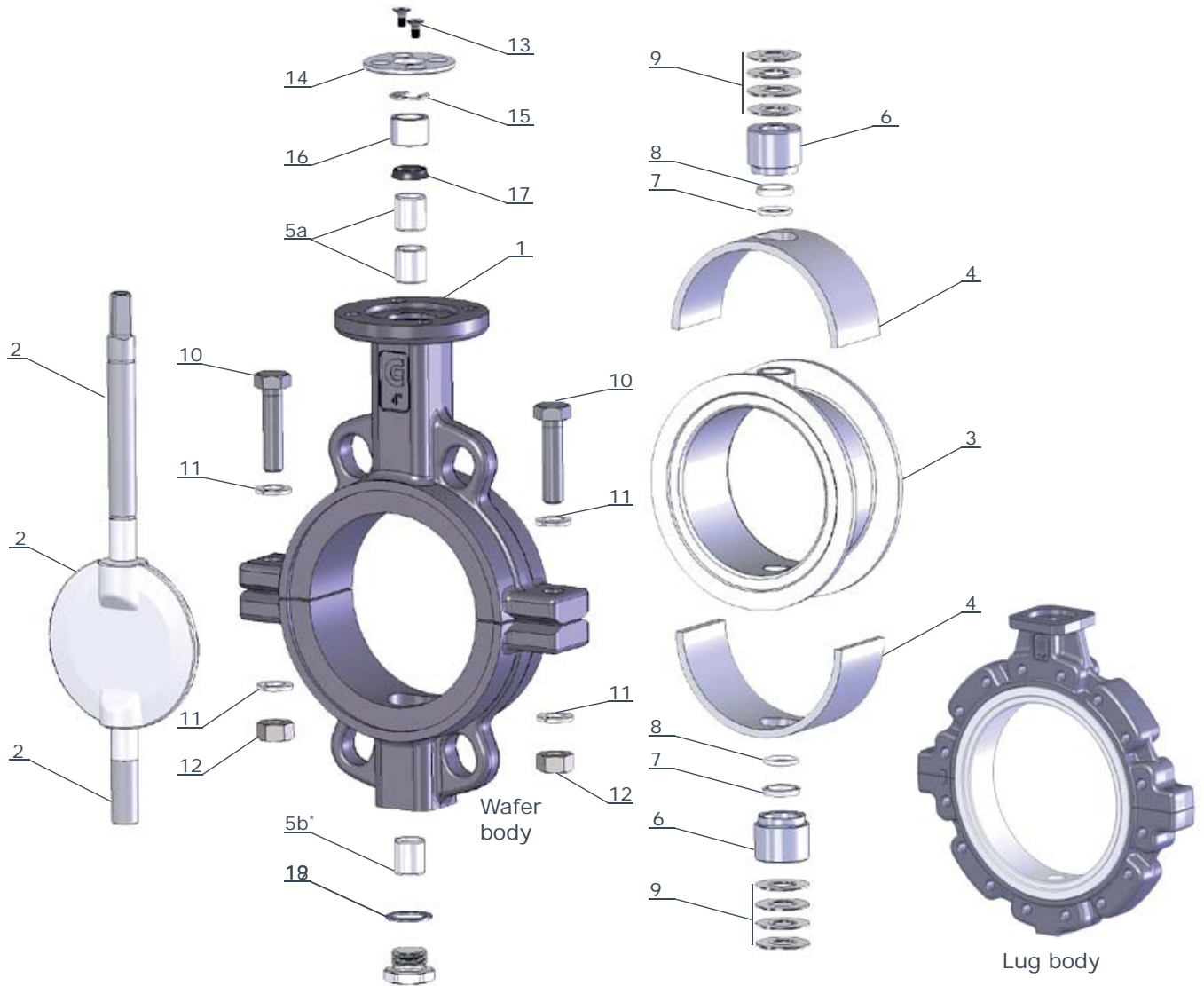
◇ parts included in spare kit

**BVTT - Wafer BLTT - Lug**

DN 50 - 300 • 2" - 12"

PN 10-16 • ANSI 150

**Stainless steel disc (ASTM A564 Type 630) PTFE coated**

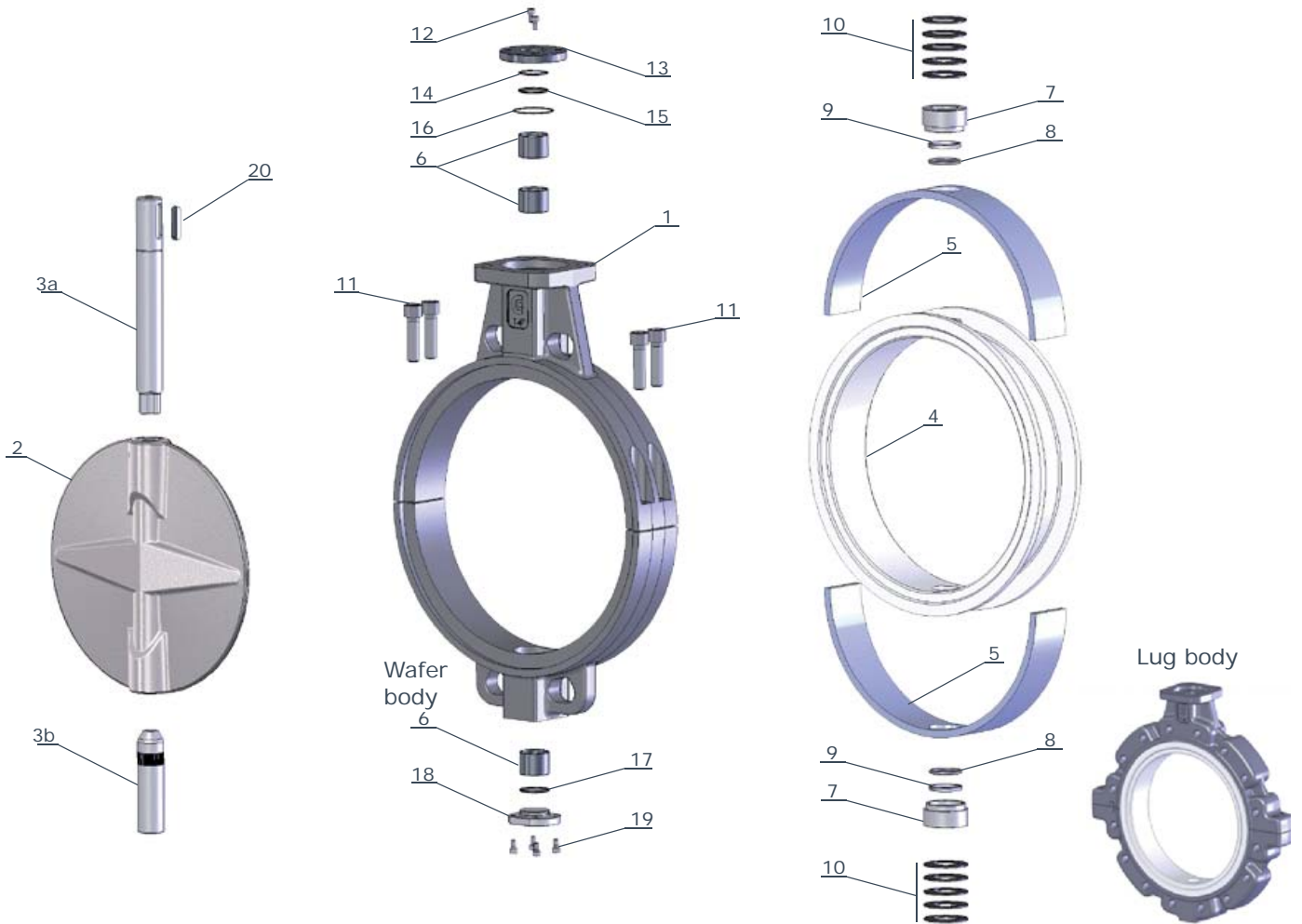


item	q.ty	part	material	item	q.ty	part	material
1	1	body	<ul style="list-style-type: none"> <li>ductile iron GS400</li> <li>A216 - WCB</li> <li>A351 - CF8M (AISI 316)</li> </ul>	11	4	washer	<ul style="list-style-type: none"> <li>zinc plated steel</li> <li>AISI 316 (body AISI 316)</li> </ul>
◇2	1	disc - shafts	<ul style="list-style-type: none"> <li>ASTM A564 Type 630 + PTFE</li> </ul>	12	2	screw nut	<ul style="list-style-type: none"> <li>zinc plated steel</li> <li>AISI 316 (body AISI 316)</li> </ul>
◇3	1	body seat	<ul style="list-style-type: none"> <li>PTFE</li> </ul>	13	2	screw	<ul style="list-style-type: none"> <li>zinc plated steel</li> <li>AISI 316 (body AISI 316)</li> </ul>
◇4	1	elastic support	<ul style="list-style-type: none"> <li>silicon</li> </ul>	14	1	upper flange	<ul style="list-style-type: none"> <li>IXEF (DN 50/150)</li> <li>aluminium (DN 200/300)</li> </ul>
5a	2	bush upper shaft	<ul style="list-style-type: none"> <li>steel + PTFE</li> </ul>	15	1	stop ring	<ul style="list-style-type: none"> <li>steel</li> </ul>
5b*	1*	bush lower shaft	<ul style="list-style-type: none"> <li>steel + PTFE</li> </ul>	◇16	1	upper bush	<ul style="list-style-type: none"> <li>PFTE</li> </ul>
6	2	housing	<ul style="list-style-type: none"> <li>AISI 316</li> </ul>	◇17	1	O. Ring	<ul style="list-style-type: none"> <li>FKM (VITON®)</li> </ul>
◇7	2	O. Ring	<ul style="list-style-type: none"> <li>FEP + FKM (VITON®)</li> </ul>	18	1	plug paking	<ul style="list-style-type: none"> <li>aluminium</li> <li>PTFE (body AISI 316)</li> </ul>
◇8	2	C. Ring	<ul style="list-style-type: none"> <li>PTFE</li> </ul>	19	1	threaded plug	<ul style="list-style-type: none"> <li>zinc plated steel</li> <li>AISI 316 (body AISI 316)</li> </ul>
9	2	springs set	<ul style="list-style-type: none"> <li>steel</li> </ul>				
10	2	screw	<ul style="list-style-type: none"> <li>zinc plated steel</li> <li>AISI 316 (body AISI 316)</li> </ul>				

\* only DN200/300

◇ parts included in spare kit

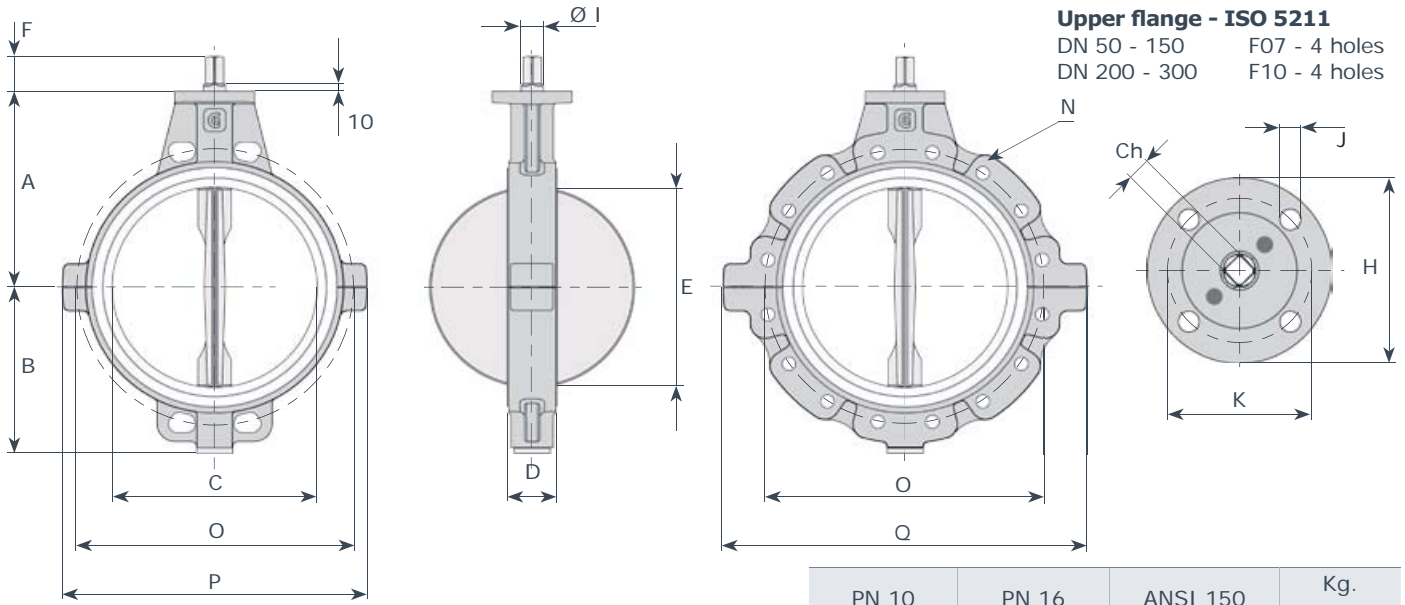
**BVTT - Wafer BLTT - Lug**  
 DN 350 - 500 • 14" - 20"  
 PN 10-16 • ANSI 150



item	q.ty	part	material	item	q.ty	part	material
1	1	body	<ul style="list-style-type: none"> <li>ductile iron GS400</li> <li>A216 - WCB</li> <li>A351 - CF8M (AISI 316)</li> </ul>	11	4	screw	<ul style="list-style-type: none"> <li>zinc plated steel</li> <li>AISI 316 (body AISI 316)</li> </ul>
2	1	body	<ul style="list-style-type: none"> <li>A351 - CF8M (AISI 316)</li> <li>HALAR® (on request)</li> </ul>	12	2	screw	<ul style="list-style-type: none"> <li>zinc plated steel</li> <li>AISI 316 (body AISI 316)</li> </ul>
3a	1	upper shafts	<ul style="list-style-type: none"> <li>AISI 316</li> </ul>	13	1	upper flange	<ul style="list-style-type: none"> <li>zinc plated steel</li> <li>AISI 316 (body AISI 316)</li> </ul>
3b	1	lower shafts	<ul style="list-style-type: none"> <li>AISI 316</li> </ul>	◇14	1	O.Ring	<ul style="list-style-type: none"> <li>FKM (VITON®)</li> </ul>
◇4	1	body seat	<ul style="list-style-type: none"> <li>PTFE</li> </ul>	15	1	stop ring	<ul style="list-style-type: none"> <li>steel</li> </ul>
◇5	1	elastic support	<ul style="list-style-type: none"> <li>silicon</li> </ul>	◇16	1	O.Ring	<ul style="list-style-type: none"> <li>FKM (VITON®)</li> </ul>
6	3	bush shaft	<ul style="list-style-type: none"> <li>A105 + PTFE</li> </ul>	◇17	1	O.Ring	<ul style="list-style-type: none"> <li>FKM (VITON®)</li> </ul>
7	2	housing	<ul style="list-style-type: none"> <li>AISI 316</li> </ul>	18	1	lower flange	<ul style="list-style-type: none"> <li>zinc plated steel</li> <li>AISI 316 (body AISI 316)</li> </ul>
◇8	2	O. Ring	<ul style="list-style-type: none"> <li>FEP + FKM (VITON®)</li> </ul>	19	4	screw	<ul style="list-style-type: none"> <li>zinc plated steel</li> <li>AISI 316 (body AISI 316)</li> </ul>
◇9	2	C. Ring	<ul style="list-style-type: none"> <li>PTFE</li> </ul>	20	1	key	<ul style="list-style-type: none"> <li>steel C40</li> </ul>
10	2	springs set	<ul style="list-style-type: none"> <li>steel</li> </ul>				

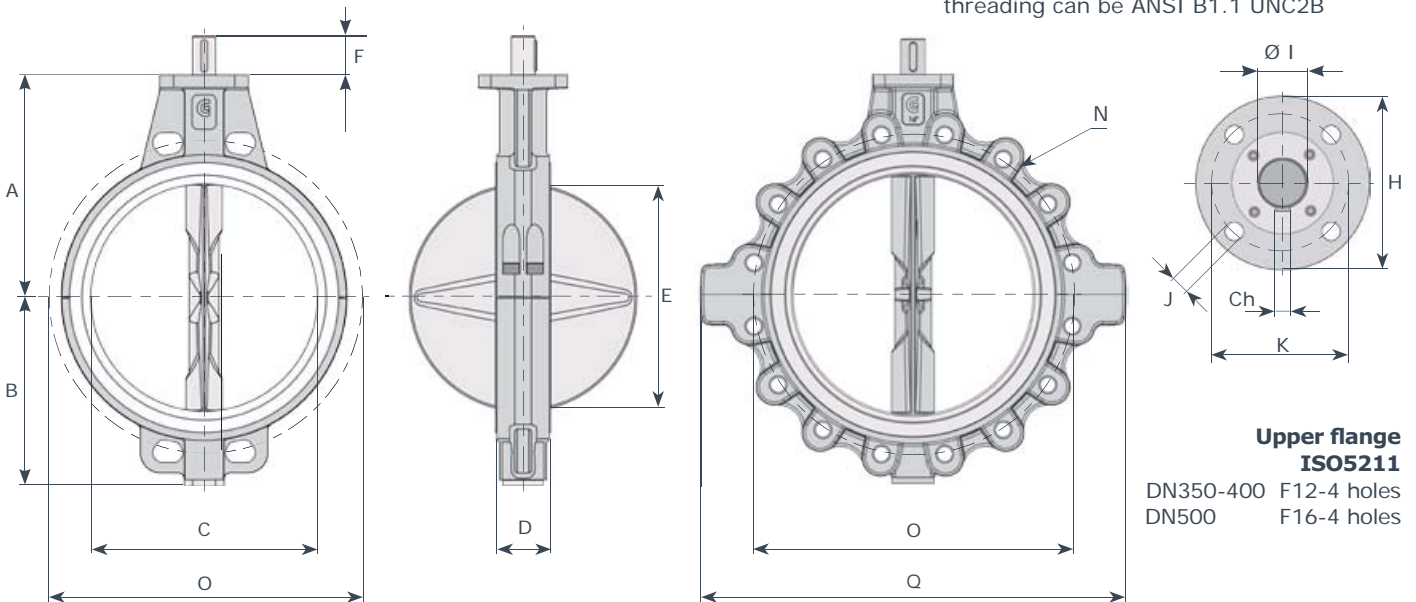
◇ parts included in spare kit

BVTT - Wafer BLTT - Lug



DN	"																Kg.								
		A	B	C	D	E	F	Ø I	Ch	H	K	J	P	Q	N	n.	O	wafer	lug						
50	2	138	81	55	43	35	34	14	11	90	70	9	165	165	M16	4	125	M16	4	125	M16	4	120.6	3.4	3.9
65	2 1/2	144	98	68	46	50	34	14	11	90	70	9	186	186	M16	8	145	M16	8	145	M16	4	139.7	4.1	4.7
80	3	158	110	81	46	67	34	14	11	90	70	9	196	242	M16	8	160	M16	8	160	M16	4	152.4	4.4	7.6
100	4	173	128	101	52	87	34	16	11	90	70	9	220	270	M16	8	180	M16	8	180	M16	8	190.5	6.8	8.4
125	5	186	140	126	56	113	34	18	14	90	70	9	250	297	M16	8	210	M16	8	210	M20	8	215.9	8.8	11.2
150	6	202	155	150	56	140	34	18	14	90	70	9	278	321	M20	8	240	M20	8	240	M20	8	241.3	10.5	12.9
200	8	240	190	200	60	191	38	22	17	125	102	11	355	420	M20	8	295	M20	12	295	M20	8	298.4	15.2	25.0
250	10	270	220	250	68	241	38	30	22	125	102	11	398	472	M20	12	350	M24	12	355	M22	12	361.9	24.5	30.0
300	12	300	247	298	78	289	38	30	22	125	102	11	455	540	M20	12	400	M24	12	410	M22	12	431.8	32.0	45.0

Note: in case of ANSI 150 flanges, threading can be ANSI B1.1 UNC2B



DN	"																kg.							
		A	B	C	D	E	F	Ø I	Ch	H	K	J	Q	PN10	PN16	ANSI150	wafer	lug						
350	14	330	280	341	78	332	60	35	10	150	125	14	600	M20	16	460	M24	16	470	M24	12	476	54	73
400	16	355	305	390	102	376	60	40	12	150	125	14	690	M24	16	515	M27	16	525	M27	16	539	68	104
500	20	422	366	485	127	468	60	45	12	210	165	22	820	M24	20	620	M30	20	650	M27	20	635	149	179

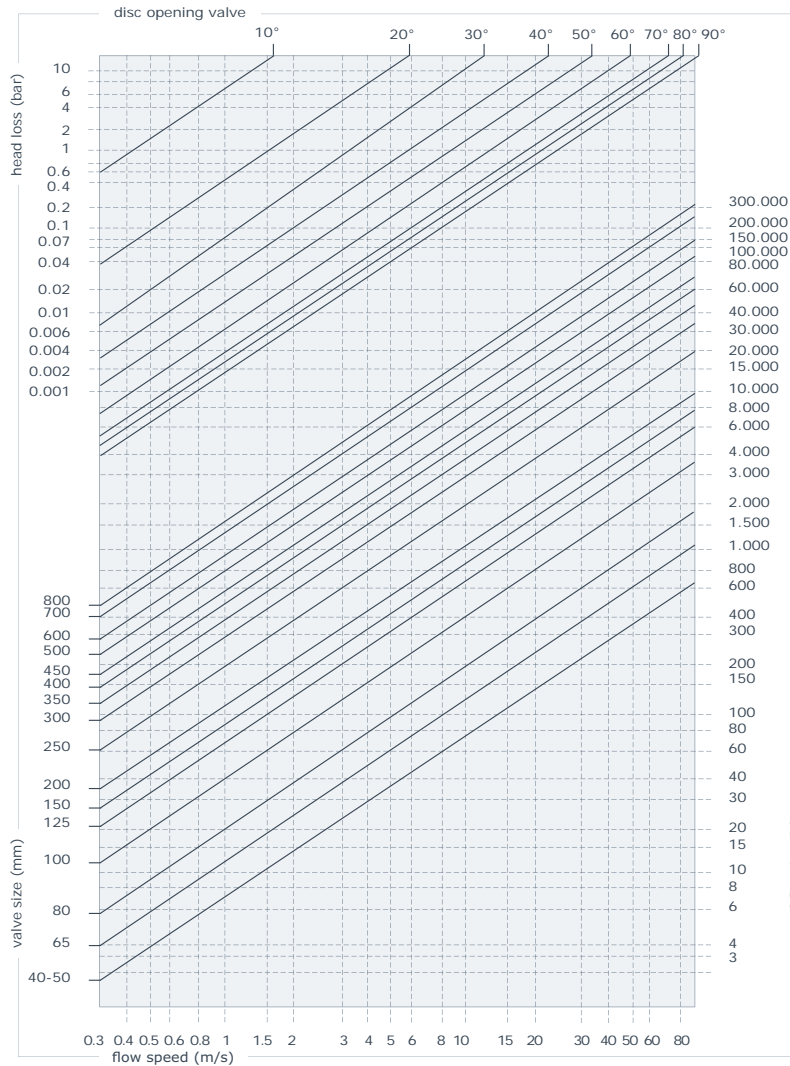
**TT Series - Torque values - Nm - safety factor excluded**

disc: <b>CF8M</b> (A316)				fluid H <sub>2</sub> O - 20°C working pressure BAR				disc: <b>A564</b> (A630) + PTFE				fluid H <sub>2</sub> O - 20°C working pressure BAR											
DN	0	6	10	DN	0	6	10	DN	0	6	10	DN	0	6	10	DN	0	6	10				
50	13	16	19	125	45	57	75	300	214	296	366	50	12	15	18	100	30	51	62	200	122	145	180
65	15	21	24	150	53	63	94	350	400	450	550	65	14	20	23	125	42	54	71	250	180	220	280
80	28	42	52	200	128	153	188	400	700	800	1000	80	26	40	49	150	50	60	89	300	311	344	385
100	32	54	65	250	198	232	296	500	980	1250	-												

Head losses

notes: values indicated in this page is only for information

Formulae for calculation of rate flow



**Liquids:**  $Q = \frac{KV}{\sqrt{\frac{PS}{\Delta P}}}$

Q rate of flow (m<sup>3</sup>/h)  
PS specific gravity (water=1)  
ΔP pressure drop (bar)

**Gas:**  $Q = 28.5 \cdot \frac{KV}{\sqrt{\frac{PS}{P_2 \cdot \Delta P}}}$

Q rate of flow (m<sup>3</sup>/h)  
PS specific gravity (air=1)  
ΔP pressure drop (bar) (less than 1/2 inlet pressure)  
P<sub>2</sub> outlet pressure

**Steam:**  $Q = 22.5 \cdot KV \cdot \sqrt{P_2 \cdot \Delta P}$

Q rate of flow (Kg/h)  
ΔP pressure drop (bar) (less than 1/2 inlet pressure)  
P<sub>2</sub> outlet pressure

**Calculation of the rate of flow equivalent to H<sub>2</sub>O:**

$Q_e = Q \sqrt{\frac{d}{1000}}$

For different liquid, gas or steam head losses are determined by equivalent water rate of flow, as follows:

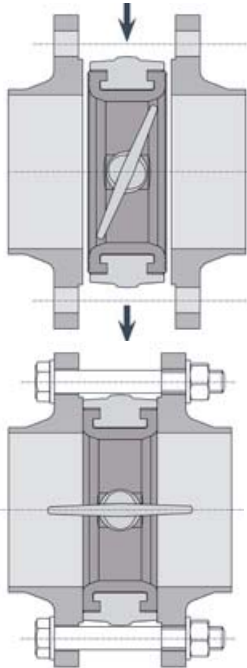
Q<sub>e</sub> equivalent water flow (mc/l o l/s)  
Q fluid flow (mc/l o l/s)  
d fluid specific gravity (Kg/mc)

Values KV (CV = 1,16 KV)

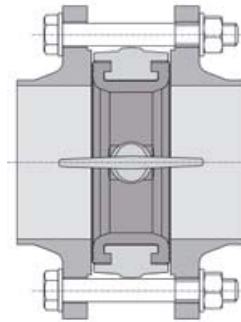
angle	40/50	65	80	100	125	150	200	250	300	350	400	500
5°	-	-	-	-	-	-	-	-	-	53	68	106
10°	-	-	-	-	-	-	-	21	49	123	161	246
15°	0,2	0,6	1,8	2,4	4,2	5,6	14	80	188	228	299	457
20°	0,9	2,5	5,2	9,5	15	23	110	156	280	315	412	630
25°	3	6,1	12	22	38	61	125	225	354	457	597	914
30°	6,1	11	21	39	69	112	211	310	381	661	863	1320
35°	9,9	18	33	60	105	166	303	433	521	890	1162	1778
40°	15	27	49	88	148	228	405	591	742	1184	1547	2366
45°	21	38	68	121	199	303	528	774	987	1552	2028	3102
50°	29	51	91	159	262	394	679	988	1252	2008	2620	4010
55°	39	68	119	207	338	505	863	1247	1571	2548	3318	5090
60°	53	90	156	269	434	641	1085	1591	2059	3225	4202	6442
65°	72	121	209	357	565	820	1364	2065	2807	3983	5196	7957
70°	92	161	283	487	768	1097	1788	2715	3744	5195	6775	10377
75°	109	209	381	662	1059	1507	2425	3625	4935	6964	9084	13912
80°	115	240	457	815	1303	1861	3043	4768	6831	9301	12142	18578
85°	115	253	502	906	1457	2008	3642	4890	8230	10280	13408	20533
90°	116	257	508	925	1492	2168	3838	5010	9233	10792	14082	22024

Installation and test

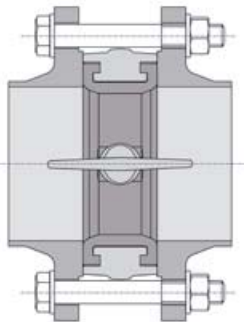
Assembly



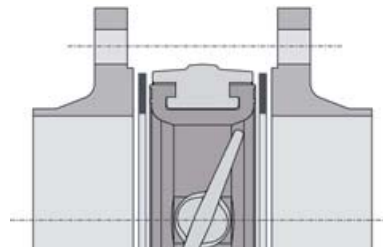
1 - Leave a space between flanges so that valve can be easily inserted and removed.



2 - Open completely the valve before tightening flanges.



3 - Tighten bolts till flanges are in contact with valve body.

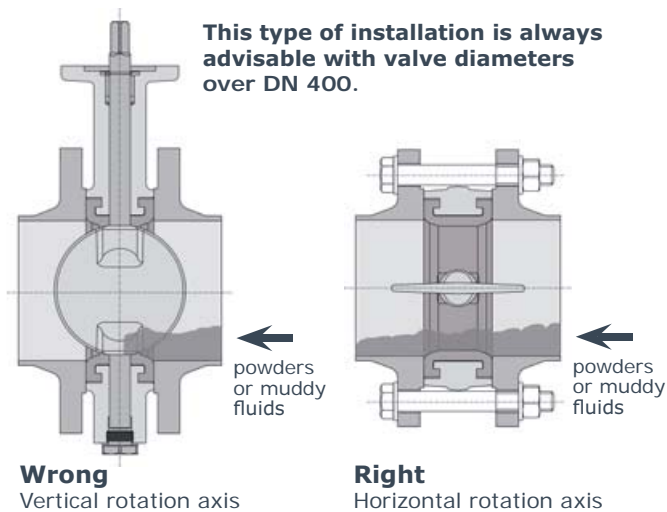


4 - NOTE: do not insert other packing between flange and valve.

NOTE: Weld the pipe only in spots with the valve between flanges. Remove the valve before finishing welding to avoid that heat damage the seat. Clean carefully the welding to avoid that slags damage the seat.

Installation for powders and muddy fluids

In case of use with muddy fluids or powders, install the valve with horizontal rotation axis, to allow sediments to flow easily on opening.



**This type of installation is always advisable with valve diameters over DN 400.**

← powders or muddy fluids

← powders or muddy fluids

**Wrong**  
Vertical rotation axis

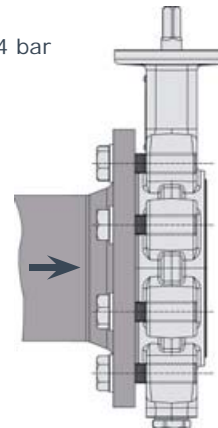
**Right**  
Horizontal rotation axis

End piping installation

When valves are installed end of piping, a counterflange as per dwg type B is needed to secure tightness at max pressure.

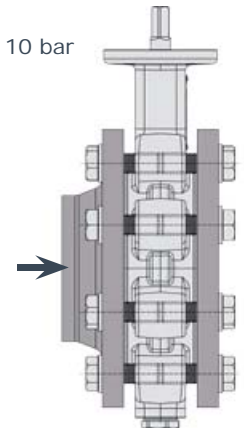
Type A installation without end piping

$P_{max} = 4 \text{ bar}$



Type B installation with end piping

$P_{max} = 10 \text{ bar}$



Test

**GIBSON valves are built according to following international standards:**

Body test pressure:	DIN 3230BA - API598
Hydraulic test pressure:	DIN 3230BN1 - API598
Pneumatic test pressure:	DIN 3230BO1 - API598
Test certificates:	UNI EN 10204 2.2 (standard)
	UNI EN 10204 3.1 (on request)
	UNI EN 10204 3.2 (on request)

DIN	body test	hydraulic test	pneu test
3230			
PN6	9 bar	7 bar	6 bar
PN10	15 bar	11 bar	6 bar
PN16	24 bar	17,6 bar	6 bar
PN25	38 bar	27,5 bar	6 bar

**Test duration is indicated by API598 standard**

Body test pressure:	Hydraulic test pressure:	Pneumatic test pressure:
< DN 65 = 15 sec.	< DN 65 = 15 sec.	< DN 65 = 15 sec.
DN 65 / DN 200 = 80 sec.	DN 65 / DN 200 = 30 sec.	DN 65 / DN 200 = 30 sec.
> DN 200 = 180 sec.	> DN 200 = 60 sec	> DN 200 = 60 sec

API598	body test	hydraulic test
ANSI125	21 bar	18 bar
ANSI150	30 bar	22 bar
ANSI300	78 bar	58 bar

Flanges to be used

**EN1092-1 Tipo 11**  
UNI 2280/81, 2282/67  
DIN 2631, 2632, 2633  
A150 B16.5 welding neck

**EN1092-1 Tipo 01**  
UNI 2276/77, 2278/67  
DIN 2575, 2576, 2577  
A150 B16.5 slip on

**EN1092-1 Tipo 02/32**  
UNI 6088/89, 6090  
DIN 2641, 2642, 2643

**EN1092-1 Tipo 04/34**  
UNI 2289/90, 2291  
DIN 2672, 2673, 2674

**EN1092-1 Tipo 02/33**  
  
NOTE: only valves with vulcanized seat (KA/KX) are recommended with these flanges

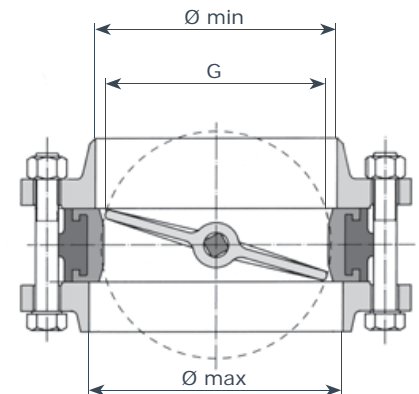
Bolts and rods dimensions

DN	Wafer valves								
	PN 10			PN 16			ANSI 150		
	Bolts	Rods	N°	Bolts	Rods	N°	Bolts	Rods	N°
40	M16x90	M16x100	4	M16x90	M16x100	4	M14x90	M14x110	4
50	M16x100	M16x120	4	M16x100	M16x120	4	M16x100	M16x130	4
65	M16x110	M16x130	8	M16x110	M16x130	8	M16x110	M16x140	4
80	M16x110	M16x130	8	M16x110	M16x130	8	M16x120	M16x150	4
100	M16x120	M16x140	8	M16x120	M16x140	8	M16x120	M16x150	8
125	M16x120	M16x150	8	M16x120	M16x150	8	M20x130	M20x160	8
150	M20x130	M20x160	8	M20x130	M20x160	8	M20x140	M20x160	8
200	M20x140	M20x170	8	M20x140	M20x170	12	M20x150	M20x170	8
250	M20x150	M20x180	12	M24x150	M24x180	12	M22x160	M22x190	12
300	M20x160	M20x190	12	M24x160	M24x190	12	M22x170	M22x210	12
350	M20x160	M20x190	16	M24x170	M24x200	16	M24x180	M24x220	12
400	M24x190	M24x220	16	M27x210	M27x240	16	M27x210	M27x250	16
450	M24x200	M24x230	20	M27x220	M27x250	20	M27x230	M27x270	16
500	M24x210	M24x240	20	M30x240	M30x280	20	M27x250	M27x290	20

DN	Lug valves - Double Flange valves					
	PN 10		PN 16		ANSI 150	
	Bolts	N°	Bolts	N°	Bolts	N°
40	M16x30	8	M16x30	8	M14x30	8
50	M16x35	8	M16x35	8	M16x35	8
65	M16x40	16	M16x40	16	M16x40	8
80	M16x40	16	M16x40	16	M16x40	8
100	M16x40	16	M16x40	16	M16x45	16
125	M16x45	16	M16x45	16	M20x50	16
150	M20x45	16	M20x45	16	M20x50	16
200	M20x50	16	M20x50	24	M20x55	16
250	M20x55	24	M24x55	24	M22x60	24
300	M20x60	24	M24x60	24	M22x60	24
350	M20x60	32	M24x65	32	M24x65	24
400	M24x70	32	M27x70	32	M27x80	32
450	M24x80	40	M27x80	40	M27x80	32
500	M24x80	40	M30x80	40	M27x90	40

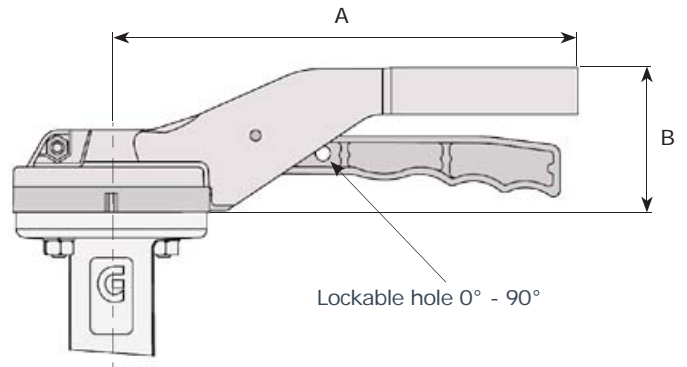
NOTE 1: Screw and rod dimensions have been calculated with WELDING NECK flanges PN 6/10/16 (EN1092-1 Tipe 11) ANSI150 (ANSI B16.5)

NOTE 2: Number of nuts should be double when WAFER valves are assembled with threaded rods.

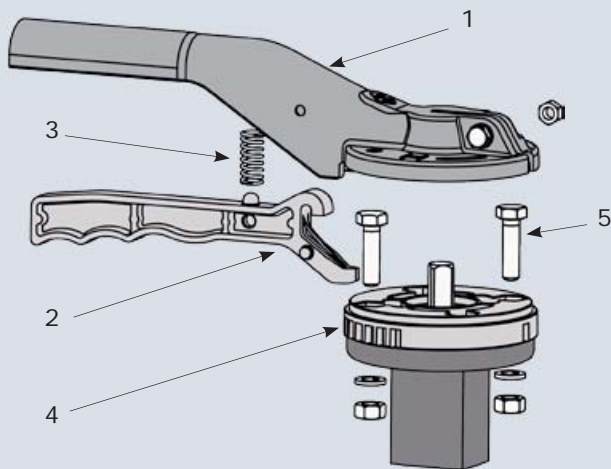
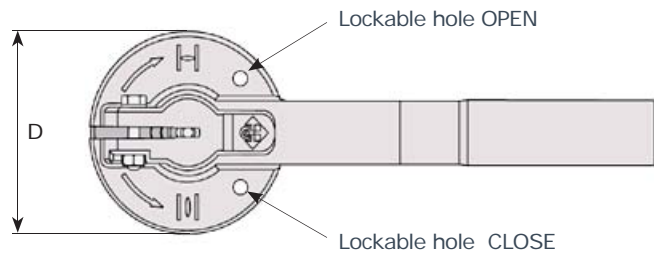


DN	40	50	65	80	100	125	150	200	250	DN	300	350	400	450	500	600	700	800
G	36	35	50	67	87	113	140	191	241	5°	289	332	376	430	479	575	670	757
Ø min	29	44	60	75	98	122	148	196	244	10°	296	332	378	428	478	566	681	782
Ø max	49	62	80	93	118	146	175	225	275	15°	330	372	422	450	500	600	717	815

Handlevers

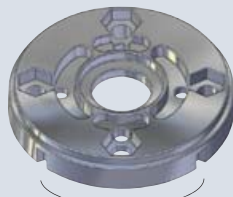
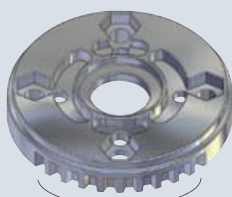


DN	A	B	D	Kg
40 - 100	220	67	93	0.6
125 - 150	275	67	93	0.65
200	340	76	125	1



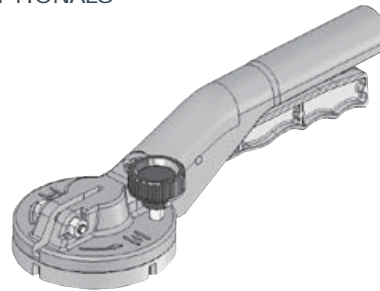
		DN40 - 300	DN40 - 150
1	lever	aluminium	A351 CF8M
2	trigger	aluminium	A351 CF8M
3	spring	stainless steel	stainless steel
4	disc positioning	aluminium	A351 CF8M
5	screws	stainless steel	stainless steel

positioning disc DN 40 - 150 designed for flanges ISO 5211 F05/F07

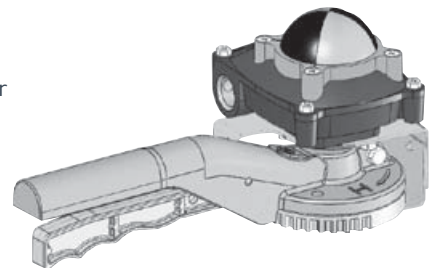


positioning disc with two types of regulation: 10 positions or Open/Close

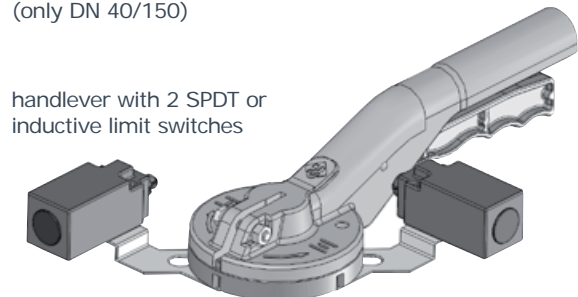
OPTIONALS



Adjustable handlever



handlever with switch box  
(only DN 40/150)



handlever with 2 SPDT or  
inductive limit switches



**Gearboxes**

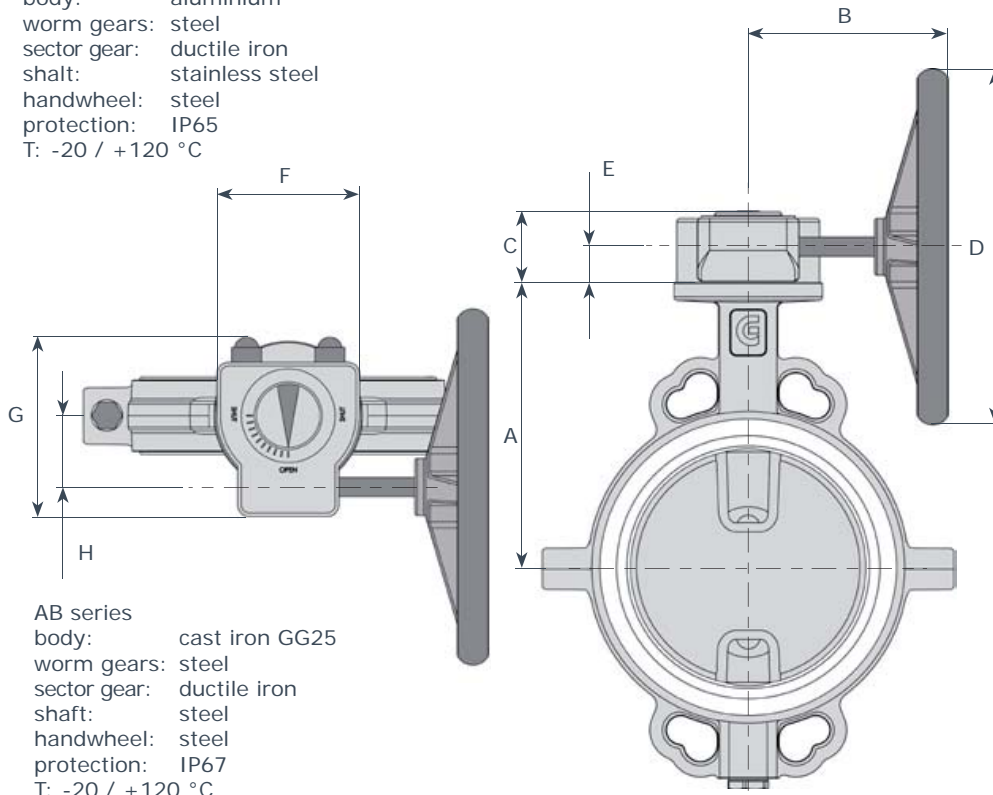
Aluminium body - HW Series

Cast Iron body - AB Series

**HW series**

body: aluminium  
 worm gears: steel  
 sector gear: ductile iron  
 shaft: stainless steel  
 handwheel: steel  
 protection: IP65  
 T: -20 / +120 °C

low/high temperature execution on request

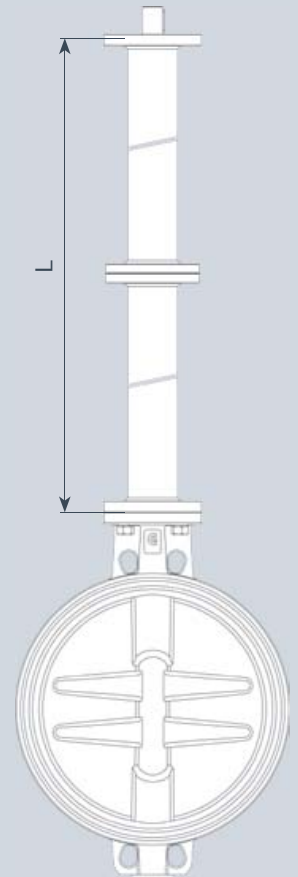


**AB series**  
 body: cast iron GG25  
 worm gears: steel  
 sector gear: ductile iron  
 shaft: steel  
 handwheel: steel  
 protection: IP67  
 T: -20 / +120 °C

**Waterproof valve shaft extension**

When necessary, it's possible to extend the valve shaft as indicated in the figure. Construction is in carbon steel with protective paint (on request stainless steel).

"L" measure should be indicated when ordering.



Our technical department is available to solve special applications.

**Dimensions**

Mod. HW	B	C	D	E	F	G	H		Kg
HW 070	160	48	140	27	80	115	42		1.6
HW 102	215	56	250	33	120	150	60		3
HW 140	325	95	400	51	185	225	80		10
HW 165	395	105	600	61	230	268	105		20
Mod.	B	C	D	E	F	G	H	I	Kg
AB150	157.5	55	125	27	80	124	43	58	2.2
AB215	217	63	200	29	102	128	52	48	3.5
AB550	282	88	300	41	138	174	71	69	8.5
AB880	282	93	400	42	200	226	86	100	14
AB1250	322	102	500	48	220	258	105	110	22
AB1950	425	126	600	55	285	323	130	143	32
AB195-PR4	398	126	600	55	285	323	130	143	39
AB680-PR4	451	159	600	59	370	407	182	170	62.5
AB680-PR6	451	159	600	59	370	407	182	170	64.2

**Coupling valve - actuators**

DN	"	mod. HW 10 bar	mod. AB 10 bar	A	DN	"	mod. HW 10 bar	mod. AB 10 bar	A
50	2	HW070	AB150	138	200	8	HW102	AB215	240
65	2 <sup>1/2</sup>	HW070	AB150	144	250	10	HW102	AB550	270
80	3	HW070	AB150	158	300	12	HW102	AB550	300
100	4	HW070	AB150	173	350	14	HW140	AB880	330
125	5	HW070	AB150	186	400	16	HW140	AB880	355
150	6	HW070	AB150	202	500	20	HW165	AB880	422

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