DREIESPJELDSVENTILER FDV
BUTTERFLY VALVES FDV

ahlsell

DREIESPJELDSVENTILER / BUTTERFLY VALVES

INNLEDNING / INTRODUCTION

DREIESPJELDSVENTILER

SIP ventilen er utviklet gjennom mange år til bruk i det norske og internasjonale markedet. Ventilen har blitt en kvalitetsventil gjennom kontinuerlig utvikling og modifiseringer basert på tilbakemeldinger fra markedet. I tillegg leveres SIP ventilene med all nødvendig dokumentasjon i forhold til de systemer de benyttes i. Alle våre spjeldventiler er produsert på DNV godkjent verk, samt at de har DNV typegodkjennelse (Gjelder ikke SIP20).

Produksjonen av våre spjeldventiler overvåkes og kontrolleres av Ahlsell sine egne ingeniører (Ahlsell avd. Kina), som sikrer at tester, materialer, utførelse og dokumentasjon er iht. våre spesifikasjoner. Ahlsell sine kontrollrutiner på spjeldventiler anses for å være en av de mest omfattende i hele Skandinavia. I tillegg omfatter våre kontrollrutiner "Code of conduct" herunder relevante punkter i ILO konvensjonen. For våre kunder vil dette bety at man ikke bare kjøper en meget god ventil, men tar også del i et system som tar hensyn til miljø og sosialt ansvar.

Ahlsell har siden oppstarten i 1877, etablert seg som et trygt og seriøst selskap i Skandinavia, og har meget kompetente medarbeidere med lang erfaring fra markedene som de lokalt arbeider i. Ahlsell er et nordisk selskap med ca 4500 medarbeidere.

BUTTERFLY VALVES

The SIP butterfly valves have been designed to fulfill the needs of the Norwegian and international markets after several years of experience with their operational demands. The valves have become a hallmark of quality through constant updates and modifications to the basic designed on the basis of customer feedback.

The SIP valves are delivered with all necessary qualifications and documentation for the systems in which they are to be used. All valves are made in DNV-approved factories and the SIP model is covered by a DNV type approval certificate. (Exept SIP20).

The production of butterfly valves is monitored by our own engineers Ahlsell's local Chinese department who also ensure that the quality control checks regarding materials, documentation and NDT procedures of the finished products are in accordance with our specifications. Our quality control procedures are considered among the most rigorous in Scandinavia and also incorporate our code of conduct regarding our dedication to the ILO convention. This ensures that our valves are not just of high quality, but their production is also held to high social and environmental standards.

Since 1877 Ahlsell has established itself as a solid and dependable Scandinavian company which associates are highly competent and experienced in their varied fields of expertise.

VÅRE SIP VENTILER / OUR SIP VALVES

Basic design

DESIGNET HAR FORDELER SOM:

- Ikke mulig å blåse opp pakningen, ved lekkasje bak pakningen.
- Gjennomgående spindel fordeler kreftene bedre enn ved 2 delt spindel (unntak 15W/LT).
- Godt egnet til aktuator, med 5 lager og nøyaktig sete/spjeld tetning.

THE DESIGN HAVE BENEFITS AS:

- Not possible to blow up the seat in case of internal leakage.
- Solid spindle ensures improved resistance to bending compared to two piece shaft design (except 15W/LT).
- The valve design is well adapted to actuator operation due to its 5 shaft bearings and bidirectional drop tight sealing.

ILLUSTRASJON

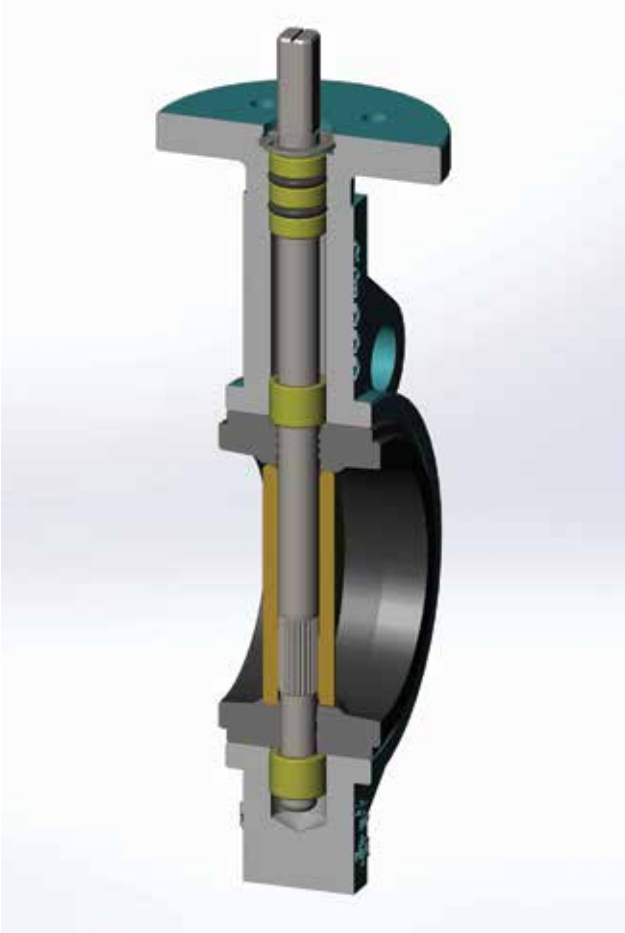
Illustrasjon av den spesielle tetningen på våre SIP dreiespjeldventiler med gummi vulkanisert til en hard backing ring. Man ser også lageret som ligger mellom aksel og ventilhuset.

SIP dreiesjeldventil er typegodkjent av GL-DNV

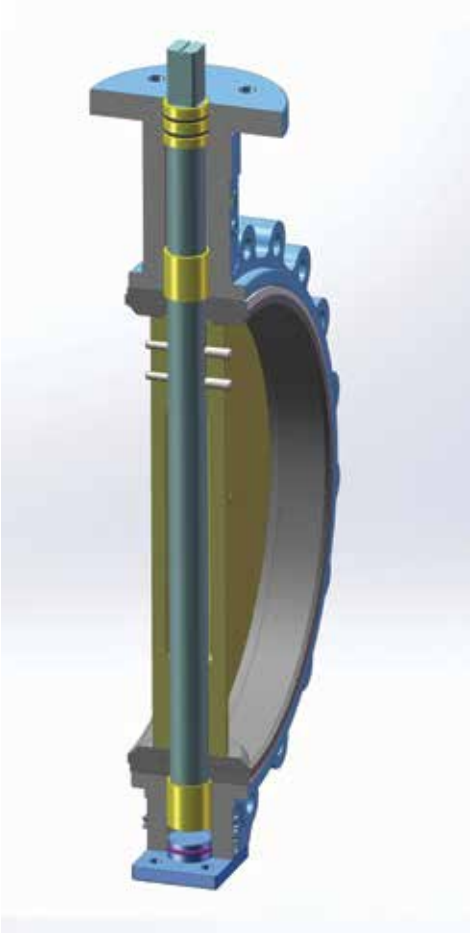
ILLUSTRATION

Illustration of the special sealing on a SIP butterflyvalve, rubber mounted to a hard backing ring. You will also see the bearing between the shaft and the housing.

The SIP butterfly valve is type approved by GL-DNV



DN 40 - DN 150



DN 200 - DN 600

SPINDELMATERIALE OG DESIGN / SPINDLE MATERIAL AND DESIGN

SIP

SPINDEL OG TAPER PINS MATERIALE:

Spindelen i våre SIP ventiler er i Duplex 2205 (UNS S322205). Gjelder fra ventiler produsert fra juni 2017. Spindelmateriale fremgår i 3.1 sertifikatene.

SPINDELKONSTRUKSJON:

Spindelen i våre SIP ventiler er designet som vist nedenfor.

Foto: DN150, Duplex 2205

Foto: DN200, Duplex 2205

Foto: DN150, 316

Foto: DN200, 17-4 PH

SPINDLE MATERIAL:

The stem in our SIP valves are in Duplex 2205 (UNS S322205). Applies to valves produced from june 2017. Stem material is showned in the 3.1 certificates.

SPINDLE CONSTRUCTION:

The stem in our SIP valves are designed as shown below.

GENERELLE EGENSKAPER DUPLEX 2205:

Duplex 2205 er en to-faset ferrittisk, austentisk 22% krom, 3% molybden, 5-6% nikkel basert rustfritt stål.
Det er den mest brukte duplex kvaliteten på verdensbasis. Den kjennetegnes for å ha høy styrke (omtrent det dobbelte av ordinær 316). I tillegg utviser Duplex 2205 høy resistens mot materialtretthet, korrosjon, erosjon, pitting og generell korrosjon i krevende miljøer.

GENERAL PROPERTIES DUPLEX 2205:

Duplex 2205 is a two-phase, ferritic, austenitic 22% chromium, 3% molybdenum, 5 to 6% nickel alloyed stainless steel.
It is the most widely used duplex stainless steel grade and is characterized by high yield strength, double that of the standard austenitic stainless steel grades. It also demonstrates good fatigue strength, as well as outstanding resistance to stress corrosion cracking, crevice, pitting, erosion, and general corrosion in severe environments.

SETEPAKNING / SEALING

SIP

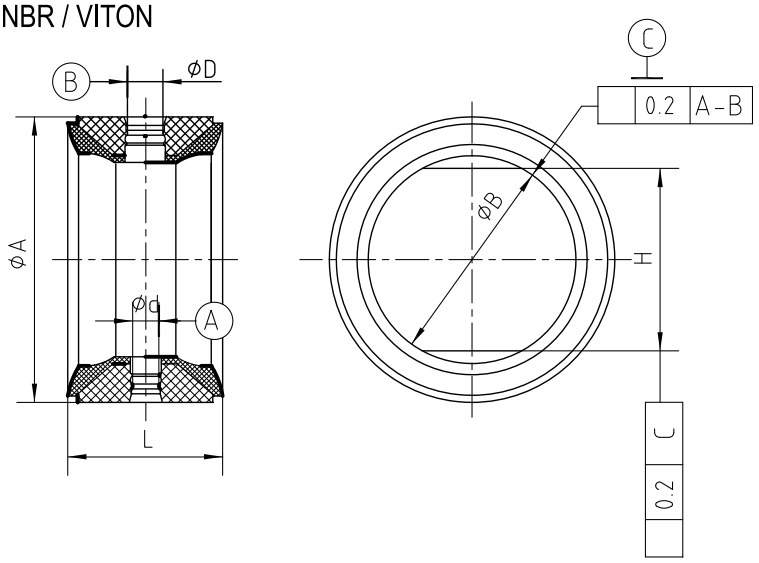
PAKNING:

Våre setepakninger er også merket på både for- og bakside av pakningen om gummikvalitet, for optimal kontroll på at ventilen har korrekt pakning i forhold til oppgitte spesifikasjoner.

SEALING:

Our valve seats are marked on both the front and back of the gasket, stating rubber quality, in order to have optimal control that the valves has the correct sealing in according to the stated specifications.

EPDM / NBR / VITON



	ØA	ØB	H	L	ØD ±0.13	Ød ±0.13
DN25	54.6 $^{0}_{-0.25}$	29 $^{+0.3}_{0}$	24.3 $^{+0.3}_{0}$	35.5 $^{+0.3}_{0}$	9.3	7.3
DN32	61.7 $^{0}_{-0.25}$	34 $^{+0.3}_{0}$	29.2 $^{+0.3}_{0}$	35.5 $^{+0.3}_{0}$	9.3	7.3
DN40	70 $^{0}_{-0.25}$	40.8 $^{+0.3}_{0}$	35.7 $^{+0.3}_{0}$	36 $^{+0.3}_{0}$	11.8	10.2
DN50	76.3 $^{0}_{-0.25}$	51 $^{+0.3}_{0}$	45 $^{+0.3}_{0}$	46.1 $^{+0.3}_{0}$	11.8	10.2
DN65	89 $^{0}_{-0.25}$	62.8 $^{+0.3}_{0}$	57.9 $^{+0.3}_{0}$	49.1 $^{+0.3}_{0}$	11.8	10.2
DN80	103.9 $^{0}_{-0.25}$	77.3 $^{+0.3}_{0}$	73.8 $^{+0.3}_{0}$	49.1 $^{+0.3}_{0}$	11.8	10.2
DN100	135 $^{0}_{-0.25}$	102.5 $^{+0.3}_{0}$	96.6 $^{+0.3}_{0}$	55.3 $^{+0.3}_{0}$	15	12.2
DN125	159 $^{0}_{-0.25}$	121.8 $^{+0.3}_{0}$	115.5 $^{+0.3}_{0}$	58.8 $^{+0.3}_{0}$	18.15	15.2
DN150	188.4 $^{0}_{-0.25}$	154.2 $^{+0.3}_{0}$	146.3 $^{+0.3}_{0}$	59.1 $^{+0.3}_{0}$	18.15	15.2
DN200	238.2 $^{0}_{-0.25}$	200.9 $^{+0.3}_{0}$	193.7 $^{+0.3}_{0}$	64.1 $^{+0.3}_{0}$	21.3	18.2

GENERELL INFORMASJON / GENERAL INFORMATION

DAMP:

Noen av våre ventiler står oppført med mettet damp som medium i bruksområdet. I dampapplikasjoner skal det fortrinnsvis anvendes ventiler som er konstruert for dette formålet, for å opprettholde forventet levetid. Kvaliteten som normalt benyttes til damp, er stål (GS-C 25N/ WCB).

Dersom det eksempelvis benyttes damp i kvaliteter som messing eller bronse, må det påregnes en redusert levetid.

SERTIFIKATER:

Alle våre ventiler kan leveres med sertifikater. Materialkvaliteter under GGG-40 (Seigjern) leveres ikke med høyere gradering enn EN10204-2.2. sertifikater. Kvaliteter fra GGG40 og over, kan leveres med EN10204-3.1.

Dersom en ventil skal leveres med EN10204-3.2 eller et oppgradert sertifikat (material/ test sertifikat fra klasseselskap), må man oppgi klasseselskap, system, medium, trykk, temperatur og andre opplysninger som er relevant for at riktige sertifikater utstedes.

EN10204-3.2 (3.1.C) SERTIFIKAT OG KLASSE TEST/ MATERIAL SERTIFIKAT:

EN10204-3.2 sertifikater kan kun utstedes av klasseselskap basert på testresultater de har gjort på støperi eller verk. For praktisk å gjennomføre en oppgradering som tar mindre tid, har de fleste klasseselskap etablert en rutine for å utstede material/ testsertifikat.

Material/ testsertifikater fra klasseselskap og EN10204-3.2 er ikke likestilt med hverandre, men er akseptert i de aller fleste installasjoner der EN10204-3.2 er påkrevet.

STEAM:

Some of our valves have been indicated with saturated steam as an application. For steam applications, valves should preferably be made of steel (GS-C25N/ WCB).

If materials like brass or bronze are used in steam applications, the service time might be reduced.

CERTIFICATES:

All our valves can be delivered with certificates. Material qualities below GGG-40 (ductile iron) are not delivered with higher gradation than EN10204-2.2. GGG-40 and higher grades can be delivered with EN 10204-3.1.

If EN10204-3.2 or upgraded material/ test certificates are requested (class society), please state class society, system, medium, pressure, temperature and other relevant information in order to issue correct certificates.

EN10204-3.2 (3.1.C) AND CLASS SOCIETY TEST/ MATERIAL CERTIFICATE:

EN10204-3.2 certificates can only be issued by a class society based upon test results they have done at the foundry or mill. The majority of the class societies have established procedures in order to issue material/ test certificates to compensate for time, and practical accomplishment of ongoing projects.

Material/ test certificates from class societies and EN10204-3.2 are not formally equivalent, but are accepted in most installations where EN10204-3.2 is requested.

TRYKKPRØVINGS RUTINER / TEST PRESSURE ROUTINES

TRYKKLASSE PN10/16/20/25

Ved testing av ventiler PN10/16/20/25, blir disse testet ved 1,1 x arbeidstrykk mot stengt ventil og 1,5 mot åpen ventil. (Klassekrav). Alle ventiler er trykktestet fra begge sider.

SERTIFISERING IHT. KLASSEKRAV

Etter utført test blir ventilen merket med et unikt nummer fra klasseselskap. Dette blir innslått på ventil hals og forsegles med rød lakk.

TRYKKLASSE DREIESPJELDSVENTILER:

Alle trykklasser er oppgitt for medier ved driftstemperatur 20°C.

PRESSURE CLASS PN10/16/20/25

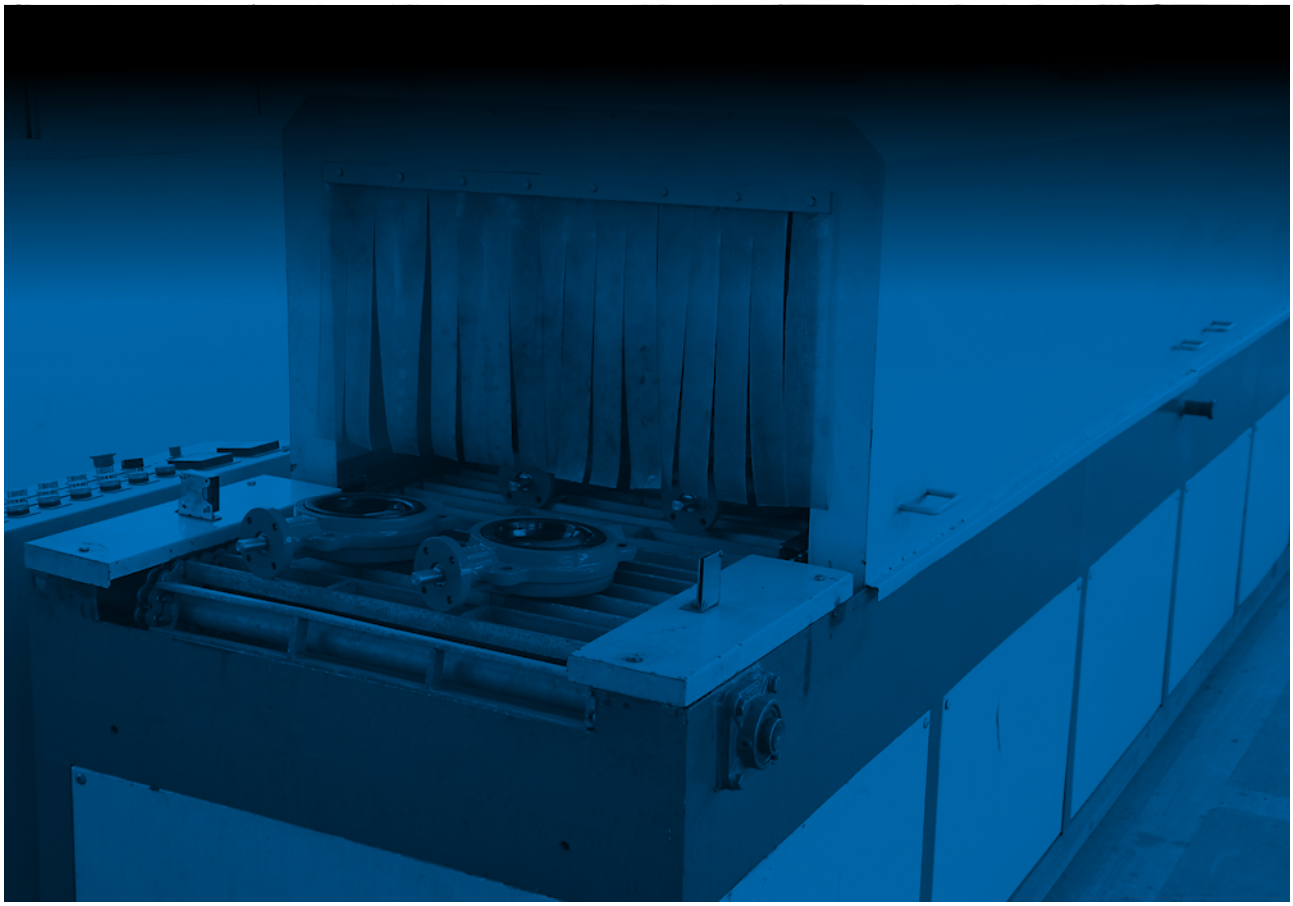
Pressure testing of valves PN10/16/20/25:
These valves will be tested with 1,1 x pressure rating against closed valve and 1,5 against open valve (Class society rules). All valves are pressuretested from both sides.

CERTIFICATION ACC. TO CLASS SOCIETY RULES

After the tests are done and the valves are approved, the valve body will be stamped with a unique tag number given by class society. The tag number will be sealed with red enamel paint.

PRESSURE CLASS BUTTERFLY VALVES:

All pressure classes valid for mediums at ambient temperature at 20°C.



TABELL FOR SETEMATERIALER / TABLE FOR SEAT MATERIALS

Name	Composition	General Application	Temp. limit	Other limits	Availability
EPDM	Ethylene - Propylene Terpolymer	Hot and cold water- Steam - Sea water - Brine - Esters - Ketone Alkalis - Caustic Soda	-20°C -4°F +120°C +248°F	Not recommanded for hydrocarbons - oils - fats	Normal stock
NBR (BUNA N)	Copolymer of Butadiene	Hydrocarbons Natural gas Oils and fat - Air - Hot and cold water - Seawater - Gasoline	-20°C -4°F +80°C +176°F	Not recommanded for Solvents - Benzene - Xylol	Normal stock
Viton (FPM)	Fluor carbon polymer	Mineral acids Oils Hydrocarbons	-20°C -4°F +135°C +275°F	Not recommanded for steam - Freon 22 Solvents - Ketones Esters - Alkalis	Normal stock
Teflon (PTFE)	Polytetrafluoro Ethylene	Solvents Corrosive Products	-40°C -40°F +180°C +356°F	Not recommanded for fluid containing powders. Alka-line metals(sodium, potas-sium) Gaseous Fluorine	Normal for ball valve & HP butterfly valve

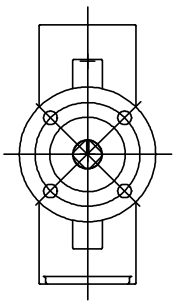
TABELLEN ER KUN EN GENERELL OVERSIKT.

Kundene må derfor selv bestemme hvilke setepakninger som passer til deres spesielle behov.
Ahlsell kan ikke holdes ansvarlig for valg av elastomer setepakninger.

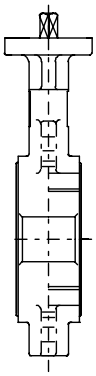
THE TABLE IS MERELY INDICATIVE.

The customer is expected to make the final decision regarding the suitability of seat materials for their specific applications. Therefore Ahlsell cannot in any way be held responsible for the elastomers used.

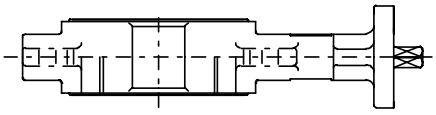
INSTALLASJON AV DREIESPJELDVENTILER / INSTALLATION OF BUTTERFLY VALVES



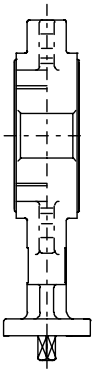
Anbefalt posisjon
Recommended



Mulig posisjon
Possible position



Mulig posisjon
Possible position

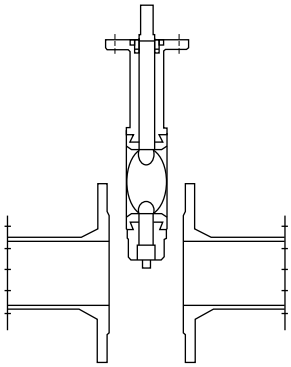


Feil posisjon
Not recommended

INSTALLASJON AV DREIESPJELDVENTILER / INSTALLATION OF BUTTERFLY VALVES

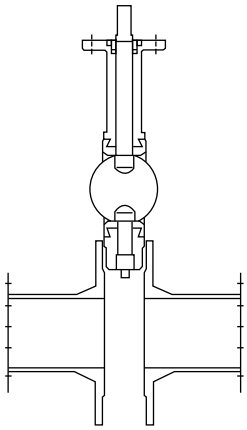
ANBEFALT INSTALLASJON / RECOMMENDED INSTALLATION

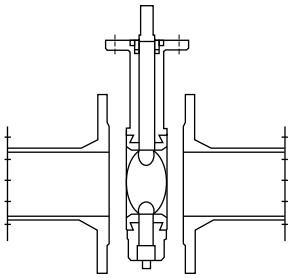
IKKE ANBEFALT INSTALLASJON / NOT RECOMMENDED INSTALLATION



1. Ha en god avstand mellom flensene før ventilen settes inn. Spjeldet skal være i delvis åpen posisjon, men ikke mer enn ventilens byggelengde. Dette for å hindre skade på spjeld og foring, samt unngå høyt vridningsmoment innledningsvis.

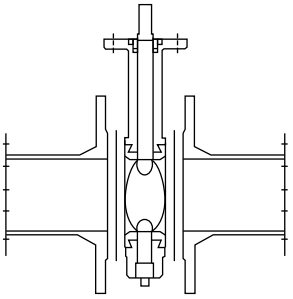
Spread flanges enough to allow the valve with disc in partially open position, but not extending the face to face lenght of the valve.

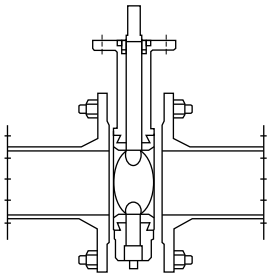




2. Pakninger mellom flenser og ventil skal ikke benyttes.

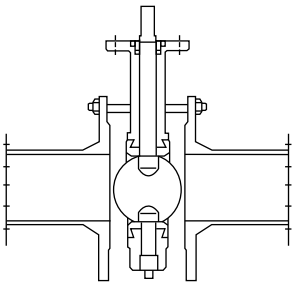
Gaskets between the flanges and valve are not needed and should not be used.

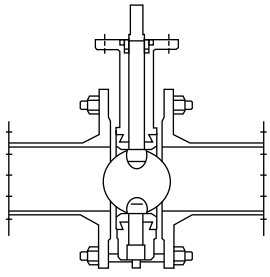




3. Sett i bolter gjennom flensene og skru forsiktig til (nederste bolter først).

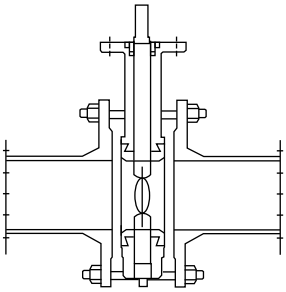
Insert bolts through the pipe flange holes and tighten carefully (bottom bolts first).

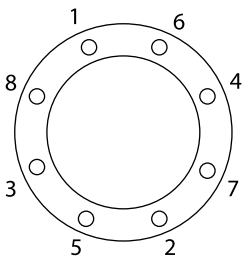




4. Spjeldet åpnes helt før fast innspenning.

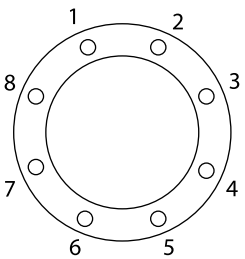
Disc in full open position before tightening the bolts evenly.





5. Spenn boltene fast i.h.t. figur til venstre.

Tighten the bolts evenly in accordance with the figure to the left.



DREIESPJELDVENTIL WAFER / BUTTERFLY VALVE WAFER

SIP - 04W

ANBEFALTE BRUKSOMRÅDER:

Ventil for bruk på varmeanlegg/
kjølevannssystemer maks. temp. 120°C.
Min. 18% strekkfasthet. Høy hals.

Flenseboring:
DN 50 - 150 PN16/ ANSI CL.150
DN 200 - 300 PN10/ ANSI CL.150

Trykklasse:
DN 50 - 150 PN16
DN 200 - 300 PN10

Standard ventiler fra DN50 til og med DN150 leveres med spak.
Dimensjoner fra DN200 leveres med gir.

For operasjonsmoment se side 558.

RECOMMENDED USAGE:

Valve for use in HVAC systems.
Max temp. 120°C.
Min. 18% elogation. Long neck.

Flange drilling:
DN 50 - 150 PN16/ ANSI CL.150
DN 200 - 300 PN10/ ANSI CL.150

Pressure class:
DN 50 - 150 PN16
DN 200 - 300 PN10

Standard valves from DN50 to DN150 are delivered with lever.
Dimensions from DN200 are delivered with gear.

For operating torque see page 558.

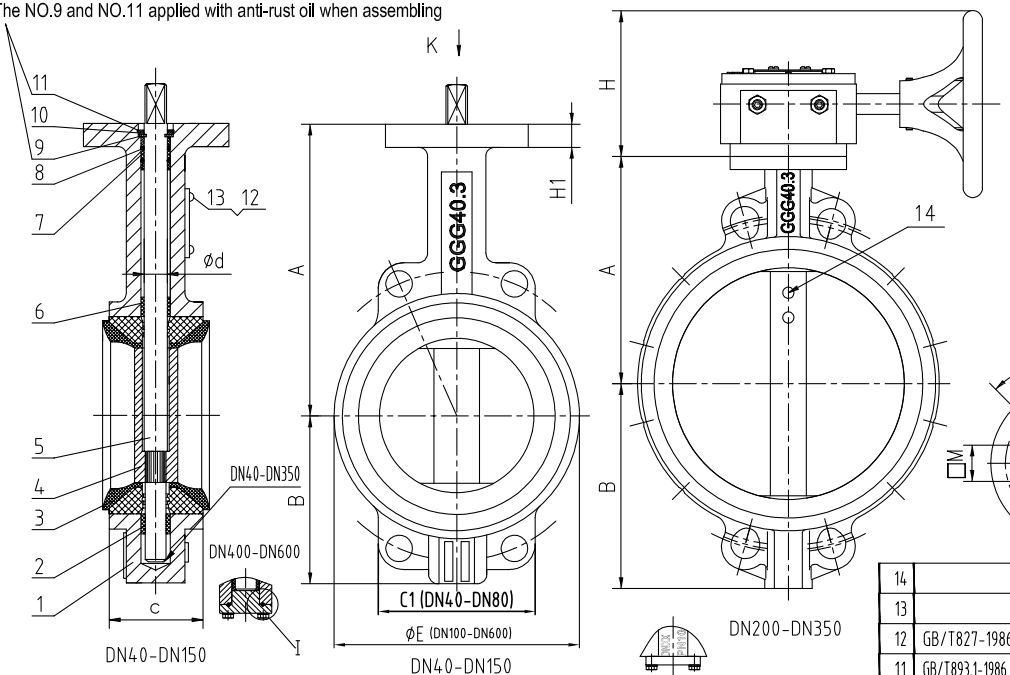
Nr.	Detalj/Part name	Materiale/Material
1	Hus/Body	Seigjern/Ductile iron (DI) GGG-40.3
2	Spjeld/Disc	316SS, (1.4408)
3	Spindel/Stem	Duplex 2205
4	Pakning/Sealing	EPDM
5	Foringer/Bearings	PTFE
6	Farge/Colour	Rød/Red
7	Taper pin from DN 200 and up	Duplex 2205

HS CODE INT. 8481.80

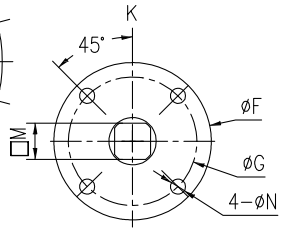
DN	Vare nr. Standard	Vare nr. *Free top	M SQ mm	ISO-TOP 5211	h2 mm	Arb.trykk Work. pressure	Vekt Weight Kg
50	5534027	5534234	11	F05/07	27	16 bar	3,6
65	5534028	5534235	11	F05/07	27	16 bar	4,3
80	5534029	5534236	11	F05/07	27	16 bar	4,6
100	5534031	5534237	14	F05/07	27	16 bar	5,8
125	5534032	5534238	14	F07	27	16 bar	7,8
150	5534033	5534239	17	F07	27	16 bar	9,4
200	5534034	5534241	17	F07/10	35	10 bar	22,2
250	5534035	5534242	22	F10	38	10 bar	29,3
300	5534036	5534243	27	F12	38	10 bar	41,7

**Free top = Ventil for montering av aktuator. M SQ -Montering / *Free top = Valve for mounting of actuator. M SQ-Mounting*
Kan leveres med EN 10204- 3.1 sertifikat / Can be delivered with EN 10204- 3.1 certificate.
Typegodkjent av Det Norske Veritas (DNV). / Type approved by Det Norske Veritas (DNV).

The NO.9 and NO.11 applied with anti-rust oil when assembling

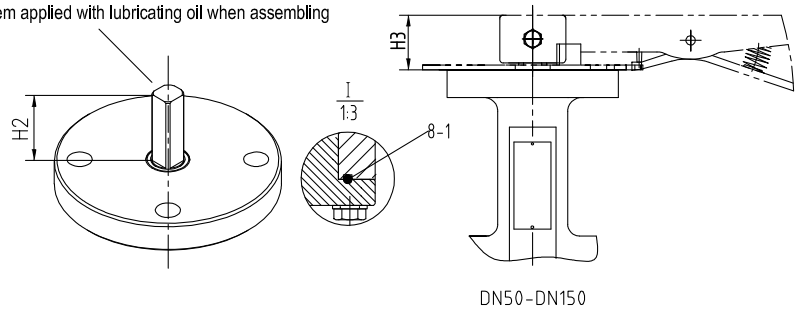


DN	A	B	C	C1	H	H1	H2	H3	ΦE	ΦF	ΦG	4-ΦN	Φd	M
40	140	75	33	120		13	27	30		90	50/70	7/10	12.6	11
50	161	80	43	123.5		13	27	30		90	50/70	7/10	12.6	11
65	175	89	46	139		13	27	30		90	50/70	7/10	12.6	11
80	181	95	46	145		13	27	30		90	50/70	7/10	12.6	11
100	200	114	52			13	27	30	161	90	50/70	7/10	15.77	14
125	213	127	56			13	27	30	191	90	70	10	18.92	14
150	226	140	56			13	27	30	216	90	70	10	18.92	17
200	260	175	60		182	14	35		270	125	70/102	10/12	22.1	17
250	292	221	68		182	17	38		324	125	102	12	28.45	22
300	337	255	78		184	20	38		400	150	125	14	31.6	27
350	368	268	78		184	22	38		435	150	125	14	31.6	27
400	400	322	102		209	23	38		495	175	125/140	14/18	33.15	36
450	422	342	114		209	23	38		538	210	140	18	37.95	36
500	479	375	127		207	25	38		592	210	140	18	41.12	36
600	562	467	154		258	28	38		705	210	165	22	50.62	46



ITEM	STANDARD
Design standard	EN 593:2004
Test standard	EN 12266-1:2003
Face to Face standard	EN 558-1:1996

The stem applied with lubricating oil when assembling



14		PIN	2	Duplex 2205			
13		PLATE	1	SS304			
12	GB/T827-1986	RIVET 2.0X5	2	Al			
11	GB/T893.1-1986	RATAINING RING	1	carbon steel			
10		WASHER	1	SS304			
9	GB/T893.4.1-1986	RATAINING RING	1	carbon steel			
8/8-1		O RING 2PCS(DN40-DN350)/ 3PCS(DN400-DN600)		VITON			
7		BUSHING II	3	F4			
6		BUSHING I	1	F4			
5		STEM	1	Duplex 2205			
4		DISC		316SS			
3		SEAT RING	1	EPDM			
2		LOWER BUSHING	1	F4			
1		BODY	1	GGG40.3			
Num	Code Num	Name	Qty	Material	N.W	G.W	

Itemref	Quantity	Title/Name, designation, material, dimension etc	Article No./Reference

Designed by	Checked by	Approved by - date	File name	Date	Scale
ZY				2016/6/15	

Assembly Drawing DN40-DN600 Butterflyvalve(Long)

SIP-04W | Edition J | Sheet

Standard valves from DN40 to DN150
are delivered with lever
Dimensions from DN200 are with gear

Flange driling
DN40-150 PN16
DN200-600 PN10
Pressure class:
DN40-150 PN 16
DN200-800 PN10

DREIESPJELDVENTIL LUG / BUTTERFLY VALVE LUG

SIP - 04LT

ANBEFALTE BRUKSOMRÅDER:

Ventil for bruk på varmeanlegg/
kjølevannssystemer maks. temp. 120°C.
Min. 18% strekkfasthet. Høy hals.

Flenseboring:
DN 50 - 150 PN16
DN 200 - 300 PN10

Trykklasse:
DN 50 - 150 PN16
DN 200 - 300 PN10

Standard ventiler fra DN50 til og med DN150 leveres med spak.
Dimensjoner fra DN200 leveres med gir.

For operasjonsmoment se side 558.

RECOMMENDED USAGE:

Valve for use in HVAC systems.
Max temp. 120°C.
Min. 18% elogation. Long neck.

Flange drilling:
DN 50 - 150 PN16
DN 200 - 300 PN10

Pressure class:
DN 50 - 150 PN16
DN 200 - 300 PN10

Standard valves from DN50 to DN150 are delivered with lever.
Dimensions from DN200 are delivered with gear.

For operating torque see page 558.

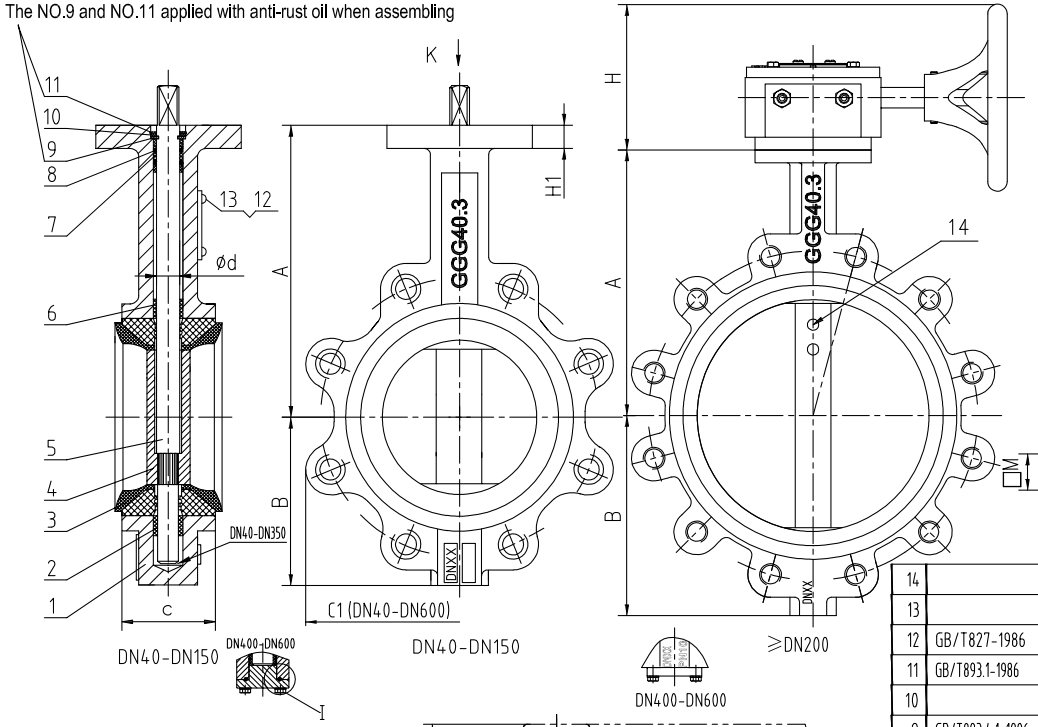
Nr.	Detalj/Part name	Materiale/Material
1	Hus/Body	Seigjern/Ductile iron (DI) GGG-40.3
2	Spjeld/Disc	316SS, (1.4408)
3	Spindel/Stem	Duplex 2205
4	Pakning/Sealing	EPDM
5	Foringer/Bearings	PTFE
6	Farge/Colour	Rød/Red
7	Taper pin from DN 200 and up	Duplex 2205

HS CODE INT. 8481.80

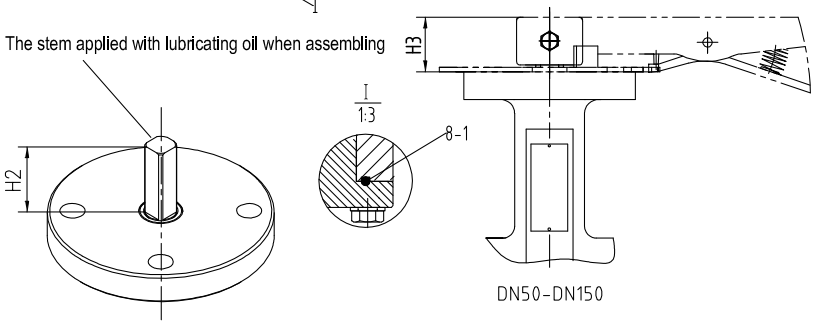
DN	Vare nr. Standard	Vare nr. *Free top	M SQ mm	ISO-TOP 5211	h2 mm	Arb.trykk Work. pressure	Vekt Weight Kg
50	5534037	5534244	11	F05/07	27	16 bar	4,5
65	5534038	5534245	11	F05/07	27	16 bar	4,6
80	5534039	5534246	11	F05/07	27	16 bar	5,9
100	5534041	5534247	14	F05/07	27	16 bar	7,6
125	5534042	5534248	14	F07	27	16 bar	10,5
150	5534043	5534249	17	F07	27	16 bar	12,0
200	5534044	5534251	17	F07/10	35	10 bar	26,1
250	5534045	5534252	22	F10	38	10 bar	35,7
300	5534046	5534253	27	F12	38	10 bar	58,6

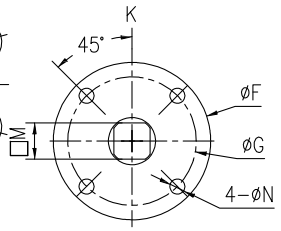
**Free top = Ventil for montering av aktuator. M SQ -Montering / *Free top = Valve for mounting of actuator. M SQ-Mounting*
Kan leveres med EN 10204- 3.1 sertifikat / Can be delivered with EN 10204- 3.1 certificate.
Typegodkjent av Det Norske Veritas (DNV). / Type approved by Det Norske Veritas (DNV).

The NO.9 and NO.11 applied with anti-rust oil when assembling



The stem applied with lubricating oil when assembling





DN	A	B	C	C1	H	H1	H2	H3	ΦF	ΦG	4-ΦN	Φd	M
40	140	75	33	118		13	27	30	90	50/70	7/10	12.6	11
50	151	80	43	126		13	27	30	90	50/70	7/10	12.6	11
65	175	89	46	143		13	27	30	90	50/70	7/10	12.6	11
80	181	95	46	179		13	27	30	90	50/70	7/10	12.6	11
100	200	114	52	207		13	27	30	90	50/70	7/10	15.77	14
125	213	127	56	237		13	27	30	90	70	10	18.92	14
150	226	140	56	262		13	27	30	90	70	10	18.92	17
200	260	175	60	323	182	14	35		125	70/102	10/12	22.1	17
250	292	221	68	400	182	17	38		125	102	12	28.45	22
300	337	255	78	445	184	20	38		150	125	14	31.6	27
350	368	288	78	501	184	22	38		150	125	14	31.6	27
400	400	322	102	538	209	23	38		175	125/140	14/18	33.15	36
450	422	342	114	611	209	23	38		210	140	18	37.95	36
500	479	375	127	662	207	25	38		210	140	18	41.12	36
600	562	436	154	773	258	28	38		210	165	22	50.62	46

ITEM	STANDARD
Design standard	EN 593:2004
Test standard	EN 12266-1:2003
Face to Face standard	EN 558-1:1996

14		PIN	2	Duplex 2205			
13		PLATE	1	SS304			
12	GB/T827-1986	RIVET 2.0X5	2	Al			
11	GB/T893.1-1986	RATAINING RING	1	carbon steel			
10		WASHER	1	SS304			
9	GB/T893.4.1-1986	RATAINING RING	1	carbon steel			
8/8-1		ORING 2PCS(DN40-DN350)/ 3PCS(DN400-DN600)		VITON			
7		BUSHING II	3	F4			
6		BUSHING I	1	F4			
5		STEM	1	Duplex 2205			
4		DISC	1	316SS			
3		SEAT RING	1	EPDM			
2		LOWER BUSHING	1	F4			
1		BODY	1	GGG40.3			
Num	Code Num	Name	Qty	Material	N.W	G.W	

Itemref	Quantity	Title/Name, designation, material, dimension etc	Article No./Reference

Designed by	Checked by	Approved by - date	File name	Date	Scale
ZY				2017/5/23	

Assembly Drawing DN40-DN600Butterflyvalve(LONG)

SIP-04LT | Edition L | Sheet

Standard valves from DN40 to DN150
are delivered with lever
Dimensions from DN200 are with gear

Flange driling
DN40-150 PN16
DN200-600 PN10
Pressure class:
DN40-150 PN 16
DN200-600 PN10

DREIESPJELDVENTIL WAFER / BUTTERFLY VALVE WAFER

SIP - 11W

ANBEFALTE BRUKSOMRÅDER:

Ventil for bruk på RSW anlegg, sjøvann og kjølevannssystemer.
Maks. temp. 120°C.
Min. 18% strekkfasthet.

Flenseboring:
DN 50 - 150 PN16/ ANSI CL.150
DN 200 - 600 PN10/ ANSI CL.150

Trykklasse:
DN 50 - 150 PN16
DN 200 - 600 PN10

Standard ventiler fra DN50 til og med DN150 leveres med spak.
Dimensjoner fra DN200 leveres med gir.

For operasjonsmoment se side 558.

RECOMMENDED USAGE:

Valve for use in RSW applications, seawater and HVAC systems.
Max temp. 120°C.
Min. 18% elogation.

Flange drilling:
DN 50 - 150 PN16/ ANSI CL.150
DN 200 - 600 PN10/ ANSI CL.150

Pressure class:
DN 50 - 150 PN16
DN 200 - 600 PN10

Standard valves from DN50 to DN150 are delivered with lever.
Dimensions from DN200 are delivered with gear.

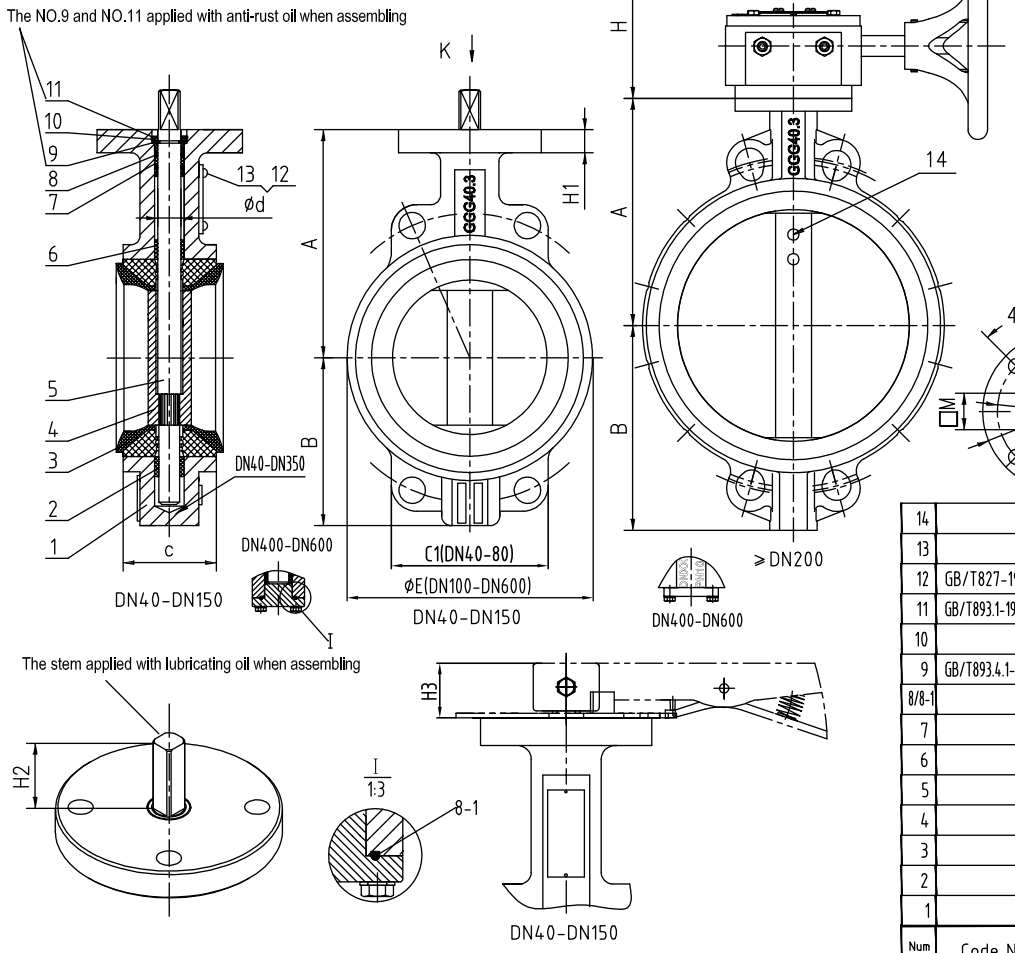
For operating torque see page 558.

Nr.	Detalj/Part name	Materiale/Material
1	Hus/Body	Seigjern/Ductile iron (DI) GGG-40.3
2	Spjeld/Disc	Al/Br (C95800)
3	Spindel/Stem	Duplex 2205
4	Pakning/Sealing	EPDM
5	Foringer/Bearings	PTFE
6	Farge/Colour	Rød/Red
7	Taper pin from DN 200 and up	Duplex 2205

HS CODE INT. 8481.80

DN	Vare nr. Standard	Vare nr. *Free top	M SQ mm	ISO-TOP 5211	h2 mm	Arb.trykk Work. pressure	Vekt Weight Kg
40	5534047	5534254	11	F05	27	16 bar	2,7
50	5534048	5534255	11	F05/07	27	16 bar	3,4
65	5534049	5534256	11	F05/07	27	16 bar	4,0
80	5534051	5534257	11	F05/07	27	16 bar	4,6
100	5534052	5534258	14	F05/07	27	16 bar	5,6
125	5534053	5534259	14	F07	27	16 bar	7,6
150	5534054	5534261	17	F07	27	16 bar	9,0
200	5534055	5534262	17	F07/10	35	10 bar	21,4
250	5534056	5534263	22	F10	38	10 bar	28,0
300	5534057	5534264	27	F12	38	10 bar	42,0
350	5534058	5534265	27	F12	38	10 bar	53,4
400	5534059	5534266	36	F12/14	38	10 bar	90,0
450	5534061	5534267	36	F14	38	10 bar	101,3
500	5534062	5534268	36	F14	38	10 bar	141,0
600	5534063	5534269	46	F16	38	10 bar	219,0

**Free top = Ventil for montering av aktuator. M SQ -Montering / *Free top = Valve for mounting of actuator. M SQ-Mounting*
Kan leveres med EN 10204- 3.1 sertifikat / Can be delivered with EN 10204- 3.1 certificate.
Typegodkjent av Det Norske Veritas (DNV). / Type approved by Det Norske Veritas (DNV).



DN	A	B	C	C1	H	H1	H2	H3	ΦE	ΦF	ΦG	4-ΦN	Φd	M
40	120	75	33	120		13	27	30		90	50/70	7/10	12.6	11
50	124	80	43	123.5		13	27	30		90	50/70	7/10	12.6	11
65	134	89	46	139		13	27	30		90	50/70	7/10	12.6	11
80	141	95	46	145		13	27	30		90	50/70	7/10	12.6	11
100	156	114	52			13	27	30	161	90	50/70	7/10	15.77	14
125	168	127	56			13	27	30	191	90	70	10	18.92	14
150	184	140	56			13	27	30	216	90	70	10	18.92	17
200	213	175	60		182	14	35		270	125	70/102	10/12	22.1	17
250	244	221	68		182	17	38		324	125	102	12	28.45	22
300	283	255	78		184	20	38		400	150	125	14	31.6	27
350	368	268	78		184	22	38		435	150	125	14	31.6	27
400	400	322	102		209	23	38		495	175	125/140	14/18	33.15	36
450	422	342	114		209	23	38		538	210	140	18	37.95	36
500	479	375	127		207	25	38		592	210	140	18	41.12	36
600	562	467	154		258	28	38		705	210	165	22	50.62	46

ITEM	STANDARD
Design standard	EN 593:2004
Test standard	EN 12266-1:2003
Face to Face standard	EN 558-1:1996

14		PIN	2	Duplex 2205			
13		PLATE	1	SS304			
12	GB/T827-1986	RIVET 2.0X5	2	Al			
11	GB/T893.1-1986	RATAINING RING	1	carbon steel			
10		WASHER	1	SS304			
9	GB/T893.4.1-1986	RATAINING RING	1	carbon steel			
8/8-1		O RING 2PCS(DN40-DN350)/ 3PCS(DN400-DN600)		VITON			
7		BUSHING II	3	F4			
6		BUSHING I	1	F4			
5		STEM	1	Duplex 2205			
4		DISC	1	AL-BR			
3		SEAT RING	1	EPDM			
2		LOWER BUSHING	1	F4			
1		BODY	1	GGG40.3			
Num	Code Num	Name	Qty	Material	N.W	G.W	

Itemref	Quantity	Title/Name, designation, material, dimension etc	Article No./Reference

Designed by	Checked by	Approved by - date	File name	Date	Scale
ZY				2017/5/23	

Assembly Drawing DN40-DN600 Butterflyvalve(Short)

SIP-11W | Edition L | Sheet

Standard valves from DN40 to DN150
are delivered with lever
Dimensions from DN200 are with gear

Flange drilling
DN40-150 PN16
DN200-600 PN10
Pressure class:
DN40-150 PN 16
DN200-600 PN10

DREIESPJELDVENTIL LUG / BUTTERFLY VALVE LUG TYPE

SIP - 11LT

ANBEFALTE BRUKSOMRÅDER:

Ventil for bruk på RSW anlegg, sjøvann og kjølevannssystemer. Godkjent som Bunn- og over bord ventil for skip og ellers utsatte plasser. Min. 18% el. for klassesertifikat. Maks. temp. 120°C.

Flenseboring:
DN 40 - 150 PN16
DN 200 - 600 PN10

Trykklasse:
DN 40 - 150 PN16
DN 200 - 600 PN10

Standard ventiler fra DN50 til og med DN150 leveres med spak. Dimensjoner fra DN200 leveres med gir.

For operasjonsmoment se side 558.

RECOMMENDED USAGE:

Valve for use in RSW applications, seawater and HVAC systems. Approved as bottom and overboard valve for ships and otherwise exposed places. Min. 18% elongation as standard for class certification. Max temp 120°C.

Flange drilling:
DN 40 - 150 PN 6
DN 200 - 600 PN10

Pressure class:
DN 40- 150 PN16
DN 200 - 600 PN10

Standard valves from DN50 to DN150 are delivered with lever. Dimensions from DN200 are delivered with gear.

For operating torque see page 558.

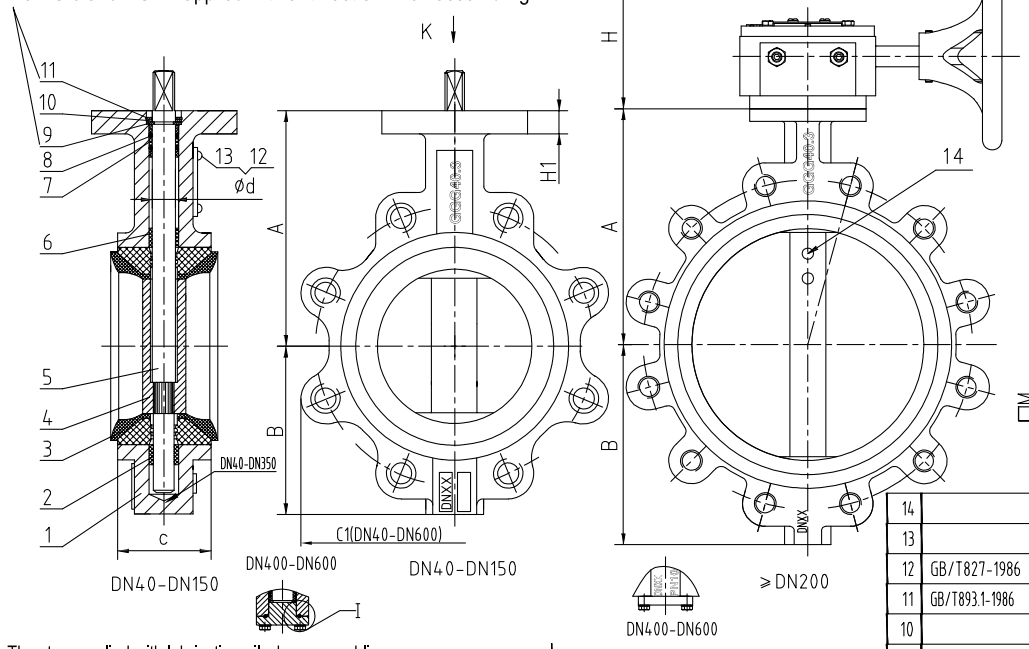
Nr.	Detalj/Part name	Materiale/Material
1	Hus/Body	Seigjern/Ductile iron (DI) GGG-40.3
2	Spjeld/Disc	Al/Br (C95800)
3	Spindel/Stem	Duplex 2205
4	Pakning/Sealing	EPDM
5	Foringer/Bearings	PTFE
6	Farge/Colour	Rød/Red
7	Taper pin from DN 200 and up	Duplex 2205

HS CODE INT. 8481.80

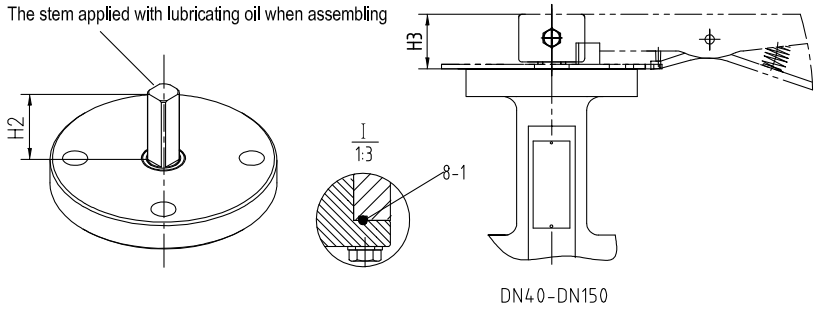
DN	Vare nr. Standard	Vare nr. *Free top	Vare nr. **DNV Cert. vlv.	M SQ mm	ISO-TOP 5211	h2 mm	Arb.trykk Work. pressure	Vekt Weight Kg
40	5534064	5534271	-	11	F05	27	16 bar	3,5
50	5534065	5534272	-	11	F05/07	27	16 bar	4,2
65	5534066	5534273	-	11	F05/07	27	16 bar	5,0
80	5534067	5534274	-	11	F05/07	27	16 bar	5,8
100	5534068	5534275	-	14	F05/07	27	16 bar	7,2
125	5534069	5534276	5533001	14	F07	27	16 bar	10,8
150	5534071	5534277	5533002	17	F07	27	16 bar	11,5
200	5534072	5534278	5533003	17	F07/10	35	10 bar	26,3
250	5534073	5534279	5533004	22	F10	38	10 bar	33,2
300	5534074	5534281	5533005	27	F12	38	10 bar	47,0
350	5534075	5534282	5533006	27	F12	38	10 bar	76,0
400	5534076	5534283	5533007	36	F12/F14	38	10 bar	111,0
450	5534077	5534284	5533008	36	F14	38	10 bar	131,0
500	5534078	5534285	5533009	36	F14	38	10 bar	158,0
600	5534079	5534286	5533011	46	F16	38	10 bar	284,0

**Free top = Ventil for montering av aktuator. M SQ -Montering / *Free top = Valve for mounting of actuator. M SQ-Mounting*
Kan leveres med EN 10204- 3.1 sertifikat / Can be delivered with EN 10204- 3.1 certificate.
Typegodkjent av Det Norske Veritas (DNV). / Type approved by Det Norske Veritas (DNV).

The NO.9 and NO.11 applied with anti-rust oil when assembling



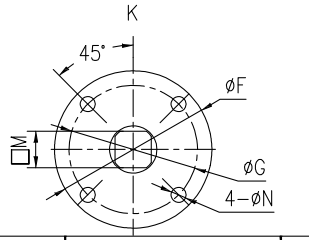
The stem applied with lubricating oil when assembling



Standard valves from DN40 to DN150
are delivered with lever
Dimensions from DN200 are with gear

Flange driling
DN40-150 PN16
DN200-600 PN10
Pressure class:
DN40-150 PN 16
DN200-600 PN10

DN	A	B	C	C1	H	H1	H2	H3	ΦF	ΦG	4-ΦN	Φd	M
40	120	75	33	118		13	27	30	90	50/70	7/10	12.6	11
50	124	80	43	126		13	27	30	90	50/70	7/10	12.6	11
65	134	89	46	143		13	27	30	90	50/70	7/10	12.6	11
80	141	95	46	179		13	27	30	90	50/70	7/10	12.6	11
100	156	114	52	207		13	27	30	90	50/70	7/10	15.77	14
125	168	127	56	237		13	27	30	90	70	10	18.92	14
150	184	140	56	262		13	27	30	90	70	10	18.92	17
200	213	175	60	323	182	14	35		125	70/102	10/12	22.1	17
250	244	221	68	400	182	17	38		125	102	12	28.45	22
300	283	255	78	445	184	20	38		150	125	14	31.6	27
350	368	268	78	501	184	22	38		150	125	14	31.6	27
400	400	322	102	558	209	23	38		175	125/140	14/18	33.15	36
450	422	342	114	611	209	23	38		210	140	18	37.95	36
500	479	375	127	662	207	25	38		210	140	18	41.12	36
600	562	436	154	773	258	28	38		210	165	22	50.62	46



ITEM	STANDARD
Design standard	EN 593:2004
Test standard	EN 12266-1:2003
Face to Face standard	EN 558-1:1996

Num	Code Num	Name	Qty	Material	N.W	G.W	
14		PIN	2	Duplex 2205			
13		PLATE	1	SS304			
12	GB/T827-1986	RIVET 2.0X5	2	Al			
11	GB/T893.1-1986	RATAINING RING	1	carbon steel			
10		WASHER	1	SS304			
9	GB/T893.4.1-1986	RATAINING RING	1	carbon steel			
8/8-1		O RING 2PCS(DN40-DN350)/ 3PCS(DN400-DN600)		VITON			
7		BUSHING II	3	F4			
6		BUSHING I	1	F4			
5		STEM	1	Duplex 2205			
4		DISC	1	AL-BR			
3		SEAT RING	1	EPDM			
2		LOWER BUSHING	1	F4			
1		BODY	1	GGG40.3			

Itemref	Quantity	Title/Name, designation, material, dimension etc	Article No./Reference

Designed by	Checked by	Approved by - date	File name	Date	Scale
ZY				2017/5/23	

Assembly Drawing	DN40-DN6000Butterflyvalve(Short)		
SIP-11LT		Edition L	Sheet

DREIESPJELDVENTIL LUG / BUTTERFLY VALVE LUG

SIP - 11LT DN 700 og 800 / SIP - 11LT DN 700 and 800

ANBEFALTE BRUKSOMRÅDER:

Ventil for bruk på RSW anlegg, sjøvann og kjølevannssystemer. Godkjent som Bunn- og over bord ventil for skip og ellers utsatte plasser. Min. 18% el. for klassesertifikat. Maks. temp. 120°C.

Flenseboring:	**Trykklasse:**
DN 700	PN10
DN 800	PN10

Standard levert med fri spindel.

For operasjonsmoment se side 558. For teknisk info gir, se side 554.

RECOMMENDED USAGE:

Valve for use in RSW applications, seawater and HVAC systems. Approved as bottom and overboard valve for ships and otherwise exposed places. Min. 18% elongation as standard for class certification. Max temp 120°C.

Flange drilling:	**Pressure class:**
DN 700	PN10
DN 800	PN10

Standard delivered with free top.

For operating torque see page 558. For technical information gear, see page 554.

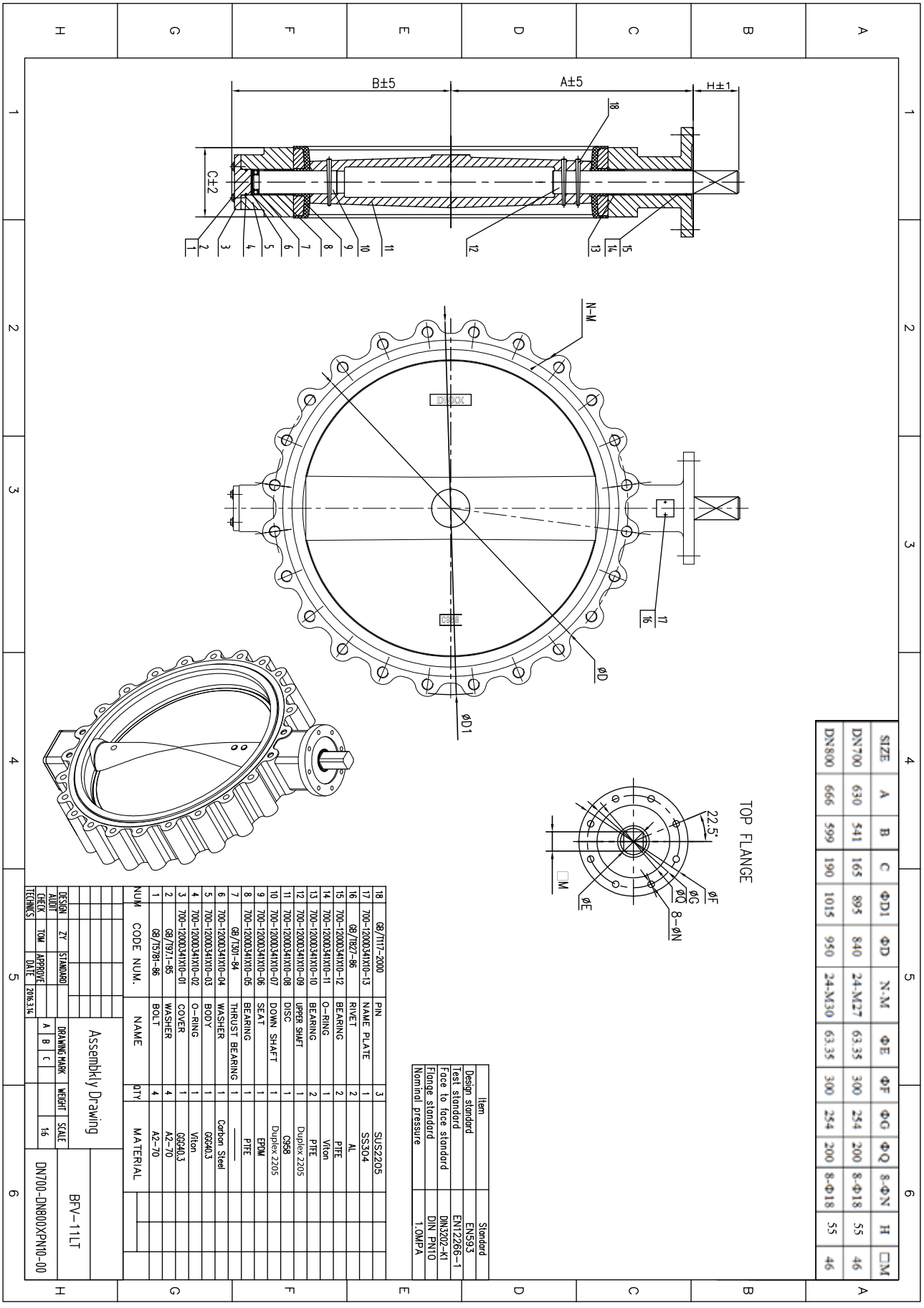
DN	Vare nr. Gir / Gear	Farge Colour
700/800	9508197	Svart/Black (C4)

Nr.	Detalj/Part name	Materiale/Material
1	Hus/Body	Seigjern/Ductile iron (DI) GGG-40.3
2	Spjeld/Disc	Al/Br (C95800)
3	Spindel/Stem	Duplex 2205
4	Pakning/Sealing	EPDM
5	Foringer/Bearings	PTFE
6	Farge/Colour	Rød/Red
7	Taper pin	Duplex 2205

HS CODE INT. 8481.80

DN	Vare nr. *DNV Cert. vlv.	M SQ mm	ISO-TOP 5211	H Hight spindel mm	Arb.trykk Work. pressure	Vekt Weight Kg
700	5534376	46	F25	95	10 bar	280,0
800	5534377	46	F25	95	10 bar	490,0

**Free top = Ventil for montering av aktuator. M SQ -Montering / *Free top = Valve for mounting of actuator. M SQ-Mounting*
Kan leveres med EN 10204- 3.1 sertifikat / Can be delivered with EN 10204- 3.1 certificate.
Typegodkjent av Det Norske Veritas (DNV). / Type approved by Det Norske Veritas (DNV).



SIZE	A	B	C	ΦD1	ΦD	N-M	ΦE	ΦF	ΦG	ΦQ	8-ΦN	H	□M
DN700	630	541	165	895	840	24-M27	63.35	300	254	200	8-Φ18	55	46
DN800	666	599	190	1015	950	24-M30	63.35	300	254	200	8-Φ18	55	46

Item	Standard
Design standard	EN593
Test standard	EN12266-1
Face to face standard	DIN3202-K1
Flange standard	DIN PN10
Nominal pressure	1.0MPA

NUM	CODE NUM.	NAME	QTY	MATERIAL
18	GB/T1117-2000	PIN	3	SUS2205
17	700-12000341X10-13	NAME PLATE	1	SS304
16	GB/T827-86	RIVET	2	AL
15	700-12000341X10-12	BEARING	2	PTFE
14	700-12000341X10-11	O-RING	1	Viton
13	700-12000341X10-10	BEARING	2	PTFE
12	700-12000341X10-09	UPPER SHAFT	1	Duplex 2205
11	700-12000341X10-08	DISC	1	CF8
10	700-12000341X10-07	DOWN SHAFT	1	Duplex 2205
9	700-12000341X10-06	SEAT	1	EPDM
8	700-12000341X10-05	BEARING	1	PTFE
7	GB/T301-84	THRUST BEARING	1	——
6	700-12000341X10-04	WASHER	1	Carbon Steel
5	700-12000341X10-03	BODY	1	GG340.3
4	700-12000341X10-02	O-RING	1	Viton
3	700-12000341X10-01	COVER	1	GG340.3
2	GB/797.1-85	WASHER	4	A2-70
1	GB/5781-86	BOLT	4	A2-70

DESIGN	ZY	STANDARD	
AUDIT			
CHECK	TOM	APPROVE	
TECHNICS		DATE	2016.3.14

DRAWING MARK	WEIGHT	SCALE
A		1:6
B		
C		

Assembkly Drawing

BFV-11LT

DN700-DN800XPN10-00

DREIESPJELDVENTIL WAFER / BUTTERFLY VALVE WAFER

SIP - 13W

ANBEFALTE BRUKSOMRÅDER:

Standard ventil for bruk til vann, sjøvann, olje mm.
Min. 18% strekkfasthet. Maks temp. 80°C.

Flenseboring:
DN 40 - 150 PN16/ ANSI CL.150
DN 200 - 600 PN10/ ANSI CL.150

Trykklasse:
DN 40 - 150 PN16
DN 200 - 600 PN10

Standard ventiler fra DN40 til og med DN150 leveres med spak.
Dimensjoner fra DN200 leveres med gir.

For operasjonsmoment se side 558.

RECOMMENDED USAGE:

Standard valve for use for water, sea water, oil etc.
Delivered with min 18% elongation. Max temp 80°C.

Flange drilling:
DN 40 - 150 PN16/ ANSI CL.150
DN 200 - 600 PN10/ ANSI CL.150

Pressure class:
DN 40 - 150 PN16
DN 200 - 600 PN10

Standard valves from DN40 to DN150 are delivered with lever.
Dimensions from DN200 are delivered with gear.

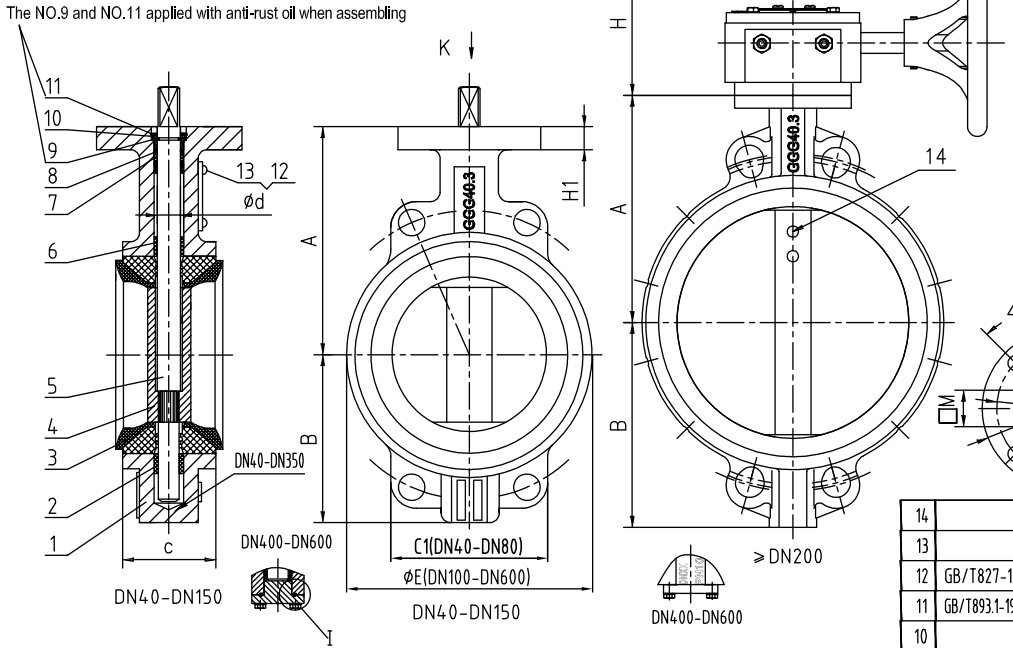
For operating torque see page 558.

Nr.	Detalj/Part name	Materiale/Material
1	Hus/Body	Seigjern/Ductile iron (DI) GGG-40.3
2	Spjeld/Disc	Al/Br (C95800)
3	Spindel/Stem	Duplex 2205
4	Pakning/Sealing	NBR
5	Foringer/Bearings	PTFE
6	Farge/Colour	Blå/Blue
7	Taper pin from DN 200 and up	Duplex 2205

HS CODE INT. 8481.80

DN	Vare nr. Standard	Vare nr. *Free top	M SQ mm	ISO-TOP 5211	h2 mm	Arb.trykk Work. pressure	Vekt Weight Kg
40	5534081	5534287	11	F05	27	16 bar	2,7
50	5534082	5534288	11	F05/07	27	16 bar	3,4
65	5534083	5534289	11	F05/07	27	16 bar	4,0
80	5534084	5534291	11	F05/07	27	16 bar	4,6
100	5534085	5534292	14	F05/07	27	16 bar	5,6
125	5534086	5534293	14	F07	27	16 bar	7,6
150	5534087	5534294	17	F07	27	16 bar	9,0
200	5534088	5534295	17	F07/10	35	10 bar	21,4
250	5534089	5534296	22	F10	38	10 bar	28,0
300	5534091	5534297	27	F12	38	10 bar	42,0
350	5534092	5534298	27	F12	38	10 bar	53,4
400	5534093	5534299	36	F12/14	38	10 bar	90,0
450	5534094	5534301	36	F14	38	10 bar	101,3
500	5534095	5534302	36	F14	38	10 bar	141,0
600	5534096	5534303	46	F16	38	10 bar	219,0

**Free top = Ventil for montering av aktuator. M SQ -Montering / *Free top = Valve for mounting of actuator. M SQ-Mounting*
Kan leveres med EN 10204- 3.1 sertifikat / Can be delivered with EN 10204- 3.1 certificate.
Typegodkjent av Det Norske Veritas (DNV). / Type approved by Det Norske Veritas (DNV).



DN	A	B	C	C1	H	H1	H2	H3	ØE	ØF	ØG	4-ØN	Ød	M
40	120	75	33	120		13	27	30		90	50/70	7/10	12.6	11
50	124	80	43	123.5		13	27	30		90	50/70	7/10	12.6	11
65	134	89	46	139		13	27	30		90	50/70	7/10	12.6	11
80	141	95	46	145		13	27	30		90	50/70	7/10	12.6	11
100	156	114	52			13	27	30	161	90	50/70	7/10	15.77	14
125	168	127	56			13	27	30	191	90	70	10	18.92	14
150	184	140	56			13	27	30	216	90	70	10	18.92	17
200	213	175	60		182	14	35		270	125	70/102	10/12	22.1	17
250	244	221	68		182	17	38		324	125	102	12	28.45	22
300	283	255	78		184	20	38		400	150	125	14	31.6	27
350	368	268	78		184	22	38		435	150	125	14	31.6	27
400	400	322	102		209	23	38		495	175	125/140	14/18	33.15	36
450	422	342	114		209	23	38		538	210	140	18	37.95	36
500	479	375	127		207	25	38		592	210	140	18	41.12	36
600	562	467	154		218	28	38		705	210	165	22	50.62	46

ITEM	STANDARD
Design standard	EN 593:2004
Test standard	EN 12266-1:2003
Face to Face standard	EN 558-1:1996

14		PIN	2	Duplex 2205			
13		PLATE	1	SS304			
12	GB/T827-1986	RIVET 2.0X5	2	Al			
11	GB/T893.1-1986	RATAINING RING	1	carbon steel			
10		WASHER	1	SS304			
9	GB/T893.4.1-1986	RATAINING RING	1	carbon steel			
8/8-1		O RING 2PCS(DN40-DN350)/ 3PCS(DN400-DN600)		VITON			
7		BUSHING II	3	F4			
6		BUSHING I	1	F4			
5		STEM	1	Duplex 2205			
4		DISC	1	AL-BR			
3		SEAT RING	1	NBR			
2		LOWER BUSHING	1	F4			
1		BODY	1	GGG40.3			
Num	Code Num	Name	Qty	Material	N.W	G.W	

Itemref	Quantity	Title/Name, designation, material, dimension etc			Article No./Reference	
Designed by ZY		Checked by	Approved by - date	File name	Date 2017/5/23	Scale
			Assembly Drawing DN40-DN800 Butterflyvalve(Short)			
			SIP-13W		Edition L	Sheet

Standard valves from DN40 to DN150
are delivered with lever
Dimensions from DN200 are with gear

Flange drilling
DN40-150 PN16
DN200-600 PN10
Pressure class:
DN40-150 PN 16
DN200-600 PN10

DREIESPJELDVENTIL LUG / BUTTERFLY VALVE LUG

SIP - 13LT

ANBEFALTE BRUKSOMRÅDER:

Standard ventil for bruk til vann, sjøvann, olje mm.
Godkjent som Bunn- og over bord ventil for skip og ellers utsatte plasser. Min. 18% el. for klassesertifikat. Maks temp. 80°C.

Flenseboring:
DN 40 - 150 PN16
DN 200 - 600 PN10

Trykklasse:
DN 40 - 150 PN16
DN 200 - 600 PN10

Standard ventiler fra DN40 til og med DN150 leveres med spak.
Dimensjoner fra DN200 leveres med gir.

For operasjonsmoment se side 558.

RECOMMENDED USAGE:

Standard valve for use for water, sea water, oil etc. Approved as bottom and overboard valve for ships and otherwise exposed places. Min. 18% elongation as standard for class certification. Max temp 80°C.

Flange drilling:
DN 40 - 150 PN16
DN 200 - 600 PN10

Pressure class:
DN 40 - 150 PN16
DN 200 - 600 PN10

Standard valves from DN40 to DN150 are delivered with lever.
Dimensions from DN200 are delivered with gear.

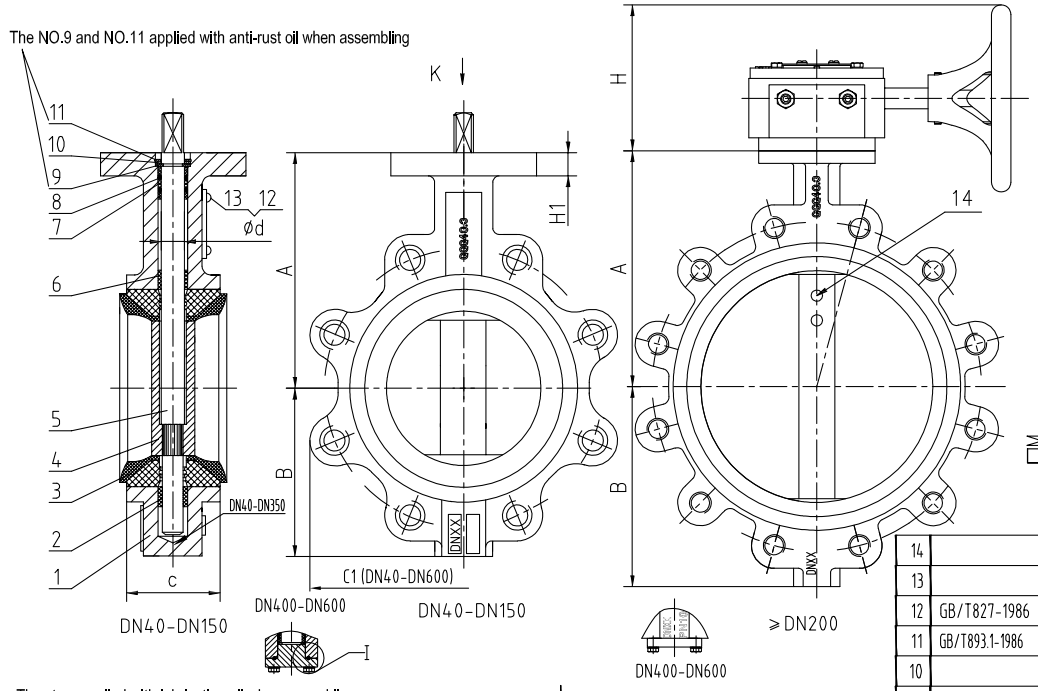
For operating torque see page 558.

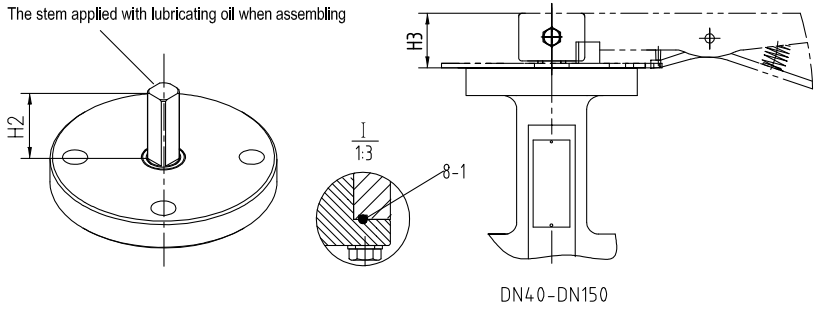
Nr.	Detalj/Part name	Materiale/Material
1	Hus/Body	Seigjern/Ductile iron (DI) GGG-40.3
2	Spjeld/Disc	Al/Br (C95800)
3	Spindel/Stem	Duplex 2205
4	Pakning/Sealing	NBR
5	Foringer/Bearings	PTFE
6	Farge/Colour	Blå/Blue
7	Taper pin from DN 200 and up	Duplex 2205

HS CODE INT. 8481.80

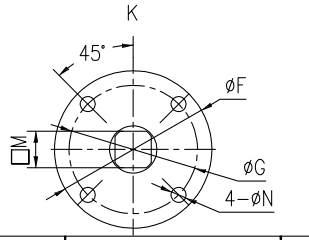
DN	Vare nr. Standard	Vare nr. *Free top	Vare nr. **DNV Cert. vlv.	M SQ mm	ISO-TOP 5211	h2 mm	Arb.trykk Work. pressure	Vekt Weight Kg
40	5534097	5534304	5533945	11	F05	27	16 bar	3,5
50	5534098	5534305	5533946	11	F05/07	27	16 bar	4,2
65	5534099	5534306	5533947	11	F05/07	27	16 bar	5,0
80	5534101	5534307	5533948	11	F05/07	27	16 bar	5,8
100	5534102	5534308	5533949	14	F05/07	27	16 bar	7,2
125	5534103	5534309	5533951	14	F07	27	16 bar	10,8
150	5534104	5534311	5533952	17	F07	27	16 bar	11,5
200	5534105	5534312	5533953	17	F07/10	35	10 bar	26,3
250	5534106	5534313	5533954	22	F10	38	10 bar	33,2
300	5534107	5534314	5533955	27	F12	38	10 bar	47,0
350	5534108	5534315	5533956	27	F12	38	10 bar	76,0
400	5534109	5534316	5533957	36	F12/F14	38	10 bar	111,0
450	5534111	5534317	5533958	36	F14	38	10 bar	131,0
500	5534112	5534318	5533959	36	F14	38	10 bar	158,0
600	5534113	5534319	5533961	46	F16	38	10 bar	284,0

**Free top = Ventil for montering av aktuator. M SQ -Montering. / *Free top = Valve for mounting of actuator. M SQ-Mounting.*
***DNV Cert. vlv.= Leveres med EN10204- 3.2 DNV sertifikat fri topp. / Delivered with EN10204- 3.2 DNV certificate Free top.*
Kan leveres med EN 10204- 3.1 sertifikat. / Can be delivered with EN 10204- 3.1 certificate.
Typegodkjent av Det Norske Veritas (DNV). / Type approved by Det Norske Veritas (DNV).





DN	A	B	C	C1	H	H1	H2	H3	ΦF	ΦG	4-ΦN	Φd	M
40	120	75	33	118		13	27	30	90	50/70	7/10	12.6	11
50	124	80	43	126		13	27	30	90	50/70	7/10	12.6	11
65	134	89	46	143		13	27	30	90	50/70	7/10	12.6	11
80	141	95	46	179		13	27	30	90	50/70	7/10	12.6	11
100	156	114	52	207		13	27	30	90	50/70	7/10	15.77	14
125	168	127	56	237		13	27	30	90	70	10	18.92	14
150	184	140	56	262		13	27	30	90	70	10	18.92	17
200	213	175	60	323	182	14	35		125	70/102	10/12	22.1	17
250	244	221	68	400	182	17	38		125	102	12	28.45	22
300	283	255	78	445	184	20	38		150	125	14	31.6	27
350	368	268	78	501	184	22	38		150	125	14	31.6	27
400	400	322	102	558	209	23	38		175	125/140	14/18	33.15	36
450	422	342	114	611	209	23	38		210	140	18	37.95	36
500	479	375	127	662	207	25	38		210	140	18	41.12	36
600	562	436	154	773	258	28	38		210	165	22	50.62	46



ITEM	STANDARD
Design standard	EN 593:2004
Test standard	EN 12266-1:2003
Face to Face standard	EN 558-1:1996

Num	Code Num	Name	Qty	Material	N.W	G.W	
14		PIN	2	Duplex 2205			
13		PLATE	1	SS304			
12	GB/T827-1986	RIVET 2.0X5	2	Al			
11	GB/T893.1-1986	RATAINING RING	1	carbon steel			
10		WASHER	1	SS304			
9	GB/T893.4.1-1986	RATAINING RING	1	carbon steel			
8/8-1		O RING 2PCS(DN40-DN350)/ 3PCS(DN400-DN600)		VITON			
7		BUSHING II	3	F4			
6		BUSHING I	1	F4			
5		STEM	1	Duplex 2205			
4		DISC	1	AL-BR			
3		SEAT RING	1	NBR			
2		LOWER BUSHING	1	F4			
1		BODY	1	GGG40.3			

Itemref	Quantity	Title/Name, designation, material, dimension etc			Article No./Reference	
Designed by ZY		Checked by	Approved by - date	File name	Date 2017/5/23	Scale
			Assembly Drawing DN40-DN600 Butterflyvalve(Short)			
			SIP-13LT		Edition L	Sheet

Standard valves from DN40 to DN150
are delivered with lever
Dimensions from DN200 are with gear

Flange driling
DN40-150 PN16
DN200-600 PN10
Pressure class:
DN40-150 PN 16
DN200-600 PN10

DREIESPJELDVENTIL LUG / BUTTERFLY VALVE LUG

SIP - 14LT

ANBEFALTE BRUKSOMRÅDER:

Ventil for bruk spesielt på cargosystemer med
20/25 bars trykk, mud og brine osv.
Min. 18% strekkfasthet.

Flenseboring:
DN 50- 150 PN40
DN 200- 500 PN25

Trykklasse:
DN 50 - 150 PN25
DN 200 - 300 PN20

Standard ventiler fra DN50 til og med DN150 leveres med spak.
Dimensjoner fra DN200 leveres med gir.

For operasjonsmoment se side 558.

RECOMMENDED USAGE:

Valve for cargo systems, 20/25 bar.
For Mud and brine etc.
Min. 18% elogation.

Flange drilling:
DN 50- 150 PN40
DN 200- 500 PN25

Pressure class:
DN 50 - 150 PN25
DN 200 - 300 PN20

Standard valves from DN50 to DN150 are delivered with lever.
Dimensions from DN200 are delivered with gear.

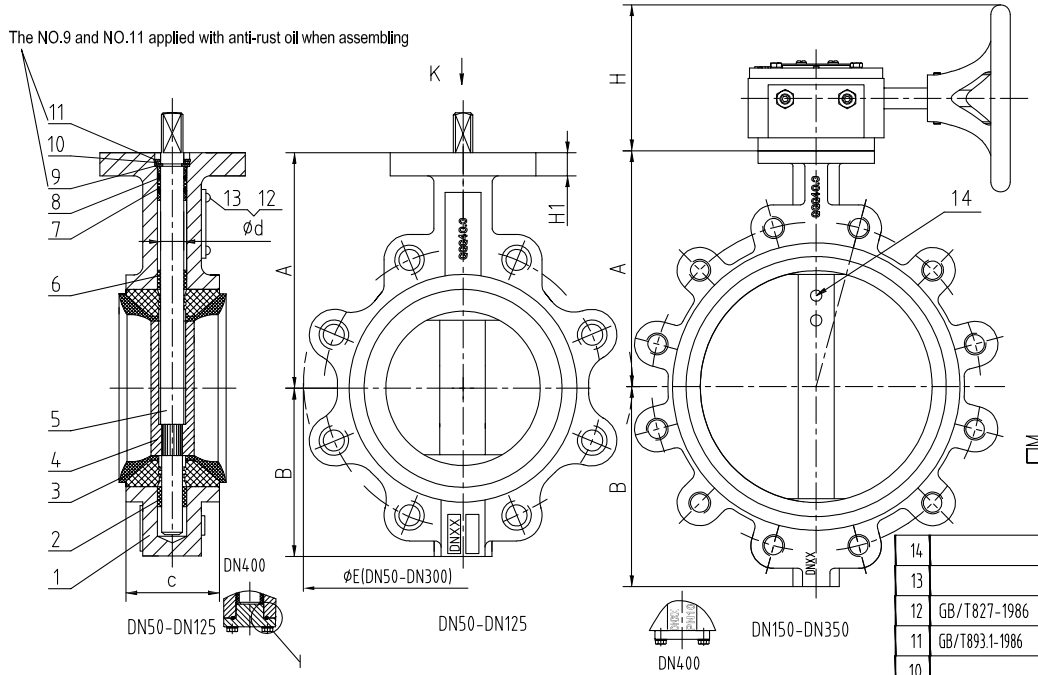
For operating torque see page 558.

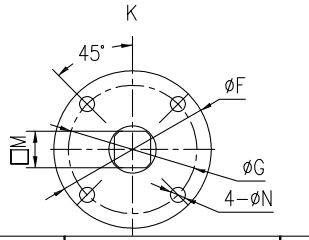
Nr.	Detalj/Part name	Materiale/Material
1	Hus/Body	Seigjern/Ductile iron (DI) GGG-40.3
2	Spjeld/Disc	Al/Br (C95800)
3	Spindel/Stem	Duplex 2205
4	Pakning/Sealing	NBR
5	Foringer/Bearings	PTFE
6	Farge/Colour	Svart/Black
7	Taper pin from DN 200 and up	Duplex 2205

HS CODE INT. 8481.80

DN	Vare nr. Standard	Vare nr. *Free top	M SQ mm	ISO-TOP 5211	h2 mm	Arb.trykk Work. pressure	Vekt Weight Kg
50	5534128	5534335	11	F05/07	30	25 Bar	4,2
65	5534129	5534336	11	F05/07	30	25 Bar	5,2
80	5534131	5534337	11	F05/07	30	25 Bar	5,8
100	5534132	5534338	14	F05/07	30	25 Bar	8,2
125	5534133	5534339	14	F07	30	25 Bar	11,0
150	5534134	5534341	17	F07	30	25 Bar	14,7
200	5534135	5534342	17	F07/10	35	20 Bar	33,6
250	5534136	5534343	22	F10	38	20 Bar	39,8
300	5534137	5534344	27	F12	38	20 Bar	56,4
350	5534138	5534345	27	F12	38	20 Bar	91,2
400	5534139	5534346	36	F14	38	20 Bar	133,2

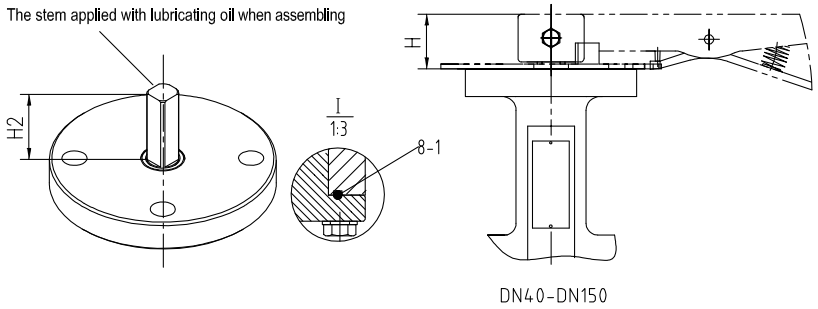
**Free top = Ventil for montering av aktuator. M SQ -Montering. / *Free top = Valve for mounting of actuator. M SQ-Mounting.*
Leveres med EN 10204- 3.2 sertifikat. / Delivered with EN 10204- 3.2 certificate.
Typegodkjent av Det Norske Veritas (DNV). / Type approved by Det Norske Veritas (DNV).





DN	A	B	C	H	H1	H2	ΦE	ΦF	ΦG	4-ΦN	Φd	M
50	124	80	43	109	13	30	160	90	50/70	7/10	12.6	11
65	134	89	46	109	13	30	179	90	50/70	7/10	12.6	11
80	141	95	46	109	13	30	190	90	50/70	7/10	12.6	11
100	156	114	52	109	13	30	221	90	50/70	7/10	15.77	14
125	168	127	56	109	13	30	252	90	70	10	18.92	14
150	184	140	56	109	13	30	278	90	70	10	18.92	17
200	213	175	60	182	14	35	339	125	70/102	10/12	22.1	17
250	244	220	68	182	17	38	400	125	102	12	28.45	22
300	283	255	78	184	20	38	455	150	125	14	31.6	27
350	368	268	78	184	22	38	505	150	125	14	31.6	36
400	400	322	102	264	23	38	565	175	125/140	14/18	33.15	36

ITEM	STANDARD
Design standard	EN 593:2004
Test standard	EN 12266-1:2003
Face to Face standard	EN 558-1:1996



Num	Code Num	Name	Qty	Material	N.W	G.W	
14		PIN	2	Duplex 2205			
13		PLATE	1	SS304			
12	GB/T827-1986	RIVET 2.0X5	2	Al			
11	GB/T893.1-1986	RATAINING RING	1	carbon steel			
10		WASHER	1	SS304			
9	GB/T893.4.1-1986	RATAINING RING	1	carbon steel			
8/8-1		O RING 2PCS(DN40-DN350)/ 3PCS(DN400)		VITON			
7		BUSHING II	3	F4			
6		BUSHING I	1	F4			
5		STEM	1	17-4PH			
4		DISC		AL-BR			
3		SEAT RING	1	NBR			
2		LOWER BUSHING	1	F4			
1		BODY	1	GGG40.3			

Itemref	Quantity	Title/Name, designation, material, dimension etc	Article No./Reference

Designed by	Checked by	Approved by - date	File name	Date	Scale
ZY				2016/3/24	

Assembly Drawing	DN50 - DN400Butterflyvalve(Short)		
SIP-14LT		Edition G	Sheet

Standard valves from DN40 to DN150
are delivered with lever
Dimensions from DN200 are with gear

Flange driling:
DN50-150 PN40
DN200-400 PN25
Pressure class:
DN40-150 PN25
DN200-400 PN20

DREIESPJELDVENTIL WAFER / BUTTERFLY VALVE WAFER

SIP - 15W

ANBEFALTE BRUKSOMRÅDER:

Ventil for bruk på næringsmiddel (FDA godkjent), aggressive medier og høy temperatur. Med teflonbelagt (PTFE) SS316 (CF8M) spjeld.

Temperatur:
-20°C +170°C

Flenseboring:
DN 50- 150 PN16
DN 200- 300 PN10

Trykklasse:
DN 50 - 150 PN16
DN 200 - 300 PN10

Standard ventiler fra DN50 til og med DN125 leveres med spak. Dimensjoner fra DN150 leveres med gir.

For operasjonsmoment se side 558.

RECOMMENDED USAGE:

Valve for use in food industry (FDA approved), agressive mediums and high temperatures.

Temperature range:
-20°C +170°C

Flange drilling:
DN 50- 150 PN16
DN 200- 300 PN10

Pressure class:
DN 50 - 150 PN16
DN 200 - 300 PN10

Standard valves from DN50 to DN125 are delivered with lever. Dimensions from DN150 are delivered with gear.

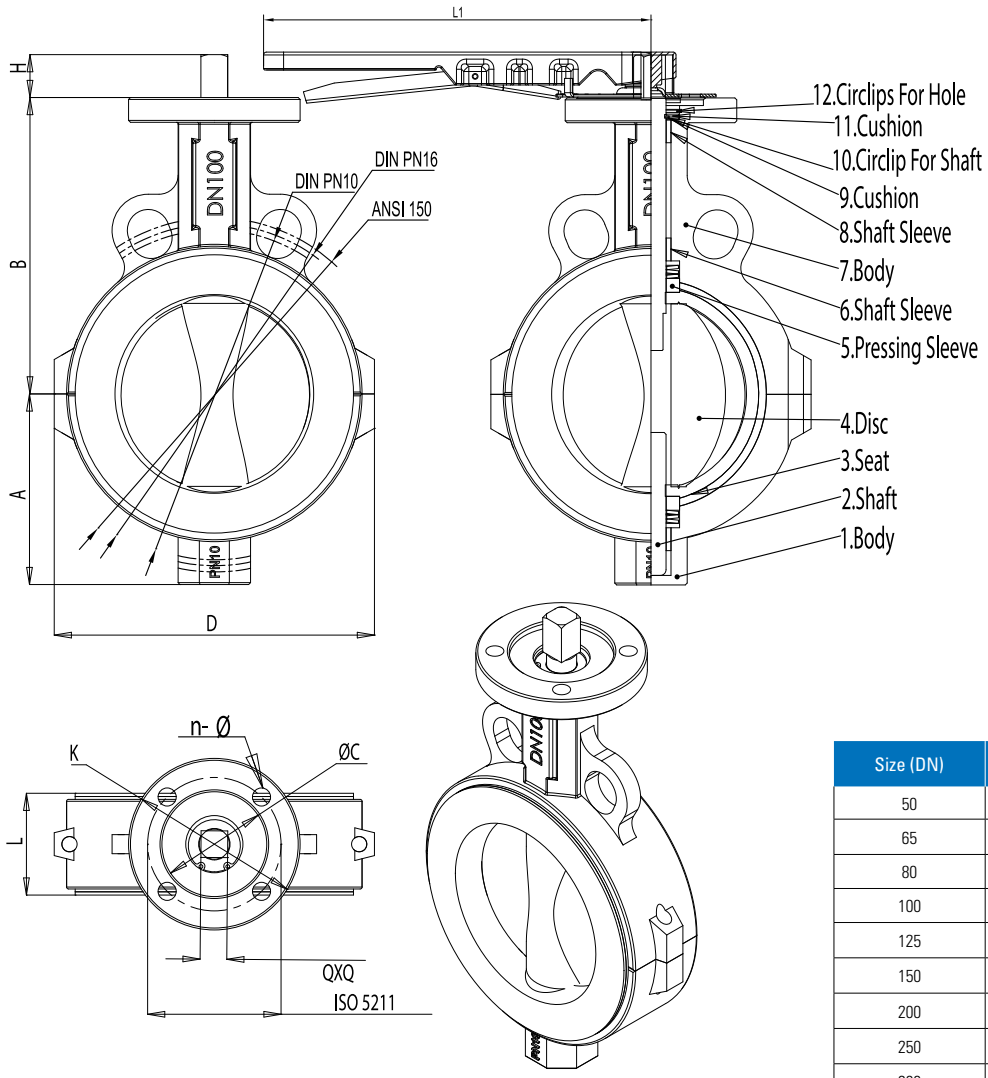
For operating torque see page 558.

Nr.	Detalj/Part	Materiale/Material
1	Hus/Body	GGG40/Ductile iron
2	Spindel/Stem	SS416
3	Sete/Seat	NBR+PTFE
4	Spjeld/Disc	CF8M+PTFE
5	Presshylse/Pressing Sleeve	FRP
6	Øvre stem/Shaft Sleeve	FRP
7	Hus/Body	GGG40
8	Nedre stem/Shaft Sleeve	FRP
9	Foring/Cushion	Steel
10	Låsering for stem/Circlip For Shaft	Steel
11	Foring/Cushion	Steel
12	Låsering øvre stem/Circlip For Hole	Steel

HS CODE INT. 8481.80

DN	Vare nr. Part no.	SQ mm	ISO-TOP 5211	Arb.trykk Work. pressure	Vekt Weight Kg
50	5533962	11	F05/07	16 bar	2,8
65	5533963	11	F05/07	16 bar	3,3
80	5533964	11	F05/07	16 bar	3,8
100	5533965	14	F05/07	16 bar	5,3
125	5533966	14	F07	16 bar	7,4
150	5533967	17	F07	16 bar	11,8
200	5533968	17	F07/10	10 bar	19,6
250	5533969	22	F10	10 bar	28,1
300	5533971	27	F12	10 bar	43,6

DN 50 - 125 = Med spak / DN 50 - 125 = With levers
DN 150 - 300 = Med gir / DN 150 - 300 =With gear
Kan leveres med EN 10204- 3.1 sertifikat / Can be delivered with EN 10204- 3.1 certificate.
Typegodkjent av Det Norske Veritas (DNV). / Type approved by Det Norske Veritas (DNV).



Size (DN)	Torque (NM)
50	18 - 25
65	25 - 35
80	38 - 52
100	64 - 85
125	90 - 110
150	120 - 140
200	250 - 350
250	350 - 400
300	450 -580

Design Standard, Top Flange ISO 5211 Standard, Side Flange ANSI 150PSI/ DIN PN10/ DIN PN16 Standard

DN	A mm	B mm	D mm	L mm	L1 mm	H mm	K mm	ISO 5211	n - Ø	Q x Q	ØC
50	65,0	138	112	47	240	30	65/90	50/70	4-M6/8	11 x 11	55
65	72,0	140	125	50	240	30	65/90	50/70	4-M6/8	11 x 11	55
80	85,0	140	142	50	240	30	65/90	50/70	4-M6/8	11 x 11	55
100	105,5	175	168	55,5	265	30	65/90	50/70	4-M6/8	14 x 14	55
125	120,5	175	202	59	265	30	90	70	4-M8	14 x 14	55
150	137,0	189	230	59	265	30	90	70	4-M8	17 x 17	55
200	169,0	230	283	63	366	35	90/125	70/102	4-M6/10	17 x 17	58
250	202,0	230	344	68	366	38	125	102	4-M10	22 x 22	72
300	236,5	302	497	73	366	38	150	125	4-M12	27 x 27	72
350	251,0	333	470	86	366	45	150	125	4-M12	28 x 28	72
400	311,0	418	568	91	366	45	150	125	4-M12	28 x 28	72

DREIESPJELDVENTIL LUG / BUTTERFLY VALVE LUG

SIP - 15LT

ANBEFALTE BRUKSOMRÅDER:

Ventil for bruk på næringsmiddel (FDA godkjent), aggressive medier og høy temperatur. Med teflonbelagt (PTFE) SS316 (CF8M) spjeld.

Temperatur:
-20°C +170°C

Flenseboring:
DN 50- 150 PN16
DN 200- 300 PN10

Trykklasse:
DN 50 - 150 PN16
DN 200 - 300 PN10

Standard ventiler fra DN50 til og med DN125 leveres med spak. Dimensjoner fra DN150 leveres med gir.

For operasjonsmoment se side 558.

RECOMMENDED USAGE:

Valve for use in food industry (FDA approved), agressive mediums and high temperatures.

Temperature range:
-20°C +170°C

Flange drilling:
DN 50- 150 PN16
DN 200- 300 PN10

Pressure class:
DN 50 - 150 PN16
DN 200 - 300 PN10

Standard valves from DN50 to DN125 are delivered with lever. Dimensions from DN150 are delivered with gear.

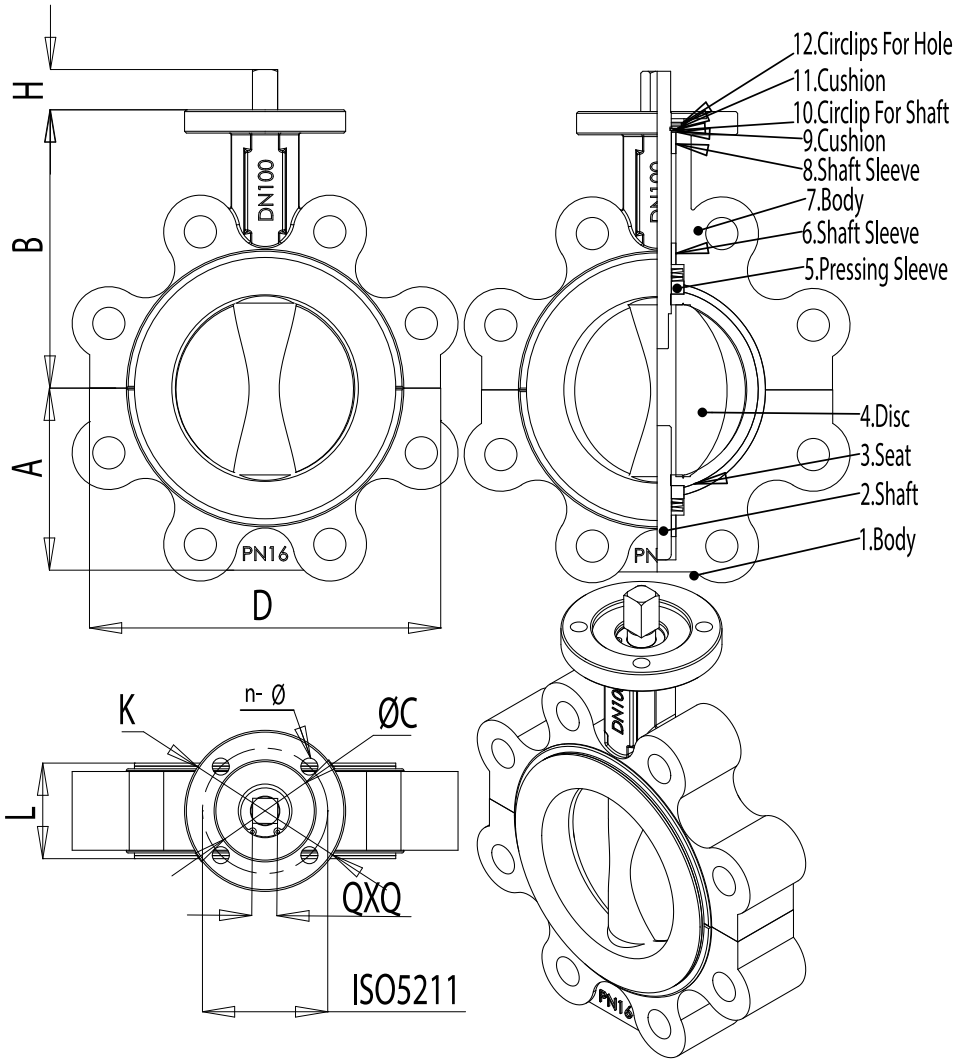
For operating torque see page 558.

Nr.	Detalj/Part	Materiale/Material
1	Hus/Body	GGG40/Ductile iron
2	Spindel/Stem	SS416
3	Sete/Seat	NBR+PTFE
4	Spjeld/Disc	316 + PTFE
5	Presshylse/Pressing Sleeve	FRP
6	Øvre stem/Shaft Sleeve	FRP
7	Hus/Body	GGG40
8	Nedre stem/Shaft Sleeve	FRP
9	Foring/Cushion	Stål/Steel
10	Låsering for stem/Circlip For Shaft	Stål/Steel
11	Foring/Cushion	Stål/Steel
12	Låsering øvre stem/Circlip For Hole	Stål/Steel

HS CODE INT. 8481.80

DN	Vare nr. Part no.	SQ mm	ISO-TOP 5211	Arb.trykk Work. pressure	Vekt Weight Kg
50	5533972	11	F05/07	16 bar	4,3
65	5533973	11	F05/07	16 bar	5,0
80	5533974	11	F05/07	16 bar	5,6
100	5533975	14	F05/07	16 bar	8,1
125	5533976	14	F07	16 bar	11,2
150	5533977	17	F07	16 bar	15,8
200	5533978	17	F07/10	10 bar	26,0
250	5533979	22	F10	10 bar	36,1
300	5533981	27	F12	10 bar	56,3

DN 50 - 125 = Med spak / DN 50 - 125 = With levers
DN 150 - 300 = Med gir / DN 150 - 300 =With gear
Kan leveres med EN 10204- 3.1 sertifikat / Can be delivered with EN 10204- 3.1 certificate.
Typegodkjent av Det Norske Veritas (DNV). / Type approved by Det Norske Veritas (DNV).



Size (DN)	Torque (NM)
50	18 - 25
65	25 - 35
80	38 - 52
100	64 - 85
125	90 - 110
150	120 - 140
200	250 - 350
250	350 - 400
300	450 -580

DN	A mm	B mm	D mm	L mm	L1 mm	H mm	K mm	ISO 5211	n - Ø	Q x Q	ØC
50	60	138	153	47	240	32	65	50	4 - 6.7	11 x 11	35
65	72	140	155	50	240	32	65	50	4 - 6.7	11 x 11	35
80	85	140	180	50	240	32	65	50	4 - 6.7	11 x 11	35
100	102	160	205	55,5	265	32	90	70	4 - 10.3	14 x 14	55
125	120	175	240	59	265	32	90	70	4 - 10.3	14 x 14	55
150	137	189	265	59	265	32	90	70	4 - 10.3	17 x 17	55
200	169	230	320	63	366	32	90	70	4 - 14.5	17 x 17	55
250	200	260	385	68	366	45	125	102	4 - 14.5	22 x 22	72
300	230	306	450	73	366	45	125	102	4 - 14.5	27 x 27	72
350	251	333	480	86	366	45	125	102	4 - 14.5	28 x 28	72
400	311	418	555	91	366	45	125	102	4 - 14.5	28 x 28	72

DREIESPJELDVENTIL HP WAFER (316) /
BUTTERFLY VALVE HIGH PERFORMANCE WAFER (316)

SIP - 16W

ANBEFALTE BRUKSOMRÅDER:

Vann, olje og gass, kjemikalier og damp.

Temperatur:
-50°C +200°C

Flensestandarder:
PN10/16/25/40/150#

Trykklasse:
PN40

Operering:
DN65 - DN100 spak (316)
DN125 - DN300 marinegir (GG.25)

316-disk/sete minimum 2,7 % molybden.
Enveisventil på trykk PN40.
Ved bi-direksjonell bruk: PN40 i hovedretning og PN20 i sekundær retning.

RECOMMENDED USAGE:

Water, oil, gas, chemicals and steam.

Temperature range:
-50°C +200°C

Flange standards:
PN10/16/25/40/150#

Pressure class:
PN40

Operation:
DN65 - DN100 lever (316)
DN125 - DN300 marine ductile iron (GG.25)

316-disc/seat minimum 2,7 % molybden.
One-way valve on pressure PN40.
By bi-directionel applications: PN40 in main direction and PN20 in secondary direction.

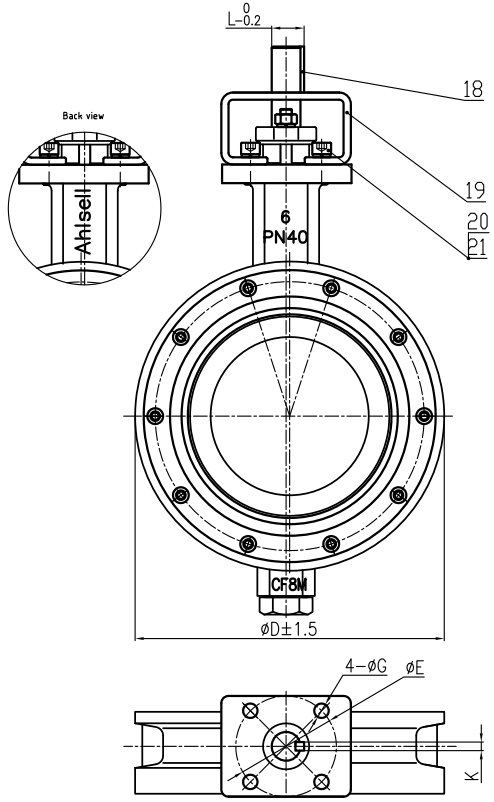
Nr.	Detalj/Part name	Materiale/Material
1	Hus/Body	CF8M/CF8/WCB
2	Spjeld/Disc	CF8M/CF8/WCB
3	Spindel/Stem	17-4PH
4	Sete/Seat	RTFE+Silicone
5	Foring/Bushing	PTFE
6	Toppflens/Top flange	ISO 5211

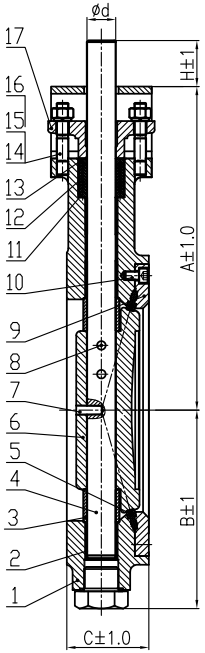
HS CODE INT. 8481.80

DN	Vare nr. Part no.	ød	Arb.trykk Work. pressure	Vekt Weight Kg
65	5533501	16	40 bar	5,00
80	5533502	16	40 bar	6,00
100	5533503	19	40 bar	8,00
125	5533504	20	40 bar	11,00
150	5533505	20	40 bar	14,00
200	5533506	26	40 bar	22,00
250	5533507	32	40 bar	40,00
300	5533508	36	40 bar	55,00

Kan leveres med EN 10204- 3.1 sertifikat / Can be delivered with EN 10204- 3.1 certificate.

Size	A	B	C	ΦD	H	Φd	K	ΦE	4-ΦG	L
65	155	81	48	120	32	16	5	70	10	18
80	175	86	48	130	32	16	5	70	10	18
100	176	103	54	157	32	19	6	70	10	21.5
125	198	120	57	191	32	20	6	102	12	22.5
150	225	136	57	215	32	20	6	102	12	22.5
200	277	165	64	273	45	26	8	125	14	29
250	310	190	71	325	56.5	32	10	140	18	35
300	355	232	81	375	56.5	36	10	140	18	39





NO.	DRAWING NUMBER	NAME	QTY.	MATERIAL
21	GB/T70.1-2000	Cap screws	4	A2-70
20	GB/T 93-1987	Lock Washer	4	304
19	65-300D373F150CL-13	Roke	1	316
18	GB/T1096-2003	Key	1	45
17	65-300D373F150CL-11	Gland	1	CF8M
16	GB/T899-2000	Stud	2	A2-70
15	GB/T6170-2000	Hex nut	2	C1-70
14	GB/T93-1987	Lock washer	4	304
13	65-300D373F150CL-10	Upper packing	1	PTFE
12	65-300D373F150CL-09	Middle packing	8	PTFE
11	65-300D373F150CL-08	Packing washer	1	PTFE
10	GB/T70.1-2000	Cap screws	10	316
9	65-300D373F150CL-07	Seat retainer plate	1	316
8	GB/T117-2000	Hinge pin	2	316
7	GB/T117-2000	Hinge pin	1	316
6	65-300D373F150CL-06	Disc	1	CF8M
5	65-300D373F150CL-05	Seat	1	RTFE
4	65-300D373F150CL-04	Shaft	1	17-4PH
3	65-300D373F150CL-03	Disc spacers	2	316
2	65-300D373F150CL-02	Bearing	3	316+PTFE
1	65-300D373F150CL-01	Body	1	CF8M

Item	Standard
Design standard	API609
Test standard	API598-2004
Face to face standard	API609 B
Flange standard	DIN PN10/PN16/PN25 ANSI B16.5 150

Specification				
Nominal pressure	PN 4.0MPa			
Suitable medium	Water, sewage, seawater, oils, gas, Steam, acid and alkali			
Suitable temperature	≤200℃			
Test item	Shell test	Seal test		Test temperature
Test pressure	6.0 MPa	4.4 MPa	0.6±0.1 MPa	
Test medium	Liquid	Liquid	Gas	≤38℃

DESIGN	JP	STANDARD	Assembly Drawing		Hight Performance Butterfly Valve	
AUDIT			DRAWING MARK	WEIGHT	SCALE	
CHECK		APPROVE			1:3	65-300D373F40-00A
TECHNICS		DATE				

DREIESPJELDVENTIL LUG PN16 / BUTTERFLY VALVE LUG PN16

SIP - 17LT

ANBEFALTE BRUKSOMRÅDER:

Ventil for bruk til vann sjøvann, olje mm.
For Nm se side 54.
Min. 18% strekkfasthet.

Flenseboring:
DN 200 - 300 PN16

Trykklasse:
DN 200 - 300 PN16

RECOMMENDED USAGE:

Valve for water, seawater, oil etc.
For Torque (Nm) see page 54.
Min. 18% elogation.

Flange drilling:
DN 200 - 300 PN16

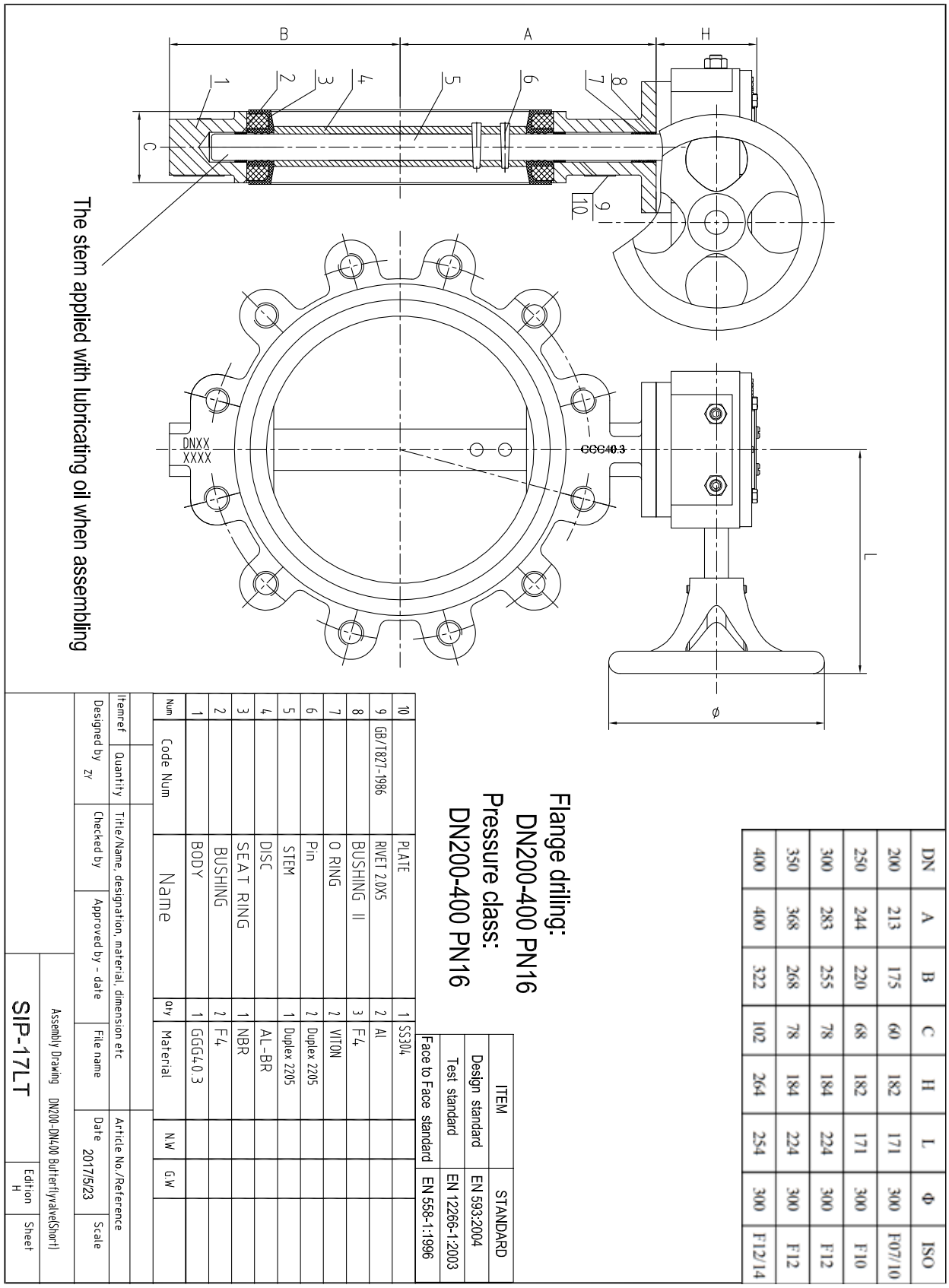
Pressure class:
DN 200 - 300 PN16

Nr.	Detalj/Part name	Materiale/Material
1	Hus/Body	Seigjern/Ductile iron (DI) GGG-40.3
2	Spjeld/Disc	Al/Br (C95800)
3	Spindel/Stem	Duplex 2205
4	Pakning/Sealing	NBR
5	Foringer/Bearings	PTFE
6	Farge/Colour	Blå/Blue

HS CODE INT. 8481.80

DN	Vare nr. Part no.	SQ mm	ISO-TOP 5211	Arb.trykk Work. pressure	Vekt Weight Kg
200	5534143	17	F07/10	16 bar	26,3
250	5534144	22	F10	16 bar	33,2
300	5534145	27	F12	16 bar	47,0

Kan leveres med EN 10204- 3.1 sertifikat / Can be delivered with EN 10204- 3.1 certificate.
Typegodkjent av Det Norske Veritas (DNV). / Type approved by Det Norske Veritas (DNV).



DN	A	B	C	H	L	Φ	ISO
200	213	175	60	182	171	300	F07/10
250	244	220	68	182	171	300	F10
300	283	255	78	184	224	300	F12
350	368	268	78	184	224	300	F12
400	400	322	102	264	254	300	F12/14

Skisse: ©Ahlsell Norge AS - www.ahlsell.no / Drawing: ©Ahlsell Norge AS - www.ahlsell.no

DREIESPJELDVENTIL DOBBELFLENSET / BUTTERFLY VALVE, DOUBLE FLANGED

SIP - 18

ANBEFALTE BRUKSOMRÅDER:

Standard ventil for bruk til vann, sjøvann, olje mm.
Min. 18% el. for klassesertifikat. Maks temp. 80°C.
Kan benyttes som endeventil på designtrykk.

Flenseboring:
DN 40 - 150 PN16
DN 200 - 600 PN10

Trykklasse:
DN 40 - 150 PN16
DN 200 - 600 PN10

Lagerføres fra DN50 til DN200.

For operasjonsmoment se side 558. NB! Levers uten betjening. Venligst se side 556.

RECOMMENDED USAGE:

Standard valve for use for water, sea water, oil etc. Min. 18% elongation as standard for class certification. Max temp 80°C. Can be used as dead end service on design pressure.

Flange drilling:
DN 40 - 150 PN16
DN 200 - 600 PN10

Pressure class:
DN 40 - 150 PN16
DN 200 - 600 PN10

Stocked from DN50 to DN200.

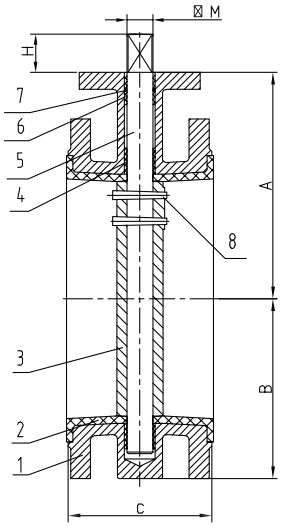
For operating torque see page 558. Note! Delivered without levers. Please see page 556.

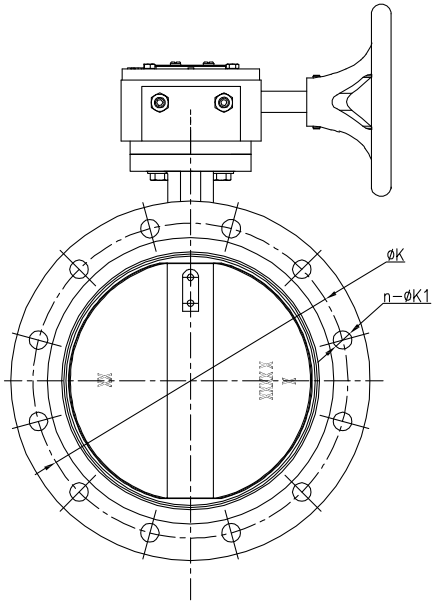
Nr.	Detalj/Part name	Materiale/Material
1	Hus/Body	Seigjern/Ductile iron (DI) GGG-40.3
2	Spjeld/Disc	Al/Br (C95800)
3	Spindel/Stem	Duplex 2205
4	Pakning/Sealing	NBR
5	Foringer/Bearings	PTFE
6	Farge/Colour	Blå/Blue

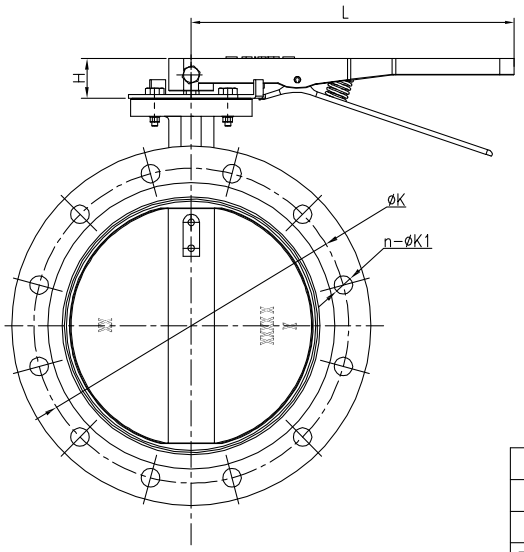
HS CODE INT. 8481.80

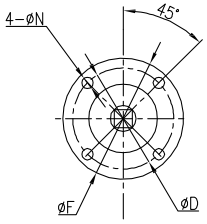
DN	Vare nr. Part no.	SQ mm	ISO-TOP 5211	Arb.trykk Work. pressure	Vekt Weight Kg
50	5534368	11	F05/07	16 bar	8,0
65	5534369	11	F05/07	16 bar	10,0
80	5534371	11	F05/07	16 bar	11,0
100	5534372	14	F05/07	16 bar	14,0
125	5534373	14	F07	16 bar	18,0
150	5534374	17	F07	16 bar	22,0
200	5534375	17	F07/10	10 bar	34,0

Kan leveres med EN 10204- 3.1 sertifikat / Can be delivered with EN 10204- 3.1 certificate.
Typegodkjent av Det Norske Veritas (DNV). / Type approved by Det Norske Veritas (DNV).









Item	Standard
Design standard	EN593
Test standard	EN12266-1
Face to Face standard	EN558
Flange standard	EN1092

SIZE		A	B	C	F	ΦD	4-ΦN	H	M	L	EN 1092-2 PN10		EN 1092-2 PN16	
											ΦK	n-Φk1	Φk	n-Φk1
2"	DN50	118	67	108	90	50/70	7/10	30	11	261	125	4-19	125	4-19
2.5"	DN65	126	74	112	90	50/70	7/10	30	11	261	145	4-19	145	4-19
3"	DN80	133	82	114	90	50/70	7/10	30	11	261	160	8-19	160	8-19
4"	DN100	147	100	127	90	50/70	7/10	30	14	261	180	8-19	180	8-19
5"	DN125	160	112	140	90	70	10	30	14	261	210	8-19	210	8-19
6"	DN150	180	134	140	90	70	10	30	17	261	240	8-23	240	8-23
8"	DN200	204	159	152	125	70/102	10/12	35	17		295	8-23	295	12-23
10"	DN250	245	195	165	125	102	12	38	22		350	12-23	355	12-23
12"	DN300	270	220	178	150	125	14	38	27		400	12-23	410	12-28
14"	DN350	315	282	190	150	125	14	38	27		460	16-23	470	16-28
16"	DN400	350	307	216	175	125/140	14/18	38	36		515	16-28	525	16-31
18"	DN450	375	352	222	210	140	18	38	36		565	20-28	585	20-31
20"	DN500	415	387	229	210	140	18	38	36		620	20-28	650	20-34
24"	DN600	465	452	267	210	165	22	38	46		725	20-31	770	20-37

NUM.	CODE	NAME	QTY	MATERIAL
8	GB/T8117-2000	PIN	2	Duplex 2205
7	D71X-10/16-08	O RING	1	VITON
6	D71X-10/16-02 II	BEARING	2	F4
5	D341X-10/16-04	SHAFT	1	Duplex 2205
4	D71X-10/16-02 I	BEARING	2	PTFE
3	D341X-10/16-03	DISC	1	C958
2	D341X-10/16-02	SEAT	1	NBR
1	D341X-10/16-01	BODY	1	GGG40.3

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:

FINISH:

DEBUR AND BREAK SHARP EDGES

DO NOT SCALE DRAWING

REVISION

	NAME	SIGNATURE	DATE
DRAWN	JL		8/12/14
CHK'D			
APPV'D			
MFG			
Q.A			

MATERIAL: SIP-18

WEIGHT:

TITLE: Double Flange Butterfly Valve

DWG NO. D341X-10/16-00

A3

SCALE:0.10

SHEET 1 OF 1

DREIESPJELDVENTIL LUG / BUTTERFLY VALVE LUG

SIP - 19LT

ANBEFALTE BRUKSOMRÅDER:

Ventil for bruk i applikasjoner for spesialprodukter, og der installasjonen har behov for multianvendelser.
Maks. temperatur 135°C. Min. 18% strekkfasthet.

Flenseboring:
DN 50 - 150 PN16
DN 200 - 600 PN10

Trykklasse:
DN 50 - 150 PN16
DN 200 - 600 PN10

Standard ventiler fra DN40 til og med DN150 leveres med spak. Dimensjoner fra DN200 leveres med gir.

For operasjonsmoment se side 558.

Utgår fra sortiment fra 2016. Se SIP 15 serie

RECOMMENDED USAGE:

Valve for use for special products, where multi-applications are requested.
Max. temperature 135°C. Min. 18% elogation.

Flange drilling:
DN 50 - 150 PN16
DN 200 - 600 PN10

Pressure class:
DN 50 - 150 PN16
DN 200 - 600 PN10

Standard valves from DN40 to DN150 are delivered with lever. Dimensions from DN200 are delivered with gear.

For operating torque see page 558.

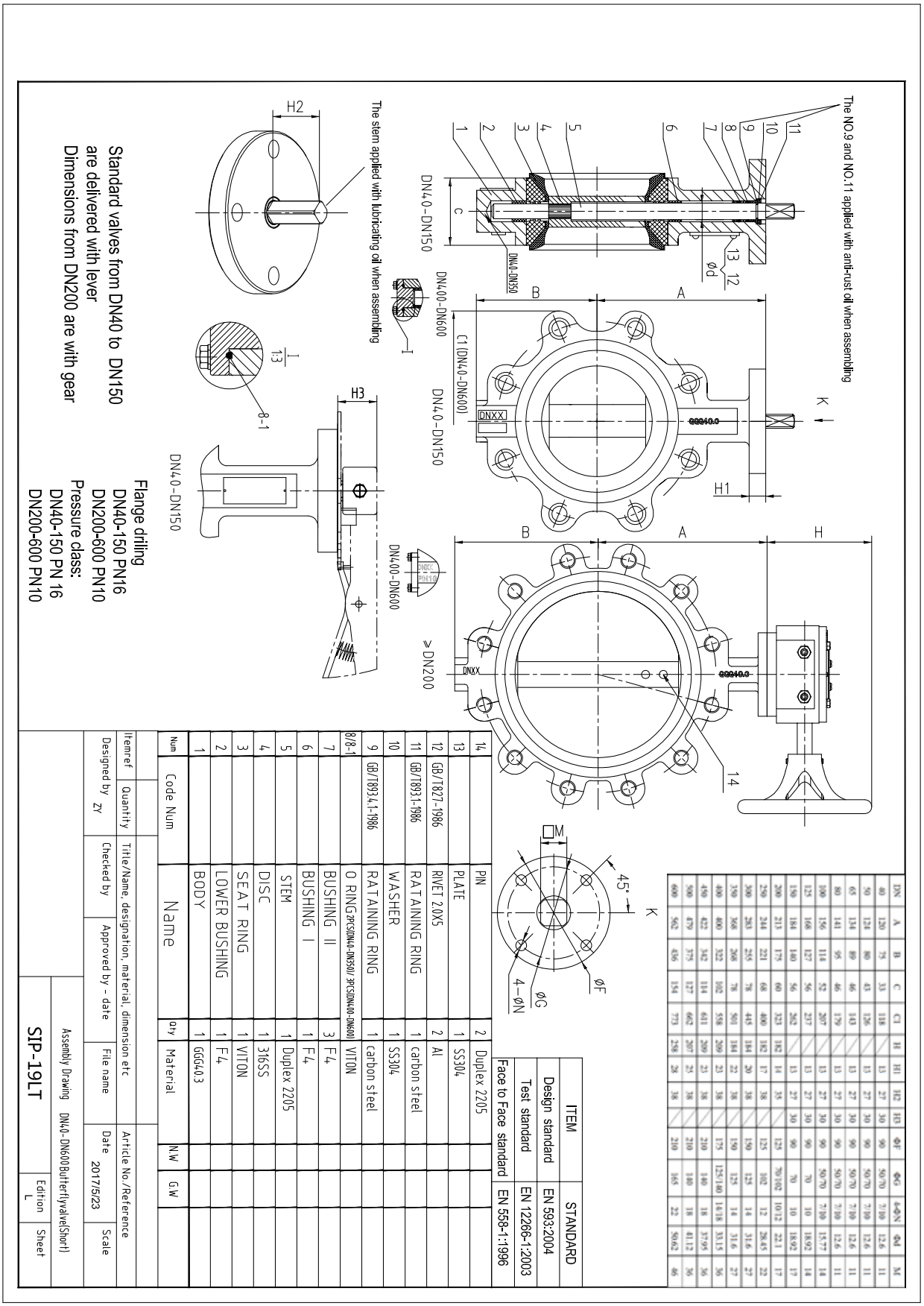
Not in stock from 2016. See SIP 15 series.

Nr.	Detalj/Part name	Materiale/Material
1	Hus/Body	Seigjern/Ductile iron (DI) GGG-40.3
2	Spjeld/Disc	316SS, (1.4408)
3	Spindel/Stem	Duplex 2205
4	Pakning/Sealing	Viton
5	Foringer/Bearings	PTFE
6	Farge/Colour	Grå/Grey

HS CODE INT. 8481.80

DN	Vare nr. Part no.	SQ mm	ISO-TOP 5211	Arb.trykk Work. pressure	Vekt Weight Kg
40	-	11	F05	16 bar	3,5
50	5534351	11	F05/07	16 bar	4,2
65	5534352	11	F05/07	16 bar	5,0
80	5534353	11	F05/07	16 bar	5,8
100	5534354	17	F05/07	16 bar	7,2
125	5534355	17	F07	16 bar	10,8
150	5534356	22	F07	16 bar	11,5
200	5534357	22	F07/10	10 bar	26,3
250	-	27	F10	10 bar	33,2
300	-	36	F12	10 bar	47,0
350	-	36	F12	10 bar	76,0
400	-	36	F12	10 bar	111,0
450	-	36	F14	10 bar	131,0
500	-	36	F14	10 bar	158,0
600	-	46	F16	10 bar	284,0

Kan leveres med EN 10204- 3.1 sertifikat / Can be delivered with EN 10204- 3.1 certificate.
Typegodkjent av Det Norske Veritas (DNV). / Type approved by Det Norske Veritas (DNV).



DN	A	B	C	C1	H	H1	H2	H3	ΦF	ΦG	4-ΦN	ΦM	M
40	120	75	33	118	/	13	27	30	90	50/70	7/19	12.6	11
50	124	80	43	126	/	13	27	30	90	50/70	7/19	12.6	11
65	134	89	46	143	/	13	27	30	90	50/70	7/19	12.6	11
80	141	95	46	179	/	13	27	30	90	50/70	7/19	12.6	11
100	156	114	52	207	/	13	27	30	90	50/70	7/19	15.77	14
125	168	127	56	237	/	13	27	30	90	70	10	18.92	14
150	184	140	56	262	/	13	27	30	90	70	10	18.92	17
200	213	175	60	323	182	14	35	/	125	70/102	10/12	22.1	17
250	244	231	68	400	182	17	38	/	125	102	12	26.45	22
300	283	255	78	445	184	20	38	/	150	125	14	31.6	27
350	368	268	78	501	184	22	38	/	150	125	14	31.6	27
400	400	322	102	558	209	23	38	/	175	125/140	14/18	33.15	36
450	422	342	114	611	209	23	38	/	210	140	18	37.95	36
500	479	375	127	662	207	25	38	/	210	140	18	41.12	36
600	562	436	154	773	258	28	38	/	210	165	22	50.62	46

ITEM	STANDARD
Design standard	EN 593:2004
Test standard	EN 12266-1:2003
Face to Face standard	EN 558-1:1996

Num	Code Num	Name	qty	Material	N.W	G.W
14		PIN	2	Duplex 2205		
13		PLATE	1	SS304		
12	GB/T827-1986	RIVET 2.0X5	2	Al		
11	GB/T893.1-1986	RATAINING RING	1	carbon steel		
10		WASHER	1	SS304		
9	GB/T893.1-1986	RATAINING RING	1	carbon steel		
8/8-1		O RING(DN40-DN350)/ 3PCS(DN400-DN600)		VITON		
7		BUSHING II	3	F4		
6		BUSHING I	1	F4		
5		STEM	1	Duplex 2205		
4		DISC	1	316SS		
3		SEAT RING	1	VITON		
2		LOWER BUSHING	1	F4		
1		BODY	1	GGG40.3		

Itemref	Quantity	Title/Name, designation, material, dimension etc		Article No./Reference
Designed by ZY	Checked by	Approved by - date	File name	Date 2017/5/23	Scale
Assembly Drawing				DN40-DN600Butterfly valve(Short)	
SIP-19LT				Edition L	Sheet

Skisse: ©Ahlsell Norge AS - www.ahlsell.no / Drawing: ©Ahlsell Norge AS - www.ahlsell.no

DREIESPJELDVENTIL MED RILLEDE ENDER / BUTTERFLY VALVE WITH GROOVED ENDS

SIP - 20

ANBEFALTE BRUKSOMRÅDER:

Ventil for bruk på varmeanlegg/kjølevannssystemer.
Min/maks. temp. -20°C - 110°C.

Dimensjon:
DN 50 - 150
I ht. ANSI/AWWA C606 tabell 4.

Trykklasse:
PN20

Standard ventiler fra DN50 til og med DN150 leveres med spak.

For operasjonsmoment se side 558.

RECOMMENDED USAGE:

Valve for use in HVAC systems.
Min/max temp. -20°C - 110°C.

Dimension:
DN 50 - 150
Acc. ANSI/AWWA C606 table 4.

Pressure class:
PN20

Standard valves from DN50 to DN150 are delivered with lever.

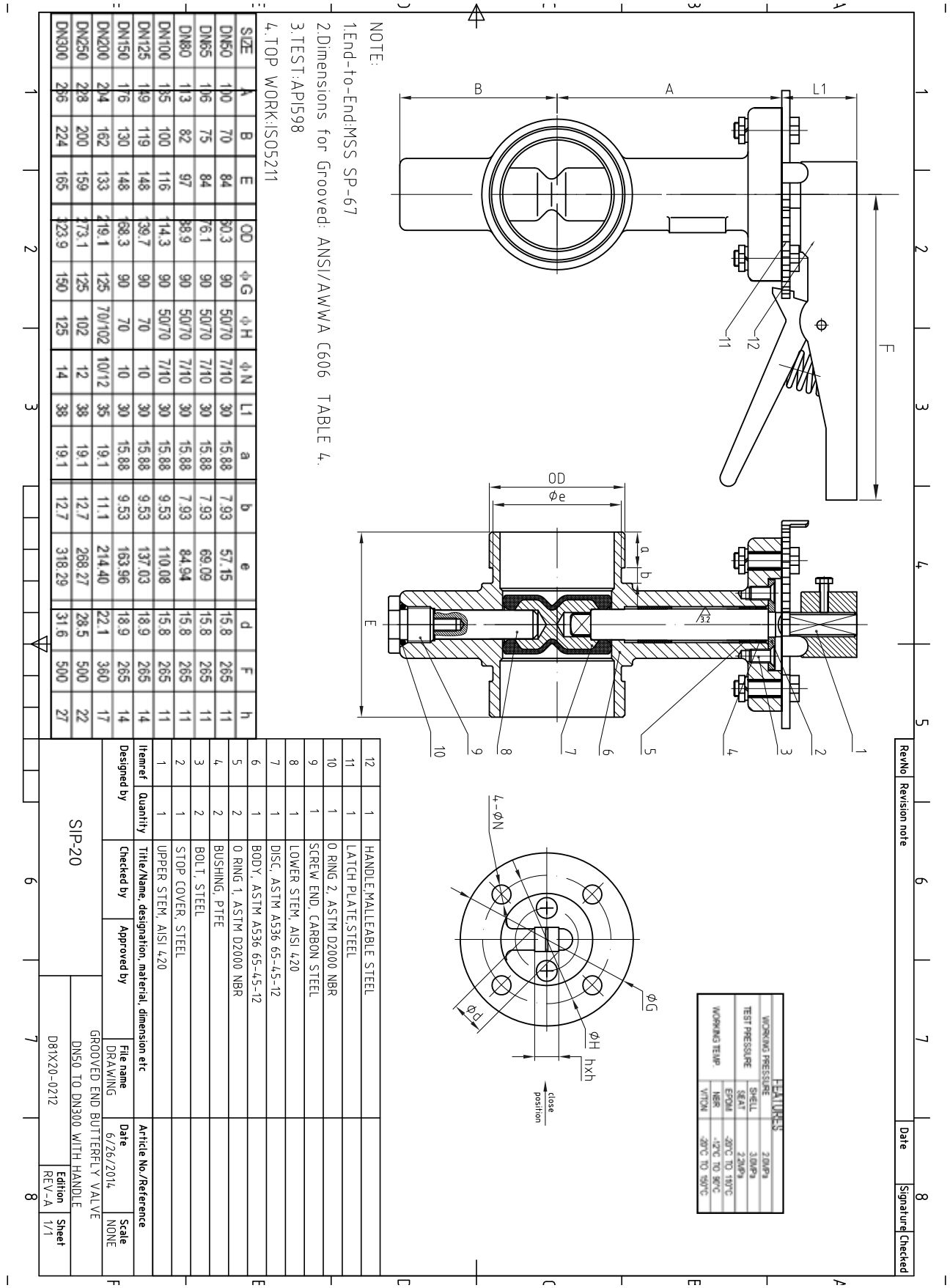
For operating torque see page 558.

Detalj/Part name	Materiale/Material
Hus/Body	Seigjern/Ductile iron (DI) GGG-40
Spjeld/Disc	ASTM A536/EPDM
Spindel/Stem	AISI 420
Pakning/Sealing	ASTM D2000 NBR
Foringer/Bearings	PTFE
Farge/Colour	Rød/Red

HS CODE INT. 8481.80

DN	Rør dim. Pipe dim.	Vare nr. Part no.	SQ mm	ISO-TOP 5211	Arb.trykk Work. pressure	Vekt Weight Kg
50	60,3	5533923	11	F05/07	20 bar	2,5
65	76,1	5533924	11	F05/07	20 bar	3,7
80	88,9	5533925	11	F05/07	20 bar	4,7
100	114,3	5533926	11	F05/07	20 bar	5,3
125	139,7	5533927	14	F07	20 bar	8,8
150	168,3	5533928	14	F07	20 bar	10,0

Kan leveres med EN 10204- 3.1 sertifikat / Can be delivered with EN 10204- 3.1 certificate.



SIZE	A	B	E	OD	φG	φH	φN	L1	a	b	e	d	F	h
DN50	100	70	84	60.3	90	50/70	7/10	30	15.88	7.93	57.15	15.8	265	11
DN65	106	75	84	76.1	90	50/70	7/10	30	15.88	7.93	69.09	15.8	265	11
DN80	113	82	97	88.9	90	50/70	7/10	30	15.88	7.93	84.94	15.8	265	11
DN100	135	100	116	114.3	90	50/70	7/10	30	15.88	9.53	110.08	15.8	265	11
DN125	149	119	148	139.7	90	70	10	30	15.88	9.53	137.03	18.9	265	14
DN150	176	130	148	168.3	90	70	10	30	15.88	9.53	163.96	18.9	265	14
DN200	204	162	133	219.1	125	70/102	10/12	35	19.1	11.1	214.40	22.1	360	17
DN250	228	200	159	273.1	125	102	12	38	19.1	12.7	268.27	28.5	500	22
DN300	266	224	165	323.9	150	125	14	38	19.1	12.7	318.29	31.6	500	27

Itemref	Quantity	Title/Name, designation, material, dimension etc
12	1	HANDLE,MALLEABLE STEEL
11	1	LATCH PLATE,STEEL
10	1	O RING 2, ASTM D2000 NBR
9	1	SCREW END, CARBON STEEL
8	1	LOWER STEM, AISI 420
7	1	DISC, ASTM A536 65-45-12
6	1	BODY, ASTM A536 65-45-12
5	2	O RING 1, ASTM D2000 NBR
4	2	BUSHING, PTFE
3	2	BOLT, STEEL
2	1	STOP COVER, STEEL
1	1	UPPER STEM, AISI 420

RevNo	Revision note	Date	Signature	Checked

Designed by | Checked by | Approved by | File name DRAWING | Date 6/26/2014 | Scale NONE | Article No./Reference

SIP-20

GROOVED END BUTTERFLY VALVE

DN50 TO DN300 WITH HANDLE

D81X20-0212

Edition REV-A | Sheet 1/1

Skisse: ©Ahlsell Norge AS - www.ahlsell.no / Drawing: ©Ahlsell Norge AS - www.ahlsell.no

DREIESPJELDVENTIL FOR HAVBRUK / BUTTERFLY VALVE FOR SEA FARMING

Sigeval S.A.

ANBEFALTE BRUKSOMRÅDER:

Ventil for bruk på havbruksanlegg, varmeanlegg/ kjølevannssystemer. Min/maks. temp. -10°C - 90°C.
Gir er konstruert for utebruk.

Dimensjon:
DN 50 - 700

Trykklasse:
PN10/16

Standard ventiler DN25 til og med DN150 leveres med spak.
DN200-DN1000 med gir.
Lagerført DN50-DN700.

For operasjonsmoment se side ???.

RECOMMENDED USAGE:

Valve for use in sea farming systems, HVAC systems.
Min/max temp. -10°C - 90°C.
Gears are made for outdoor wear.

Dimension:
DN 50 - 700

Pressure class:
PN10/16

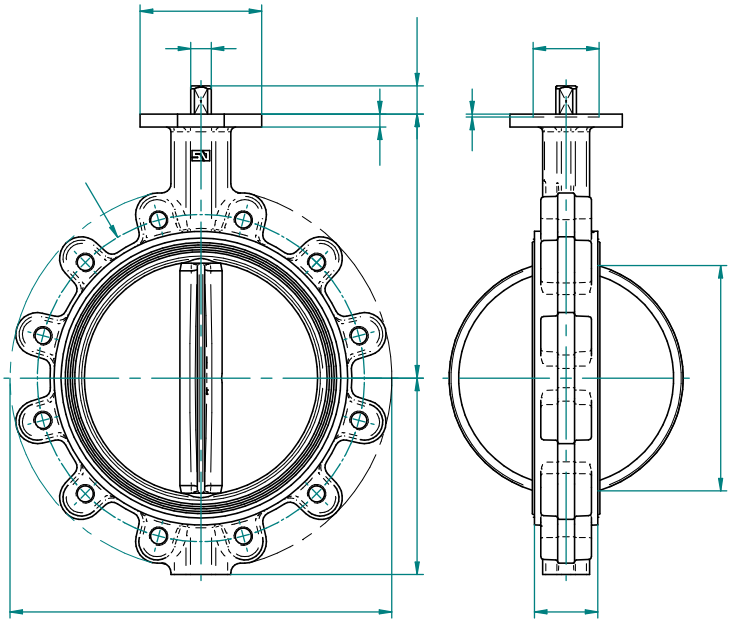
Standard valves from DN25 to DN150 are delivered with lever.
DN200-DN1000 with gear.
DN50-DN700 articles on stock.

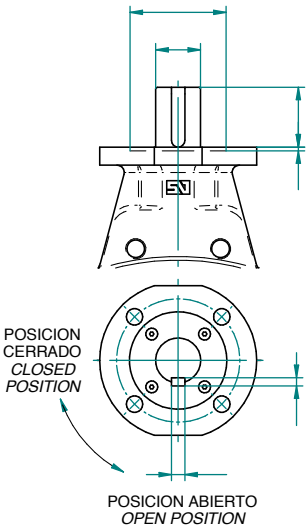
For operating torque see page ???.

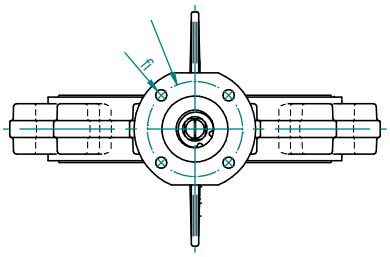
Detalj/Part name	Materiale/Material
Hus/Body	EN 1563 GJS-400-15 (GGG 40)
Spjeld/Disc	EN 1563 GJS-400-15 (GGG 40) + Rilsan (Poliamid 11) 250 MY
Sete/Seat	EPDM
Spindel/Stem	AISI 420
Pakning/Sealing	NBR
Foringer/Bearings	DN32-200 Acetal/DN250-700 SC/Bronze/PTFE
Farge hus/Colour body	Red/RAL 3000/Epoxy 250 MY
Test/Testing	Holiday test (non-destructive test method) by third part laboratory
Gir/Gear	DN 200-350 alu/DN 400-700 GG-25

HS CODE INT. 8481.80

DN	Vare nr. Standard	M SQ mm	ISO-TOP 5211	E mm	Arb.trykk Work. pressure	Vekt Weight incl. op. Kg
50	5527522	11	F07	30	16 Bar	3,3
65	5527523	11	F07	30	16 Bar	3,7
80	5527524	11	F07	30	16 Bar	5,3
100	5527525	11	F07	30	16 Bar	6,8
125	5527526	14	F07	33	16 Bar	10,4
150	5527527	14	F07	33	16 Bar	11,2
200	5527528	17	F07	33	10 Bar	16,0
250	5527529	22	F10	30	10 Bar	29,8
300	5527531	22	F10	30	10 Bar	43,1
350	5527532	22	F10	31	10 Bar	59,5
400	5527533	27	F12	31	10 Bar	84,0
450	5527534	36	F14	38	10 Bar	122,0
500	5527535	36	F14	38	10 Bar	177,0
600	5527536	60 round	F16	800	10 Bar	255,0
700	5527537	65 round	F25	106	10 Bar	329,0







DN 50/500

DN 600/700

E1 - EJE CORTO OPCIONAL BAJO PEDIDO
E1 - SHORT SHAFT ON REQUEST

DIMENSIONES GENERALES / *GENERAL DIMENSIONS*																BRIDA / *TOP FLANGE*					
DN		A	B	C	D	E	E1	F	G	K			L	M	Kg	ISO	Q	R	S	T	a x b
										PN10	PN16	Cl.150									
25	1"	103	50	8	130	30	16	11	90	85	85	79.4	33	14	1.9	F-07	70	4x9			
32	1¼"	103	50	8	130	30	16	11	90	100	100	88.9	33	14	1.9	F-07	70	4x9			
40	1½"	110	54	10	140	30	16	11	90	110	110	98.4	33	26	2.0	F-07	70	4x9			
50	2"	120	59	10	156	30	16	11	90	125	125	120.6	43	29	2.9	F-07	70	4x9			
65	2½"	135	66	10	175	30	16	11	90	145	145	139.7	46	46	3.3	F-07	70	4x9			
80	3"	141	91	10	194	30	16	11	90	160	160		46	65	4.8	F-07	70	4x9			
					185							152.4			3.5						
100	4"	165	105	10	224	30	16	11	90	180	180	190.5	52	90	6.3	F-07	70	4x9			
125	5"	180	125	12	267	33	18	14	90	210	210	215.9	56	112	9.8	F-07	70	4x9			
150	6"	193	136	12	292	33	18	14	90	240	240	241.3	56	139	10.6	F-07	70	4x9			
200	8"	225	156	12	334	33	18	17	90	295		298.5	60	191	13.4	F-07	70	4x9			
			171		352						295				17.5						
250	10"	283	210	14	409	30	23	22	130	350	355	361.9	68	241	26.4	F-10	102	4x12	3	70	
300	12"	308	240	14	480	30	23	22	130	400	410	431.8	78	290	39.6	F-10	102	4x12	3	70	
350	14"	339	263	18	522	31		22	160	460	470		78	338	56.1	F-10	102	4x12	3	70	
					522							476.2			56.0						
400	16"	380	308	18	595	31		27	160	515	525	539.7	102	387	74.9	F-12	125	4x14	4	85	
450	18"	381	340	20	633	38		36	190	565	585		114	434	103	F-14	140	4x18	4	100	
					638							577.8			94.6						
500	20"	433	380	20	717	38		36	210	620	650	635.0	127	478	158	F-14	140	4x18	4	100	
600	24"	494	440	24	833	80		60	210	725	770	749.3	154	570	220	F-16	165	4x22	5	130	18x11
700	28"	560	485	25	904	106		65	300	840	840		165	660	293	F-25	254	8x18	5	200	18x11
					924							863.5			312						
750	30"	590	530	25	964	106		80	300	900	900		190	705	373	F-25	254	8x18	5	200	22x14
					979							914.4			392						
800	32"	630	565	27	1020	106		80	300	950	950	978	190	763	432	F-25	254	8x18	5	200	22x14
900	36"	695	610	32	1120	110		80	350	1050	1050	1086	203	866	539	F-25	254	8x18	5	200	22x14
1000	40"	770	675	32	1246	110		80	350	1160	1170	1200	216	966	690	F-25	254	8x18	5	200	22x14
1100	44"	815	733	32	1345	110		80	350	1270	1270		216	1054	869	F-25	254	8x18	5	200	22x14
					1390							1314.5			964						

Skisse: ©Ahlsell Norge AS - www.ahlsell.no / Drawing: ©Ahlsell Norge AS - www.ahlsell.no

MARINE GIR FOR DREIESPJELDVENTIL /
MARINE GEAR FOR BUTTERFLY VALVE

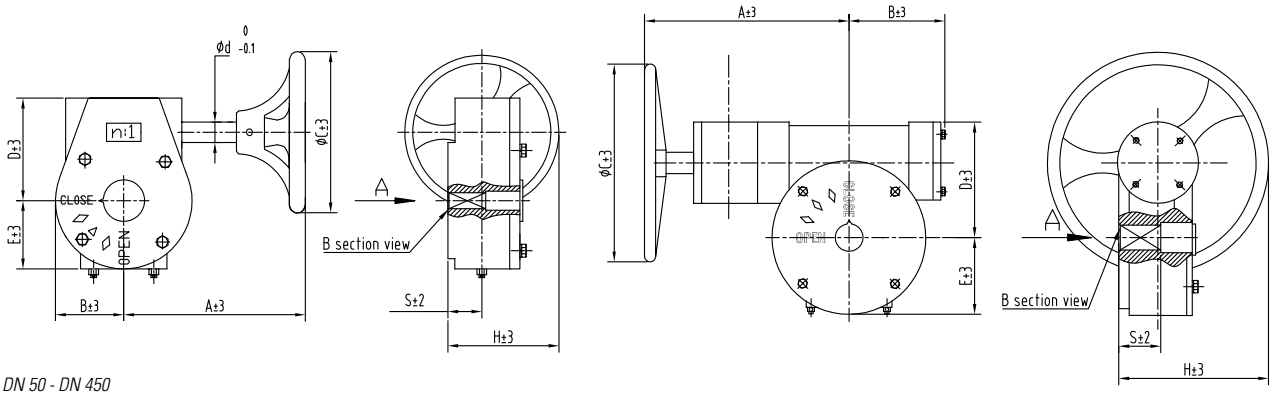
SIP

MATERIALE

Støpejern (GG-25). Svart coating C4 behandling fra 2016.

MATERIAL:

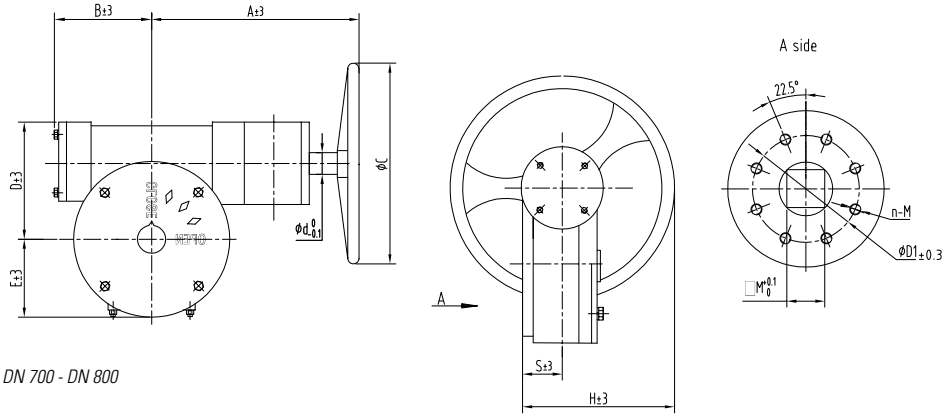
Cast iron (GG-25). Black coating C4 treatment from 2016.



DN 50 - DN 450

HS CODE INT. 8481.80

Dn	Vare nr. Part no.	M SQ	A mm	B mm	øC mm	ød mm	D1 ISO-top 5211	n:1 Transmission	Turnes open/closed	Torque N x M	Vekt Weight Kg
50-80	5533991	11	153	31,5	146	16	F07	24:1	6	150	4,2
100-125	5533992	14	153	31,5	146	16	F07	24:1	6	150	4,2
150	5533993	17	153	31,5	146	16	F07	24:1	6	150	4,2
200	5533994	17	235,5	73	288,5	19	F10	30:1	7	500	10
250	5533995	22	235,5	73	288,5	19	F10	30:1	7	500	10
300-350	5533996	27	231	78,5	288,5	19	F12	50:1	12	1200	12
400	9508193	36	277	127	290	25	F14	80:1	20	2500	25
450	9508194	36	277	127	290	25	F14	80:1	20	2500	25
500	9508195	36	340	130	290	25	F14	260:1	65	3000	35
600	9508196	46	342	133	384	25	F16	290:1	72	4000	45
700-800	9508197	46	363	142	384	32	F25	290:1	72	8000	63



DN 700 - DN 800

Materiale hus: 2"-18 GG25 / 20"-40 GGG40
Aksling: SS316
Gir: Aluminium Bronze
Bolt, mutter and skive: A4-70
Maling: C4

Material gear box: 2"-18 GG25 / 20"-40 GGG40
Shaft: SS316
Gear: Aluminium Bronze
Bolt, nut and washer: A4-70
Coating: C4

SPAK FOR DREIESPJELDVENTIL / LEVERS FOR BUTTERFLY VALVE

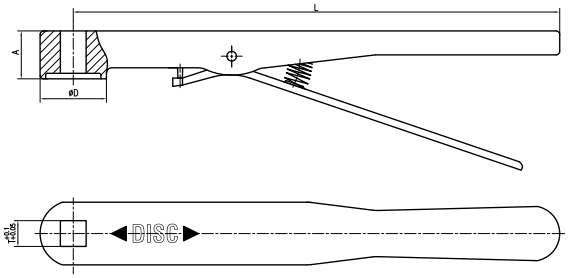
SIP

MATERIALE:

Støpejern (GG-25) og AiSi 316.

MATERIAL:

Cast iron (GG-25) and AiSi 316.

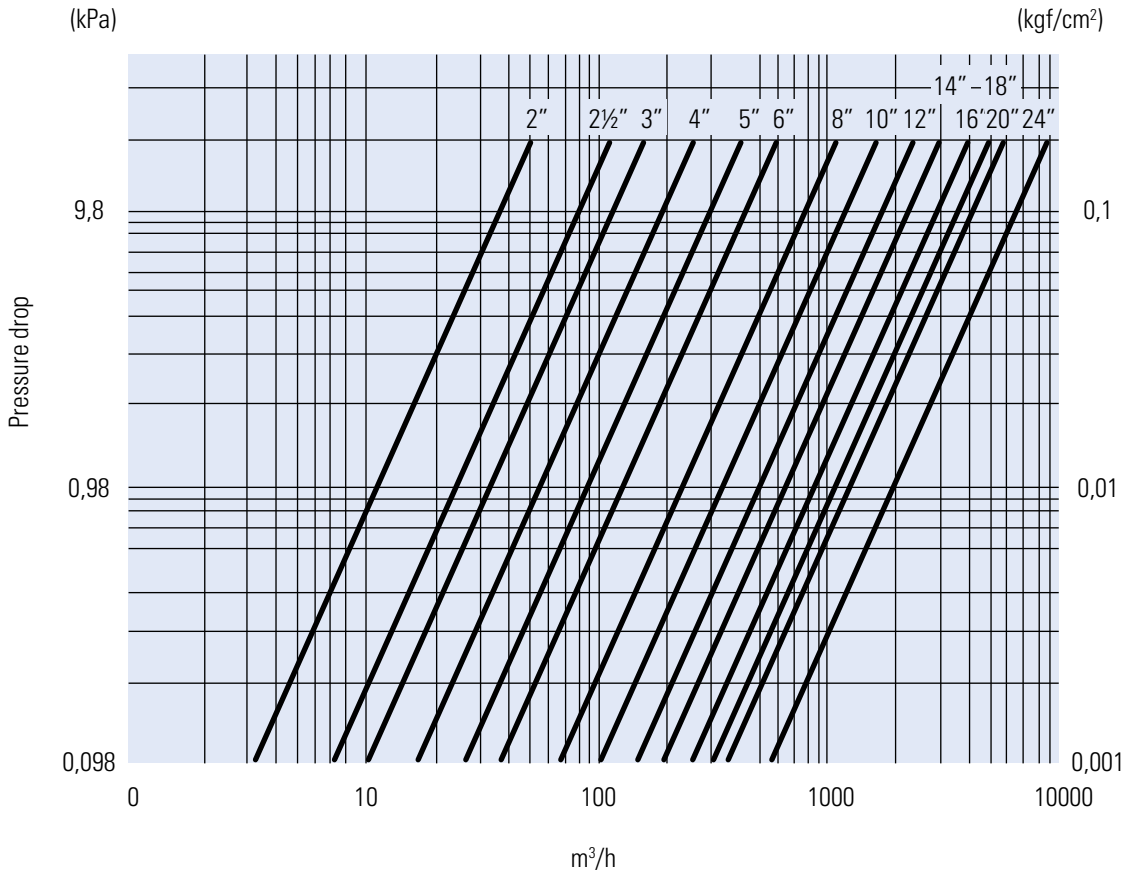


HS CODE INT. 8481.80

Dn	Vare nr. Part no. GG-25	Vare nr. Part no. AISI 316	T mm	A mm	ød mm	L mm	Vekt Weight Kg
40-80	5533982	5533986	11	26	36	264	0,80
100-125	5533983	5533987	14	26	36	264	0,80
150	5533984	5533988	17	26	36	264	0,80
200	5533985	5533989	17	31	62	364	0,80

FLOWTABELL FOR DREIESPJELDSVENTIL / FLOW TABLE FOR BUTTERFLY VALVE

SIP 04/11/13/14/17/18



KV VERDIER / KV VALUES

Dreiespjeldsventiler / butterfly valves

KV VERDIER DREIESPJELDSVENTILER 04, 11, 13, 14, 17, 19 SERIE / KV VALUES BUTTERFLY VALVES 04, 11, 13, 14, 17, 19 SERIES

Size	10°	20°	30°	40°	50°	60°	70°	80°	90°
DN50	0,09	4,28	10,28	12,85	23,14	37,70	59,98	89,97	98,54
DN65	0,17	6,86	17,14	21,42	38,56	64,27	101,97	152,53	167,95
DN80	0,26	10,28	18,85	33,42	59,98	99,40	156,81	235,65	258,78
DN100	0,43	14,57	30,85	66,84	119,11	197,09	311,91	467,87	514,14
DN125	0,69	24,85	52,27	113,97	203,08	335,90	531,28	796,92	875,75
DN150	1,71	38,56	81,41	175,66	313,62	518,42	820,91	1231,36	1353,04
DN200	2,57	76,26	161,10	349,61	622,96	1029,99	1630,68	2445,59	2687,23
DN250	18,00	129,39	274,21	594,69	1059,98	1755,78	2776,35	4163,67	4652,96
DN300	36,00	200,51	424,16	918,59	1637,53	2709,51	4288,77	6432,73	7069,41
DN350	112,00	289,63	612,68	1327,34	2365,90	3914,31	6195,37	9292,20	10211,65
DN400	159,00	397,60	842,33	1825,19	3253,64	5383,03	8519,28	12778,92	14042,84
DN450	200,00	526,99	1115,68	2418,17	4308,48	7129,39	11283,63	16925,45	18598,97
DN500	260,00	677,81	1411,31	3108,83	5539,85	9167,10	14508,14	21761,78	23914,31
DN600	345,00	1047,13	2216,80	4802,91	8559,55	14162,81	22413,88	33621,25	36946,02

OPERASJONSMOMENT (NM) / OPERATING TORQUE (NM)

Alle verdier nedenfor er åpningsmomenter / All given torque values are initial brake away

SIP - 04, 11, 13, 14, 17, 19

Size	PN 3 Nm wet/dry	PN 5 Nm wet/dry	PN 10 Nm wet/dry	PN 16 Nm wet/dry	PN 25 Nm wet/dry
DN40	10/12	10/13	12/15	12/18	20/32
DN50	11/14	11/16	11/19	12/25	20/35
DN65	12/15	14/20	18/25	25/30	35/45
DN80	20/25	25/30	30/36	34/44	56/70
DN100	27/33	29/36	40/50	50/60	70/98
DN125	49/75	52/80	60/85	79/110	150/180
DN150	60/121	68/134	80/149	110/199	200/300
DN200	120/150	130/165	140/175	200/280	350/460
DN250	194/235	232/280	238/300	300/400	700/910
DN300	283/461	343/545	358/583	601/746	1000/1560
DN350	361/541	434/629	458/688	-	-
DN400	499/673	565/852	755/944	-	-
DN450	653/902	742/1121	212/1265	-	-
DN500	753/1130	765/1475	1350/1688	-	-
DN600	1308/1767	1494/2267	2111/2638	-	-
DN700	2800/3360	3300/4150	3900/4680	-	-
DN800	3300/3960	4000/4800	4600/5500	-	-

Ved påmontering av aktuator må det beregnes en sikkerhetsmargin på 25% /
By mounting of actuator, please add 25% safety margin

SIP 15

Size	PN 3 Nm wet/dry	PN 5 Nm wet/dry	PN 10 Nm wet/dry	PN 16 Nm wet/dry
DN50	35/39	39/47	40/48	45/54
DN65	40/44	44/53	46/55	50/60
DN80	55/61	60/72	63/76	68/82
DN100	85/94	93/112	97/116	105/126
DN125	130/143	142/171	149/179	161/193
DN150	160/176	174/209	183/220	198/238
DN200	350/385	385/432	420/504	-
DN250	400/440	436/523	480/576	-
DN300	580/640	632/758	696/835	-

SIP 20

Size	PN 3 Nm wet/dry	PN 10 Nm wet/dry	PN 20 Nm wet/dry
DN50	10/12	14/17	15/18
DN65	16/19	22/26	24/29
DN80	20/24	27/32	30/36
DN100	33/40	45/54	50/60
DN125	43/52	58/70	65/78
DN150	82/98	111/133	123/148
DN200	158/190	213/256	320/384
DN 250	185/222	251/301	390/468
DN 300	260/312	351/421	650/780

Ved påmontering av aktuator må det beregnes en sikkerhetsmargin på 25% /
By mounting of actuator, please add 25% safety margin

SIP 16W HIGH PERFORMACE

Size	Torque/N.M.	
	PN25	PN40
DN65	35	39
DN80	39	43
DN100	55	60
DN125	100	111
DN150	172	189
DN200	221	243
DN250	254	280
DN300	397	442

Ved påmontering av aktuator må det beregnes en sikkerhetsmargin på 25% /
By mounting of actuator, please add 25% safety margin

OPERASJONSMOMENT (NM) / OPERATING TORQUE (NM)

SIP - 18 DOBBELFLENSET / SIP 18 DOUBLE FLANGED

Size	PN 3 Nm wet/dry	PN 5 Nm wet/dry	PN 10 Nm wet/dry	PN 16 Nm wet/dry
DN50	12/20	18/30	14/22	27/43
DN65	17/26	26/38	20/32	34/54
DN80	23/42	35/63	26/50	41/65
DN100	33/57	49/86	37/68	54/87
DN125	49/85	73/128	58/101	95/152
DN150	76/134	114/201	94/165	149/239
DN200	137/236	205/354	173/297	258/412

TABELL FOR ANBEFALTE BOLTER / TABLE FOR RECOMMENDED BOLTS

(Diameter x Length)

Size	Wafer type connect with NS 2526 PN10 flanges	Wafer type connect with NS 2527 PN16 flanges	Lug type connect with NS 2526 PN10 flanges	Lug type connect with NS 2527 PN16 flanges	For mounting lever or gears
	Stud bolts		Hex bolts		Hex bolts
DN40	M16X120	M16X120	M16X30	M16X30	M8X25
DN50	M16X140	M16X140	M16X40	M16X40	M8X25
DN65	M16X140	M16X140	M16X40	M16X40	M8X25
DN80	M16X140	M16X140	M16X40	M16X40	M8X30
DN100	M16X150	M16X150	M16X45	M16X45	M8X30
DN125	M16X160	M16X160	M16X50	M16X50	M8X30
DN150	M20X170	M20X170	M20X50	M20X50	M8X30
DN200	M20X180	M20X180	M20X50	M20X50	M10X30
DN250	M20X190	M24X210	M20X55	M24X60	M10X30
DN300	M20X200	M24X220	M20X60	M24X65	M12X35
DN350	M20X210	M24X220	M20X65	M24X70	M12X35
DN400	M24X240	M27X250	M24X80	M27X80	M16X40
DN450	M24X250	M27X260	M24X80	M27X90	M16X40
DN500	M24X280	M30X300	M24X90	M30X100	M16X40
DN600	M27X300	M33X350	M27X100	M33X110	M20X50
DN700	M27X320	M33X360	M27X100	M33X110	M16X55
DN800	M30X350	M36X380	M33X110	M36X150	M16X55

Ved påmontering av aktuator må det beregnes en sikkerhetsmargin på 25% /
By mounting of actuator, please add 25% safety margin

BOLT TORQUE (GUIDELINE VALUES IN NM)

Thread size	8.8	10.9	12.9
M5	5,7	8,1	9,7
M6	9,8	14	17
M8	24	33	40
M10	47	65	79
M12	81	114	136
M16	197	277	333
M20	385	541	649
M24	665	935	1120
M30	1310	1840	2210
M36	2280	3210	3850

INFORMASJON LUG, WAFER / INFORMATION LUG, WAFER

Lug / Wafer

LUG:

Kan sitte som endeventil i kortere perioder og på lavt trykk. For permanent bruk som endeventil anbefaler vi bruk av motflens.

WAFER:

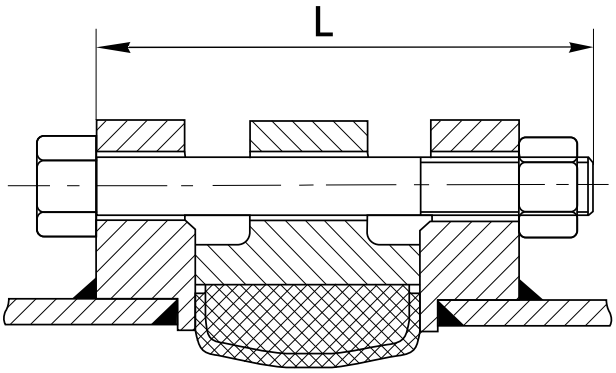
For innspenning, lange bolter med en mutter.
Lengden er beregnet ut i fra 2 stk. flenser,
en på hver side av ventilen.

LUG:

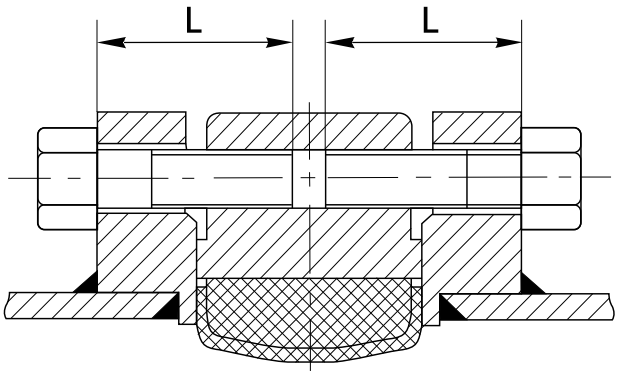
For dead end services for shorter periods and low pressure.
For permanently use as dead end valve we recommend use of counter flange. Use short bolts without nuts.

WAFER:

To be mounted between flanges, can not be used for dead end services. Use longer bolts with one nut.
The calculated length includes flanges on both sides of the valve.



Skisse: Wafer / Drawing: Wafer



Skisse: Lug / Drawing: Lug

DREIESPJELDVENTIL LUG / BUTTERFLY VALVE LUG

LK Ventiler

BUTTERFLY VALVES WITH VULCANIZED LINER

Butterfly valves are maintenance free, easy to install and operate and require minimum installation space, therefore they are used more and more in various applications on board.
Less material is used in a butterfly valve compared to other types of valves, which makes them a cost efficient choice, for example the weight of a butterfly lug DN150 is just 18% of a similar globe valve.
Our vulcanized, soft seated butterfly valves have lower weight, better flow coefficient and reduced torque compared to equivalent products. It is available in three types; wafer, lug or double flange, where double flange can be placed shipside. The butterfly valve is available with flange connection for DIN, ANSI or JIS. The design is verified and type approved by DNV and ABS.
LK Valves butterfly valve have gone through intense testing during the development process; including, but not limited to, burst test of the body, test of the rubber bonding strenght and verification of the flow characteristics of the disc. Our butterfly valve also passed more than 10.000 cycles in a full-scale endurance test rig at a nominal pressure of 16 bar.
All materials and solutions in our butterfly valve are carefully chosen to meet our high durability and performance expectations:

BODY

The valve body is of a heavy duty design to ensure safe vulcanization during high pressure and each design is burst tested prior to release. Our standard body material is ductile iron (GGG40), but other materials are available upon request. For easy assembly of actuators the top flange is made in accordance with ISO 5211.

RUBBER

Rubber quality is crucial to make the valve leak proof and ensure a long service life, still it is impossible with the naked eye to separate good quality rubber from bad. Therefore it is important for us to be in control of all parts of this process.
By specifying the rubber compound for marine use, setting high demands for cleanliness in the production and using injection moulding we ensure excellent bonding strenght and durability of the vulcanized rubber lining. Temperature control of the raw material prevents premature hardening during mixing. Thorough control of the vulcanization process ensures correct structure and hardness of the rubber.
We offer rubber lining in NBR, EPDM or Viton. For use in hydrocarbon applications, we recommend NBR or Viton.

STEM AND PINS

Our butterfly valve has a one piece stem mounted in centric position. The stem is supported by bearings in bronze to give a low torque. A mark in the top of the stem, parallel with the disc, indicates the position of the disc.
The pins are in duplex stainless steel (1.4462) which is durable and resistant to corrosion. Pins are used to keep the disc in correct position and thereby avoid a permanent imprint in the rubber.

DISC

The disc is designed based on computational fluid dynamics (CFD) simulations as well as practical tests, and gives our butterfly valve better flow capacity than similar valves on the market. Choose between discs in aluminium bronze (AB2) or Super duplex. The disc is hand polished to guarantee tightness and reduce torque.

VULKANISERT DREIESPJELDVENTIL LUG /
VULCANIZED BUTTERFLY VALVE LUG

LK 710701 / 710702

ANBEFALTE BRUKSOMRÅDER:

Ventil for bruk i krevende applikasjoner. Vulkanisert sete.
Maks. temperatur 95°C. Min. 18% strekkfasthet.

Flenseboring:
DN 50 - 150 PN16
DN 200 - 600 PN10

Trykklasse:
DN 50 - 150 PN16
DN 200 - 600 PN10

Standard ventiler fra DN40 til og med DN150 leveres med spak.
Dimensjoner fra DN200 leveres med gir.

For operasjonsmoment se side XXX

RECOMMENDED USAGE:

Valve for use in demanding applications. Vulcanized liner.
Max. temperature 95°C. Min. 18% elogation.

Flange drilling:
DN 50 - 150 PN16
DN 200 - 600 PN10

Pressure class:
DN 50 - 150 PN16
DN 200 - 600 PN10

Standard valves from DN40 to DN150 are delivered with lever.
Dimensions from DN200 are delivered with gear.

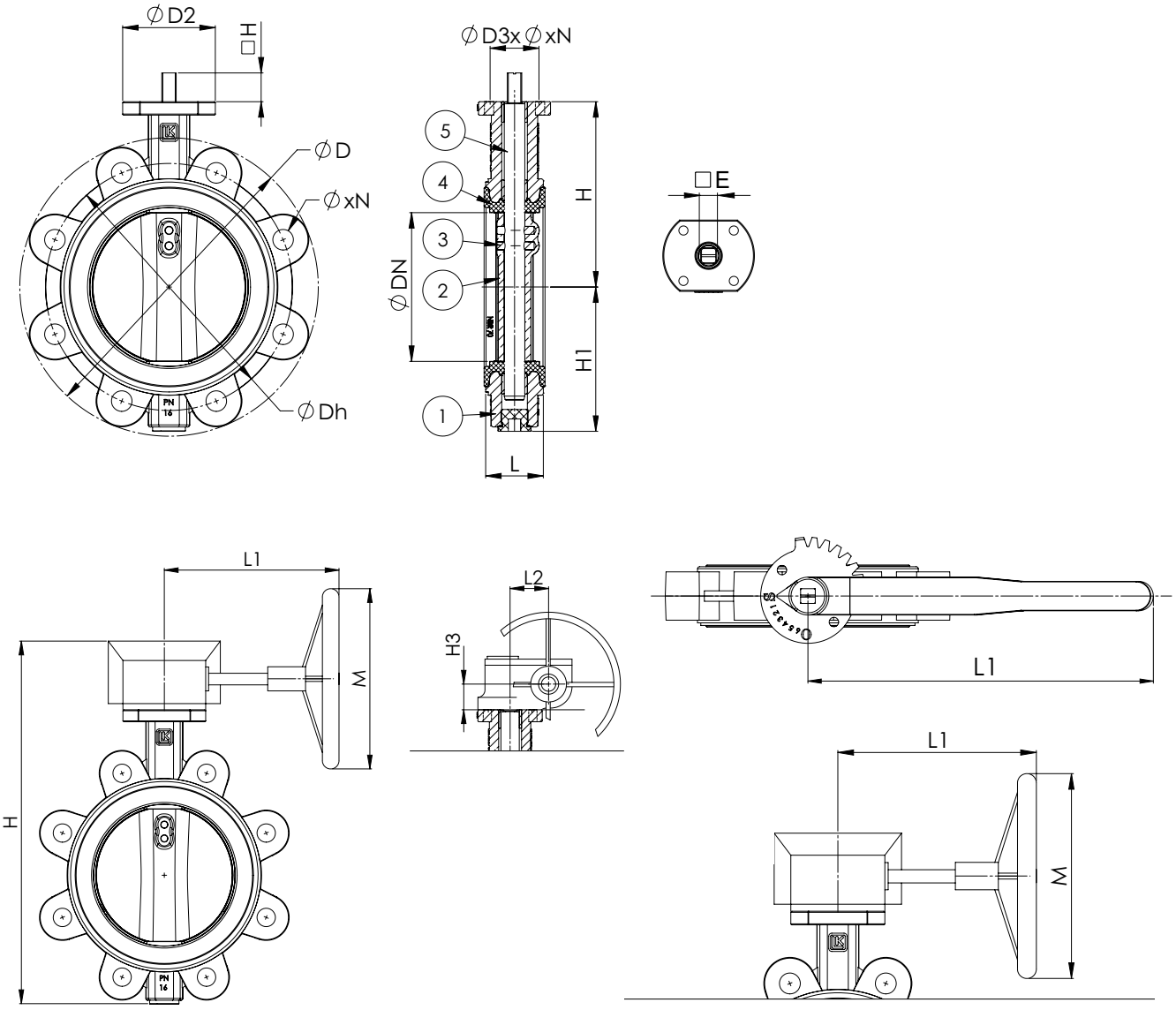
For operating torque see page XXX.

	Detalj/Part name	Materiale/Material
1	Hus/Body	Seigjern/Ductile iron (DI) GGG-40
2	Spjeld/Disc	Al/Br
3	Pin	Duplex
4	Pakning/Sealing	Vulkanisert NBR / Vulcanized NBR
5	Spindel/Stem	DN 40-300 AISI 316 / DN 350-600 AISI 431
-	Foringer/Bearings	Bronse/Bronze
-	Farge/Colour	Rød/Red

HS CODE INT. 8481.80
FRI SPINDEL / BARE STEM

DN	Vare nr. Part no.	Trykk-klasse Pressure rating	Tilslutning Connection	L	#E	ISO Top flange	D	Dh	D2	#H	H	H1	Vekt Weight (kg)
40	5527737	PN 16	PN16	33	11	F07	147	110	90	19	113	66	2,4
50	5527738	PN 16	PN16	43	11	F07	161	125	90	19	118	71	3,5
65	5527739	PN 16	PN16	46	11	F07	185	145	90	19	126	80	4,4
80	5527741	PN 16	PN16	46	11	F07	196	160	90	19	133	88	5,5
100	5527742	PN 16	PN16	52	11	F07	226	180	90	19	147	106	7,4
125	5527743	PN 16	PN16	56	14	F07	260	210	90	19	160	118	10
150	5527744	PN 16	PN16	56	14	F07	290	240	90	19	180	140	12,2
200	5527745	PN 16	PN16	60	17	F07	356	295	90	25	204	167	16
200	5527752	PN 10	PN10	60	17	F07	335	295	90	25	204	167	19
250	5527753	PN 10	PN10	68	22	F10	420	350	125	30	245	203	31
300	5527754	PN 10	PN10	78	22	F10	478	400	125	30	270	228	43
350	5527755	PN 10	PN10	78	27	F12	516	460	150	30	315	288	54
400	5527756	PN 10	PN10	102	27	F12	581	515	150	30	350	305	91
450	5527757	PN 10	PN10	114	36	F14	641	565	175	38	375	335	124
500	5527758	PN 10	PN10	127	36	F14	710	620	175	38	415	379	169
600	5527759	PN 10	PN10	154	46	F16	780	725	210	48	465	431	211

Alle mål er i mm. / All measurements in mm.



HS CODE INT. 8481.80

HENDEL OG GIR / LEAVER AND GEAR BOX

DN	Vare nr. Part no.	Trykk-klasse Pressure rating	Tilslutning Connection	L	D	Dh	D2	H	L1	L2	H1	H2	H3	M	Vekt Weight (kg)
40	5527961	PN 16	PN16	33	147	110	90	232,5	232	-	66	113	-	-	2,8
50	5527963	PN 16	PN16	43	161	125	90	242,5	232	-	71	118	-	-	4,3
65	5527965	PN 16	PN16	46	185	145	90	264,5	232	-	80	126	-	-	5,2
80	5527967	PN 16	PN16	46	196	160	90	274,5	232	-	88	133	-	-	6,2
100	5527969	PN 16	PN16	52	226	180	90	306,5	232	-	106	147	-	-	8
125	5527972	PN 16	PN16	56	260	210	90	342	329	-	118	160	-	-	11
150	5527974	PN 16	PN16	56	290	240	90	384	329	-	140	180	-	-	14
200	5527978	PN 16	PN16	60	356	295	90	432	218	53	167	204	35	260	21,9
200	5527983	PN 10	PN10	60	335	295	90	432	218	53	167	204	35	260	22
250	5527985	PN 10	PN10	68	420	350	125	509	218	53	203	245	35	260	41
300	5527987	PN 10	PN10	78	478	400	125	570	210	66	228	270	42	300	50
350	5527988	PN 10	PN10	78	516	460	150	675	210	66	288	315	42	300	65
400	5527989	PN 10	PN10	102	581	515	150	736	287	101	305	350	50	400	111
450	5527991	PN 10	PN10	114	641	565	175	791	287	101	335	375	50	400	137
500	5528008	PN 10	PN10	127	710	620	175	885	357	123	379	415	50	500	184
600	5528017	PN 10	PN10	154	780	725	210	969	382	153	431	465	50	500	252

Alle mål er i mm. DN 40 - 150 har hendel, fra DN 200 og oppover har gir. / All measurements in mm. DN 40 - 150 with lever, from DN 200 and up has gear box.

OPERASJONSMOMENT (NM) / OPERATING TORQUE (NM)

Alle verdier nedenfor er åpningsmomenter / All given torque values are initial brake away

TORQUE DREIJESPJEDLSVENTILER / TORQUE TABLE BUTTERFLY VALVES

DN	2,5 bar	6 bar	10 bar	16 bar	20 bar	25 bar
DN 40	3	4	4	5	8	11
DN 50	6	7	8	9	12	15
DN 65	7	8	9	11	16	22
DN 80	13	15	17	20	28	38
DN 100	20	23	26	30	48	58
DN 125	31	34	40	51	78	90
DN 150	50	58	65	77	122	152
DN 200	107	123	135	164	195	228
DN 250	159	184	210	-	462	720
DN 300	283	321	370	-	690	872
DN 350	404	466	528	-	780	1050
DN 400	621	716	812	-	1490	1923
DN 450	713	951	1132	-	1967	-
DN 500	859	1145	1307	-	2420	-
DN 600	1820	2101	2381	-	-	-
DN 700	2135	2545	2940	-	-	-
DN 800	2769	3301	3814	-	-	-
DN 900	3909	4661	-	-	-	-
DN 1000	5414	6454	-	-	-	-

Verdiene er basert i Nm og er målt gjennomsnitt på to standard avvik på 20°C ambivalent temperatur, våt - våt tilstand. For FPM/FKM gummi, benytt torque verdier med ett trinn høyere trykknivå. / Table values in Nm. Values are based on measured average torque readings with two standard deviations at 20°C ambient temperature, wet – wet condition. For FPM/FKM rubber lining please use torque value from one pressure level higher in the table.

ahlsell

www.ahlsell.no