

BBS- 3F

Flow indicators with
Clamp connection

Inline flow indicators with Clamp connection, Full view and standard version

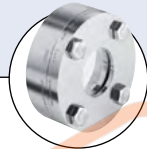


- Guaranteed crevice free
- Fully traceable wetted materials
- Suitable for CIP and SIP
- Glass mounted without stress

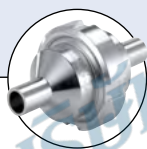
Hygienic Processing Components.....



Type BBS-05
Quick connect



Type BBS-07
Block flange



Type BBS-10
Check valve



Type 2103
Diaphragm valve



Type 8221
Conductivity sensor



Type 8652
Process Automation

These sterile flow indicators can be installed in any position to observe liquid flow in any direction.

The flow indicator is usually employed to detect either the presence or absence of solutions, or to observe fluids for turbulence, colour or clarity.

They are ideal for high purity applications.

The standard view indicator offers excellent process visualization whilst protecting the glass and the full view version allows a 360° process vision, this means you can observe fluid flow from any position.

Technical data

Available standard sizes

Full view version

ISO DN08 to DN100
BS-OD DN1/4" up to DN4"
DIN DN08 up to DN100
ISO DN08 up to DN50
BS-OD DN1/4" up to DN2"
DIN DN08 to DN50
Customized on request

Standard version

Material medium contact

Stainless steel 1.4435 BN2 (316L)
Special materials on request

Material medium separated

1.4305 or equivalent

Glass

Borosilicate glass

Seals

O-Ring, EPDM, FEP (PTFE coated silicone O-Ring)
special seal material e.g. silicone, pure PTFE etc.
on request

Surface quality

Medium contacted surface < Ra 0.8µm,
electro polished, finer surface on request

Operating temperature

Dependent upon the chosen seal material

Ambient temperature

-20 to +80 °C

Media

Gases or liquids

Operating pressure

-1 up to +8 bar (higher pressure on request)

Applicable Standards

Clamp connection acc. to DIN 32676
ISO-Dimensions Series B
DIN-Dimensions Series A
BS-OD-Dimensions Series C (ASME BPE)

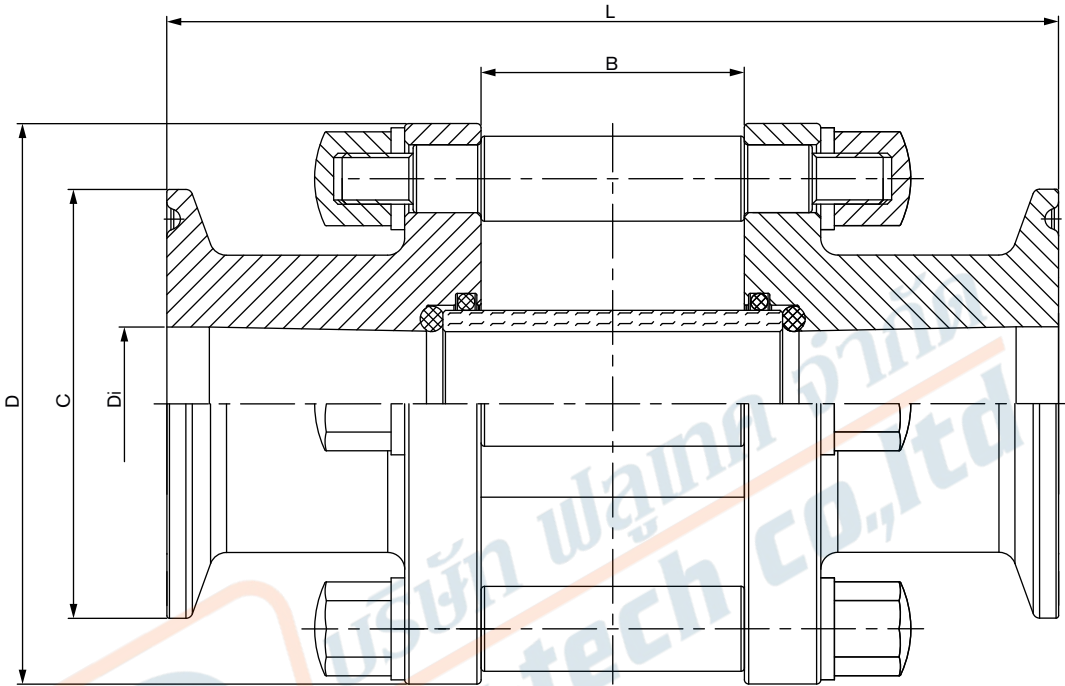
Certifications

Material 3.1
FDA for all recommended seal materials
USP VI for EPDM, FEP and PTFE

Applications

- Biotechnology
- Pharmaceutical
- Chemical industry
- Dairy
- Food
- Cosmetic

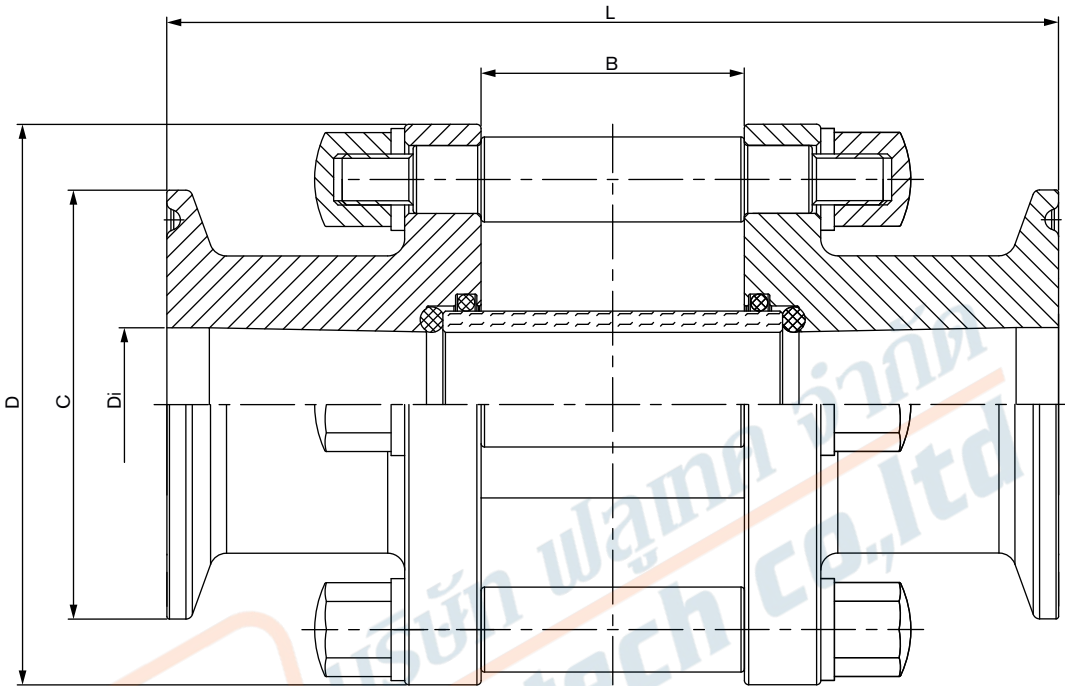
Dimensions [mm] Inline flow indicator with Clamp connection / full view version



Orifice	D [mm]	C [mm]	Di [mm]	B [mm]	L [mm]	Article no. EPDM	Article no. FEP
ISO Dimensions Inline flow indicator with Clamp connection / full view version							
DN08	59.00	25.00	10.30	19.50	91.00	741399	741401
DN10	59.00	25.00	14.00	26.40	91.00	741409	741411
DN15	66.00	50.50	18.10	31.00	111.00	741429	741431
DN20	73.00	50.50	23.70	32.00	111.00	741436	741438
DN25	73.00	50.50	29.70	32.00	111.00	741448	741450
DN32	90.00	64.00	38.40	41.20	121.00	741458	741460
DN40	88.00	64.00	44.30	67.00	146.00	741466	741468
DN50	124.10	77.50	56.30	80.00	171.00	741474	741476
DN65	135.00	91.00	71.50	94.00	185.00	741481	741483
DN80	145.00	106.00	84.30	97.00	196.00	741488	741490
DN100	178.00	130.00	109.10	118.00	209.00	741417	741419

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Dimensions [mm] Inline flow indicator with Clamp connection / full view version

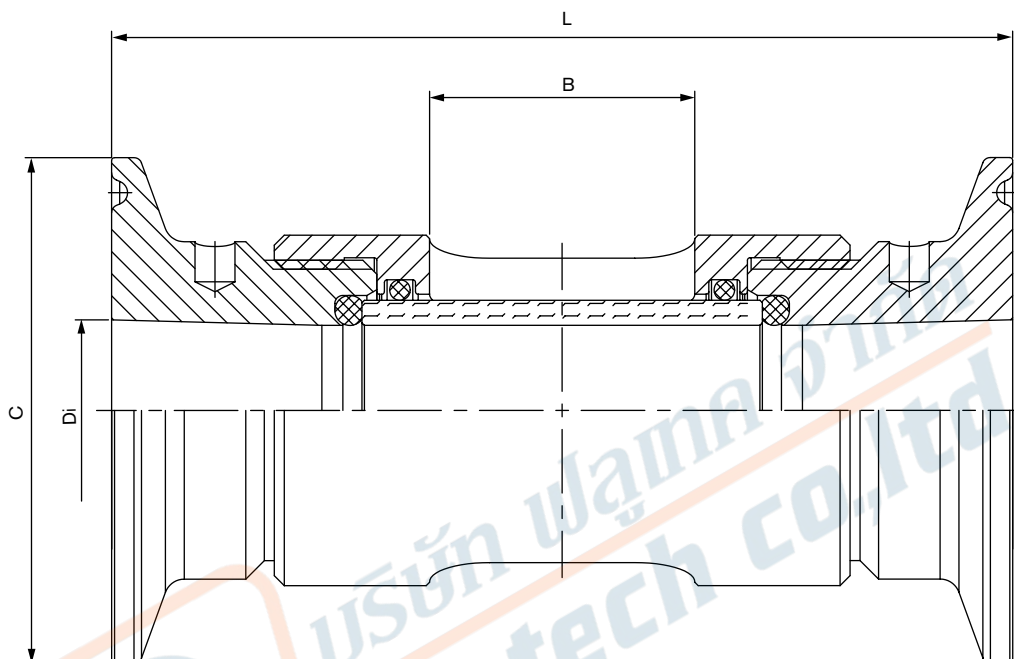


Orifice	D [mm]	C [mm]	Di [mm]	B [mm]	L [mm]	Article no. EPDM	Article no. FEP
BS-OD Dimensions Inline flow indicator with Clamp connection / full view version							
DN1/4"	50.00	25.00	4.57	19.50	91.50	743027	743028
DN3/8"	50.00	25.00	7.75	19.50	91.50	741502	741503
DN1/2"	59.00	25.00	9.40	19.50	91.50	741511	741513
DN3/4"	65.00	25.00	15.75	33.00	105.00	741520	741522
DN1"	73.00	50.50	22.10	36.00	105.00	741537	741541
DN1 1/2"	82.00	50.50	34.80	37.00	105.00	741552	741554
DN2"	100.00	64.00	47.50	54.00	140.00	741565	741567
DN2 1/2"	124.00	77.50	60.20	67.00	151.00	741574	741576
DN3"	135.00	91.00	72.90	97.00	181.00	741586	741588
DN4"	159.00	119.00	97.38	119.00	206.00	741596	741598

Orifice	D [mm]	C [mm]	Di [mm]	B [mm]	L [mm]	Article no. EPDM	Article no. FEP
DIN Dimensions Inline flow indicator with Clamp connection / full view version							
DN08	59.00	25.00	8.00	19.50	91.00	on request	on request
DN10	59.00	34.00	10.00	19.50	91.00	on request	748693
DN15	65.00	34.00	16.00	31.00	105.00	748263	741617
DN20	70.00	34.00	20.00	32.00	105.00	on request	on request
DN25	80.00	50.50	26.00	32.00	105.00	on request	748759
DN32	80.00	50.50	32.00	32.00	105.00	on request	on request
DN40	90.00	50.50	38.00	41.20	121.00	748780	on request
DN50	110.00	64.00	50.00	60.00	140.00	on request	748622
DN65	124.00	91.00	66.00	67.00	148.00	748889	on request
DN80	145.00	106.00	81.00	110.00	196.00	741638	748621
DN100	160.00	119.00	100.00	97.00	184.00	on request	on request

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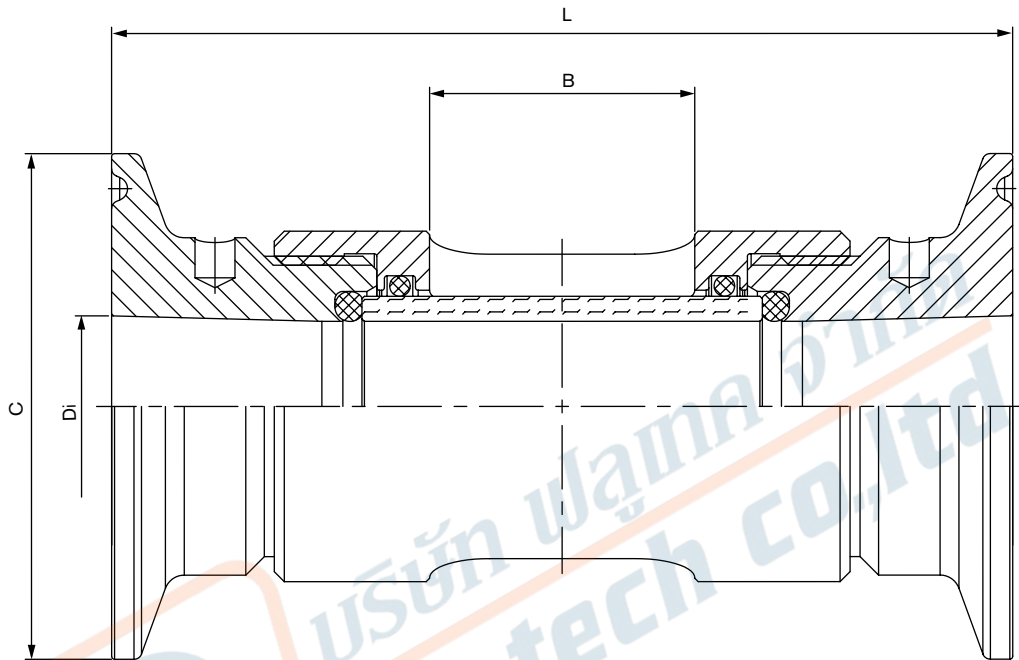
Dimensions [mm] Inline flow indicator with Clamp connection / standard



Orifice	C [mm]	Di [mm]	B [mm]	L [mm]	Article no. EPDM	Article no. FEP
ISO Dimensions Inline flow indicator with Clamp connection / standard						
DN08	25.00	9.40	20.00	76.00	741395	741397
DN10	25.00	14.00	20.00	76.00	741403	741405
DN15	50.50	18.10	24.00	92.00	741425	741427
DN20	50.50	23.70	24.00	92.00	741433	741434
DN25	50.50	29.70	24.00	92.00	741444	741446
DN32	64.00	38.40	32.00	115.00	741454	741456
DN40	64.00	44.30	48.00	120.00	741462	741464
DN50	77.50	56.30	80.00	187.00	741470	741472

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Dimensions [mm] Inline flow indicator with Clamp connection / standard

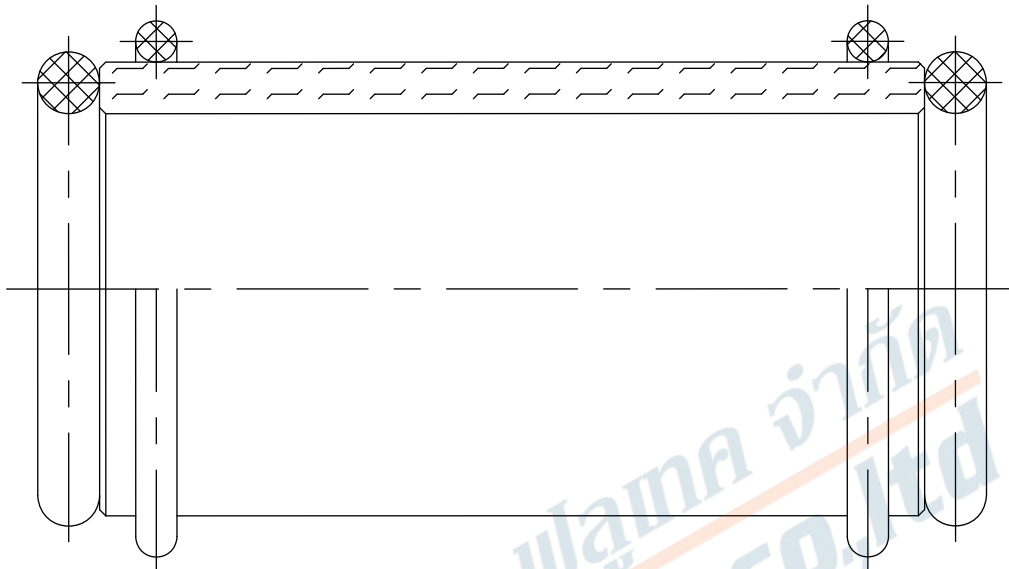


Orifice	C [mm]	Di [mm]	B [mm]	L [mm]	Article no. EPDM	Article no. FEP
BS-OD Dimensions Inline flow indicator with Clamp connection / standard						
ASME DN1/4"	25.00	4.60	20.00	76.00	741492	741496
ASME DN3/8"	25.00	7.75	20.00	76.00	741498	741500
ASME DN1/2"	25.00	9.40	20.00	76.00	741505	741509
ASME DN3/4"	25.00	15.75	30.00	92.00	741516	741518
ASME DN1"	50.50	22.10	30.00	92.00	741530	741533
ASME DN1 1/2"	50.50	34.80	32.00	115.00	741546	741550
ASME DN2"	64.00	47.50	48.00	120.00	741560	741563

Orifice	C [mm]	Di [mm]	B [mm]	L [mm]	Article no. EPDM	Article no. FEP
DIN Dimensions Inline flow indicator with Clamp connection / standard						
DN08	25.00	8.00	20.00	76.00	747993	on request
DN10	34.00	10.00	20.00	76.00	743903	on request
DN15	50.50	16.00	30.00	92.00	741612	741615
DN20	50.50	20.00	30.00	92.00	741619	on request
DN25	50.50	26.00	32.00	92.00	741623	734168
DN32	50.50	32.00	32.00	92.00	741625	741627
DN40	64.00	38.00	32.00	120.00	741629	on request
DN50	64.00	50.00	48.00	120.00	741631	on request

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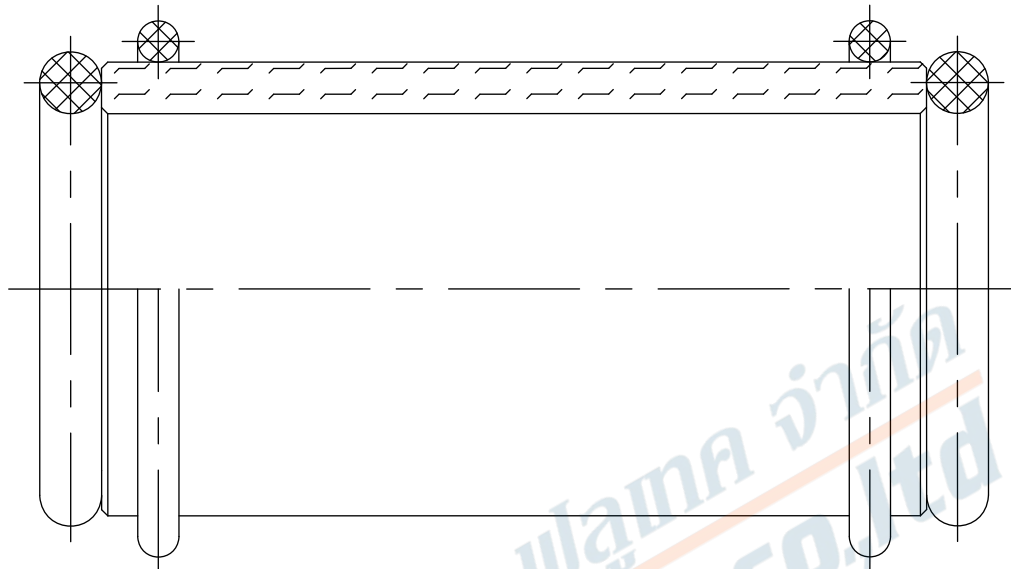
Spare parts kit for flow indicator



Orifice	Article no. EPDM	Article no. FEP
ISO Spare parts kit (consisting of glass, O-Ring and support ring)		
DN08	740492	740495
DN10	740500	744722
DN15	740515	740518
DN20	740527	740530
DN25	740539	740542
DN32	740552	740555
DN40	740561	740564
DN50	740573	740575
DN65	744727	744728
DN80	744729	740581
DN100	744723	744724

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Spare parts kit for flow indicator



Orifice	Article no. EPDM	Article no. FEP
DIN Spare parts kit (consisting of glass, O-Ring and support ring)		
DN08	740316	744678
DN10	744679	744680
DN15	744683	744684
DN20	744687	744688
DN25	744689	744690
DN32	744691	744692
DN40	744693	744694
DN50	740334	744695
DN65	744696	744697
DN80	744698	744699
DN100	744681	744682

Orifice	Article no. EPDM	Article no. FEP
BS-OD Spare parts kit (consisting of glass, O-Ring and support ring)		
DN1/4"	744718	744719
DN3/8"	740316	744721
DN1/2"	740347	740350
DN3/4"	740365	740368
DN1"	740381	740384
DN1 1/2"	740393	740396
DN2"	740417	740420
DN2 1/2"	740433	740436
DN3"	740446	740449
DN4"	740458	740461

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Specification key (other versions on request)

Example BBS-3F - XX - 00 - 25.0 - AB - XX - LTA - XX - NK52 + NO10

Specification key

Delivery (LIUM)	
ST	Line Standard inspection glass (part vision)
SV	Line inspection glass full vision
SG	Spare part kit for line inspection glass

Connection Type (VRBT)	
CA	Clamp-connection acc. to DIN 32676-A
CB	Clamp-connection acc. to ISO 2852 / DIN 32676-B
CC	Clamp-connection acc. to ASME BPE / DIN 32676-C
WA	Welded connection acc. to DIN 11850 row 2 / DIN 11866 row A
WB	Welded connection acc. to DIN EN ISO 1127 / ISO 4200 / DIN 11866 row B
WC	Welded connection acc. to ASME BPE / DIN 11866 row C
00	without connection (spare part kit)

Orifice (DN)	
08.0	
10.0	
15.0	
20.0	
25.0	
32.0	
40.0	
50.0	
65.0	
80.0	
0100	

Seal Material (DWST)	
AB	EPDM
FE	FEP

Material (WKST)	
VI	1.4435 acc. to BN2 and 316L acc. to ASME BPE table DT3
HA	Hastelloy C22
VU	1.4539
VV	1.4410
VN	1.4547

Internal polishing	
NO10	int. electro polished (Standard) Ra = 0.8 µm

Certificate	
NK52	3.1 Certificate (Standard)

Characteristic size function part (KGFT)	
GA	Inside calibration Borosilicate glass
GC	Borosilicate glass with Polyurethane coating

LTA clamp connection							
Orifice		DIN 32676 row A (DIN-Rohr (DIN11850))		DIN 32676 row B (ISO-Rohr (ISO4200))		DIN 32676 row C (ASME BPE)	
DN	8	1/4"	TD40 - 10.0 × 1.0 Cl: 25.0	TC40 - 13.5 × 1.6 Cl: 25.0	TG 50 - 6.35 × 0.89 Cl: 25.0		
DN	10	3/8"	TD41 - 13.0 × 1.5 Cl: 34.0	TC53 - 17.2 × 1.6 Cl: 25.0	TG 01 - 9.53 × 0.89 Cl: 25.0		
DN	15	1/2"	TD42 - 19.0 × 1.5 Cl: 34.0	TC52 - 21.3 × 1.6 Cl: 50.5	TG 02 - 12.7 × 1.65 Cl: 25.0		
DN	20	3/4"	TD43 - 23.0 × 1.5 Cl: 34.0	TC43 - 26.9 × 1.6 Cl: 50.5	TG 03 - 19.05 × 1.65 Cl: 25.0		
DN	25	1"	TD44 - 29.0 × 1.5 Cl: 50.5	TC44 - 33.7 × 2.0 Cl: 50.5	TG 04 - 25.4 × 1.65 Cl: 50.5		
DN	40	1 1/2"	TD46 - 41.0 × 1.5 Cl: 50.5	TC46 - 48.3 × 2.0 Cl: 64.0	TG 05 - 38.1 × 1.65 Cl: 50.5		
DN	50	2"	TD47 - 53.0 × 1.5 Cl: 64.0	TC47 - 60.3 × 2.0 Cl: 77.5	TG 06 - 50.8 × 1.65 Cl: 64.0		
DN	65	2 1/2"	TD48 - 70.0 × 2.0 Cl: 91.0	TC48 - 76.1 × 2.0 Cl: 91.0	TG 07 - 63.5 × 1.65 Cl: 77.5		
DN	80	3"		TC49 - 88.9 × 2.3 Cl: 106.0	TG 08 - 76.2 × 1.65 Cl: 91.0		
DN	100	4"		TC50 - 114.3 × 2.3 Cl: 130.0	TG 09 - 101.6 × 2.11 Cl: 119.0		

LTA weldend											
Orifice		DIN 11850 row 0		DIN 11850 row 1		DIN 11850 row 2 DIN 11866 row A		DIN EN ISO 1127 ISO 4200 DIN 11866 row B		ASME BPE DIN 11866 row C	
DN	8	1/4"	SC42 - 10.0 × 1.0					SA40 - 13.5 × 1.6	SA90 - 6.35 × 0.89		
DN	10	3/8"		SF40 - 12.0 × 1.0	SD40 - 13.0 × 1.5			SA41 - 17.2 × 1.6	SA91 - 9.53 × 0.89		
DN	15	1/2"	SC43 - 18.0 × 1.5	SF41 - 18.0 × 1.0	SD42 - 19.0 × 1.5			SA42 - 21.3 × 1.6	SA92 - 12.7 × 1.65		
DN	20	3/4"	SC44 - 22.0 × 1.5	SF42 - 22.0 × 1.0	SD43 - 23.0 × 1.5			SA43 - 26.9 × 1.6	SA93 - 19.05 × 1.65		
DN	25	1"	SC45 - 28.0 × 1.5	SF43 - 28.0 × 1.0	SD44 - 29.0 × 1.5			SA44 - 33.7 × 2.0	SODF - 25.4 × 1.65		
DN	40	1 1/2"	SC46 - 34.0 × 1.5	SF45 - 40.0 × 1.0	SD46 - 41.0 × 1.5			SA46 - 48.3 × 2.0	SODH - 38.1 × 1.65		
DN	50	2"	SC47 - 40.0 × 1.5	SF46 - 52.0 × 1.0	SD47 - 53.0 × 1.5			SA47 - 60.3 × 2.0	SODI - 50.8 × 1.65		
DN	65	2 1/2"	SC48 - 52.0 × 1.5		SD48 - 70.0 × 2.0			SA48 - 76.1 × 2.0	SODJ - 63.5 × 1.65		
DN	80	3"			SD49 - 85.0 × 2.0			SA49 - 88.9 × 2.3	SODK - 76.2 × 1.65		
DN	100	4"			SD50 - 104.0 × 2.0			SA39 - 114.3 × 2.3	SODL - 101.6 × 2.11		

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