

SERVICE : NON-PULSATING SERVICE  
FULL VACUUM RESISTANT

Pressure / temperature rating:

Temperature (°C)	-10	50	100	150	200	250	300
Pressure (barg)	10	10	9.2	8.8	8.3	7.6	6.9

For a temperature between 50°C and 100°C, interpolate between 20°C and that required temperature

DESIGN CODE: EN 13480 CORROSION ALLOWANCE: 1 mm

INSPECTION AND CERTIFICATES: ACCORDING EN 13480 TEST PRESSURE (1): ACCORDING EN 13480  
ACCORDING CONFORMITY ASSESSMENT MODULE

WELDING PROCEDURE: EN ISO 15607 and EN ISO 15614-1

PIPE	DN (>=)	DN (<=)	Ends	Rating	Facing / Finish	Standard	Material	WN	
	DN 15	DN 600	BEVEL	-	-	EN 10216-2	P235GH TC1 smls	1.0345 smls	
FITTINGS (2)	DN 15	DN 600	BW	-	-	EN 10253-2 TYPE A	P235GH smls	1.0345 smls	
EQUAL TEES	DN 15 DN 600	DN 500 DN 600	BW BW	- -	- -	EN 10253-2 TYPE A EN 10253-2 TYPE B	P235GH smls P235GH smls	1.0345 smls 1.0345 smls	
FLANGES (3) (6)	DN 15 DN 50 DN 200	DN 40 DN 150 DN 600	11-WN 11-WN 11-WN	PN 40 PN 16 PN 10	B1 B1 B1	EN 1092-1 EN 1092-1 EN 1092-1	P250GH P250GH P250GH	1.0460 1.0460 1.0460	
	DN 15 DN 50 DN 200	DN 40 DN 150 DN 600	05-BL 05-BL 05-BL	PN 40 PN 16 PN 10	A A A	EN 1092-1 EN 1092-1 EN 1092-1	P250GH P250GH P250GH	1.0460 1.0460 1.0460	
GASKETS (6) (7) t ≤ 200°C	DN 15 DN 100 DN 250	DN 80 DN 200 DN 600	- - -	PN 40 PN 16 PN 10	IBC IBC IBC	EN 1514-1 EN 1514-1 EN 1514-1	2 mm Klingler Topchem 2003		
GASKETS (6) 200°C < t ≤ 300°C	DN 15 DN 100	DN 80 DN 600	- -	PN 40 PN 10	C/I C/I	EN 1514-2 EN 1514-2	spiral wound 316L, graphite filled + 316L inner and outer ring		
BOLTING	HEXAGON HEAD BOLTS HEXAGON NUTS					EN ISO 4014 / EN ISO 898-1 EN ISO 4032 / EN ISO 898-2	8.8 8		

BRANCH SIZE	RUN SIZE																		
	DN 600	DN 500	DN 450	DN 400	DN 350	DN 300	DN 250	DN 200	DN 150	DN 125	DN 100	DN 80	DN 65	DN 50	DN 40	DN 32	DN 25	DN 20	DN 15
DN 15	U	U	U	U	U	U	U	U	U	U	U	U	U	U	RA	RA	RA	RA	TA
DN 20	U	U	U	U	U	U	U	U	U	U	U	U	U	RA	RA	RA	RA	TA	
DN 25	U	U	U	U	U	U	U	U	U	U	U	U	U	RA	RA	RA	RA	TA	
DN 32	U	U	U	U	U	U	U	U	U	U	U	U	RA	RA	RA	RA	TA		
DN 40	U	U	U	U	U	U	U	U	U	U	U	RA	RA	RA	RA	TA			
DN 50	U	U	U	U	U	U	U	U	U	RA	RA	RA	RA	TA					
DN 65	U	U	U	U	U	U	U	U	RA	RA	RA	RA	TA						
DN 80	U	U	U	U	U	U	U	U	RA	RA	RA	RA	TA						
DN 100	U	U	U	U	U	U	RA	RA	RA	RA	TA								
DN 125	U	U	U	U	U	RA	RA	RA	RA	TA									
DN 150	U	U	U	RA	RA	RA	RA	RA	TA										
DN 200	U	U	RA	RA	RA	RA	RA	RA	TA										
DN 250	RA	RA	RA	RA	RA	RA	RA	RA	TA										
DN 300	RA	RA	RA	RA	RA	TA													
DN 350			RA	RA	TA														
DN 400	RA	RA	RA	RA	TA														
DN 450		RA	TA																
DN 500	RA	TA																	
DN 600	TB																		

U = UNREINFORCED BRANCH  
RA = REDUCING TEE TYPE A  
TA = EQUAL TEE TYPE A  
TB = EQUAL TEE TYPE B

PIPE: OUTSIDE DIAMETER AND WALL THICKNESS (4)

DN	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200	DN 250	DN 300	DN 350	DN 400	DN 450	DN 500	DN 600
OUTSIDE DIAM. (mm)	21,3	26,9	33,7	42,4	48,3	60,3	76,1	88,9	114,3	139,7	168,3	219,1	273	323,9	355,6	406,4	457	508	610
WALL THICKNESS (mm)	2	2,3	2,6	2,6	2,6	2,9	2,9	3,2	3,6	4	4,5	6,3	6,3	7,1	8	8,8	10	10	10

ELBOW MODEL 3D: WALL THICKNESS AND RADIUS (4) (5)

DN	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN125	DN 150	DN 200	DN 250	DN 300	DN 350	DN 400	DN 450	DN 500	DN 600
WALL THICKNESS (mm)	2	2,3	2,6	2,6	2,6	2,9	2,9	3,2	3,6	4	4,5	6,3	6,3	7,1	8	8,8	10	10	10
RADIUS (mm)	38	38	38	48	57	76	95	114	152	190	229	305	381	457	533	610	686	762	914

GENERAL  
BL = BLIND  
WN = WELDING NECK / WERKSTOFF NUMBER  
BW = BUTT WELD  
FLGD = FLANGED  
smls = SEAMLESS  
wld = WELDED  
t = MAXIMUM DESIGN TEMPERATURE

NOTES  
(1) TEST PRESSURE ACCORDING EN 13480 = MAX (1,43 . DESIGN PRESSURE; 1,25 . DESIGN PRESSURE . (f<sub>act</sub>/f))  
(2) FITTINGS = CAPS, CONCENTRIC AND ECCENTRIC REDUCERS, ELBOWS 45°/90° MODEL 3D, REDUCING TEES  
(3) DIN EN 1092-1 TYPE 11 FLANGES SHALL BE ORDERED WITH A HUB THICKNESS IDENTICAL TO THE PIPE WALL THICKNESS.  
(4) USE OF DN 32, DN 65, DN 125 SHOULD BE AVOIDED  
(5) BENDING OF PIPE MATERIAL AS SUBSTITUTE FOR ELBOWS IS NOT ALLOWED.  
(6) FLANGES AND GASKETS IN STEAM SERVICE (LS - LOW PRESSURE STEAM) SHALL BE DESIGNATED PN 40.  
(7) EPDM WITH STEEL INLAY CAN BE CONSIDERED FOR LOW TEMPERATURE SERVICE.