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EXCERPT FROM ASME-MFC-3M-2004, TABLE 2-3 Required Straight Lengths Between Orifice Plates and Fittings Without Flow Conditioners

BETA RATIO	Single 90° 90°beno plane (S [NO	dsinany 6>30D)	same p config (30D>=	bends in plane: S- uration :S>10D) TE 1]	same j config	*bendsin plane:S- guration) [NOTE 1]	Perper pla	bendsin ndicular nes S>=5D) TE 1]	planes	ndicular	or Wi Extension	i'i ee with İthout	plan	sinsame e:S- uration	Concentr 2D to D O			D Over	orgatev	ball valve valve fully ben	Abrupt Sy redux		poicket o diameter	ometer rwell of	Downstrea side of th plate IF (columns 2 Densito poc	e orifice littings to 11) and meter
1	2A	2B	3A	3B	4A	4B	5A	5B	6A	6B	7A	7B	8A	8B	9A	9B	10A	10B	11A	11B	12A	12B	13A	13B	14A	14B
0.491	133.63	54.67	109.33	60.74	133.63	60.74	267.26	109.33	455.56	206.52	115.41	54.67	182.22	109.33	48.59	30.37	121.48	54.67	72.89	36.44	182.22	91.11	30.37	18.22	36.44	36.44

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GENERAL NOTES:

- (a) Values expressed as multiples of internal diameter, D.
- (b) The minimum straight lengths required are the lengths between various fittings located upstream or downstream of the orifice plate and the orifice plate itself. Straight lengths shall be measured from the downstream end of the curved portion of the nearest (or only) bend or of the tee or the downstream end of the curved or conical portion of the reducer or the expander.
- (c) Most of the bends on which the lengths in this table are based had a radius of curvature equal to 1.5D.
- (d) Column A for each fitting gives lengths corresponding to "zero additional uncertainty" values [see para. 2-5.2(c)].
- (e) Column B for each fitting gives lengths corresponding to "0.5% additional uncertainty" values [see para. 2-5.2(d)].
- (1) Sis the separation between the two bands measured from the downstream end of the curved portion of the upstream bend to the upstream end of the curved portion of the downstream bend.
- (2) This is not a good upstream installation; a flow conditioner should be used where possible.
- (3) The installation of thermometer pockets or wells will not alter the required minimum upstream straight lengths for the other fittings.
- (4) A thermometer pocket or well of diameter between 0.03D and 0.13D may be installed provided that the values in each Column A and B are increased to 20 and 10 respectively. Such an installation is not, however, recommended.

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- (5) The straight length in each Column A gives zero additional uncertainty; data are not available for shorter straight lengths which could be used to give the required straight lengths for each Column B.
- (6) 95D is required for ReD x 106 if S < 2D.

	D13/ 10	00								
	über/over		±0,3							
	bis/to	100	_0,0							
	über/over bis/to	100 300	±0,5							
	über/over bis/to	300 1000	±0,8							
	über/over bis/to		±1,2							
	Untolerierte Maße nach/ Untolarate Dimensions acc. EN ISO 13920- class/Klasse B									
	über/over bis/to	2 30	±1							
Е	über/over bis/to	30 120	±2							
	über/over bis/to	120 400	±2							
	über/over bis/to	400 1000	±3							
	über/over bis/to	1000 2000	±4							
	über/over bis/to	2000 4000	±6							
	über/over bis/to	4000 8000	±8							
	über/over bis/to	8000 12000	±10							
F	über/over bis/to	12000 16000	±12							
	über/over bis/to	16000 20000	±14							

über/over 20000 ±16

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Untolerierte Maße nach/ Untolarate Dimensions acc DIN 7168-mittel

> 6 ±0,1 6 ±0,2

		ı					D		
Construction Code: ASME Se Clasification: NBEP Supporting Code: ASME B3	,								
Stamping: N.A. (r	not required by customer)	С	Modification of diameter	13.04.16	LB				
	not required by customer)	В	Implementation of custom modification of plate thick		LB				
appl. Code cases:	None	Α	For release	21.12.15	LB				
PWHT:	NO	Index rev.	Änderungshinweis/Deta	Datum Date	Name				
Medium:	Water	Revisions							
Baujahr/Year built:	2016	Inspector: SEIKO							
Gew./Weight: (kg)	~172lb / 78 kg	Einb	aulage/mounting pos	Horiz					
Abmessungen./Dimensi	ons: (mm)	Druckentnahmestutzen/taps: 2 pa							
L: 259 mm W: 490 mr 10,21 in 19,3 in		Corre	osion protection:	Re	emosil				
PS (max. Pressure): 99	35Psig/ 6447kPa /64,5 bar(g)	Oberflächenbeh./Surface treatment:							
TS (max. Temp.):	494°F/ 257 °C	KKS-I	Nr./TAG-No.:	erial No.:	rial No.:				
PT (Testpressure): Inline!	1407Psig/ 9700kPa/ 97 bar(g)		1LP-FE3003	15 2822					
Isolierstärke/ Insulation thic	kness mm		121 120000	JEI	10_2022				
Corrosion allowance:	0 mm								
Kunde/Customer:	SEIKO	Orific	ennung/Title: ce Flange Assembly ecirc Outlet Flow Eleme	6" 60 Sch.		F			
Projekt/Project.: V17494 - Middletown Energy Center & V17495 -Kings Moutain Energy Center	FLOWCONTROL	Seik	o: A16020088-150	Type:	_F	'			

PO: V0009647 Item #8 HO: A16020088-150712 Kunde: Vogt Power international (VIP)

С

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