

Installation Handbook DeltaV-Seal™ 304L – Addendum 4

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Scope

- DeltaV-Seal ASTM A240, GB/T 24511; UNS Designation S30403; Type 304L Standard Products
- EN 1092-1 ASTM A182 F304L UNS S30403 Flanges
- DN15, DN25, DN32, DN40 and DN50 PN10-40

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Normative Reference

The following document, in whole, is normatively referenced in this document and are indispensable for its application:

- Installation Handbook 304L EN; Doc. No. DVS-116-H0-900-12

Table 9-1 – EN PN10-40 Torque Table

EN PN10-40 – Maximum operating temperature 200°C; Chesterton 783(E) Revision of Installation Handbook Doc. No. DVS-116-H0-900-12; Table 9									
Nominal Diameter (mm)	No. of Bolts	Type of Bolt	Torque [Nm]					Notes	
			Initial Step	10%	20%	40%	80%		100%
15	4	M12 x 1.75	Hand tighten	4	8	16	32	40	
25	4	M12 x 1.75		5	9	18	37	46	
32	4	M16 x 2		10	19	38	76	95	
40	4	M16 x 2		10	21	41	82	103	
50	4	M16 x 2		11	22	44	88	110	

Table 10-1 – EN PN10-40 Installation Forces (corresponding to Table 9-1)

EN PN10-40 – Maximum operating temperature 200°C; Chesterton 783(E) Revision of Installation Handbook Doc. No. DVS-116-H0-900-12; Table 10									
Nominal Diameter (mm)	No. of Bolts	Type of Bolt	Initial Step	Force [kN]					Total inst. force FBO,Nom (kN) (100% x No. bolts)
				10%	20%	40%	80%	100%	
15	4	M12 x 1.75	Hand tighten	2	5	9	18	23	92
25	4	M12 x 1.75		3	5	11	21	26	105
32	4	M16 x 2		4	8	17	33	42	167
40	4	M16 x 2		5	9	18	36	45	181
50	4	M16 x 2		5	10	20	39	49	195

Notes to Tables

1. Torque values are only applicable to Chesterton 783(E) lubricant. For other lubricants, contact Pipeotech for custom-made torque values.
2. All torque values are calculated by $M_{t,nom} = k_B \times \frac{F_{B0nom}}{n_B}$ in accordance with EN 1591-1 equation B.4. k_B is the calculated “nut factor” from the coefficients of friction in the threads and underhead from the bolts/nuts, F_{B0nom} is the total installation force whilst n_B is the number of bolts. The F_{B0nom} - value is marked on each gasket as given in Table 10-1 (if applicable).
3. All torque and force values in Table 9-1 and 10-1 are rounded off to the nearest Nm/kN.