



Sealant Technologies

Torque Guidelines

EN

Flange Type: Raised Face Steel Flange

Gasket Type: Ring Gasket

Product Names: GORE® Universal Pipe Gasket (Style 800)/GORE® GR Sheet Gasketing

To achieve a reliable seal, adequate gasket stress must be applied during installation. This table provides an estimation of torque for use during assembly of standard design steel pipe flanges.*

The user must verify these conditions, as outlined, are appropriate for the specific application. The user must confirm that torque values do not exceed pipe manufacturer's torque recommendation.

The intent of this torque table is to find the balance between bolt yield and allowable gasket stress to achieve a long-term reliable seal. This torque table is not intended to communicate the minimum possible torque value to seal GORE® Gaskets. Consult Gore when selecting a lower torque value.

Caution should be used when using this documentation as proof of flange design. It is the user's responsibility to meet all applicable local laws and requirements. This estimation does not account for the influence of flange rotation, flange strength, external forces, temperature expansion, pressure peaks and installation error.



Ring Gasket



Raised Face Steel Flange

GORE® Universal Pipe Gasket (Style 800) • GORE® GR Sheet Gasketing Bolt Torque: Ring Gasket on Raised Face Steel Flange

DN (mm)	PN 6		PN 10		PN 16		PN 25		PN 40	
	Nm	Ft-lbs	Nm	Ft-lbs	Nm	Ft-lbs	Nm	Ft-lbs	Nm	Ft-lbs
10	25	20	50	35	50	35	50	35	50	40
15	25	20	50	35	50	35	50	35	50	40
20	25	20	50	35	50	35	50	35	50	40
25	25	20	50	35	50	35	50	35	50	40
32	50	35	120	90	120	90	120	90	120	90
40	50	35	120	90	120	90	120	90	120	90
50	50	35	120	90	120	90	120	90	120	90
65	65	50	120	90	120	90	120	90	120	90
80	120	90	120	90	120	90	120	90	120	90
100	120	90	120	90	120	90	250	180	250	180
125	120	90	120	90	120	90	430	320	430	320
150	120	90	250	180	250	180	430	320	430	320
200	120	90	250	180	250	180	430	320	600	440
250	120	90	250	180	430	320	600	440	800	590
300	250	180	250	180	430	320	600	440	800	590
350	250	180	250	180	430	320	800	590	1100	810
400	250	180	430	320	600	440	1100	810	1500	1110
450	250	180	430	320	600	440	1100	810	1500	1110
500	250	180	430	320	800	590	1100	810	1800	1330
600	430	320	600	440	1100	810	1500	1110	2900	2140

TORQUE VALUES REQUIREMENTS

- Use of well lubricated bolts, Grade 24CrMo5 or better
- Use of any available gasket thickness
- Installation practices according to ASME PCC-1

TORQUE ESTIMATION CONDITIONS

- Gasket dimensions according to EN1514-1 Form IBC
- Flange dimensions according to EN 1092-1 Type 11 Form B
- Calculated for 40 bar (580 psi) maximum. Please ensure suitability of the pipe class
- Friction factor $\mu = 0.12$; Nut factor $K = 0.15$
- Target torque calculation according to ASME PCC-1 Appendix J. Generally 70 % bolt yield is targeted.

* Flanges larger than DN600/NPS24 are usually considered equipment flanges, for which generic torque tables are not provided. Equipment flanges have an internal pressure that is highly application-dependent, which prevents the generation of a generic torque table. As the flange size increases, internal operating pressure plays an increasingly decisive role in determining a torque value.

All technical information and advice given here is based on our previous experiences and/or test results. We give this information to the best of our knowledge, but assume no legal responsibility. Customers are asked to check the suitability and usability in the specific application, since the performance of the product can only be judged when all necessary operating data are available. Specifications are subject to change without notice. Gore's terms and conditions of sale apply to the purchase and sale of the product.

For detailed selection criteria, technical information, installation guidelines and the complete listing of local sales offices, please visit gore.com/sealants.

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