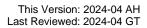
AusPress Systems - Technical



AusPress[®]

Tech Note 25:

Flange Pressure-Temperature Rating Summary



Various flange standards (types) are available and shall be confirmed as suitable for the application based on pressure, temperature (including the ring seal), application or a combination of these.

Tables below are organised per standard, noting the flange rating may be higher or lower than what the press-fitting join is rated, and shall be considered as part of the system as a whole. Please refer to the applicable standard in full, this is a summary only.

AS 2129:2000		Working (Operating) Pressure (max kPa)			Site Test
		-200 to 50°C	< 150°C	< 200°C	Pressure (kPa)
Table D	316L S/S	700	650	600	1,200
Table E	316L S/S	1,400	1,300	1,200	2,400
	Copper, <dn80< td=""><td>1,400</td><td>1,400</td><td>1,400 (<170°C)</td><td>2,100</td></dn80<>	1,400	1,400	1,400 (<170°C)	2,100
	Copper, DN100	1,200	1,100	1,100 (<170°C)	1,800
Table F	316L S/S	2,100	1,900	1,800	3,750
Table H	316L S/S	3,500	3,200	2,900	6,150
Note: 316 and 316L have different pressure ratings (316L is lower)					

Note: 316 and 316L have different pressure ratings (316L is lower).

ANSI B16.5	Working (Site Test			
316/L (Group 2)	38°C	< 100°C	< 200°C	Pressure	
ANSI #150	1,980	1,330	1,120	3,000	
ANSI #300	5,170	3,480	2,920	7,800	
ANSI #400	6,890	4,640	3,890	10,300	
Note: Test up to 1.5x the 38°C pressure for that class, rounded up to the pext full har: #- class					

Note: Test up to 1.5x the 38°C pressure for that class, rounded up to the next full bar; #= class.

EN 1092-1:2001	AS 4331.1:1995 316L (Table E.3, 13E0, 0.2% proof)	Working (Operating) Pressure (max kPa)			Site Test
316L (Table 17, 13E0, 0.2% proof)		-10 to 50°C	< 100°C	< 200°C	Pressure
DIN PN6	PN6	510	440	370	765
DIN PN10	PN10	840	730	610	1,260
DIN PN16	PN16	1,350	1,170	970	2,025
Note: Hydrostatic testing (annex E.3.2.1) max = 1.34 x PN value. Site Test 1.5x ambient temp at 20°C rating.					

AS 4087:2011 316/L (Table 2.1)	Standard < 80°C	Incl Surges < 80°C	Site Test Pressure	Lab Test Only	
PN14	1,400	1,680	1,750	2,100	
PN16 (~Table D)	1,600	1,920	2,000	2,400	
PN21 (~Table F)	2,100	2,520	2,625	3,150	
PN35 (~Table H)	3,500	4,200	4,375	5,250	
Note: AS 4087 is used for wastewater and an update of AS 2129 (which is still in use), featuring thicker flanges.					

TN.25 Flange Pressure-Temperature Ratings.docx

Printed: 5/04/2024 | Page 1 of 1

© 2024 AusPress Systems Pty Ltd. This document is intended as a guide only and specific assessment must be made for each project for suitability. No responsibility is taken for any errors or omissions, contained or implied in this document. Document may be updated or corrected at anytime without notice.