

KDS016 Pressure-Temperature Ratings for Medium & Heavy Pipes to AS1074 Calculated in Accordance with AS4041-1998

(Refer to the "Notes" accompanying these tables as the values presented will require corrections which will result in lower working pressure values depending on the application)

"Medium" Pipes

DN (mm)	OD (mm)	Wall Thickness (mm)	Mass (kg/m)	Maximum Working Pressure (kPa)								
				-45 °C	50 °C	100 °C	150 °C	200 °C	250 °C	300 °C	350 °C	400 °C
20	26.9	2.6	1.56	14700	14700	13500	12200	11000	9750	8730	8050	7710
25	33.7	3.2	2.41	14500	14500	13200	12000	10800	9560	8560	7900	7560
32	42.4	3.2	3.10	11300	11300	10300	9370	8410	7460	6680	6160	5900
40	48.3	3.2	3.57	9810	9810	8980	8150	7320	6490	5810	5360	5130
50	60.3	3.6	5.03	8780	8780	8040	7300	6550	5810	5200	4800	4590
65	76.1	3.6	6.43	6880	6880	6300	5720	5130	4550	4070	3760	3600
80	88.9	4.0	8.37	6530	6530	5980	5420	4870	4320	3870	3570	3420
90	101.6	4.0	9.63	5680	5680	5200	4720	4240	3760	3370	3100	2970
100	114.3	4.5	12.2	5680	5680	5200	4720	4240	3760	3370	3100	2970
125	139.7	5.0	16.6	5150	5150	4710	4280	3840	3410	3050	2810	2690
150	165.1	5.0	19.7	4330	4330	3970	3600	3230	2870	2570	2370	2270

"Heavy" Pipes

DN (mm)	OD (mm)	Wall Thickness (mm)	Mass (kg/m)	Maximum Working Pressure (kPa)								
				-45 °C	50 °C	100 °C	150 °C	200 °C	250 °C	300 °C	350 °C	400 °C
20	26.9	3.2	1.87	18500	18500	17000	15400	13800	12300	11000	10100	9700
25	33.7	4.0	2.94	18500	18500	16900	15400	13800	12200	11000	10100	9680
32	42.4	4.0	3.80	14400	14400	13100	11900	10700	9500	8500	7840	7510
40	48.3	4.0	4.38	12500	12500	11400	10400	9300	8240	7380	6800	6520
50	60.3	4.5	6.19	11100	11100	10200	9250	8310	7370	6600	6080	5830
65	76.1	4.5	7.93	8700	8700	7960	7220	6490	5750	5150	4750	4550
80	88.9	5.0	10.3	8250	8250	7550	6850	6150	5460	4890	4500	4310
90	101.6	5.0	11.9	7170	7170	6560	5960	5350	4740	4250	3920	3750
100	114.3	5.4	14.5	6870	6870	6290	5710	5130	4540	4070	3750	3590
125	139.7	5.4	17.9	5580	5580	5100	4630	4160	3690	3300	3050	2920
150	165.1	5.4	21.3	4690	4690	4290	3900	3500	3100	2780	2560	2450

Notes:

- Maximum Working Pressures have been calculated in accordance with AS 4041 with a design strength of 130 MPa at 50 °C and a wall thickness equal to 90% of the nominal wall thickness to allow for maximum manufacturing tolerance.
- No allowance has been made for corrosion, threading, grooving or machining.
- The loads applied to the pipe have been assumed to be from internal pressure only. No allowance has been made for any bending moments or external loads imposed due to supports, thermal expansion etc.
- For Class 2 piping to AS 4041, the maximum allowable pressure is limited to 10,000 kPa when carrying fluid types 2 ("Very Harmful") and 3 ("Harmful Gases"). This pipe is prohibited for use when fluid type 1 ("Lethal") is carried as per AS 4041.