

Engineering Data

Pressure/Temperature Rating acc. to DIN 2401

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All bodies of safety valves have been tested for strength in conformity with DIN 3840.

The strength calculation for the bodies is based on the maximum set pressure and maximum operating temperature. The result of the examination is submitted to the TÜV within the scope of the type test approval specified by VdTÜV Merkblatt, Sicherheitsventile 100.

Selecting the nominal pressure ratings (PN) for the connecting flanges is governed by the operating pressure, operating temperature, material strength, sealing materials used, etc.. To accurately check if the selected PN ratings will match the operational loads, follow the specifications of DIN 3840, DIN 2505 or AD Merkblatt B 8.

DIN 2401, page 2 – edition January '66 but now withdrawn – can be referred to for selecting the PN rating in connection with the preliminary design. The allowable operating pressures for the relevant PN ratings, stated in that standard, are listed on page 22/21. However, checking in conformity with the aforementioned specifications and standards should always be carried out in the case of doubt.

DIN 2401, page 2, edition 01.66 specifies an operating temperature limit of 400° C for the material GP 240 GH (1.0619). However, DIN EN10213-2 specifies 450° C as allowable upper limit. That has been taken into account in the diagram.

DIN 2401, Blatt 2 (1.66) Auszug / Extract

Gehäusewerkstoff Body Material	Nenndruck Nom. Pressure	Zulässiger Betriebsdruck [bar] bei Temperatur [°C] Permissible operating pressure [bar g] at temperature [°C]															
		-10 °C +120 °C	200 °C	250 °C	300 °C	350 °C	400 °C	425 °C	450 °C	475 °C	500 °C	510 °C	520 °C	530 °C	540 °C	550 °C	
GG 25	0.6025	PN 16	16	13	11	10											
		PN 16	16	13	11	10	(9)										
GGG-40.3	0.7043	PN 25	25	20	18	16	(14)										
		PN 40	40	32	28	24	(21)										
		PN 16	16	14	13	11	10	8	(6)								
GP 240 GH	1.0619	PN 25	25	22	20	17	16	13	(10)								
		PN 40	40	35	32	28	24	21	(18)								
C 22.8	1.0460	PN 63	63	50	45	40	36	32	(30)	(28)							
St 35.8	1.0305	PN 100	100	80	70	60	56	50	(48)	(46)							
		PN 160	160	130	112	96	90	80	(75)	(70)							
S 355J2G3	1.0570	PN 250	250	200	175	150	140	125	(110)								
		PN 320	320	250	225	192	180	160	(150)	(140)							
		PN 400	400	320	280	240	225	200	(175)								
G17 CrMo 5-5 13 CrMo 4-5	1.7357 1.7335	PN 40				40	38	36	35	34	33	29	24	19	15		
		PN 63				63	61	58	57	56	53	47	40	32	25		
		PN 100				100	95	91	89	87	82	74	62	49	38		
		PN 160				160	153	146	142	139	132	118	100	79	62	46	35
		PN 250				250	238	227	223	217	206	184	154	124	97	73	54
		PN 320				320	304	292	285	278	264	237	200	158	124	93	69
PN 400				400	380	364	356	348	330	295	250	198	155	116	87		