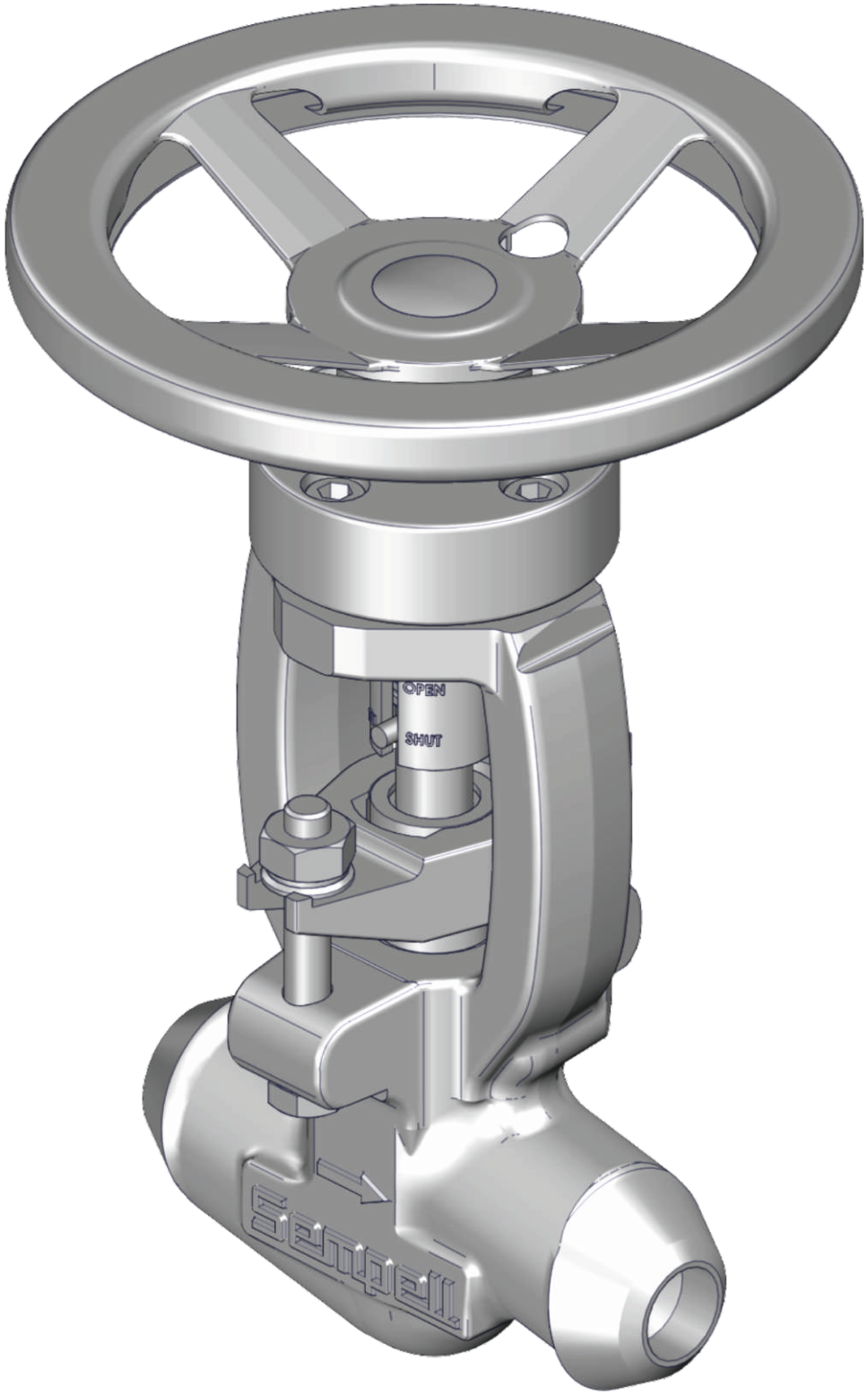
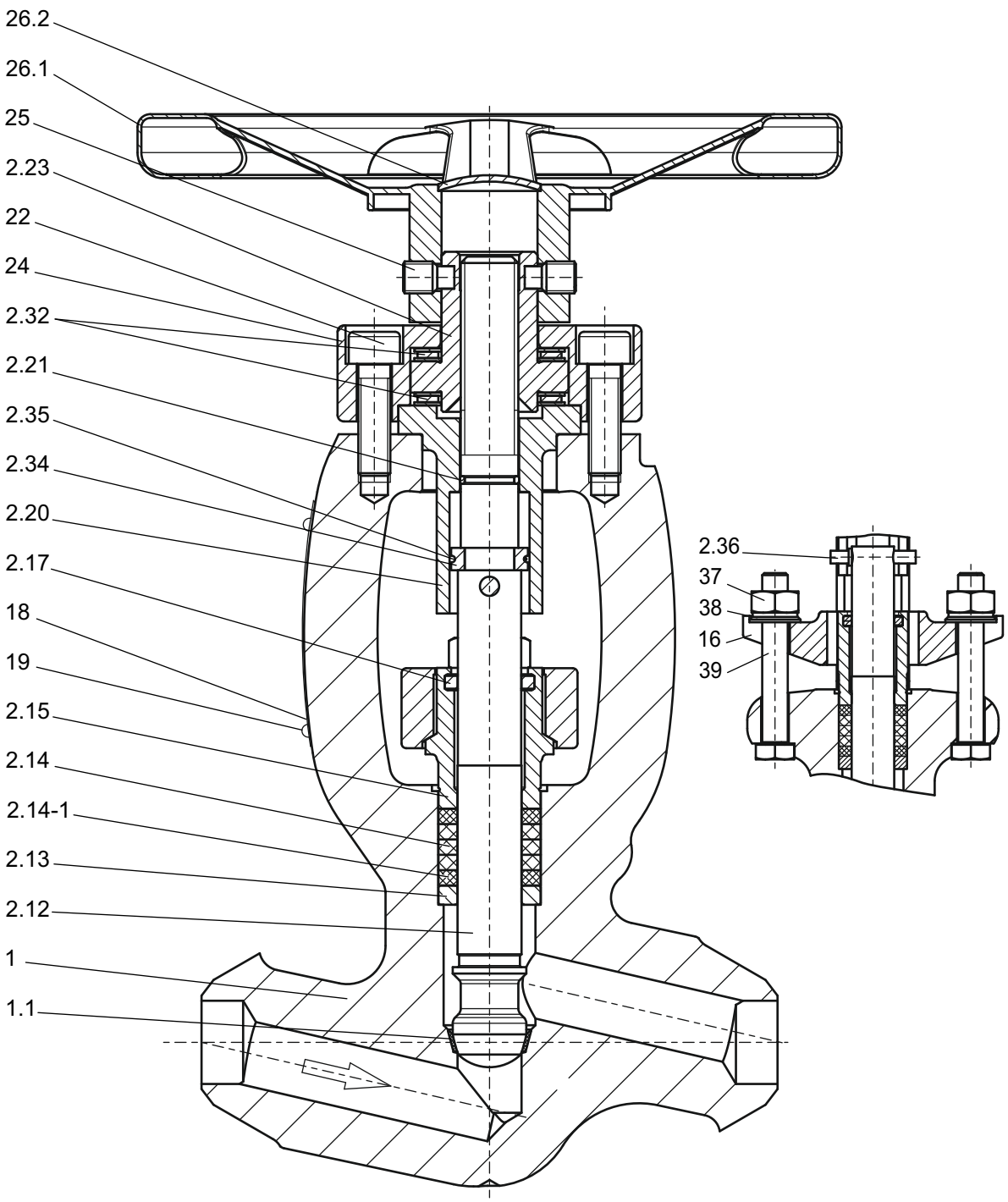
High Pressure Stop Valve

Type VA505

Class 900 - 2680 / NVS ½" - 2"

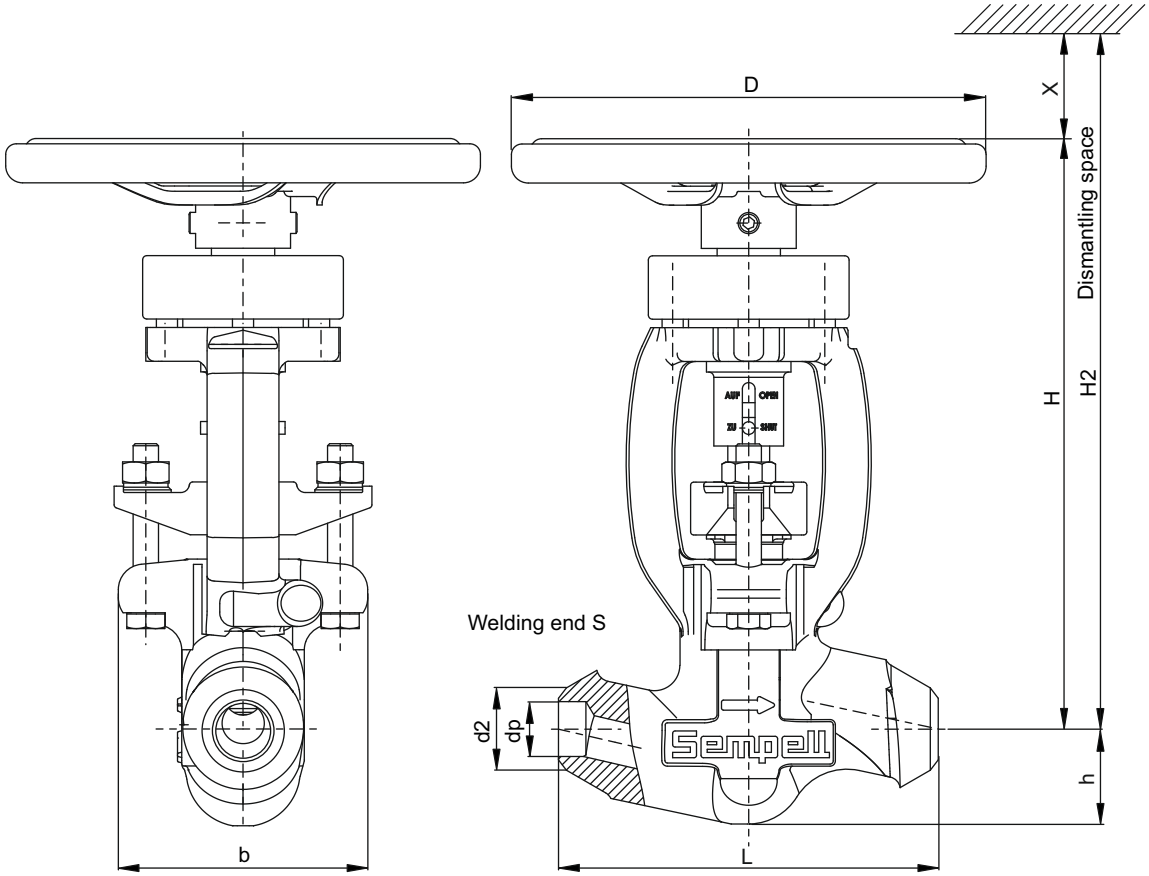



26.2
26.1
25
2.23
22
24
2.32
2.21
2.35
2.34
2.20
2.17
18
19
2.15
2.14
2.14-1
2.13
2.12
1
1.1
2.36
37
38
16
39

Part List

Material Specification		51	60	63	80
Part	Designation	Material			
1	Body	(S)A105	(S)A182F12	(S)A182F22	(S)A182F91
1.1	Body seat	Stellite			
2.12	Stem	17 % Cr			
2.13	Base ring	13 % Cr			
♦ 2.14	Packing	Graphite			
♦ 2.14-1	Packing	Graphite-Austenite			
2.15	Gland shaft	13 % Cr			
♦ 2.17	Wiper ring	Graphite			
2.20	Guide bush	13 % Cr			
♦ 2.21	O-ring	FKM			
2.23	Threaded bush	Brass			
2.32	Axial needle bearing	Steel			
2.34	Split ring	17 % Cr			
2.35	Ring	Austenite			
2.36	Guide bolt	17 % Cr			
16	Gland flange	13 % Cr			
18	Nameplate	Austenite			
19	Grooved pin	Austenite			
22	Allen bolt	Steel			
24	Cover	Steel			
25	Threaded pin	Steel			
26.1	Handwheel	Steel			
26.2	Lock washer	Steel			
37	Hexagonal nut	Steel			
38	Washer	Steel			
39	Stuffing box screw	Steel			

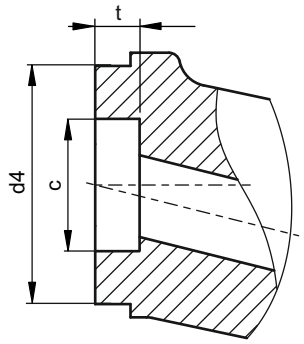
♦ = Commissioning parts



NVS		½"	1"	2"
NPS [1), 5)]	⅜"	Cl.900-2680		
	½"	Cl.900-2680		
	¾"	Cl.2680	Cl.900-1690	
	1"	Cl.2680	Cl.900-1690	
	1¼"		Cl.2680	Cl.900-1690
	1½"		Cl.2680	Cl.900-1690
	2"			Cl.900-2680
	2½"			Cl.900-2680
	3" only Standard Class			Cl.900-2680
d2	mm	38	54	94
	in	1,49	2,13	3,7
dp	mm	6	18	27
	in	0,24	0,71	1,06
L [2)]	mm	160	180	300
	in	6,3	7,09	11,81
b	mm	120	130	170
	in	4,72	5,12	6,69
H	mm	approx. 235	approx. 290	approx. 459
	in	approx. 9,25	approx. 11,42	approx. 18,07
H2 [3)]	mm	approx. 635	approx. 790	approx. 1159
	in	approx. 25	approx. 31,10	approx. 45,63
h	mm	35	45	75
	in	1,37	1,77	2,95
D	mm	200	250	315
	in	7,87	9,84	12,4
X	mm	approx. 400	approx. 500	approx. 700
	in	approx. 15,75	approx. 19,86	approx. 27,56
Seat Ø	mm	13	20	40
	in	0,51	0,78	1,57
U/Stroke	mm	5	7,5	10
	in	0,19	0,29	0,39
Weight [4)]	kg	approx. 7	approx. 11	approx. 39
	lbs	approx. 15	approx. 24	approx. 86

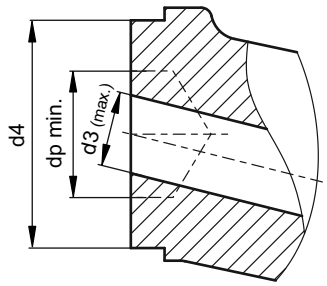
[1)] Possible pipe connections
[2)] Other end-to-end dimension on request
[3)] Required dimension for disassembly with handwheel for rework
[4)] Weight of flanged valves on request
Weight for W / M / U
[5)] Only buttweld

Socket weld end



NPS	NVS		c	t	d4
⅜"	½"	mm	17,6	10	40,5
		in	0,69	0,39	1,59
½"		mm	21,8	13	40,5
		in	0,86	0,5	1,59
¾"	1"	mm	27,1	13	56,5
		in	1,07	0,5	2,22
1"		mm	33,9	13	56,5
		in	1,33	0,5	2,22
1¼"	2"	mm	42,7	13	97
		in	1,68	0,5	3,81
1½"		mm	48,8	13	97
		in	1,92	0,5	3,81
2"		mm	61,2	16	97
		in	2,41	0,63	3,81

Plain



NVS		d3 max.	d3*	dp min.	d4
½"	mm	13	6	8	40,5
	in	0,51	0,23	0,31	1,59
½"	mm	13	10	11,8	40,5
	in	0,51	0,39	0,46	1,59
½"	mm	13	13	15	40,5
	in	0,51	0,51	0,59	1,59
1"	mm	20	14	17	56,5
	in	0,78	0,55	0,67	2,22
1"	mm	20	18	20,7	56,5
	in	0,78	0,71	0,81	2,22
1"	mm	20	20	22,8	56,5
	in	0,78	0,78	0,9	2,22
2"	mm	40	20	24	97
	in	1,57	0,78	0,94	3,82
2"	mm	40	30	34	97
	in	1,57	1,18	1,34	3,82
2"	mm	40	40	44	97
	in	1,57	1,57	1,73	3,82

* corresponding to customer`s request

Application ranges Limited class for welding end valves in sizes NPS 2½" and smaller
Standard class for flanged valves
Recommended temperatures see ASME B16.34

Working Pressure by Class [barg] —ASME B16.34

	A105						A182F12						A182F22					
Class	**900**	**1690**	**2680**	**900**	**1690**	**2680**	**900**	**1690**	**2680**	**900**	**1690**	**2680**	**900**	**1690**	**2680**	**900**	**1690**	**2680**
Temp °C	**Standard**			**Limited**			**Standard**			**Limited**			**Standard**			**Limited**		
-29 – 38	153	288	456	155	291	462	155	291	462	155	291	462	155	291	462	155	291	462
50	150	282	448	155	291	462	155	290	460	155	290	460	155	291	462	155	291	462
100	140	263	416	155	291	461	151	284	451	152	285	452	155	290	460	155	291	461
150	135	254	403	153	288	456	145	271	430	149	280	444	151	283	448	153	287	455
200	131	247	391	152	285	452	139	261	43	149	280	444	146	274	435	151	283	449
250	126	236	375	152	285	451	135	252	400	149	279	443	139	261	414	150	282	446
300	120	224	356	152	285	451	129	242	383	147	276	438	129	242	383	149	280	444
325	116	218	346	150	282	448	124	233	369	146	274	434	124	233	369	149	279	443
350	113	212	336	147	276	437	121	227	359	144	269	427	121	227	359	148	277	440
375	109	205	325	141	265	421	117	219	346	141	265	420	117	219	346	146	275	436
400	104	196	310	130	244	388	110	206	327	141	265	420	110	206	327	146	275	436
425	86	162	257	108	203	321	105	197	313	141	265	420	105	197	313	146	275	436
450	69	130	206	86	162	257	101	190	302	129	242	384	101	190	302	141	266	421
475	52	98	156	65	123	195	84	157	249	105	196	311	95	178	283	128	241	382
500	35	66	105	45	85	137	64	120	191	81	154	249	85	159	252	109	206	332
538	18	33	53	23	45	75	41	77	123	54	105	174	55	104	165	72	141	234
550							36	68	108	47	92	153	47	88	140	61	119	199
575							26	50	79	34	67	112	32	59	94	41	80	134
600							18	34	54	24	46	77	21	39	62	27	53	87
625																		

	A182F91					
Class	**900**	**1690**	**2680**	**900**	**1690**	**2680**
Temp °C	**Standard**			**Limited**		
-29 – 38	155	291	462	155	291	462
50	155	291	462	155	291	462
100	155	290	460	155	291	462
150	151	283	448	155	291	462
200	146	274	435	155	291	462
250	139	261	414	155	291	462
300	129	242	383	155	291	462
325	124	233	369	155	291	462
350	121	227	359	154	290	459
375	117	219	346	152	284	451
400	110	206	327	151	283	448
425	105	197	313	149	280	443
450	101	190	302	141	266	421
475	95	178	283	128	241	382
500	85	159	252	109	206	332
538	75	141	224	90	177	295
550	75	141	223	90	177	295
575	72	135	214	89	174	291
600	59	110	174	76	149	248
625	44	82	130	57	111	186

admissible working pressure (plain welding ends) test pressure = 1.5 × admissible working pressure at 38 °C

Application ranges Limited class for welding end valves in sizes NPS 2½" and smaller
Standard class for flanged valves
Recommended temperatures see ASME B16.34

Working Pressure by Class [psig] —ASME B16.34

	A105						A182F12						A182F22					
Class	**900**	**1690**	**2680**	**900**	**1690**	**2680**	**900**	**1690**	**2680**	**900**	**1690**	**2680**	**900**	**1690**	**2680**	**900**	**1690**	**2680**
Temp °F	**Standard**			**Limited**			**Standard**			**Limited**			**Standard**			**Limited**		
-20 – 100	2220	4180	6620	2250	4230	6700	2250	4230	6700	2250	4230	6700	2250	4230	6700	2250	4230	6700
200	2035	3830	6070	2250	4230	6700	2210	4150	6580	2210	4150	6580	2250	4230	6700	2250	4230	6700
300	1965	3690	5850	2220	4170	6620	2100	3940	6250	2165	4070	6450	2185	4110	6510	2220	4170	6610
400	1900	3580	5670	2200	4130	6550	2005	3770	5980	2165	4070	6450	2115	3980	6310	2185	4110	6510
500	1810	3400	5390	2200	4130	6550	1940	3640	5780	2155	4060	6430	1995	3750	5940	2175	4080	6470
600	1705	3200	5080	2200	4130	6550	1815	3410	5410	2125	3990	6330	1815	3410	5410	2165	4070	6450
650	1650	3100	4910	2145	4030	6390	1765	3320	5260	2090	3930	6230	1765	3320	5260	2145	4040	6400
700	1590	3010	4750	2075	3900	6180	1705	3200	5080	2050	3850	6100	1705	3200	5080	2120	3990	6320
750	1520	2860	4540	1905	3580	5670	1595	3000	4750	2050	3850	6100	1595	3000	4750	2120	3990	6320
800	1235	2320	3680	1545	2900	4600	1525	2870	4540	2050	3850	6100	1525	2870	4540	2120	3990	6320
850	955	1800	2850	1195	2250	3560	1460	2750	4360	1840	3460	5480	1460	2750	4360	2030	3820	6060
900	690	1300	2060	860	1620	2570	1120	2110	3340	1400	2640	4180	1350	2530	4020	1800	3380	5360
950	410	780	1230	565	1080	1745	825	1550	2450	1070	2050	3320	1160	2180	3460	1435	2740	4445
1000	255	490	770	335	655	1090	595	1130	1780	775	1515	2525	800	1510	2400	1045	2040	3400
1050							430	820	1290	570	1120	1860	525	990	1560	710	1390	2315
1100							290	550	860	385	755	1255	330	620	990	450	875	1455
1150																		

	A182F91					
Class	**900**	**1690**	**2680**	**900**	**1690**	**2680**
Temp °F	**Standard**			**Limited**		
-20 – 100	2250	4230	6700	2250	4230	6700
200	2250	4230	6700	2250	4230	6700
300	2185	4110	6510	2250	4230	6700
400	2115	3980	6310	2250	4230	6700
500	1995	3750	5940	2250	4230	6700
600	1815	3410	5410	2250	4230	6700
650	1765	3320	5260	2250	4230	6700
700	1705	3200	5080	2200	4130	6550
750	1595	3000	4750	2185	4110	6510
800	1525	2870	4540	2160	4060	6440
850	1460	2750	4360	2030	3820	6060
900	1350	2530	4020	1800	3380	5360
950	1160	2180	3460	1505	2880	4675
1000	1090	2060	3250	1310	2565	4275
1050	1080	2030	3220	1300	2545	4240
1100	905	1710	2700	1155	2260	3770
1150	670	1260	1900	870	1700	2835

admissible working pressure (plain welding ends) test pressure = 1.5 × admissible working pressure at 100 °F

Coding System