

## Table for PP

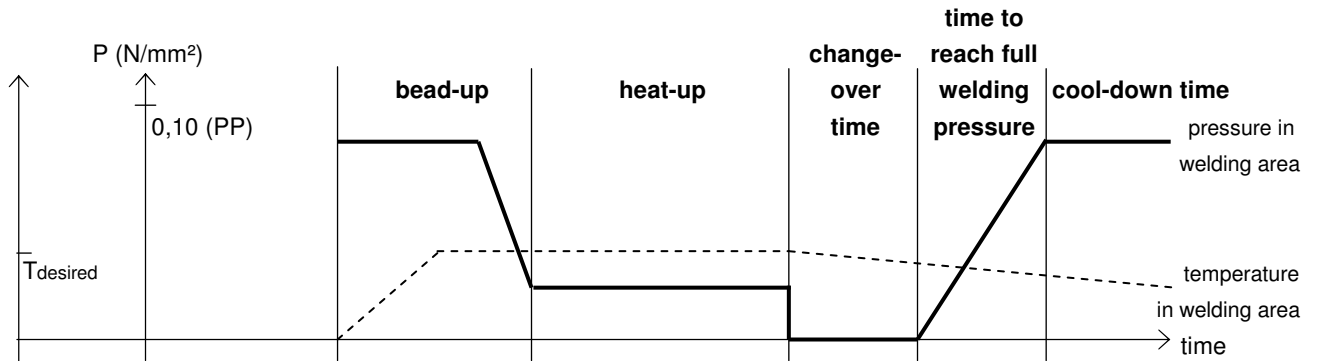


Foundation: 2207, 2208 DIN 16932 German association for welding  
Use for: **4911**

1 bar on manometer: **59 N**

The standard value for heating element temperature is 210°C +/- 10°C.  
The **smaller** the pipe wall the **higher** the temperature.

Additional to the given bead-up force and to the welding force the moving force of the support must be added !



pipe diameter OD [mm]	pipe wall (s) [mm]	SDR	bead-up pressure [bar]	circular bead min. [mm]	heat-up time [s]	max. change-over time [s]	time to reach welding pressure [s]	welding pressure [bar]	cool-down time [min] ①
<b>90</b>	2,2	41	2	0,5	94	4	5	2	2
	2,8	33	2	0,5	104	4	5	2	3
	3,5	26	2	0,5	117	5	6	2	4
	5,1	17,6	3	0,5	145	5	6	3	7
	8,2	11	4	1,0	192	6	8	4	14
	12,3	7,4	6	1,0	249	7	11	6	20
	15,0	6	6	1,0	281	8	14	6	24
<b>110</b>	2,7	41	2	0,5	103	4	5	2	3
	3,4	33	2	0,5	115	5	6	2	4
	4,2	26	3	0,5	130	5	6	3	6
	6,3	17,6	4	0,5	164	6	7	4	10
	10,0	11	6	1,0	217	7	9	6	17
	15,1	7,4	8	1,0	283	8	14	8	24
	18,3	6	9	1,0	322	9	16	9	29
<b>125</b>	3,1	41	3	0,5	110	4	5	3	4
	3,9	33	3	0,5	124	5	6	3	5
	4,8	26	4	0,5	140	5	6	4	7
	7,1	17,6	5	1,0	176	6	7	5	12
	11,4	11	7	1,0	237	7	11	7	19
	17,1	7,4	10	1,0	307	8	15	10	27
	20,8	6	12	1,5	348	10	18	12	33

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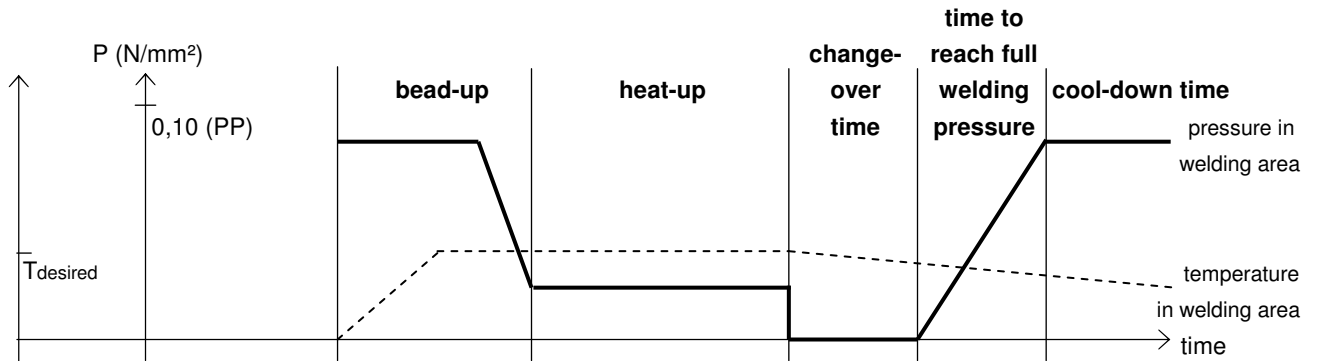


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<b>140</b>	3,5	41	3	0,5	117	5	6	3	4
	4,3	33	4	0,5	131	5	6	4	6
	5,4	26	4	0,5	149	5	6	4	8
	8,0	17,6	6	1,0	189	6	8	6	14
	12,7	11	9	1,0	254	7	12	9	21
	19,2	7,4	13	1,5	332	9	17	13	30
	23,3	6	15	1,5	373	10	20	15	36
<b>160</b>	4,0	41	4	0,5	126	5	6	4	5
	4,9	33	5	0,5	141	5	6	5	7
	6,2	26	6	0,5	162	6	7	6	10
	9,1	17,6	8	1,0	204	6	9	8	15
	14,6	11	12	1,0	277	8	13	12	24
	21,9	7,4	17	1,5	359	10	19	17	34
	26,6	6	19	2,0	405	11	23	19	41
<b>180</b>	4,4	41	5	0,5	133	5	6	5	6
	5,5	33	6	0,5	151	5	6	6	8
	6,9	26	7	0,5	173	6	7	7	12
	10,2	17,6	10	1,0	220	7	10	10	17
	16,4	11	15	1,0	298	8	15	15	26
	24,6	7,4	21	1,5	386	11	21	21	38
	29,0	6	24	2,0	423	12	25	24	44

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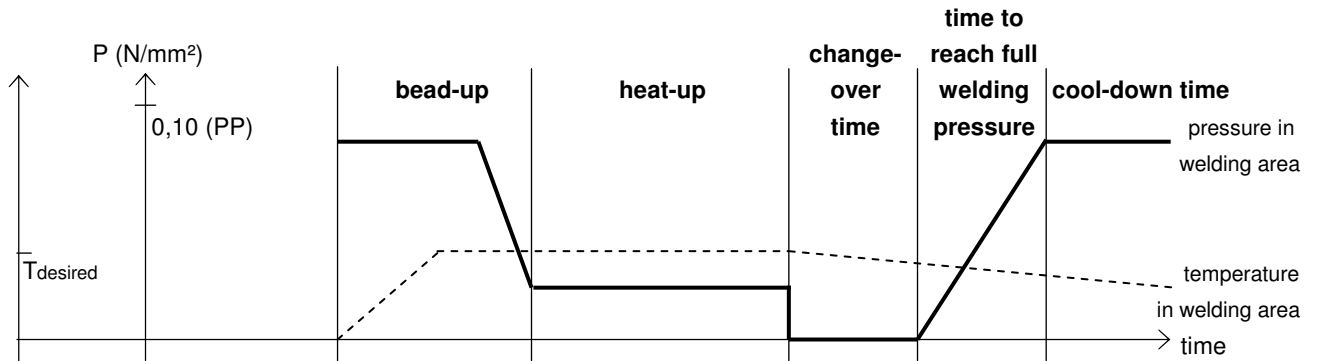


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pipe diameter OD [mm]	pipe wall (s) [mm]	SDR	bead-up pressure [bar]	circular bead min. [mm]	heat-up time [s]	max. change-over time [s]	time to reach welding pressure [s]	welding pressure [bar]	cool-down time [min] <b>1</b>
<b>200</b>	4,9	41	6	0,5	141	5	6	6	7
	6,2	33	7	0,5	162	6	7	7	10
	7,7	26	8	1,0	185	6	8	8	13
	11,4	17,6	12	1,0	237	7	11	12	19
	18,2	11	18	1,0	320	9	16	18	29
	27,4	7,4	26	2,0	411	11	23	26	42
	33,2	6	30	2,0	456	13	29	30	50
<b>225</b>	5,5	41	7	0,5	151	5	6	7	8
	6,9	33	9	0,5	173	6	7	9	12
	8,6	26	10	1,0	197	6	8	10	15
	12,8	17,6	15	1,0	255	7	12	15	21
	20,5	11	23	1,5	345	9	18	23	32
	30,8	7,4	32	2,0	437	12	26	32	47
	37,4	6	38	2,5	487	14	32	38	55
<b>250</b>	6,2	41	9	0,5	162	6	7	9	10
	7,7	33	10	1,0	185	6	8	10	13
	9,6	26	13	1,0	211	7	9	13	16
	14,2	17,6	18	1,0	272	8	13	18	23
	22,7	11	28	1,5	367	10	20	28	35
	34,2	7,4	40	2,0	463	13	29	40	51

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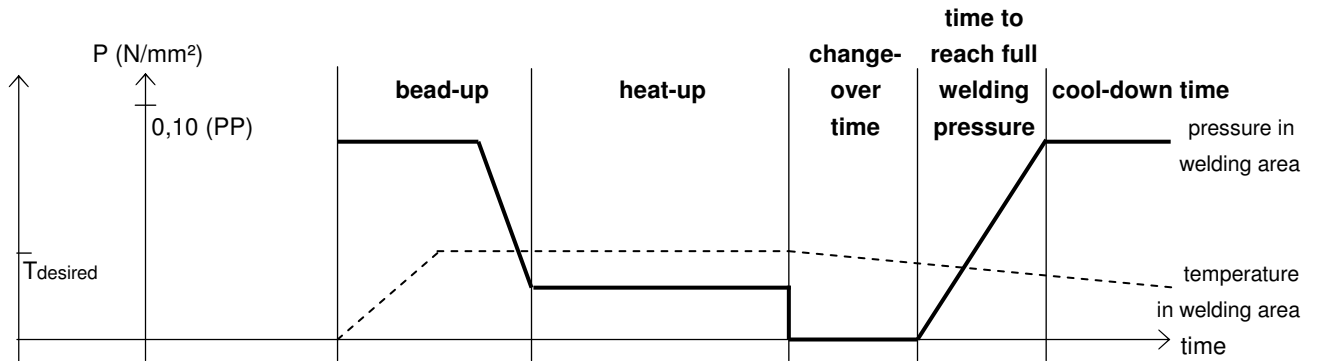


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<b>280</b>	6,9	41	11	0,5	173	6	7	11	12
	8,6	33	13	1,0	197	6	8	13	15
	10,7	26	16	1,0	227	7	10	16	18
	15,9	17,6	23	1,0	292	8	14	23	26
	25,4	11	35	1,5	394	11	22	35	39
	38,3	7,4	50	2,5	493	14	33	50	57
<b>315</b>	7,7	41	13	1,0	185	6	8	13	13
	9,7	33	16	1,0	213	7	9	16	16
	12,1	26	20	1,0	246	7	11	20	20
	17,9	17,6	29	1,0	317	9	16	29	28
	28,6	11	44	2,0	420	12	24	44	44
<b>355</b>	8,7	41	17	1,0	199	6	8	17	15
	10,9	33	20	1,0	230	7	10	20	18
	13,6	26	25	1,0	264	7	12	25	22
	20,1	17,6	36	1,5	341	9	18	36	32
	32,2	11	56	2,0	448	13	28	56	48

**①** Remaining under the cool-down time for up to 50% is allowed under the following conditions:

- prefabrication under workshop conditions
- low additional pressure at unclamping
- no additional pressure during further cooling down
- load onto the workpieces only after being completely cooled down
- Join parts with wall thickness ≥15 mm