

Table for PE



Foundation: 2207, 2208 DIN 16932 German association for welding

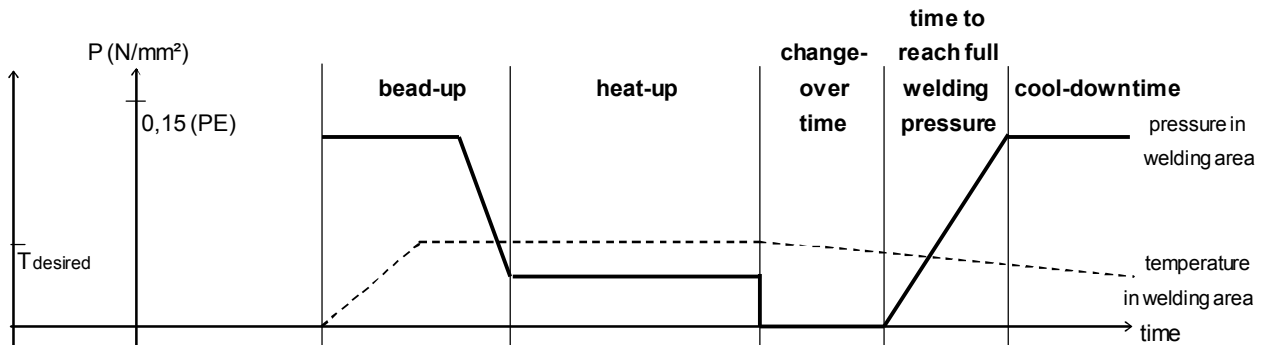
Use for: **4002 (with 2. cylinder)**

1 bar on manometer: **36 N**

PE 80 The value for heating element temperature is between 200° C - 220° C.
The **smaller** the pipe wall the **higher** the temperature.

PE 100 The standard value for heating element temperature is 220° C.
Increase the change-over time and the welding pressure time at PE 100 as fast as possible !

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



The following pressure values are only valid if the 2. cylinder is used.

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
90	2,2	41	3	0,5	22	4	4	3	2
	2,8	33	4	0,5	28	4	4	4	3
	3,5	26	4	0,5	35	5	5	4	4
	4,3	21,0	5	0,5	43	5	5	5	6
	5,1	17,6	6	1,0	51	5	5	6	7
	5,4	17	6	1,0	54	5	5	6	7
	6,7	13,6	8	1,0	67	6	6	8	10
	8,2	11	29	1,5	82	6	6	29	11
	10,1	9,0	43	1,5	101	7	7	43	14
12,3	7,4	61	2,0	123	8	8	61	16	
110	2,7	41	4	0,5	27	4	4	4	3
	3,4	33	5	0,5	34	5	5	5	4
	4,2	26	6	0,5	42	5	5	6	6
	5,3	21,0	8	1,0	53	5	5	8	7
	6,3	17,6	9	1,0	63	6	6	9	9
	6,6	17	9	1,0	66	6	6	9	9
	8,1	13,6	11	1,5	81	6	6	11	11
	10,0	11	14	1,5	100	7	7	14	14
	12,3	9,0	16	2,0	123	8	8	16	16
15,1	7,4	19	2,0	151	9	9	19	20	

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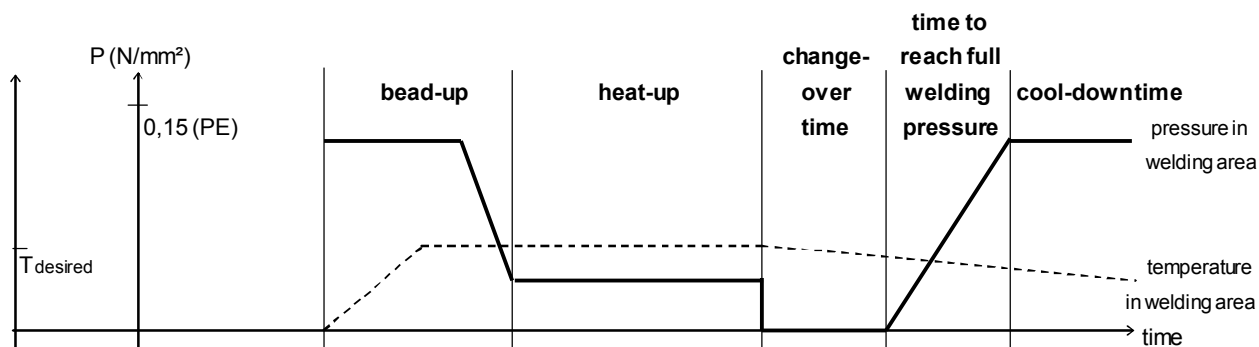
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Increase the change-over time and the welding pressure time at PE 100 as fast as possible !

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



The following pressure values are only valid if the 2. cylinder is used.

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
125	3,1	41	5	0,5	31	4	4	5	4
	3,9	33	7	0,5	39	5	5	7	5
	4,8	26	8	1,0	48	5	5	8	6
	6,0	21,0	10	1,0	60	6	6	10	8
	7,1	17,6	11	1,5	71	6	6	11	10
	7,4	17	12	1,5	74	6	6	12	10
	9,2	13,6	14	1,5	92	7	7	14	13
	11,4	11	17	1,5	114	8	8	17	15
	14,0	9,0	21	2,0	140	9	9	21	18
17,1	7,4	25	2,0	171	9	10	25	22	
140	3,5	41	7	0,5	35	5	5	7	4
	4,3	33	8	0,5	43	5	5	8	6
	5,4	26	10	1,0	54	5	5	10	7
	6,7	21,0	12	1,0	67	6	6	12	10
	8,0	17,6	14	1,5	80	6	6	14	11
	8,3	17	15	1,5	83	7	7	15	12
	10,3	13,6	18	1,5	103	7	7	18	14
	12,7	11	22	2,0	127	8	8	22	17
	15,7	9,0	26	2,0	157	9	10	26	20
19,2	7,4	31	2,5	192	10	11	31	24	

Table for PE



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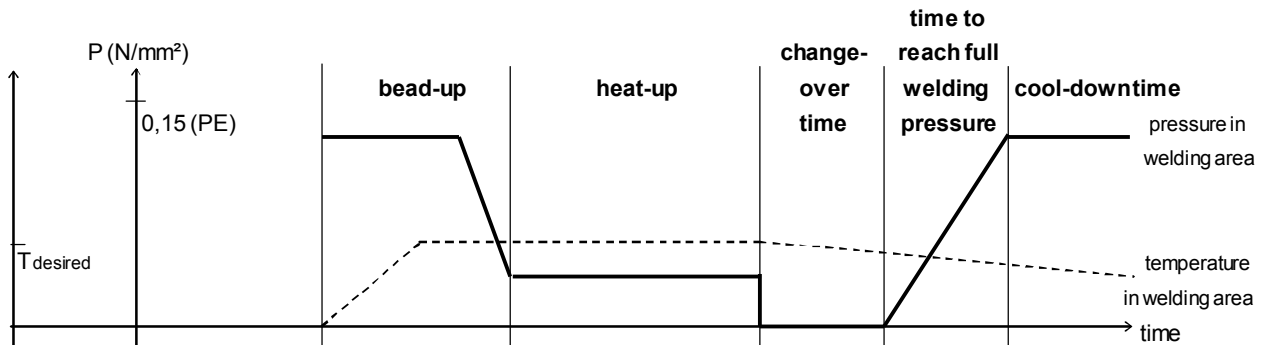
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Increase the change-over time and the welding pressure time at PE 100 as fast as possible !

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



The following pressure values are only valid if the 2. cylinder is used.

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
160	4,0	41	9	0,5	40	5	5	9	5
	4,9	33	10	1,0	49	5	5	10	7
	6,2	26	13	1,0	62	6	6	13	9
	7,7	21,0	16	1,5	77	6	6	16	11
	9,1	17,6	18	1,5	91	7	7	18	13
	9,5	17	19	1,5	95	7	7	19	13
	11,8	13,6	23	2,0	169	9	10	23	22
	14,6	11	28	2,0	146	9	9	28	19
	17,9	9,0	34	2,0	179	10	11	34	23
180	21,9	7,4	40	2,5	219	11	12	40	27
	4,4	41	11	0,5	44	5	5	11	6
	5,5	33	13	1,0	55	5	5	13	8
	6,9	26	16	1,0	69	6	6	16	10
	8,6	21,0	20	1,5	86	7	7	20	12
	10,2	17,6	23	1,5	102	7	7	23	14
	10,7	17	24	1,5	107	7	7	24	14
	13,3	13,6	30	2,0	136	8	9	30	18
	16,4	11	36	2,0	164	9	10	36	21
20,1	9,0	43	2,5	201	10	11	43	25	
24,6	7,4	51	2,5	246	12	13	51	30	

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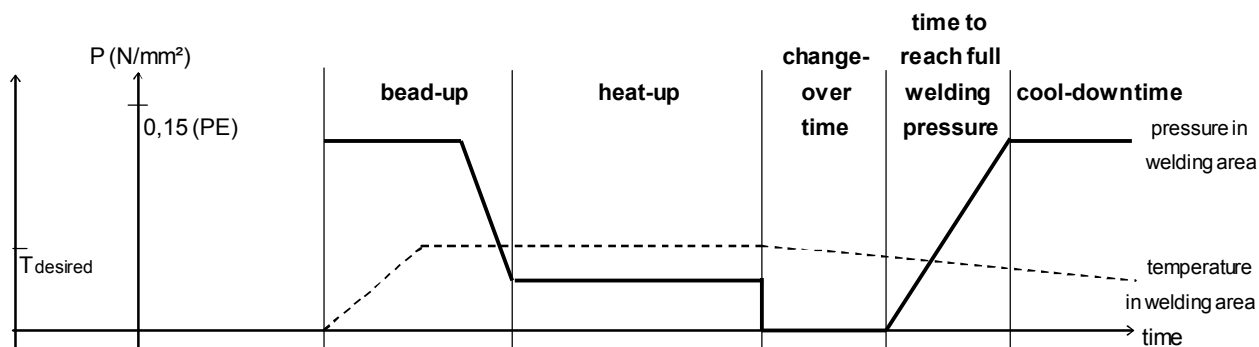
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The following pressure values are only valid if the 2. cylinder is used.

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
200	4,9	41	13	1,0	49	5	5	13	7
	6,2	33	16	1,0	62	6	6	16	9
	7,7	26	20	1,5	77	6	6	20	11
	9,6	21,0	24	1,5	96	7	7	24	13
	11,4	17,6	29	1,5	114	8	8	29	15
	11,9	17	30	1,5	119	8	8	30	16
	14,7	13,6	36	2,0	147	9	9	36	19
	18,2	11	44	2,0	182	10	11	44	23
	22,4	9,0	53	2,5	224	11	12	53	28
27,4	7,4	62	3,0	274	13	15	62	34	
225	5,5	41	16	1,0	55	5	5	16	8
	6,9	33	20	1,0	69	6	6	20	10
	8,6	26	25	1,5	86	7	7	25	12
	10,8	21,0	31	1,5	108	8	8	31	15
	12,8	17,6	36	2,0	128	8	8	36	17
	13,4	17	38	2,0	134	8	9	38	18
	16,6	13,6	46	2,0	166	9	10	46	21
	20,5	11	55	2,5	205	10	12	55	26
	25,2	9,0	66	2,5	252	12	14	66	31
30,8	7,4	79	3,0	308	14	16	79	38	

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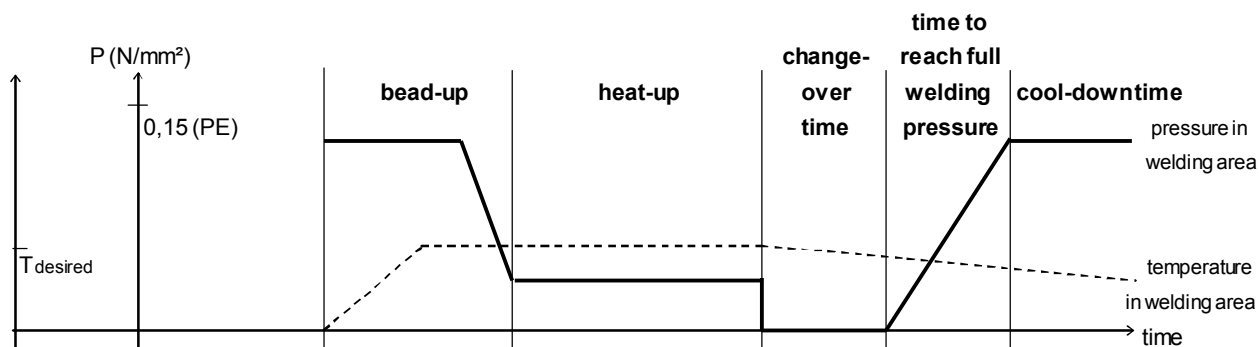
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The following pressure values are only valid if the 2. cylinder is used.

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
250	6,2	41	20	1,0	62	6	6	20	9
	7,7	33	25	1,5	77	6	6	25	11
	9,6	26	31	1,5	96	7	7	31	13
	11,9	21,0	38	1,5	119	8	8	38	16
	14,2	17,6	44	2,0	142	9	9	44	19
	14,8	17	46	2,0	148	9	9	46	19
	18,4	13,6	56	2,0	184	10	11	56	23
	22,7	11	68	2,5	227	11	13	68	28
	27,9	9,0	82	3,0	279	13	15	82	34
	34,2	7,4	97	3,0	342	15	18	97	42
280	6,9	41	25	1,0	69	6	6	25	10
	8,6	33	31	1,5	86	7	7	31	12
	10,7	26	38	1,5	107	7	7	38	14
	13,4	21,0	47	2,0	134	8	9	47	18
	15,9	17,6	55	2,0	159	9	10	55	20
	16,6	17	58	2,0	166	9	10	58	21
	20,6	13,6	70	2,5	206	10	12	70	26
	25,4	11	85	2,5	254	12	14	85	31
	31,3	9,0	102	3,0	313	14	16	102	38
	38,3	7,4	122	3,5	383	16	20	122	47

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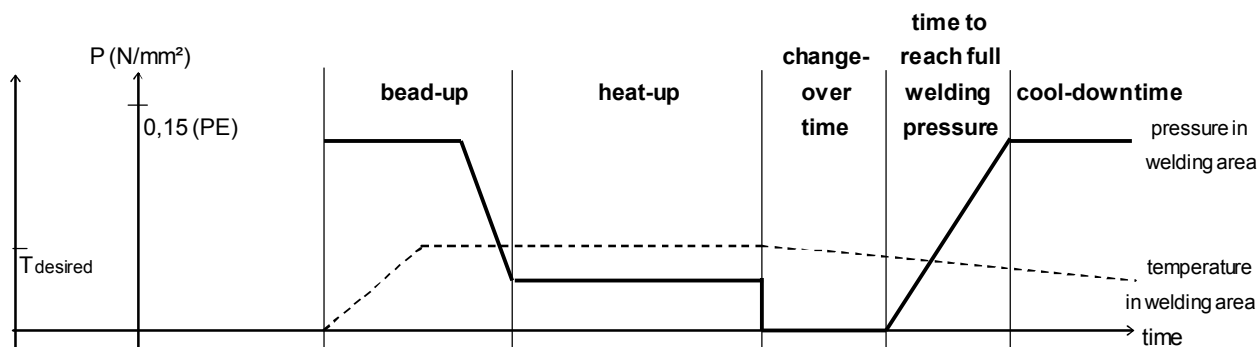
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315	7,7	41	31	1,5	77	6	6	31	11
	9,7	33	39	1,5	97	7	7	39	13
	12,1	26	48	2,0	121	8	8	48	16
	15,0	21,0	59	2,0	150	9	9	59	19
	17,9	17,6	70	2,0	179	10	11	70	23
	18,7	17	73	2,0	187	10	11	73	24
	23,2	13,6	89	2,5	232	11	13	89	29
	28,6	11	108	3,0	286	13	15	108	35
	35,2	9,0	129	3,0	352	15	18	129	43
43,1	7,4	154	3,5	431	18	22	154	52	
355	8,7	41	40	1,5	87	7	7	40	12
	10,9	33	50	1,5	109	8	8	50	15
	13,6	26,0	61	2,0	136	8	9	61	18
	16,9	21,0	75	2,0	169	9	10	75	22
	20,1	17,6	89	2,5	201	10	11	89	25
	21,1	17	93	2,5	211	11	12	93	26
	26,1	13,6	113	3,0	261	12	14	113	32
	32,2	11,0	137	3,0	322	14	17	137	39
	39,7	9,0	164	3,5	397	17	20	164	48
48,5	7,4	195	3,5	485	20	24	195	58	

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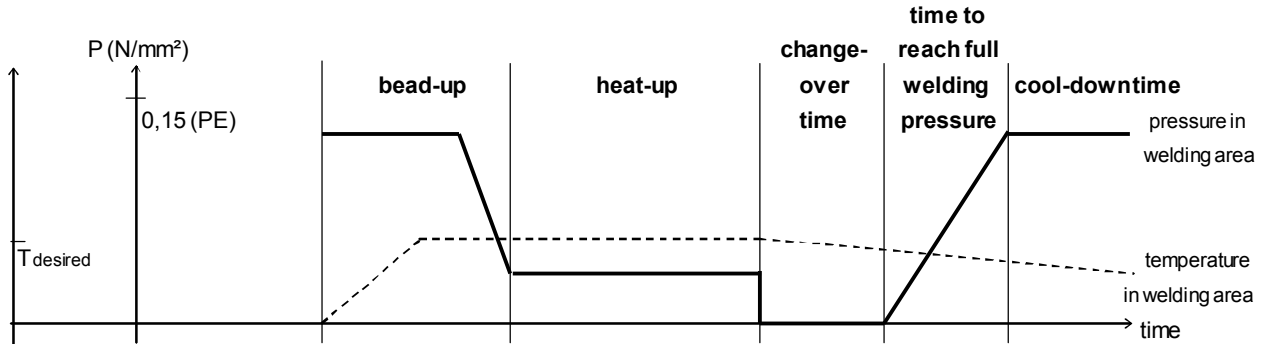
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400	9,8	41	51	1,5	98	7	7	51	13
	12,3	33	63	2,0	123	8	8	63	16
	15,3	26,0	78	2,0	153	9	9	78	20
	19,1	21,0	96	2,5	191	10	11	96	24
	22,7	17,6	113	2,5	227	11	13	113	28
	23,7	17,0	117	2,5	237	11	13	117	29
	29,4	13,6	143	3,0	294	13	16	143	36
	36,3	11,0	173	3,0	363	16	19	173	44
	44,7	9,0	208	3,5	447	18	23	208	54
450	54,7	7,4	248	4,0	547	21	27	248	65
	11,0	41	64	1,5	110	8	8	64	15
	13,8	33	79	2,0	138	9	9	79	18
	17,2	26,0	98	2,0	172	9	10	98	22
	21,5	21,0	121	2,5	215	11	12	121	27
	25,5	17,6	142	2,5	255	12	14	142	31
	26,7	17,0	148	3,0	267	12	14	148	33
	33,1	13,6	181	3,0	331	15	17	181	40
	40,9	11,0	220	3,5	409	17	21	220	49
50,3	9,0	264	4,0	503	20	25	264	60	
61,5	7,4	313	4,0	615	23	31	313	71	

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