

Table for PP

Basis: DVS data sheets 2207, 2208 - State 2017

Field of application: **HRG 3, HRG4**

1 bar on manometer: **98** N (Effective surface of cylinder: 980 mm² / 1,52 inch²)

The heating element temperature is 210° C ± 10° C / 410° F ± 18° F.

The change-over time should be kept as low as possible.

The joining pressure build-up time should be recognized as maximum value and may be overrun by up to 50%.

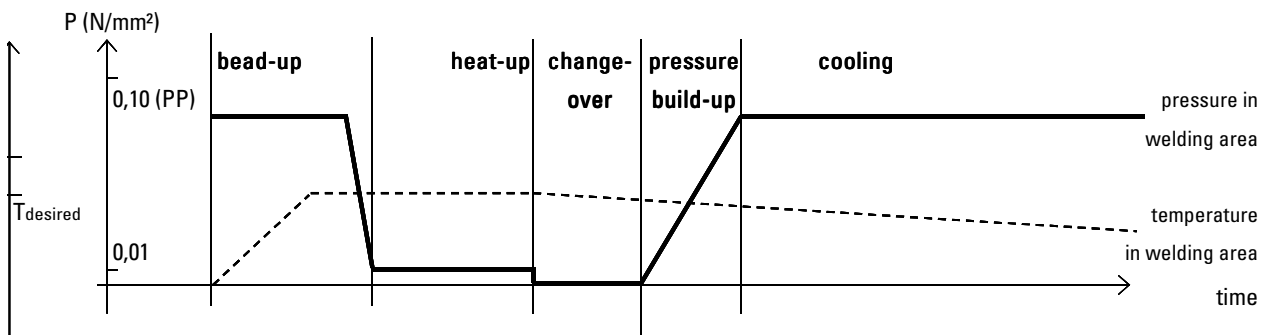
You must add the motion pressure of the welding machine to the indicated bead-up and welding pressure in each case!

The maximum pressure of the welding machine is to be observed.

1 These cooling times are only valid under the following conditions:

- Welding connection is produced under workshop conditions
- Removal from the welding machine and temporary storage until complete cooling time elapses only cause minor strain for the welding connection

All information without guarantee



| pipe wall (s) | SDR degree | bead-up pressure [bar] | circular bead height min. [mm] | heat-up time [min:s] | max. change-over time [s] | pressure build-up time [s] | welding pressure [bar] | cooling time for ambient temperature | | | special cooling time 1 [min:s] |
|---------------|------------|------------------------|--------------------------------|----------------------|---------------------------|----------------------------|------------------------|--------------------------------------|-------------------------|-----------------------|--------------------------------|
| | | | | | | | | < 15°C < 59°F [min:s] | 15-25°C 59-77°F [min:s] | > 25°C > 77°F [min:s] | |
| DA 200 | | | | | | | | | | | |
| 4,9 | 41 | 4 | 1 | 00:49 | 5 | 5 | 4 | 04:19 | 05:24 | 06:59 | 03:44 |
| 6,2 | 33 | 4 | 1 | 01:02 | 6 | 6 | 4 | 05:22 | 06:42 | 08:32 | 04:31 |
| 7,7 | 26 | 5 | 1,5 | 01:17 | 6 | 6 | 5 | 06:29 | 08:08 | 10:20 | 05:25 |
| 11,4 | 17,6 | 7 | 1,5 | 01:54 | 8 | 8 | 7 | 09:05 | 11:28 | 14:47 | 07:38 |
| 11,9 | 17 | 8 | 1,5 | 01:59 | 8 | 8 | 8 | 09:26 | 11:55 | 15:23 | 07:56 |
| 18,2 | 11 | 11 | 2 | 03:02 | 10 | 11 | 11 | 13:29 | 17:19 | 23:02 | 11:33 |
| 22,4 | 9 | 13 | 2,5 | 03:44 | 11 | 12 | 13 | 16:26 | 20:55 | 27:53 | 13:57 |
| 27,4 | 7,4 | 16 | 3 | 04:34 | 13 | 15 | 16 | 20:01 | 25:16 | 33:39 | 16:53 |
| 33,2 | 6 | 18 | 3 | 05:32 | 15 | 17 | 18 | 24:14 | 30:33 | 40:31 | 20:35 |
| DA 225 | | | | | | | | | | | |
| 5,5 | 41 | 4 | 1 | 00:55 | 5 | 5 | 4 | 04:48 | 06:00 | 07:42 | 04:06 |
| 6,9 | 33 | 5 | 1 | 01:09 | 6 | 6 | 5 | 05:55 | 07:24 | 09:23 | 04:56 |
| 8,6 | 26 | 6 | 1,5 | 01:26 | 7 | 7 | 6 | 07:07 | 08:56 | 11:25 | 05:58 |
| 12,8 | 17,6 | 9 | 2 | 02:08 | 8 | 8 | 9 | 10:01 | 12:41 | 16:28 | 08:27 |
| 13,4 | 17 | 10 | 2 | 02:14 | 8 | 9 | 10 | 10:24 | 13:12 | 17:12 | 08:48 |
| 20,5 | 11 | 14 | 2,5 | 03:25 | 10 | 12 | 14 | 15:04 | 19:17 | 25:43 | 12:51 |
| 25,2 | 9 | 17 | 2,5 | 04:12 | 12 | 14 | 17 | 18:26 | 23:19 | 31:05 | 15:33 |
| 30,8 | 7,4 | 20 | 3 | 05:08 | 14 | 16 | 20 | 22:29 | 28:22 | 37:40 | 19:03 |
| 37,4 | 6 | 23 | 3,5 | 06:14 | 16 | 19 | 23 | 27:17 | 34:22 | 45:30 | 23:15 |

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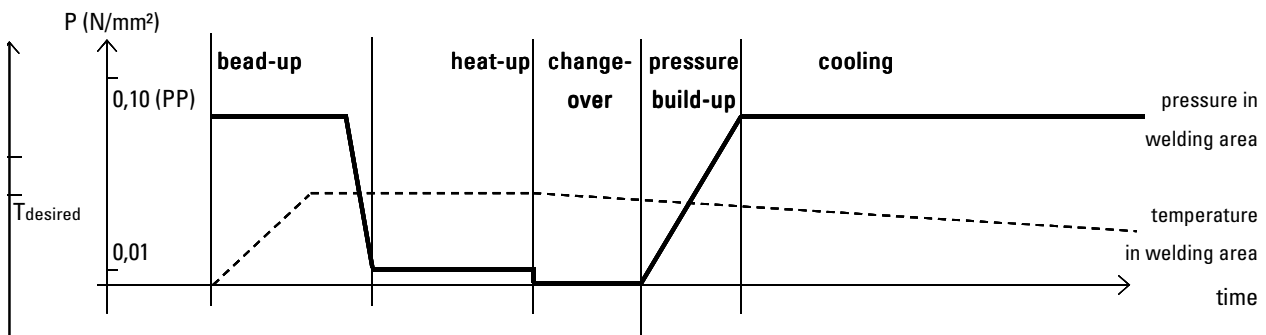
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|---------------|------------|------------------------|--------------------------------|----------------------|---------------------------|----------------------------|------------------------|--------------------------------------|-------------------------|-----------------------|--------------------------------|
| | | | | | | | | < 15°C < 59°F [min:s] | 15-25°C 59-77°F [min:s] | > 25°C > 77°F [min:s] | |
| DA 250 | | | | | | | | | | | |
| 6,2 | 41 | 5 | 1 | 01:02 | 6 | 6 | 5 | 05:22 | 06:42 | 08:32 | 04:31 |
| 7,7 | 33 | 6 | 1,5 | 01:17 | 6 | 6 | 6 | 06:29 | 08:08 | 10:20 | 05:25 |
| 9,6 | 26 | 8 | 1,5 | 01:36 | 7 | 7 | 8 | 07:49 | 09:50 | 12:37 | 06:34 |
| 14,2 | 17,6 | 11 | 2 | 02:22 | 9 | 9 | 11 | 10:55 | 13:53 | 18:10 | 09:15 |
| 14,8 | 17 | 12 | 2 | 02:28 | 9 | 9 | 12 | 11:18 | 14:24 | 18:54 | 09:36 |
| 22,7 | 11 | 17 | 2,5 | 03:47 | 11 | 13 | 17 | 16:39 | 21:10 | 28:14 | 14:07 |
| 27,9 | 9 | 20 | 3 | 04:39 | 13 | 15 | 20 | 20:23 | 25:44 | 34:15 | 17:13 |
| 34,2 | 7,4 | 24 | 3 | 05:42 | 15 | 18 | 24 | 24:58 | 31:27 | 41:41 | 21:13 |
| DA 280 | | | | | | | | | | | |
| 6,9 | 41 | 7 | 1 | 01:09 | 6 | 6 | 7 | 05:55 | 07:24 | 09:23 | 04:56 |
| 8,6 | 33 | 8 | 1,5 | 01:26 | 7 | 7 | 8 | 07:07 | 08:56 | 11:25 | 05:58 |
| 10,7 | 26 | 10 | 1,5 | 01:47 | 7 | 7 | 10 | 08:35 | 10:50 | 13:56 | 07:13 |
| 15,9 | 17,6 | 14 | 2 | 02:39 | 9 | 10 | 14 | 12:00 | 15:21 | 20:14 | 10:14 |
| 16,6 | 17 | 15 | 2 | 02:46 | 9 | 10 | 15 | 12:27 | 15:57 | 21:05 | 10:38 |
| 25,4 | 11 | 21 | 2,5 | 04:14 | 12 | 14 | 21 | 18:34 | 23:29 | 31:19 | 15:39 |
| 31,3 | 9 | 25 | 3 | 05:13 | 14 | 16 | 25 | 22:51 | 28:49 | 38:16 | 19:22 |
| 38,3 | 7,4 | 30 | 3,5 | 06:23 | 16 | 20 | 30 | 27:54 | 35:12 | 46:36 | 23:48 |

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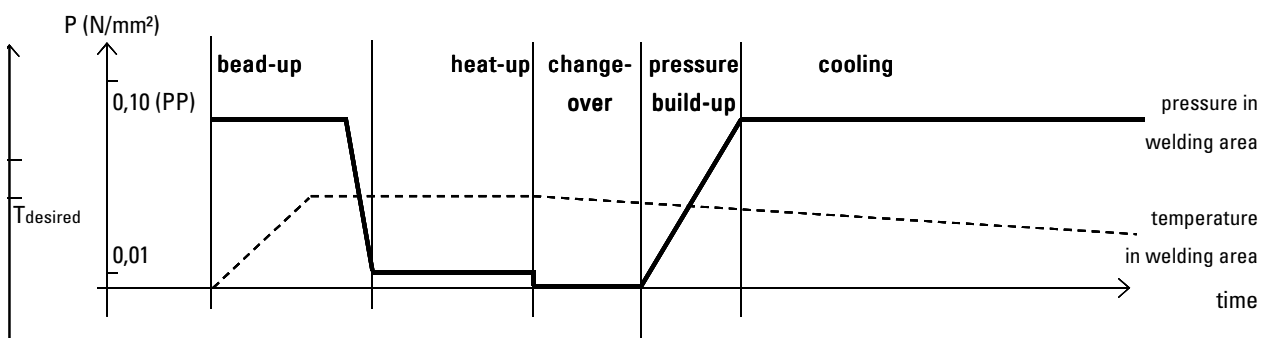
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| pipe wall (s) | SDR degree | bead-up pressure [bar] | circular bead height min. [mm] | heat-up time [min:s] | max. change-over time [s] | pressure build-up time [s] | welding pressure [bar] | cooling time for ambient temperature | | | special cooling time 1 [min:s] |
|---------------|------------|------------------------|--------------------------------|----------------------|---------------------------|----------------------------|------------------------|--------------------------------------|-------------------------|-----------------------|--------------------------------|
| | | | | | | | | < 15°C < 59°F [min:s] | 15-25°C 59-77°F [min:s] | > 25°C > 77°F [min:s] | |
| DA 315 | | | | | | | | | | | |
| 7,7 | 41 | 8 | 1,5 | 01:17 | 6 | 6 | 8 | 06:29 | 08:08 | 10:20 | 05:25 |
| 9,7 | 33 | 10 | 1,5 | 01:37 | 7 | 7 | 10 | 07:53 | 09:56 | 12:44 | 06:37 |
| 12,1 | 26 | 12 | 2 | 02:01 | 8 | 8 | 12 | 09:34 | 12:05 | 15:37 | 08:03 |
| 17,9 | 17,6 | 18 | 2 | 02:59 | 10 | 11 | 18 | 13:18 | 17:03 | 22:40 | 11:22 |
| 18,7 | 17 | 18 | 2 | 03:07 | 10 | 11 | 18 | 13:48 | 17:45 | 23:38 | 11:50 |
| 28,6 | 11 | 27 | 3 | 04:46 | 13 | 15 | 27 | 20:53 | 26:22 | 35:04 | 17:39 |
| 35,2 | 9 | 32 | 3 | 05:52 | 15 | 18 | 32 | 25:41 | 32:22 | 42:52 | 21:51 |
| DA 355 | | | | | | | | | | | |
| 8,7 | 41 | 10 | 1,5 | 01:27 | 7 | 7 | 10 | 07:11 | 09:02 | 11:32 | 06:01 |
| 10,9 | 33 | 13 | 1,5 | 01:49 | 8 | 8 | 13 | 08:44 | 11:01 | 14:11 | 07:20 |
| 13,6 | 26 | 15 | 2 | 02:16 | 8 | 9 | 15 | 10:32 | 13:22 | 17:27 | 08:55 |
| 20,1 | 17,6 | 22 | 2,5 | 03:21 | 10 | 11 | 22 | 14:47 | 18:57 | 25:15 | 12:38 |
| 21,1 | 17 | 23 | 2,5 | 03:31 | 11 | 12 | 23 | 15:30 | 19:48 | 26:24 | 13:12 |
| 32,2 | 11 | 34 | 3 | 05:22 | 14 | 17 | 34 | 23:31 | 29:38 | 39:20 | 19:57 |
| 39,7 | 9 | 41 | 3,5 | 06:37 | 17 | 20 | 41 | 28:52 | 36:30 | 48:19 | 24:40 |

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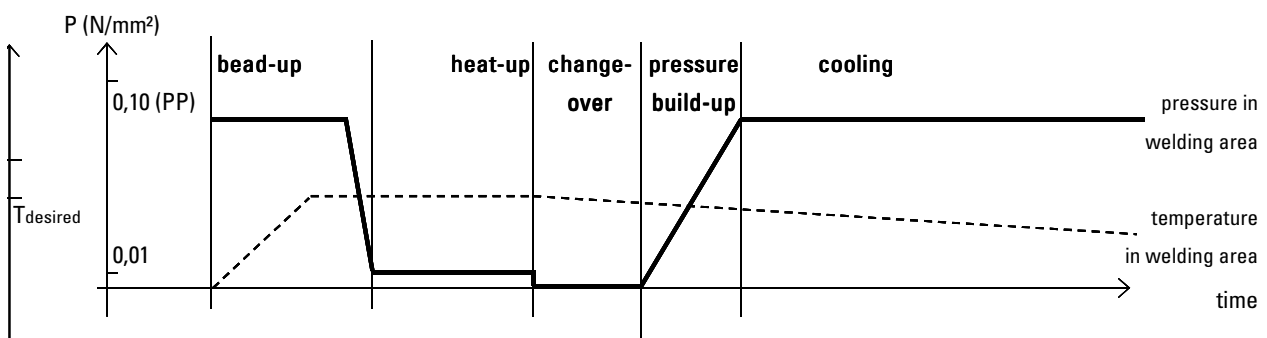
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|---------------|------------|------------------------|--------------------------------|----------------------|---------------------------|----------------------------|------------------------|--------------------------------------|-------------------------|-----------------------|--------------------------------|
| | | | | | | | | < 15°C < 59°F [min:s] | 15-25°C 59-77°F [min:s] | > 25°C > 77°F [min:s] | |
| [mm] | | | | | | | | | | | |
| DA 400 | | | | | | | | | | | |
| 9,8 | 41 | 13 | 1,5 | 01:38 | 7 | 7 | 13 | 07:58 | 10:01 | 12:52 | 06:41 |
| 12,3 | 33 | 16 | 2 | 02:03 | 8 | 8 | 16 | 09:42 | 12:15 | 15:52 | 08:10 |
| 15,3 | 26 | 19 | 2 | 02:33 | 9 | 9 | 19 | 11:37 | 14:50 | 19:30 | 09:53 |
| 22,7 | 17,6 | 28 | 2,5 | 03:47 | 11 | 13 | 28 | 16:39 | 21:10 | 28:14 | 14:07 |
| 23,7 | 17 | 29 | 2,5 | 03:57 | 11 | 13 | 29 | 17:21 | 22:02 | 29:22 | 14:41 |
| 36,3 | 11 | 43 | 3 | 06:03 | 16 | 19 | 43 | 26:29 | 33:22 | 44:10 | 22:33 |
| DA 450 | | | | | | | | | | | |
| 11,0 | 41 | 16 | 1,5 | 01:50 | 8 | 8 | 16 | 08:48 | 11:06 | 14:18 | 07:24 |
| 13,8 | 33 | 20 | 2 | 02:18 | 9 | 9 | 20 | 10:39 | 13:33 | 17:41 | 09:02 |
| 17,2 | 26 | 24 | 2 | 02:52 | 9 | 10 | 24 | 12:51 | 16:27 | 21:49 | 10:58 |
| 25,5 | 17,6 | 35 | 2,5 | 04:15 | 12 | 14 | 35 | 18:39 | 23:34 | 31:26 | 15:43 |
| 26,7 | 17 | 37 | 3 | 04:27 | 12 | 14 | 37 | 19:31 | 24:38 | 32:50 | 16:27 |
| 40,9 | 11 | 54 | 3,5 | 06:49 | 17 | 21 | 54 | 29:42 | 37:36 | 49:48 | 25:24 |