

Miniplast® Polygon LT™ Welding Parameters							CURRENT AS OF 09/01/2023	
Product Line & Material	Pipe Size	Initial Melt Pressure	Bead Height	Melt Pressure	Heatsoak Time	Changeover Time	Welding Pressure	Cooling Time
Air-Pro® (PE)	1/2" (20mm) SDR7	6.7 lbs	0.5 mm	Almost Zero	30 seconds	5 seconds	6.7 lbs	5.0 min
Air-Pro® (PE)	3/4" (25mm) SDR7	9.0 lbs	0.5 mm	Almost Zero	35 seconds	5 seconds	9.0 lbs	5.0 min
Air-Pro® (PE)	1" (32mm) SDR7	18.0 lbs	0.5 mm	Almost Zero	44 seconds	5 seconds	18.0 lbs	5.0 min
Air-Pro® (PE)	1-1/4" (40mm) SDR7	20.2 lbs	1 mm	Almost Zero	55 seconds	5 seconds	20.2 lbs	6.0 min
Air-Pro® (PE)	1-1/2" (50mm) SDR7	33.7 lbs	1 mm	Almost Zero	69 seconds	6 seconds	33.7 lbs	7.4 min
Air-Pro® (PE)	2" (63mm) SDR7	51.7 lbs	1.5 mm	Almost Zero	86 seconds	7 seconds	51.7 lbs	8.9 min
Air-Pro® (PE)	3" (90mm) SDR7	103.4 lbs	2 mm	Almost Zero	123 seconds	8 seconds	103.4 lbs	12.3 min
Air-Pro® (PE)	4" (110mm) SDR7	152.9 lbs	2 mm	Almost Zero	151 seconds	9 seconds	152.9 lbs	14.8 min
Asahitec™ Solid Wall (PP-RCT)	1/2" (20mm) SDR11	4.5 lbs	0.5 mm	Almost Zero	24 seconds	5 seconds	4.5 lbs	5.0 min
Asahitec™ Solid Wall (PP-RCT)	3/4" (25mm) SDR11	4.5 lbs	0.5 mm	Almost Zero	27 seconds	5 seconds	4.5 lbs	5.0 min
Asahitec™ Solid Wall (PP-RCT)	1" (32mm) SDR11	6.7 lbs	0.5 mm	Almost Zero	34 seconds	5 seconds	6.7 lbs	5.0 min
Asahitec™ Solid Wall (PP-RCT)	1-1/4" (40mm) SDR11	11.2 lbs	0.5 mm	Almost Zero	44 seconds	5 seconds	11.2 lbs	5.0 min
Asahitec™ Solid Wall (PP-RCT)	1-1/2" (50mm) SDR11	15.7 lbs	0.5 mm	Almost Zero	54 seconds	5 seconds	15.7 lbs	5.1 min



Welding Temperatures

- PP: 393°F - 410°F (200°C - 210°C)
- PE: 420°F - 446°F (215°C - 230°C)
- PVDF: 436°F - 446°F (225°C - 230°C)
- ECTFE: 527°F - 536°F (275°C - 280°C)

A reduction in the cooling time of up to 50%, i.e. removal of the welded part from the welding machine, is permitted in the following circumstances:

- the joint connection was created under workshop conditions and
- the removal of the part from the welding machine and its temporary storage until the complete cooling time according to the Cooling Time column causes negligible loading of the joint

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Asahitec™ Solid Wall (PP-RCT)	2" (63mm) SDR11	24.7 lbs	0.5 mm	Almost Zero	68 seconds	6 seconds	24.7 lbs	6.3 min
Asahitec™ Solid Wall (PP-RCT)	2-1/2" (75mm) SDR11	33.7 lbs	0.5 mm	Almost Zero	79 seconds	6 seconds	33.7 lbs	7.3 min
Asahitec™ Solid Wall (PP-RCT)	3" (90mm) SDR11	49.5 lbs	1 mm	Almost Zero	94 seconds	6 seconds	49.5 lbs	8.6 min
Asahitec™ Solid Wall (PP-RCT)	4" (110mm) SDR11	71.9 lbs	1 mm	Almost Zero	113 seconds	7 seconds	71.9 lbs	10.2 min
Asahitec™ Solid Wall (PP-RCT)	1/2" (20mm) SDR7	4.5 lbs	0.5 mm	Almost Zero	33 seconds	5 seconds	4.5 lbs	5.0 min
Asahitec™ Solid Wall (PP-RCT)	3/4" (25mm) SDR7	6.7 lbs	0.5 mm	Almost Zero	41 seconds	5 seconds	6.7 lbs	5.0 min
Asahitec™ Solid Wall (PP-RCT)	1" (32mm) SDR7	9.0 lbs	0.5 mm	Almost Zero	52 seconds	5 seconds	9.0 lbs	5.0 min
Asahitec™ Solid Wall (PP-RCT)	1-1/4" (40mm) SDR7	13.5 lbs	0.5 mm	Almost Zero	53 seconds	5 seconds	13.5 lbs	5.0 min
Asahitec™ Solid Wall (PP-RCT)	1-1/2" (50mm) SDR7	22.5 lbs	0.5 mm	Almost Zero	80 seconds	6 seconds	22.5 lbs	7.4 min
Asahitec™ Solid Wall (PP-RCT)	2" (63mm) SDR7	33.7 lbs	1 mm	Almost Zero	98 seconds	6 seconds	33.7 lbs	8.9 min
Asahitec™ Solid Wall (PP-RCT)	2-1/2" (75mm) SDR7	47.2 lbs	1 mm	Almost Zero	117 seconds	7 seconds	47.2 lbs	10.5 min
Asahitec™ Solid Wall (PP-RCT)	3" (90mm) SDR7	69.7 lbs	1 mm	Almost Zero	138 seconds	7 seconds	69.7 lbs	12.3 min
Asahitec™ Solid Wall (PP-RCT)	4" (110mm) SDR7	103.4 lbs	1 mm	Almost Zero	166 seconds	8 seconds	103.4 lbs	14.7 min



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- ECTFE: 527°F - 536°F (275°C - 280°C)

A reduction in the cooling time of up to 50%, i.e. removal of the welded part from the welding machine, is permitted in the following circumstances:
 - the joint connection was created under workshop conditions and
 - the removal of the part from the welding machine and its temporary storage until the complete cooling time according to the Cooling Time column causes negligible loading of the joint

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Product Line & Material	Pipe Size	Initial Melt Pressure	Bead Height	Melt Pressure	Heatsoak Time	Changeover Time	Welding Pressure	Cooling Time
Chem Proline® (PE)	1/2" (20mm) SDR11	4.5 lbs	0.5 mm	Almost Zero	20 seconds	5 seconds	4.5 lbs	5.0 min
Chem Proline® (PE)	3/4" (25mm) SDR11	4.5 lbs	0.5 mm	Almost Zero	23 seconds	5 seconds	4.5 lbs	5.0 min
Chem Proline® (PE)	1" (32mm) SDR11	13.5 lbs	0.5 mm	Almost Zero	30 seconds	5 seconds	13.5 lbs	5.0 min
Chem Proline® (PE)	1-1/2" (50mm) SDR11	22.5 lbs	1 mm	Almost Zero	46 seconds	5 seconds	22.5 lbs	5.1 min
Chem Proline® (PE)	2" (63mm) SDR11	36.0 lbs	1 mm	Almost Zero	58 seconds	6 seconds	36.0 lbs	6.3 min
Chem Proline® (PE)	3" (90mm) SDR11	71.9 lbs	1.5 mm	Almost Zero	82 seconds	6 seconds	71.9 lbs	8.6 min
Chem Proline® (PE)	4" (110mm) SDR11	107.9 lbs	1.5 mm	Almost Zero	100 seconds	7 seconds	107.9 lbs	10.2 min
Chem Proline® (PE)	1/2" (20mm) SDR7	6.7 lbs	0.5 mm	Almost Zero	30 seconds	5 seconds	6.7 lbs	5.0 min
Chem Proline® (PE)	3/4" (25mm) SDR7	9.0 lbs	0.5 mm	Almost Zero	35 seconds	5 seconds	9.0 lbs	5.0 min
Climatec™ (PP-RCT)	1/2" (20mm) SDR7	4.5 lbs	0.5 mm	Almost Zero	33 seconds	5 seconds	4.5 lbs	5.0 min
Climatec™ (PP-RCT)	3/4" (25mm) SDR7	6.7 lbs	0.5 mm	Almost Zero	41 seconds	5 seconds	6.7 lbs	5.0 min
Climatec™ (PP-RCT)	1" (32mm) SDR9	9.0 lbs	0.5 mm	Almost Zero	42 seconds	5 seconds	9.0 lbs	5.0 min
Climatec™ (PP-RCT)	1-1/4" (40mm) SDR11	11.2 lbs	0.5 mm	Almost Zero	44 seconds	5 seconds	11.2 lbs	5.0 min



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A reduction in the cooling time of up to 50%, i.e. removal of the welded part from the welding machine, is permitted in the following circumstances:

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- the removal of the part from the welding machine and its temporary storage until the complete cooling time according to the Cooling Time column causes negligible loading of the joint

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Climatec™ (PP-RCT)	1-1/2" (50mm) SDR11	15.7 lbs	0.5 mm	Almost Zero	54 seconds	5 seconds	15.7 lbs	5.1 min
Climatec™ (PP-RCT)	2" (63mm) SDR11	24.7 lbs	0.5 mm	Almost Zero	68 seconds	6 seconds	24.7 lbs	6.3 min
Climatec™ (PP-RCT)	2-1/2" (75mm) SDR11	33.7 lbs	0.5 mm	Almost Zero	79 seconds	6 seconds	33.7 lbs	7.3 min
Climatec™ (PP-RCT)	3" (90mm) SDR11	49.5 lbs	1 mm	Almost Zero	94 seconds	6 seconds	49.5 lbs	8.6 min
Climatec™ (PP-RCT)	4" (110mm) SDR11	71.9 lbs	1 mm	Almost Zero	113 seconds	7 seconds	71.9 lbs	10.2 min
Proline® PRO150 (PP)	1/2" (20mm) SDR11	4.5 lbs	0.5 mm	Almost Zero	24 seconds	5 seconds	4.5 lbs	5.0 min
Proline® PRO150 (PP)	3/4" (25mm) SDR11	4.5 lbs	0.5 mm	Almost Zero	27 seconds	5 seconds	4.5 lbs	5.0 min
Proline® PRO150 (PP)	1" (32mm) SDR11	6.7 lbs	0.5 mm	Almost Zero	34 seconds	5 seconds	6.7 lbs	5.0 min
Proline® PRO150 (PP)	1-1/4" (40mm) SDR11	11.2 lbs	0.5 mm	Almost Zero	44 seconds	5 seconds	11.2 lbs	5.0 min
Proline® PRO150 (PP)	1-1/2" (50mm) SDR11	15.7 lbs	0.5 mm	Almost Zero	54 seconds	5 seconds	15.7 lbs	5.1 min
Proline® PRO150 (PP)	2" (63mm) SDR11	24.7 lbs	0.5 mm	Almost Zero	68 seconds	6 seconds	24.7 lbs	6.3 min
Proline® PRO150 (PP)	2-1/2" (75mm) SDR11	33.7 lbs	0.5 mm	Almost Zero	79 seconds	6 seconds	33.7 lbs	7.3 min
Proline® PRO150 (PP)	3" (90mm) SDR11	49.5 lbs	1 mm	Almost Zero	94 seconds	6 seconds	49.5 lbs	8.6 min



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 - the joint connection was created under workshop conditions and
 - the removal of the part from the welding machine and its temporary storage until the complete cooling time according to the Cooling Time column causes negligible loading of the joint

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Product Line & Material	Pipe Size	Initial Melt Pressure	Bead Height	Melt Pressure	Heatsoak Time	Changeover Time	Welding Pressure	Cooling Time
Proline® PRO150 (PP)	4" (110mm) SDR11	71.9 lbs	1 mm	Almost Zero	113 seconds	7 seconds	71.9 lbs	10.2 min
Proline® PRO90 (PP)	1-1/2" (50mm) SDR17.6	9.0 lbs	0.5 mm	Almost Zero	34 seconds	5 seconds	9.0 lbs	5.0 min
Proline® PRO90 (PP)	2" (63mm) SDR17.6	15.0 lbs	0.5 mm	Almost Zero	42 seconds	5 seconds	15.0 lbs	5.0 min
Proline® PRO90 (PP)	2-1/2" (75mm) SDR17.6	22.0 lbs	0.5 mm	Almost Zero	51 seconds	5 seconds	22.0 lbs	5.0 min
Proline® PRO90 (PP)	3" (90mm) SDR17.6	31.0 lbs	0.5 mm	Almost Zero	60 seconds	5 seconds	31.0 lbs	5.4 min
Proline® PRO90 (PP)	4" (110mm) SDR17.6	46.0 lbs	0.5 mm	Almost Zero	73 seconds	5 seconds	46.0 lbs	6.5 min
Proline® PRO45 (PP)	3" (90mm) SDR33	18.0 lbs	0.5 mm	Almost Zero	33 seconds	5 seconds	18.0 lbs	5.0 min
Proline® PRO45 (PP)	4" (110mm) SDR33	27.0 lbs	0.5 mm	Almost Zero	40 seconds	5 seconds	27.0 lbs	5.0 min
Super Proline® (PVDF)	1/2" (20mm) SDR21	3.0 lbs	0.5 mm	Almost Zero	59 seconds	3 seconds	3.0 lbs	4.5 min
Super Proline® (PVDF)	3/4" (25mm) SDR21	3.0 lbs	0.5 mm	Almost Zero	59 seconds	3 seconds	3.0 lbs	4.5 min
Super Proline® (PVDF)	1" (32mm) SDR21	5.0 lbs	0.5 mm	Almost Zero	64 seconds	3 seconds	5.0 lbs	5.0 min
Super Proline® (PVDF)	1-1/4" (40mm) SDR21	7.0 lbs	0.5 mm	Almost Zero	64 seconds	3 seconds	7.0 lbs	5.0 min
Super Proline® (PVDF)	1-1/2" (50mm) SDR21	10.0 lbs	0.5 mm	Almost Zero	70 seconds	3 seconds	10.0 lbs	5.5 min



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Super Proline® (PVDF)	2" (63mm) SDR21	13.0 lbs	0.5 mm	Almost Zero	70 seconds	3 seconds	13.0 lbs	5.5 min
Super Proline® (PVDF)	2-1/2" (75mm) SDR21	18.0 lbs	0.5 mm	Almost Zero	76 seconds	3 seconds	18.0 lbs	6.5 min
Super Proline® (PVDF)	3" (90mm) SDR21	26.0 lbs	0.5 mm	Almost Zero	83 seconds	3 seconds	26.0 lbs	7.0 min
Super Proline® (PVDF)	4" (110mm) SDR21	38.0 lbs	0.5 mm	Almost Zero	93 seconds	3 seconds	38.0 lbs	8.5 min
Super Proline® (PVDF)	3" (90mm) SDR33	17.0 lbs	0.5 mm	Almost Zero	68 seconds	3 seconds	17.0 lbs	5.5 min
Super Proline® (PVDF)	4" (110mm) SDR33	25.0 lbs	0.5 mm	Almost Zero	74 seconds	3 seconds	25.0 lbs	6.0 min
Ultra Proline® (ECTFE)	1/2" (20mm) SDR21	2.0 lbs	0.5 mm	Almost Zero	12 seconds	4 seconds	2.0 lbs	3.0 min
Ultra Proline® (ECTFE)	3/4" (25mm) SDR21	3.0 lbs	0.5 mm	Almost Zero	12 seconds	4 seconds	3.0 lbs	3.0 min
Ultra Proline® (ECTFE)	1" (32mm) SDR21	5.0 lbs	0.5 mm	Almost Zero	19 seconds	4 seconds	5.0 lbs	4.0 min
Ultra Proline® (ECTFE)	1-1/2" (50mm) SDR21	9.0 lbs	0.5 mm	Almost Zero	25 seconds	4 seconds	9.0 lbs	5.0 min
Ultra Proline® (ECTFE)	2" (63mm) SDR21	11.0 lbs	0.5 mm	Almost Zero	25 seconds	4 seconds	11.0 lbs	5.0 min
Ultra Proline® (ECTFE)	3" (90mm) SDR21	22.0 lbs	0.5 mm	Almost Zero	34 seconds	4 seconds	22.0 lbs	6.0 min
Ultra Proline® (ECTFE)	4" (110mm) SDR21	33.0 lbs	0.5 mm	Almost Zero	40 seconds	4 seconds	33.0 lbs	7.0 min



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Watertec™ (PP-RCT)	1/2" (20mm) SDR7	4.5 lbs	0.5 mm	Almost Zero	33 seconds	5 seconds	4.5 lbs	5.0 min
Watertec™ (PP-RCT)	3/4" (25mm) SDR7	6.7 lbs	0.5 mm	Almost Zero	41 seconds	5 seconds	6.7 lbs	5.0 min
Watertec™ (PP-RCT)	1" (32mm) SDR9	9.0 lbs	0.5 mm	Almost Zero	42 seconds	5 seconds	9.0 lbs	5.0 min
Watertec™ (PP-RCT)	1-1/4" (40mm) SDR9	13.5 lbs	0.5 mm	Almost Zero	53 seconds	5 seconds	13.5 lbs	5.0 min
Watertec™ (PP-RCT)	1-1/2" (50mm) SDR9	18.0 lbs	0.5 mm	Almost Zero	65 seconds	5 seconds	18.0 lbs	6.1 min
Watertec™ (PP-RCT)	2" (63mm) SDR9	29.2 lbs	1 mm	Almost Zero	82 seconds	6 seconds	29.2 lbs	7.6 min
Watertec™ (PP-RCT)	2-1/2" (75mm) SDR9	40.5 lbs	1 mm	Almost Zero	96 seconds	6 seconds	40.5 lbs	8.7 min
Watertec™ (PP-RCT)	3" (90mm) SDR9	58.5 lbs	1 mm	Almost Zero	114 seconds	7 seconds	58.5 lbs	10.3 min
Watertec™ (PP-RCT)	4" (110mm) SDR9	85.4 lbs	1 mm	Almost Zero	138 seconds	7 seconds	85.4 lbs	12.3 min
Chem Prolok® (PE)	1" X 3" (32mm X 90mm) SDR11X11	85.4 lbs	1.5 mm	Almost Zero	82 seconds	6 seconds	85.4 lbs	8.6 min
Chem Prolok® (PE)	2" X 4" (63mm X 110mm) SDR11X33	76.3 lbs	0.5 mm	Almost Zero	58 seconds	5 seconds	76.3 lbs	6.3 min
Chem Prolok® (PE)	1" X 4" (32mm X 110mm) SDR11X33	53.8 lbs	0.5 mm	Almost Zero	34 seconds	5 seconds	53.8 lbs	5.0 min
Duo-Pro® PRO150X150 (PP)	1" X 3" (32mm X 90mm) SDR11X11	56.2 lbs	1 mm	Almost Zero	94 seconds	6 seconds	56.2 lbs	8.6 min



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Duo-Pro® PRO150X150 (PP)	2" X 4" (63mm X 110mm) SDR11X11	96.7 lbs	1 mm	Almost Zero	113 seconds	7 seconds	96.7 lbs	10.2 min
Duo-Pro® PRO150X150 (PP)	1" X 4" (32mm X 110mm) SDR11X11	78.7 lbs	1 mm	Almost Zero	113 seconds	7 seconds	78.7 lbs	10.2 min
Duo-Pro® PRO150X45 (PP)	2" X 4" (63mm X 110mm) SDR11X33	33.7 lbs	0.5 mm	Almost Zero	68 seconds	5 seconds	33.7 lbs	5.0 min
Duo-Pro® PVDFXPVDF (PVDF)	1" X 3" (32mm X 90mm) SDR21X33	22.0 lbs	0.5 mm	Almost Zero	68 seconds	3 seconds	22.0 lbs	5.5 min
Duo-Pro® PVDFXPVDF (PVDF)	2" X 4" (63mm X 110mm) SDR21X33	38.0 lbs	0.5 mm	Almost Zero	74 seconds	3 seconds	38.0 lbs	6.0 min
Duo-Pro® PVDFXPVDF (PVDF)	1" X 4" (32mm X 110mm) SDR21X33	30.0 lbs	0.5 mm	Almost Zero	74 seconds	3 seconds	30.0 lbs	6.0 min
Fluidlok (IPS) (PE)	1" X 3" SDR11X11	79.0 lbs	1.5 mm	Almost Zero	81 seconds	5 seconds	79.0 lbs	16.0 min



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- the joint connection was created under workshop conditions and
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