

Acrobat 160

Welding Parameters

CURRENT AS OF
12/19/2024

Product Line & Material	Pipe Size	Initial Melt Pressure	Bead Height	Melt Pressure	Heatsoak Time	Changeover Time	Welding Pressure	Cooling Time
Air-Pro® (PE)	1-1/2" (50mm) SDR7	6.0 bar	1 mm	Almost Zero	69 seconds	6 seconds	6.0 bar	7.4 min
Air-Pro® (PE)	2" (63mm) SDR7	9.0 bar	1.5 mm	Almost Zero	86 seconds	7 seconds	9.0 bar	8.9 min
Air-Pro® (PE)	3" (90mm) SDR7	19.0 bar	2 mm	Almost Zero	123 seconds	8 seconds	19.0 bar	12.3 min
Air-Pro® (PE)	4" (110mm) SDR7	28.0 bar	2 mm	Almost Zero	151 seconds	9 seconds	28.0 bar	14.8 min
Air-Pro® (PE)	6" (160mm) SDR11	41.0 bar	2 mm	Almost Zero	146 seconds	9 seconds	41.0 bar	14.2 min
Chem Proline® (PE)	1-1/2" (50mm) SDR11	4.0 bar	1 mm	Almost Zero	46 seconds	5 seconds	4.0 bar	5.1 min
Chem Proline® (PE)	2" (63mm) SDR11	7.0 bar	1 mm	Almost Zero	58 seconds	6 seconds	7.0 bar	6.3 min
Chem Proline® (PE)	3" (90mm) SDR11	13.0 bar	1.5 mm	Almost Zero	82 seconds	6 seconds	13.0 bar	8.6 min
Chem Proline® (PE)	4" (110mm) SDR11	19.0 bar	1.5 mm	Almost Zero	100 seconds	7 seconds	19.0 bar	10.2 min
Chem Proline® (PE)	6" (160mm) SDR11	41.0 bar	2 mm	Almost Zero	146 seconds	9 seconds	41.0 bar	14.2 min
Proline® PRO150 (PP)	1-1/2" (50mm) SDR11	3.0 bar	0.5 mm	Almost Zero	54 seconds	5 seconds	3.0 bar	5.1 min
Proline® PRO150 (PP)	2" (63mm) SDR11	5.0 bar	0.5 mm	Almost Zero	68 seconds	6 seconds	5.0 bar	6.3 min
Proline® PRO150 (PP)	2-1/2" (75mm) SDR11	6.0 bar	0.5 mm	Almost Zero	79 seconds	6 seconds	6.0 bar	7.3 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

Acrobat 160

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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)	3" (90mm) SDR11	9.0 bar	1 mm	Almost Zero	94 seconds	6 seconds	9.0 bar	8.6 min
Proline® PRO150 (PP)	4" (110mm) SDR11	13.0 bar	1 mm	Almost Zero	113 seconds	7 seconds	13.0 bar	10.2 min
Proline® PRO150 (PP)	4-1/2" (125mm) SDR11	17.0 bar	1 mm	Almost Zero	129 seconds	7 seconds	17.0 bar	11.5 min
Proline® PRO150 (PP)	5" (140mm) SDR11	21.0 bar	1 mm	Almost Zero	142 seconds	7 seconds	21.0 bar	12.6 min
Proline® PRO150 (PP)	6" (160mm) SDR11	27.0 bar	1 mm	Almost Zero	161 seconds	8 seconds	27.0 bar	14.2 min
Proline® PRO90 (PP)	1-1/2" (50mm) SDR17.6	2.0 bar	0.5 mm	Almost Zero	34 seconds	5 seconds	2.0 bar	5.0 min
Proline® PRO90 (PP)	2" (63mm) SDR17.6	3.0 bar	0.5 mm	Almost Zero	42 seconds	5 seconds	3.0 bar	5.0 min
Proline® PRO90 (PP)	2-1/2" (75mm) SDR17.6	4.0 bar	0.5 mm	Almost Zero	51 seconds	5 seconds	4.0 bar	5.0 min
Proline® PRO90 (PP)	3" (90mm) SDR17.6	6.0 bar	0.5 mm	Almost Zero	60 seconds	5 seconds	6.0 bar	5.4 min
Proline® PRO90 (PP)	4" (110mm) SDR17.6	9.0 bar	0.5 mm	Almost Zero	73 seconds	6 seconds	9.0 bar	6.5 min
Proline® PRO90 (PP)	4-1/2" (125mm) SDR17.6	11.0 bar	0.5 mm	Almost Zero	82 seconds	6 seconds	11.0 bar	7.4 min
Proline® PRO90 (PP)	5" (140mm) SDR17.6	14.0 bar	0.5 mm	Almost Zero	92 seconds	6 seconds	14.0 bar	8.2 min
Proline® PRO90 (PP)	6" (160mm) SDR17.6	18.0 bar	0.5 mm	Almost Zero	104 seconds	6 seconds	18.0 bar	9.2 min

Welding Temperatures

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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

Acrobat 160

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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® PRO45 (PP)	4" (110mm) SDR33	5.0 bar	0.5 mm	Almost Zero	40 seconds	5 seconds	5.0 bar	5.0 min
Proline® PRO45 (PP)	4-1/2" (125mm) SDR33	6.0 bar	0.5 mm	Almost Zero	46 seconds	5 seconds	6.0 bar	5.0 min
Proline® PRO45 (PP)	5" (140mm) SDR33	8.0 bar	0.5 mm	Almost Zero	51 seconds	5 seconds	8.0 bar	5.0 min
Proline® PRO45 (PP)	6" (160mm) SDR33	10.0 bar	0.5 mm	Almost Zero	57 seconds	5 seconds	10.0 bar	5.0 min
Super Proline® (PVDF)	1-1/2" (50mm) SDR21	2.0 bar	0.5 mm	Almost Zero	70 seconds	3 seconds	2.0 bar	5.5 min
Super Proline® (PVDF)	2" (63mm) SDR21	3.0 bar	0.5 mm	Almost Zero	70 seconds	3 seconds	3.0 bar	5.5 min
Super Proline® (PVDF)	2-1/2" (75mm) SDR21	4.0 bar	0.5 mm	Almost Zero	76 seconds	3 seconds	4.0 bar	6.5 min
Super Proline® (PVDF)	3" (90mm) SDR21	5.0 bar	0.5 mm	Almost Zero	83 seconds	3 seconds	5.0 bar	7.0 min
Super Proline® (PVDF)	4" (110mm) SDR21	7.0 bar	0.5 mm	Almost Zero	93 seconds	3 seconds	7.0 bar	8.5 min
Super Proline® (PVDF)	6" (160mm) SDR21	15.0 bar	0.7 mm	Almost Zero	117 seconds	4 seconds	15.0 bar	11.0 min
Super Proline® (PVDF)	3" (90mm) SDR33	4.0 bar	0.5 mm	Almost Zero	68 seconds	3 seconds	4.0 bar	5.5 min
Super Proline® (PVDF)	4" (110mm) SDR33	5.0 bar	0.5 mm	Almost Zero	74 seconds	3 seconds	5.0 bar	6.0 min
Super Proline® (PVDF)	6" (160mm) SDR33	10.0 bar	0.5 mm	Almost Zero	89 seconds	3 seconds	10.0 bar	8.0 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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Product Line & Material	Pipe Size	Initial Melt Pressure	Bead Height	Melt Pressure	Heatsoak Time	Changeover Time	Welding Pressure	Cooling Time
Chem Prolok® (PE)	2" X 4" (63mm X 110mm) SDR11X33	14.0 bar	0.5 mm	Almost Zero	34 seconds	58 seconds	14.0 bar	7.0 min
Chem Prolok® (PE)	3" X 6" (90mm X 160mm) SDR11X33	28.0 bar	1 mm	Almost Zero	49 seconds	82 seconds	28.0 bar	13.0 min
Chem Prolok® (PE)	2" X 6" (63mm X 160mm) SDR11X33	22.0 bar	1 mm	Almost Zero	49 seconds	58 seconds	22.0 bar	7.0 min
Duo-Pro® PRO150X150 (PP)	1" X 3" (32mm X 90mm) SDR11X11	9.5 bar	1 mm	Almost Zero	94 seconds	7 seconds	9.5 bar	6.0 min
Duo-Pro® PRO150X150 (PP)	1" X 4" (32mm X 110mm) SDR11X11	13.6 bar	1 mm	Almost Zero	113 seconds	7 seconds	13.6 bar	6.0 min
Duo-Pro® PRO150X150 (PP)	2" X 4" (63mm X 110mm) SDR11X11	18.0 bar	1 mm	Almost Zero	113 seconds	68 seconds	18.0 bar	10.2 min
Duo-Pro® PRO150X150 (PP)	3" X 6" (90mm X 160mm) SDR11X11	36.0 bar	1 mm	Almost Zero	161 seconds	94 seconds	36.0 bar	14.2 min
Duo-Pro® PRO150X150 (PP)	2" X 6" (63mm X 160mm) SDR11X11	32.0 bar	1 mm	Almost Zero	161 seconds	68 seconds	32.0 bar	14.2 min
Duo-Pro® PRO150X45 (PP)	2" X 4" (63mm X 110mm) SDR11X33	10.0 bar	0.5 mm	Almost Zero	68 seconds	68 seconds	10.0 bar	5.0 min
Duo-Pro® PRO150X45 (PP)	3" X 6" (90mm X 160mm) SDR11X33	19.0 bar	0.5 mm	Almost Zero	94 seconds	94 seconds	19.0 bar	9.0 min
Duo-Pro® PRO150X45 (PP)	2" X 6" (63mm X 160mm) SDR11X33	15.0 bar	0.5 mm	Almost Zero	68 seconds	68 seconds	15.0 bar	5.0 min
Duo-Pro® PVDFXPVDF (PVDF)	1" X 3" (32mm X 90mm) SDR21X33	4.0 bar	0.5 mm	Almost Zero	68 seconds	3 seconds	4.0 bar	5.5 min
Duo-Pro® PVDFXPVDF (PVDF)	1" X 4" (32mm X 110mm) SDR21X33	5.5 bar	0.5 mm	Almost Zero	74 seconds	3 seconds	38.0 bar	6.0 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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Duo-Pro® PVDFXPVDF (PVDF)	2" X 4" (63mm X 110mm) SDR21X33	8.0 bar	0.5 mm	Almost Zero	74 seconds	70 seconds	8.0 bar	6.0 min
Duo-Pro® PVDFXPVDF (PVDF)	3" X 6" (90mm X 160mm) SDR33X33	14.0 bar	0.5 mm	Almost Zero	89 seconds	68 seconds	14.0 bar	8.0 min
Duo-Pro® PVDFXPVDF (PVDF)	2" X 6" (63mm X 160mm) SDR21X33	13.0 bar	0.5 mm	Almost Zero	89 seconds	70 seconds	13.0 bar	8.0 min
Duo-Pro® Halar®XHalar® (ECTFE)	1" X 3" (32mm X 90mm) SDR21X21	4.7 bar	0.5 mm	Almost Zero	34 seconds	4 seconds	4.7 bar	6.0 min
Duo-Pro® Halar®XHalar® (ECTFE)	1" X 4" (32mm X 110mm) SDR21X21	6.7 bar	0.5 mm	Almost Zero	40 seconds	4 seconds	6.7 bar	6.0 min
Duo-Pro® Halar®XHalar® (ECTFE)	2" X 4" (63mm X 110mm) SDR21X21	7.9 bar	0.5 mm	Almost Zero	40 seconds	4 seconds	7.9 bar	7.0 min
Duo-Pro® Halar®XHalar® (ECTFE)	3" X 6" (90mm X 160mm) SDR21X21	16.5 bar	0.5 mm	Almost Zero	50 seconds	4 seconds	16.5 bar	10.0 min
Fluidlok (IPS) (PE)	2" X 4" SDR11X17	19.0 bar	mm	Almost Zero	67 seconds	3 seconds	19.0 bar	10.0 min
Poly-Flo® PE100RC (PE)	2" X 3" (63mm X 90mm) SDR11X17	6.6 bar	1 mm	Almost Zero	35 seconds	5 seconds	6.6 bar	8.0 min
Poly-Flo® PE100RC (PE)	4" X 6" (110mm X 160mm) SDR11X17	22.5 bar	1.5 mm	Almost Zero	80 seconds	7 seconds	22.5 bar	14.0 min
Poly-Flo® PPR (PP)	2" X 3" (63mm X 90mm) SDR11X17	6.1 bar	0.5 mm	Almost Zero	80 seconds	6 seconds	6.1 bar	9.0 min
Poly-Flo® PPR (PP)	4" X 6" (110mm X 160mm) SDR11X17	18.7 bar	1 mm	Almost Zero	150 seconds	7 seconds	18.7 bar	17.0 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:

- 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