



TURBOLP312-355 - LOW PRESSURE				
Reference: ASTM F 2620 (Standard)				
Welding ranges:	3" 4" 6" 8" 10" 12" IPS			1 Mpa= 145 PSI = 10 Bar = 1 N/mm ²
Pressure ranges:	913.7 PSI	6.3 Mpa	63 Bar	1mm=0.1cm=0.03937In=0.001217In ²
Cylinder Area:	3.1 In ²	20 cm ²	TEPA	1mm ² = 0.01 cm ² = 0.00155 In ²
IFP:	75 PSI	0.517 Mpa	Obtain a copy of the pipe manufacturer's Welding Parameters for the appropriate joining standard for the pipe being fused.	
Material:	HDPE			

Note: Add the (DRAG) 30 PSI = 0.20 Mpa = 0.20 N/mm² = 20.68 N/cm²

Drag pressure is the pressure to overcome the friction during machine carriage movement. It should be added to the total fusion pressure.

This machine has a max pressure of 913.7 PSI and a cylinder area of 3.1 In² if the pipe to weld exceed the max pressure, you need to use a higher pressure machine, which has more force due to a larger cylinder area.

Remember, the lower the pipe SDR the thicker the wall, which means more pressure to melt and more time to weld.

+ 30 PSI

Pipe Size	OD	Wall Thickness	SDR	Heater Temp	P1		P2	T2	T3	T4	P5	T5
					Bead Up Force	(+30PSI Drag)	Heat Soak Force	Heat Soak time	Remove Heating tool	Start Fusion	Fuse/Cool Force	Cooling time
					PSI	PSI	PSI	S	S	S	PSI	Min
12	12.8	1.82	7	450	1512	1542	30	19	4	4	1512	0.8
12	12.8	1.42	9	450	1220	1250	30	15	4	4	1220	0.6
12	12.8	1.16	11	450	1021	1051	30	12	4	4	1021	0.5
12	12.8	0.94	13.5	450	847	877	30	10	4	4	847	0.4
12	12.8	0.75	17	450	684	714	30	8	4	4	684	0.3
12	12.8	0.61	21	450	560	590	30	6	4	4	560	0.3
12	12.8	0.49	26	450	457	487	30	5	4	4	457	0.2
12	12.8	0.39	32.5	450	368	398	30	4	4	4	368	0.2

Pipe Size	OD	Wall Thickness	SDR	Heater Temp	P1		P2	T2	T3	T4	P5	T5
					Bead Up Force	(+30PSI Drag)	Heat Soak Force	Heat Soak time	Remove Heating tool	Start Fusion	Fuse/Cool Force	Cooling time
					PSI	PSI	PSI	S	S	S	PSI	Min
10	10.8	1.54	7	450	1075	1105	30	16	4	4	1075	0.7
10	10.8	1.19	9	450	867	897	30	13	4	4	867	0.5
10	10.8	0.98	11	450	726	756	30	10	4	4	726	0.4
10	10.8	0.80	13.5	450	602	632	30	8	4	4	602	0.3
10	10.8	0.63	17	450	486	516	30	7	4	4	486	0.3
10	10.8	0.51	21	450	398	428	30	5	4	4	398	0.2
10	10.8	0.41	26	450	325	355	30	4	4	4	325	0.2
10	10.8	0.33	32.5	450	262	292	30	4	4	4	262	0.1



WELDING PARAMETERS

HAYES FUSION

+ 30 PSI

		P1					P2	T2	T3	T4	P5	T5
Pipe Size	OD	Wall Thickness	SDR	Heater Temp	Bead Up Force	(+30PSI Drag)	Heat Soak Force	Heat Soak time	Remove Heating tool	Start Fusion	Fuse/Cool Force	Cooling time
Inch	Inch	mm	SDR	°F	PSI	PSI	PSI	S	S	S	PSI	Min
8	8.63	1.23	7	450	693	723	30	13	4	4	693	0.5
8	8.63	0.96	9	450	559	589	30	10	4	4	559	0.4
8	8.63	0.78	11	450	468	498	30	8	4	4	468	0.3
8	8.63	0.64	13.5	450	388	418	30	7	4	4	388	0.3
8	8.63	0.51	17	450	313	343	30	5	4	4	313	0.2
8	8.63	0.41	21	450	257	287	30	4	4	4	257	0.2
8	8.63	0.33	26	450	209	239	30	4	4	4	209	0.1
8	8.63	0.27	32.5	450	169	199	30	3	4	4	169	0.1

+ 30 PSI

		P1					P2	T2	T3	T4	P5	T5
Pipe Size	OD	Wall Thickness	SDR	Heater Temp	Bead Up Force	(+30PSI Drag)	Heat Soak Force	Heat Soak time	Remove Heating tool	Start Fusion	Fuse/Cool Force	Cooling time
Inch	Inch	mm	SDR	°F	PSI	PSI	PSI	S	S	S	PSI	Min
6	6.63	0.95	7	450	409	439	30	10	4	4	409	0.4
6	6.63	0.74	9	450	330	360	30	8	4	4	330	0.3
6	6.63	0.60	11	450	276	306	30	6	4	4	276	0.3
6	6.63	0.49	13.5	450	229	259	30	5	4	4	229	0.2
6	6.63	0.39	17	450	185	215	30	4	4	4	185	0.2
6	6.63	0.32	21	450	151	181	30	3	4	4	151	0.1
6	6.63	0.26	26	450	123	153	30	3	4	4	123	0.1
6	6.63	0.20	32.5	450	100	130	30	2	4	4	100	0.1

+ 30 PSI

		P1					P2	T2	T3	T4	P5	T5
Pipe Size	OD	Wall Thickness	SDR	Heater Temp	Bead Up Force	(+30PSI Drag)	Heat Soak Force	Heat Soak time	Remove Heating tool	Start Fusion	Fuse/Cool Force	Cooling time
Inch	Inch	mm	SDR	°F	PSI	PSI	PSI	S	S	S	PSI	Min
4	4.5	0.64	7	450	188	218	30	7	4	4	188	0.3
4	4.5	0.50	9	450	152	182	30	5	4	4	152	0.2
4	4.5	0.41	11	450	127	157	30	4	4	4	127	0.2
4	4.5	0.33	13.5	450	106	136	30	4	4	4	106	0.1
4	4.5	0.26	17	450	85	115	30	3	4	4	85	0.1
4	4.5	0.21	21	450	70	100	30	2	4	4	70	0.1
4	4.5	0.17	26	450	57	87	30	2	4	4	57	0.1
4	4.5	0.14	32.5	450	46	76	30	1	4	4	46	0.1



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					Bead Up Force	(+30PSI Drag)	Heat Soak Force	Heat Soak time	Remove Heating tool	Start Fusion	Fuse/Cool Force	Cooling time
Inch	Inch	mm	SDR	°F	PSI	PSI	PSI	S	S	S	PSI	Min
3	3.5	0.50	7	450	114	144	30	5	4	4	114	0.2
3	3.5	0.39	9	450	92	122	30	4	4	4	92	0.2
3	3.5	0.32	11	450	77	107	30	3	4	4	77	0.1
3	3.5	0.26	13.5	450	64	94	30	3	4	4	64	0.1
3	3.5	0.21	17	450	52	82	30	2	4	4	52	0.1
3	3.5	0.17	21	450	42	72	30	2	4	4	42	0.1
3	3.5	0.13	26	450	34	64	30	1	4	4	34	0.1
3	3.5	0.11	32.5	450	28	58	30	1	4	4	28	0.0