



Saemin Electronics Industries Corp.

HEAD OFFICE : #926-2 WHAGOG-DONG GANGSEO-GU SEOUL, KOREA.

Tel : 82-2-2696-8848 Fax : 82-2-2601-1496

URL <http://www.selding.com> E-mail : selding@selding.com

ISO 9001 Registered

AUTOMATIC & MANUAL BUTT FUSION MACHINE / ELECTRO FUSION PROCESSOR

SDR- 5		Units	Remark	ISO - SDR5.0-HDPE															
Cylinder area(Ac)	cm ²	7.22																	
Spec	mm			50	63	75	90	110	125	140	160	180	200	225	250	280	315		
Out dia(Od)	mm			50	63	75	90	110	125	140	160	180	200	225	250	280	315		
Thickness(t)	mm	Od/SDR		10.0	12.6	15.0	18.0	22.0	25.0	28.0	32.0	36.0	40.0	45.0	50.0	56.0	63.0		
In dia(Id)	mm	Od-t*2		30.0	37.8	45.0	54.0	66.0	75.0	84.0	96.0	108.0	120.0	135.0	150.0	168.0	189.0		
Area(Ar)	cm ²			12.6	19.9	28.3	40.7	60.8	78.5	98.5	128.6	162.8	201.0	254.3	314.0	393.9	498.5		
Heater Temp																			
-9	°C			210<215<220															
10-22	°C			205<210<215															
23-	°C			200<205<210															
Forming bead	Kg/cm ²	Ar*1.5/Ac		2.6	4.1	5.9	8.5	12.6	16.3	20.5	26.7	33.8	41.8	52.8	65.2	81.8	103.6		
Forming bead	sec	Ht*0.25		30.0	37.8	45.0	54.0	66.0	75.0	84.0	96.0	108.0	120.0	135.0	150.0	168.0	189.0		
Heating(Hp)	Kg/cm ²	Ar*0.1/Ac		0.2	0.3	0.4	0.6	0.8	1.1	1.4	1.8	2.3	2.8	3.5	4.3	5.5	6.9		
Heating(Ht)	sec	12t		120.0	151.2	180.0	216.0	264.0	300.0	336.0	384.0	432.0	480.0	540.0	600.0	672.0	756.0		
Remove Heater	sec	3+0.02Od		4.0	4.3	4.5	4.8	5.2	5.5	5.8	6.2	6.6	7.0	7.5	8.0	8.6	9.3		
Fusing	Kg/cm ²			same to forming bead															
Fusing	sec	(3+t)*0.8		10.4	12.5	14.4	16.8	20.0	22.4	24.8	28.0	31.2	34.4	38.4	42.4	47.2	52.8		
Cooling	Kg/cm ²			same to forming bead															
Cooling Time				10MINUTE <= COOLING TIME <= 35MINUTE															
-9	sec	0.8		576	726	864	1037	1267	1440	1613	1843	2074	2304	2592	2880	3226	3629		
10-22	sec	0.9		648	816	972	1166	1426	1620	1814	2074	2333	2592	2916	3240	3629	4082		
23-	sec	1.2t		720	907	1080	1296	1584	1800	2016	2304	2592	2880	3240	3600	4032	4536		



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SDR- 6	Units	Remark	ISO - SDR6.0-HDPE													
Cylinder area(Ac)	cm ²	7.22														
Spec	mm		50	63	75	90	110	125	140	160	180	200	225	250	280	315
Out dia(Od)	mm		50	63	75	90	110	125	140	160	180	200	225	250	280	315
Thickness(t)	mm	Od/SDR	8.3	10.5	12.5	15.0	18.3	20.8	23.3	26.7	30.0	33.3	37.5	41.7	46.7	52.5
In dia(Id)	mm	Od-t*2	33.3	42.0	50.0	60.0	73.3	83.3	93.3	106.7	120.0	133.3	150.0	166.7	186.7	210.0
Area(Ar)	cm ²		10.9	17.3	24.5	35.3	52.8	68.1	85.5	111.6	141.3	174.4	220.8	272.6	341.9	432.7
Heater Temp																
-9	°C		210<215<220													
10-22	°C		205<210<215													
23-	°C		200<205<210													
Forming bead	Kg/cm ²	Ar*1.5/Ac	2.3	3.6	5.1	7.3	11.0	14.2	17.8	23.2	29.4	36.2	45.9	56.6	71.0	89.9
Forming bead	sec	Ht*0.25	25.0	31.5	37.5	45.0	55.0	62.5	70.0	80.0	90.0	100.0	112.5	125.0	140.0	157.5
Heating(Hp)	Kg/cm ²	Ar*0.1/Ac	0.2	0.2	0.3	0.5	0.7	0.9	1.2	1.5	2.0	2.4	3.1	3.8	4.7	6.0
Heating(Ht)	sec	12t	100.0	126.0	150.0	180.0	220.0	250.0	280.0	320.0	360.0	400.0	450.0	500.0	560.0	630.0
Remove Heater	sec	3+0.02Od	4.0	4.3	4.5	4.8	5.2	5.5	5.8	6.2	6.6	7.0	7.5	8.0	8.6	9.3
Fusing	Kg/cm ²		same to forming bead													
Fusing	sec	(3+t)*0.8	9.1	10.8	12.4	14.4	17.1	19.1	21.1	23.7	26.4	29.1	32.4	35.7	39.7	44.4
Cooling	Kg/cm ²		same to forming bead													
Cooling Time			10MINUTE <= COOLING TIME <= 35MINUTE													
-9	sec	0.8	480	605	720	864	1056	1200	1344	1536	1728	1920	2160	2400	2688	3024
10-22	sec	0.9	540	680	810	972	1188	1350	1512	1728	1944	2160	2430	2700	3024	3402
23-	sec	1.2t	600	756	900	1080	1320	1500	1680	1920	2160	2400	2700	3000	3360	3780



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SDR- 7	Units	Remark	ISO - SDR7.0-HDPE													
Cylinder area(Ac)	cm ²	7.22														
Spec	mm		50	63	75	90	110	125	140	160	180	200	225	250	280	315
Out dia(Od)	mm		50	63	75	90	110	125	140	160	180	200	225	250	280	315
Thickness(t)	mm	Od/SDR	7.1	9.0	10.7	12.9	15.7	17.9	20.0	22.9	25.7	28.6	32.1	35.7	40.0	45.0
In dia(Id)	mm	Od-t*2	35.7	45.0	53.6	64.3	78.6	89.3	100.0	114.3	128.6	142.9	160.7	178.6	200.0	225.0
Area(Ar)	cm ²		9.6	15.3	21.6	31.1	46.5	60.1	75.4	98.4	124.6	153.8	194.6	240.3	301.4	381.5
Heater Temp																
-9	°C		210<215<220													
10-22	°C		205<210<215													
23-	°C		200<205<210													
Forming bead	Kg/cm ²	Ar*1.5/Ac	2.0	3.2	4.5	6.5	9.7	12.5	15.7	20.4	25.9	32.0	40.4	49.9	62.6	79.3
Forming bead	sec	Ht*0.25	21.4	27.0	32.1	38.6	47.1	53.6	60.0	68.6	77.1	85.7	96.4	107.1	120.0	135.0
Heating(Hp)	Kg/cm ²	Ar*0.1/Ac	0.1	0.2	0.3	0.4	0.6	0.8	1.0	1.4	1.7	2.1	2.7	3.3	4.2	5.3
Heating(Ht)	sec	12t	85.7	108.0	128.6	154.3	188.6	214.3	240.0	274.3	308.6	342.9	385.7	428.6	480.0	540.0
Remove Heater	sec	3+0.02Od	4.0	4.3	4.5	4.8	5.2	5.5	5.8	6.2	6.6	7.0	7.5	8.0	8.6	9.3
Fusing	Kg/cm ²		same to forming bead													
Fusing	sec	(3+t)*0.8	8.1	9.6	11.0	12.7	15.0	16.7	18.4	20.7	23.0	25.3	28.1	31.0	34.4	38.4
Cooling	Kg/cm ²		same to forming bead													
Cooling Time			10MINUTE <= COOLING TIME <= 35MINUTE													
-9	sec	0.8	411	518	617	741	905	1029	1152	1317	1481	1646	1851	2057	2304	2592
10-22	sec	0.9	463	583	694	833	1018	1157	1296	1481	1666	1851	2083	2314	2592	2916
23-	sec	1.2t	514	648	771	926	1131	1286	1440	1646	1851	2057	2314	2571	2880	3240



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SDR- 7.4	Units	Remark	ISO - SDR7.4-HDPE													
Cylinder area(Ac)	cm ²	7.22														
Spec	mm		50	63	75	90	110	125	140	160	180	200	225	250	280	315
Out dia(Od)	mm		50	63	75	90	110	125	140	160	180	200	225	250	280	315
Thickness(t)	mm	Od/SDR	6.8	8.5	10.1	12.2	14.9	16.9	18.9	21.6	24.3	27.0	30.4	33.8	37.8	42.6
In dia(Id)	mm	Od-t*2	36.5	46.0	54.7	65.7	80.3	91.2	102.2	116.8	131.4	145.9	164.2	182.4	204.3	229.9
Area(Ar)	cm ²		9.2	14.6	20.6	29.7	44.4	57.3	71.9	93.9	118.9	146.8	185.8	229.4	287.7	364.1
Heater Temp																
-9	°C		210<215<220													
10-22	°C		205<210<215													
23-	°C		200<205<210													
Forming bead	Kg/cm ²	Ar*1.5/Ac	1.9	3.0	4.3	6.2	9.2	11.9	14.9	19.5	24.7	30.5	38.6	47.7	59.8	75.7
Forming bead	sec	Ht*0.25	20.3	25.5	30.4	36.5	44.6	50.7	56.8	64.9	73.0	81.1	91.2	101.4	113.5	127.7
Heating(Hp)	Kg/cm ²	Ar*0.1/Ac	0.1	0.2	0.3	0.4	0.6	0.8	1.0	1.3	1.6	2.0	2.6	3.2	4.0	5.0
Heating(Ht)	sec	12t	81.1	102.2	121.6	145.9	178.4	202.7	227.0	259.5	291.9	324.3	364.9	405.4	454.1	510.8
Remove Heater	sec	3+0.02Od	4.0	4.3	4.5	4.8	5.2	5.5	5.8	6.2	6.6	7.0	7.5	8.0	8.6	9.3
Fusing	Kg/cm ²		same to forming bead													
Fusing	sec	(3+t)*0.8	7.8	9.2	10.5	12.1	14.3	15.9	17.5	19.7	21.9	24.0	26.7	29.4	32.7	36.5
Cooling	Kg/cm ²		same to forming bead													
Cooling Time			10MINUTE <= COOLING TIME <= 35MINUTE													
-9	sec	0.8	389	490	584	701	856	973	1090	1245	1401	1557	1751	1946	2179	2452
10-22	sec	0.9	438	552	657	788	963	1095	1226	1401	1576	1751	1970	2189	2452	2758
23-	sec	1.2t	486	613	730	876	1070	1216	1362	1557	1751	1946	2189	2432	2724	3065



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SDR- 9		Units	Remark	ISO - SDR9.0-HDPE													
Cylinder area(Ac)	cm ²		7.22														
Spec	mm			50	63	75	90	110	125	140	160	180	200	225	250	280	315
Out dia(Od)	mm			50	63	75	90	110	125	140	160	180	200	225	250	280	315
Thickness(t)	mm	Od/SDR		5.6	7.0	8.3	10.0	12.2	13.9	15.6	17.8	20.0	22.2	25.0	27.8	31.1	35.0
In dia(Id)	mm	Od-t*2		38.9	49.0	58.3	70.0	85.6	97.2	108.9	124.4	140.0	155.6	175.0	194.4	217.8	245.0
Area(Ar)	cm ²			7.8	12.3	17.4	25.1	37.5	48.5	60.8	79.4	100.5	124.0	157.0	193.8	243.1	307.7
Heater Temp																	
-9	°C			210<215<220													
10-22	°C			205<210<215													
23-	°C			200<205<210													
Forming bead	Kg/cm ²	Ar*1.5/Ac		1.6	2.6	3.6	5.2	7.8	10.1	12.6	16.5	20.9	25.8	32.6	40.3	50.5	63.9
Forming bead	sec	Ht*0.25		16.7	21.0	25.0	30.0	36.7	41.7	46.7	53.3	60.0	66.7	75.0	83.3	93.3	105.0
Heating(Hp)	Kg/cm ²	Ar*0.1/Ac		0.1	0.2	0.2	0.3	0.5	0.7	0.8	1.1	1.4	1.7	2.2	2.7	3.4	4.3
Heating(Ht)	sec	12t		66.7	84.0	100.0	120.0	146.7	166.7	186.7	213.3	240.0	266.7	300.0	333.3	373.3	420.0
Remove Heater	sec	3+0.02Od		4.0	4.3	4.5	4.8	5.2	5.5	5.8	6.2	6.6	7.0	7.5	8.0	8.6	9.3
Fusing	Kg/cm ²			same to forming bead													
Fusing	sec	(3+t)*0.8		6.8	8.0	9.1	10.4	12.2	13.5	14.8	16.6	18.4	20.2	22.4	24.6	27.3	30.4
Cooling	Kg/cm ²			same to forming bead													
Cooling Time				10MINUTE <= COOLING TIME <= 35MINUTE													
-9	sec	0.8		320	403	480	576	704	800	896	1024	1152	1280	1440	1600	1792	2016
10-22	sec	0.9		360	454	540	648	792	900	1008	1152	1296	1440	1620	1800	2016	2268
23-	sec	1.2t		400	504	600	720	880	1000	1120	1280	1440	1600	1800	2000	2240	2520



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SDR- 11		Units	Remark	ISO - SDR11.0-HDPE														
Cylinder area(Ac)	cm ²	7.22																
Spec	mm			50	63	75	90	110	125	140	160	180	200	225	250	280	315	
Out dia(Od)	mm			50	63	75	90	110	125	140	160	180	200	225	250	280	315	
Thickness(t)	mm	Od/SDR		4.5	5.7	6.8	8.2	10.0	11.4	12.7	14.5	16.4	18.2	20.5	22.7	25.5	28.6	
In dia(Id)	mm	Od-t*2		40.9	51.5	61.4	73.6	90.0	102.3	114.5	130.9	147.3	163.6	184.1	204.5	229.1	257.7	
Area(Ar)	cm ²			6.5	10.3	14.6	21.0	31.4	40.5	50.9	66.4	84.1	103.8	131.4	162.2	203.5	257.5	
Heater Temp																		
-9	°C			210<215<220														
10-22	°C			205<210<215														
23-	°C			200<205<210														
Forming bead	Kg/cm ²	Ar*1.5/Ac		1.3	2.1	3.0	4.4	6.5	8.4	10.6	13.8	17.5	21.6	27.3	33.7	42.3	53.5	
Forming bead	sec	Ht*0.25		13.6	17.2	20.5	24.5	30.0	34.1	38.2	43.6	49.1	54.5	61.4	68.2	76.4	85.9	
Heating(Hp)	Kg/cm ²	Ar*0.1/Ac		0.1	0.1	0.2	0.3	0.4	0.6	0.7	0.9	1.2	1.4	1.8	2.2	2.8	3.6	
Heating(Ht)	sec	12t		54.5	68.7	81.8	98.2	120.0	136.4	152.7	174.5	196.4	218.2	245.5	272.7	305.5	343.6	
Remove Heater	sec	3+0.02Od		4.0	4.3	4.5	4.8	5.2	5.5	5.8	6.2	6.6	7.0	7.5	8.0	8.6	9.3	
Fusing	Kg/cm ²			same to forming bead														
Fusing	sec	(3+t)*0.8		6.0	7.0	7.9	8.9	10.4	11.5	12.6	14.0	15.5	16.9	18.8	20.6	22.8	25.3	
Cooling	Kg/cm ²			same to forming bead														
Cooling Time				10MINUTE <= COOLING TIME <= 35MINUTE														
-9	sec	0.8		262	330	393	471	576	655	733	838	943	1047	1178	1309	1466	1649	
10-22	sec	0.9		295	371	442	530	648	736	825	943	1060	1178	1325	1473	1649	1856	
23-	sec	1.2t		327	412	491	589	720	818	916	1047	1178	1309	1473	1636	1833	2062	



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SDR- 13.6		Units	Remark	ISO - SDR13.6-HDPE													
Cylinder area(Ac)	cm ²		7.22														
Spec	mm			50	63	75	90	110	125	140	160	180	200	225	250	280	315
Out dia(Od)	mm			50	63	75	90	110	125	140	160	180	200	225	250	280	315
Thickness(t)	mm	Od/SDR		3.7	4.6	5.5	6.6	8.1	9.2	10.3	11.8	13.2	14.7	16.5	18.4	20.6	23.2
In dia(Id)	mm	Od-t*2		42.6	53.7	64.0	76.8	93.8	106.6	119.4	136.5	153.5	170.6	191.9	213.2	238.8	268.7
Area(Ar)	cm ²			5.3	8.5	12.0	17.3	25.9	33.4	41.9	54.8	69.3	85.6	108.3	133.7	167.7	212.2
Heater Temp																	
-9	°C			210<215<220													
10-22	°C			205<210<215													
23-	°C			200<205<210													
Forming bead	Kg/cm ²	Ar*1.5/Ac		1.1	1.8	2.5	3.6	5.4	6.9	8.7	11.4	14.4	17.8	22.5	27.8	34.8	44.1
Forming bead	sec	Ht*0.25		11.0	13.9	16.5	19.9	24.3	27.6	30.9	35.3	39.7	44.1	49.6	55.1	61.8	69.5
Heating(Hp)	Kg/cm ²	Ar*0.1/Ac		0.1	0.1	0.2	0.2	0.4	0.5	0.6	0.8	1.0	1.2	1.5	1.9	2.3	2.9
Heating(Ht)	sec	12t		44.1	55.6	66.2	79.4	97.1	110.3	123.5	141.2	158.8	176.5	198.5	220.6	247.1	277.9
Remove Heater	sec	3+0.02Od		4.0	4.3	4.5	4.8	5.2	5.5	5.8	6.2	6.6	7.0	7.5	8.0	8.6	9.3
Fusing	Kg/cm ²			same to forming bead													
Fusing	sec	(3+t)*0.8		5.3	6.1	6.8	7.7	8.9	9.8	10.6	11.8	13.0	14.2	15.6	17.1	18.9	20.9
Cooling	Kg/cm ²			same to forming bead													
Cooling Time				10MINUTE <= COOLING TIME <= 35MINUTE													
-9	sec	0.8		212	267	318	381	466	529	593	678	762	847	953	1059	1186	1334
10-22	sec	0.9		238	300	357	429	524	596	667	762	858	953	1072	1191	1334	1501
23-	sec	1.2t		265	334	397	476	582	662	741	847	953	1059	1191	1324	1482	1668



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AUTOMATIC & MANUAL BUTT FUSION MACHINE / ELECTRO FUSION PROCESSOR

SDR- 15.5			ISO - SDR15.5-HDPE													
Cylinder area(Ac)	Units	Remark														
	cm ²	7.22														
Spec	mm		50	63	75	90	110	125	140	160	180	200	225	250	280	315
Out dia(Od)	mm		50	63	75	90	110	125	140	160	180	200	225	250	280	315
Thickness(t)	mm	Od/SDR	3.2	4.1	4.8	5.8	7.1	8.1	9.0	10.3	11.6	12.9	14.5	16.1	18.1	20.3
In dia(Id)	mm	Od-t*2	43.5	54.9	65.3	78.4	95.8	108.9	121.9	139.4	156.8	174.2	196.0	217.7	243.9	274.4
Area(Ar)	cm ²		4.7	7.5	10.7	15.4	22.9	29.6	37.1	48.5	61.4	75.8	95.9	118.4	148.6	188.0
Heater Temp																
-9	°C		210<215<220													
10-22	°C		205<210<215													
23-	°C		200<205<210													
Forming bead	Kg/cm ²	Ar*1.5/Ac	1.0	1.6	2.2	3.2	4.8	6.2	7.7	10.1	12.8	15.7	19.9	24.6	30.9	39.1
Forming bead	sec	Ht*0.25	9.7	12.2	14.5	17.4	21.3	24.2	27.1	31.0	34.8	38.7	43.5	48.4	54.2	61.0
Heating(Hp)	Kg/cm ²	Ar*0.1/Ac	0.1	0.1	0.1	0.2	0.3	0.4	0.5	0.7	0.9	1.0	1.3	1.6	2.1	2.6
Heating(Ht)	sec	12t	38.7	48.8	58.1	69.7	85.2	96.8	108.4	123.9	139.4	154.8	174.2	193.5	216.8	243.9
Remove Heater	sec	3+0.02Od	4.0	4.3	4.5	4.8	5.2	5.5	5.8	6.2	6.6	7.0	7.5	8.0	8.6	9.3
Fusing	Kg/cm ²		same to forming bead													
Fusing	sec	(3+t)*0.8	5.0	5.7	6.3	7.0	8.1	8.9	9.6	10.7	11.7	12.7	14.0	15.3	16.9	18.7
Cooling	Kg/cm ²		same to forming bead													
Cooling Time			10MINUTE <= COOLING TIME <= 35MINUTE													
-9	sec	0.8	186	234	279	334	409	465	520	595	669	743	836	929	1041	1171
10-22	sec	0.9	209	263	314	376	460	523	585	669	753	836	941	1045	1171	1317
23-	sec	1.2t	232	293	348	418	511	581	650	743	836	929	1045	1161	1301	1463



Saemin Electronics Industries Corp.

HEAD OFFICE : #926-2 WHAGOG-DONG GANGSEO-GU SEOUL, KOREA.

Tel : 82-2-2696-8848 Fax : 82-2-2601-1496

URL <http://www.selding.com> E-mail : selding@selding.com

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AUTOMATIC & MANUAL BUTT FUSION MACHINE / ELECTRO FUSION PROCESSOR

SDR- 17		Units	Remark	ISO - SDR17.0-HDPE													
Cylinder area(Ac)	cm ²		7.22														
Spec	mm			50	63	75	90	110	125	140	160	180	200	225	250	280	315
Out dia(Od)	mm			50	63	75	90	110	125	140	160	180	200	225	250	280	315
Thickness(t)	mm	Od/SDR		2.9	3.7	4.4	5.3	6.5	7.4	8.2	9.4	10.6	11.8	13.2	14.7	16.5	18.5
In dia(Id)	mm	Od-t*2		44.1	55.6	66.2	79.4	97.1	110.3	123.5	141.2	158.8	176.5	198.5	220.6	247.1	277.9
Area(Ar)	cm ²			4.3	6.9	9.8	14.1	21.0	27.2	34.1	44.5	56.3	69.5	88.0	108.7	136.3	172.5
Heater Temp																	
-9	°C			210<215<220													
10-22	°C			205<210<215													
23-	°C			200<205<210													
Forming bead	Kg/cm ²	Ar*1.5/Ac		0.9	1.4	2.0	2.9	4.4	5.6	7.1	9.2	11.7	14.4	18.3	22.6	28.3	35.8
Forming bead	sec	Ht*0.25		8.8	11.1	13.2	15.9	19.4	22.1	24.7	28.2	31.8	35.3	39.7	44.1	49.4	55.6
Heating(Hp)	Kg/cm ²	Ar*0.1/Ac		0.1	0.1	0.1	0.2	0.3	0.4	0.5	0.6	0.8	1.0	1.2	1.5	1.9	2.4
Heating(Ht)	sec	12t		35.3	44.5	52.9	63.5	77.6	88.2	98.8	112.9	127.1	141.2	158.8	176.5	197.6	222.4
Remove Heater	sec	3+0.02Od		4.0	4.3	4.5	4.8	5.2	5.5	5.8	6.2	6.6	7.0	7.5	8.0	8.6	9.3
Fusing	Kg/cm ²			same to forming bead													
Fusing	sec	(3+t)*0.8		4.8	5.4	5.9	6.6	7.6	8.3	9.0	9.9	10.9	11.8	13.0	14.2	15.6	17.2
Cooling	Kg/cm ²			same to forming bead													
Cooling Time				10MINUTE <= COOLING TIME <= 35MINUTE													
-9	sec	0.8		169	213	254	305	373	424	474	542	610	678	762	847	949	1067
10-22	sec	0.9		191	240	286	343	419	476	534	610	686	762	858	953	1067	1201
23-	sec	1.2t		212	267	318	381	466	529	593	678	762	847	953	1059	1186	1334



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HEAD OFFICE : #926-2 WHAGOG-DONG GANGSEO-GU SEOUL, KOREA.

Tel : 82-2-2696-8848 Fax : 82-2-2601-1496

URL <http://www.selding.com> E-mail : selding@selding.com

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AUTOMATIC & MANUAL BUTT FUSION MACHINE / ELECTRO FUSION PROCESSOR

SDR- 17.6		Units	Remark	ISO - SDR17.6-HDPE													
Cylinder area(Ac)	cm ²		7.22														
Spec	mm			50	63	75	90	110	125	140	160	180	200	225	250	280	315
Out dia(Od)	mm			50	63	75	90	110	125	140	160	180	200	225	250	280	315
Thickness(t)	mm	Od/SDR		2.8	3.6	4.3	5.1	6.3	7.1	8.0	9.1	10.2	11.4	12.8	14.2	15.9	17.9
In dia(Id)	mm	Od-t*2		44.3	55.8	66.5	79.8	97.5	110.8	124.1	141.8	159.5	177.3	199.4	221.6	248.2	279.2
Area(Ar)	cm ²			4.2	6.7	9.5	13.6	20.4	26.3	33.0	43.1	54.5	67.3	85.2	105.2	131.9	167.0
Heater Temp																	
-9	°C			210<215<220													
10-22	°C			205<210<215													
23-	°C			200<205<210													
Forming bead	Kg/cm ²	Ar*1.5/Ac		0.9	1.4	2.0	2.8	4.2	5.5	6.9	8.9	11.3	14.0	17.7	21.8	27.4	34.7
Forming bead	sec	Ht*0.25		8.5	10.7	12.8	15.3	18.8	21.3	23.9	27.3	30.7	34.1	38.4	42.6	47.7	53.7
Heating(Hp)	Kg/cm ²	Ar*0.1/Ac		0.1	0.1	0.1	0.2	0.3	0.4	0.5	0.6	0.8	0.9	1.2	1.5	1.8	2.3
Heating(Ht)	sec	12t		34.1	43.0	51.1	61.4	75.0	85.2	95.5	109.1	122.7	136.4	153.4	170.5	190.9	214.8
Remove Heater	sec	3+0.02Od		4.0	4.3	4.5	4.8	5.2	5.5	5.8	6.2	6.6	7.0	7.5	8.0	8.6	9.3
Fusing	Kg/cm ²			same to forming bead													
Fusing	sec	(3+t)*0.8		4.7	5.3	5.8	6.5	7.4	8.1	8.8	9.7	10.6	11.5	12.6	13.8	15.1	16.7
Cooling	Kg/cm ²			same to forming bead													
Cooling Time				10MINUTE <= COOLING TIME <= 35MINUTE													
-9	sec	0.8		164	206	245	295	360	409	458	524	589	655	736	818	916	1031
10-22	sec	0.9		184	232	276	331	405	460	515	589	663	736	828	920	1031	1160
23-	sec	1.2t		205	258	307	368	450	511	573	655	736	818	920	1023	1145	1289



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HEAD OFFICE : #926-2 WHAGOG-DONG GANGSEO-GU SEOUL, KOREA.

Tel : 82-2-2696-8848 Fax : 82-2-2601-1496

URL <http://www.selding.com> E-mail : selding@selding.com

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AUTOMATIC & MANUAL BUTT FUSION MACHINE / ELECTRO FUSION PROCESSOR

SDR- 19		Units	Remark	ISO - SDR19.0-HDPE															
Cylinder area(Ac)	cm ²	7.22																	
Spec	mm			50	63	75	90	110	125	140	160	180	200	225	250	280	315		
Out dia(Od)	mm			50	63	75	90	110	125	140	160	180	200	225	250	280	315		
Thickness(t)	mm	Od/SDR		2.6	3.3	3.9	4.7	5.8	6.6	7.4	8.4	9.5	10.5	11.8	13.2	14.7	16.6		
In dia(Id)	mm	Od-t*2		44.7	56.4	67.1	80.5	98.4	111.8	125.3	143.2	161.1	178.9	201.3	223.7	250.5	281.8		
Area(Ar)	cm ²			3.9	6.2	8.8	12.7	18.9	24.5	30.7	40.1	50.7	62.6	79.3	97.9	122.7	155.4		
Heater Temp																			
-9	°C			210<215<220															
10-22	°C			205<210<215															
23-	°C			200<205<210															
Forming bead	Kg/cm ²	Ar*1.5/Ac		0.8	1.3	1.8	2.6	3.9	5.1	6.4	8.3	10.5	13.0	16.5	20.3	25.5	32.3		
Forming bead	sec	Ht*0.25		7.9	9.9	11.8	14.2	17.4	19.7	22.1	25.3	28.4	31.6	35.5	39.5	44.2	49.7		
Heating(Hp)	Kg/cm ²	Ar*0.1/Ac		0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.6	0.7	0.9	1.1	1.4	1.7	2.2		
Heating(Ht)	sec	12t		31.6	39.8	47.4	56.8	69.5	78.9	88.4	101.1	113.7	126.3	142.1	157.9	176.8	198.9		
Remove Heater	sec	3+0.02Od		4.0	4.3	4.5	4.8	5.2	5.5	5.8	6.2	6.6	7.0	7.5	8.0	8.6	9.3		
Fusing	Kg/cm ²			same to forming bead															
Fusing	sec	(3+t)*0.8		4.5	5.1	5.6	6.2	7.0	7.7	8.3	9.1	10.0	10.8	11.9	12.9	14.2	15.7		
Cooling	Kg/cm ²			same to forming bead															
Cooling Time				10MINUTE <= COOLING TIME <= 35MINUTE															
-9	sec	0.8		152	191	227	273	333	379	424	485	546	606	682	758	849	955		
10-22	sec	0.9		171	215	256	307	375	426	477	546	614	682	767	853	955	1074		
23-	sec	1.2t		189	239	284	341	417	474	531	606	682	758	853	947	1061	1194		



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AUTOMATIC & MANUAL BUTT FUSION MACHINE / ELECTRO FUSION PROCESSOR

SDR- 21	Units	Remark	ISO - SDR21.0-HDPE													
Cylinder area(Ac)	cm ²	7.22														
Spec	mm		50	63	75	90	110	125	140	160	180	200	225	250	280	315
Out dia(Od)	mm		50	63	75	90	110	125	140	160	180	200	225	250	280	315
Thickness(t)	mm	Od/SDR	2.4	3.0	3.6	4.3	5.2	6.0	6.7	7.6	8.6	9.5	10.7	11.9	13.3	15.0
In dia(Id)	mm	Od-t*2	45.2	57.0	67.9	81.4	99.5	113.1	126.7	144.8	162.9	181.0	203.6	226.2	253.3	285.0
Area(Ar)	cm ²		3.6	5.7	8.0	11.5	17.2	22.3	27.9	36.5	46.1	57.0	72.1	89.0	111.6	141.3
Heater Temp																
-9	°C		210<215<220													
10-22	°C		205<210<215													
23-	°C		200<205<210													
Forming bead	Kg/cm ²	Ar*1.5/Ac	0.7	1.2	1.7	2.4	3.6	4.6	5.8	7.6	9.6	11.8	15.0	18.5	23.2	29.4
Forming bead	sec	Ht*0.25	7.1	9.0	10.7	12.9	15.7	17.9	20.0	22.9	25.7	28.6	32.1	35.7	40.0	45.0
Heating(Hp)	Kg/cm ²	Ar*0.1/Ac	0.0	0.1	0.1	0.2	0.2	0.3	0.4	0.5	0.6	0.8	1.0	1.2	1.5	2.0
Heating(Ht)	sec	12t	28.6	36.0	42.9	51.4	62.9	71.4	80.0	91.4	102.9	114.3	128.6	142.9	160.0	180.0
Remove Heater	sec	3+0.02Od	4.0	4.3	4.5	4.8	5.2	5.5	5.8	6.2	6.6	7.0	7.5	8.0	8.6	9.3
Fusing	Kg/cm ²		same to forming bead													
Fusing	sec	(3+t)*0.8	4.3	4.8	5.3	5.8	6.6	7.2	7.7	8.5	9.3	10.0	11.0	11.9	13.1	14.4
Cooling	Kg/cm ²		same to forming bead													
Cooling Time			10MINUTE <= COOLING TIME <= 35MINUTE													
-9	sec	0.8	137	173	206	247	302	343	384	439	494	549	617	686	768	864
10-22	sec	0.9	154	194	231	278	339	386	432	494	555	617	694	771	864	972
23-	sec	1.2t	171	216	257	309	377	429	480	549	617	686	771	857	960	1080



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Tel : 82-2-2696-8848 Fax : 82-2-2601-1496

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AUTOMATIC & MANUAL BUTT FUSION MACHINE / ELECTRO FUSION PROCESSOR

SDR- 22		Units	Remark	ISO - SDR22.0-HDPE													
Cylinder area(Ac)	cm ²		7.22														
Spec	mm			50	63	75	90	110	125	140	160	180	200	225	250	280	315
Out dia(Od)	mm			50	63	75	90	110	125	140	160	180	200	225	250	280	315
Thickness(t)	mm	Od/SDR		2.3	2.9	3.4	4.1	5.0	5.7	6.4	7.3	8.2	9.1	10.2	11.4	12.7	14.3
In dia(Id)	mm	Od-t*2		45.5	57.3	68.2	81.8	100.0	113.6	127.3	145.5	163.6	181.8	204.5	227.3	254.5	286.4
Area(Ar)	cm ²			3.4	5.4	7.7	11.0	16.5	21.3	26.7	34.9	44.1	54.5	69.0	85.1	106.8	135.2
Heater Temp																	
-9	°C			210<215<220													
10-22	°C			205<210<215													
23-	°C			200<205<210													
Forming bead	Kg/cm ²	Ar*1.5/Ac		0.7	1.1	1.6	2.3	3.4	4.4	5.5	7.2	9.2	11.3	14.3	17.7	22.2	28.1
Forming bead	sec	Ht*0.25		6.8	8.6	10.2	12.3	15.0	17.0	19.1	21.8	24.5	27.3	30.7	34.1	38.2	43.0
Heating(Hp)	Kg/cm ²	Ar*0.1/Ac		0.0	0.1	0.1	0.2	0.2	0.3	0.4	0.5	0.6	0.8	1.0	1.2	1.5	1.9
Heating(Ht)	sec	12t		27.3	34.4	40.9	49.1	60.0	68.2	76.4	87.3	98.2	109.1	122.7	136.4	152.7	171.8
Remove Heater	sec	3+0.02Od		4.0	4.3	4.5	4.8	5.2	5.5	5.8	6.2	6.6	7.0	7.5	8.0	8.6	9.3
Fusing	Kg/cm ²			same to forming bead													
Fusing	sec	(3+t)*0.8		4.2	4.7	5.1	5.7	6.4	6.9	7.5	8.2	8.9	9.7	10.6	11.5	12.6	13.9
Cooling	Kg/cm ²			same to forming bead													
Cooling Time				10MINUTE <= COOLING TIME <= 35MINUTE													
-9	sec	0.8		131	165	196	236	288	327	367	419	471	524	589	655	733	825
10-22	sec	0.9		147	186	221	265	324	368	412	471	530	589	663	736	825	928
23-	sec	1.2t		164	206	245	295	360	409	458	524	589	655	736	818	916	1031



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Tel : 82-2-2696-8848 Fax : 82-2-2601-1496

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SDR- 26	Units	Remark	ISO - SDR26.0-HDPE													
Cylinder area(Ac)	cm ²	7.22														
Spec	mm		50	63	75	90	110	125	140	160	180	200	225	250	280	315
Out dia(Od)	mm		50	63	75	90	110	125	140	160	180	200	225	250	280	315
Thickness(t)	mm	Od/SDR	1.9	2.4	2.9	3.5	4.2	4.8	5.4	6.2	6.9	7.7	8.7	9.6	10.8	12.1
In dia(Id)	mm	Od-t*2	46.2	58.2	69.2	83.1	101.5	115.4	129.2	147.7	166.2	184.6	207.7	230.8	258.5	290.8
Area(Ar)	cm ²		2.9	4.6	6.5	9.4	14.1	18.1	22.8	29.7	37.6	46.4	58.8	72.6	91.0	115.2
Heater Temp																
-9	°C		210<215<220													
10-22	°C		205<210<215													
23-	°C		200<205<210													
Forming bead	Kg/cm ²	Ar*1.5/Ac	0.6	1.0	1.4	2.0	2.9	3.8	4.7	6.2	7.8	9.7	12.2	15.1	18.9	23.9
Forming bead	sec	Ht*0.25	5.8	7.3	8.7	10.4	12.7	14.4	16.2	18.5	20.8	23.1	26.0	28.8	32.3	36.3
Heating(Hp)	Kg/cm ²	Ar*0.1/Ac	0.0	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.5	0.6	0.8	1.0	1.3	1.6
Heating(Ht)	sec	12t	23.1	29.1	34.6	41.5	50.8	57.7	64.6	73.8	83.1	92.3	103.8	115.4	129.2	145.4
Remove Heater	sec	3+0.02Od	4.0	4.3	4.5	4.8	5.2	5.5	5.8	6.2	6.6	7.0	7.5	8.0	8.6	9.3
Fusing	Kg/cm ²		same to forming bead													
Fusing	sec	(3+t)*0.8	3.9	4.3	4.7	5.2	5.8	6.2	6.7	7.3	7.9	8.6	9.3	10.1	11.0	12.1
Cooling	Kg/cm ²		same to forming bead													
Cooling Time			10MINUTE <= COOLING TIME <= 35MINUTE													
-9	sec	0.8	111	140	166	199	244	277	310	354	399	443	498	554	620	698
10-22	sec	0.9	125	157	187	224	274	312	349	399	449	498	561	623	698	785
23-	sec	1.2t	138	174	208	249	305	346	388	443	498	554	623	692	775	872



Saemin Electronics Industries Corp.

HEAD OFFICE : #926-2 WHAGOG-DONG GANGSEO-GU SEOUL, KOREA.

Tel : 82-2-2696-8848 Fax : 82-2-2601-1496

URL <http://www.selding.com> E-mail : selding@selding.com

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AUTOMATIC & MANUAL BUTT FUSION MACHINE / ELECTRO FUSION PROCESSOR

SDR- 33		Units	Remark	ISO - SDR33.0-HDPE													
Cylinder area(Ac)	cm ²		7.22														
Spec	mm			50	63	75	90	110	125	140	160	180	200	225	250	280	315
Out dia(Od)	mm			50	63	75	90	110	125	140	160	180	200	225	250	280	315
Thickness(t)	mm	Od/SDR		1.5	1.9	2.3	2.7	3.3	3.8	4.2	4.8	5.5	6.1	6.8	7.6	8.5	9.5
In dia(Id)	mm	Od-t*2		47.0	59.2	70.5	84.5	103.3	117.4	131.5	150.3	169.1	187.9	211.4	234.8	263.0	295.9
Area(Ar)	cm ²			2.3	3.7	5.2	7.5	11.2	14.4	18.1	23.6	29.9	36.9	46.7	57.7	72.3	91.6
Heater Temp																	
-9	°C			210<215<220													
10-22	°C			205<210<215													
23-	°C			200<205<210													
Forming bead	Kg/cm ²	Ar*1.5/Ac		0.5	0.8	1.1	1.6	2.3	3.0	3.8	4.9	6.2	7.7	9.7	12.0	15.0	19.0
Forming bead	sec	Ht*0.25		4.5	5.7	6.8	8.2	10.0	11.4	12.7	14.5	16.4	18.2	20.5	22.7	25.5	28.6
Heating(Hp)	Kg/cm ²	Ar*0.1/Ac		0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.8	1.0	1.3
Heating(Ht)	sec	12t		18.2	22.9	27.3	32.7	40.0	45.5	50.9	58.2	65.5	72.7	81.8	90.9	101.8	114.5
Remove Heater	sec	3+0.02Od		4.0	4.3	4.5	4.8	5.2	5.5	5.8	6.2	6.6	7.0	7.5	8.0	8.6	9.3
Fusing	Kg/cm ²			same to forming bead													
Fusing	sec	(3+t)*0.8		3.6	3.9	4.2	4.6	5.1	5.4	5.8	6.3	6.8	7.2	7.9	8.5	9.2	10.0
Cooling	Kg/cm ²			same to forming bead													
Cooling Time				10MINUTE <= COOLING TIME <= 35MINUTE													
-9	sec	0.8		87	110	131	157	192	218	244	279	314	349	393	436	489	550
10-22	sec	0.9		98	124	147	177	216	245	275	314	353	393	442	491	550	619
23-	sec	1.2t		109	137	164	196	240	273	305	349	393	436	491	545	611	687



Saemin Electronics Industries Corp.

HEAD OFFICE : #926-2 WHAGOG-DONG GANGSEO-GU SEOUL, KOREA.

Tel : 82-2-2696-8848 Fax : 82-2-2601-1496

URL <http://www.selding.com> E-mail : selding@selding.com

ISO 9001 Registered

AUTOMATIC & MANUAL BUTT FUSION MACHINE / ELECTRO FUSION PROCESSOR

SDR- 41	Units	Remark	ISO - SDR41.0-HDPE													
Cylinder area(Ac)	cm ²	7.22														
Spec	mm		50	63	75	90	110	125	140	160	180	200	225	250	280	315
Out dia(Od)	mm		50	63	75	90	110	125	140	160	180	200	225	250	280	315
Thickness(t)	mm	Od/SDR	1.2	1.5	1.8	2.2	2.7	3.0	3.4	3.9	4.4	4.9	5.5	6.1	6.8	7.7
In dia(Id)	mm	Od-t*2	47.6	59.9	71.3	85.6	104.6	118.9	133.2	152.2	171.2	190.2	214.0	237.8	266.3	299.6
Area(Ar)	cm ²		1.9	3.0	4.2	6.1	9.0	11.7	14.6	19.1	24.2	29.9	37.8	46.7	58.6	74.1
Heater Temp																
-9	°C		210<215<220													
10-22	°C		205<210<215													
23-	°C		200<205<210													
Forming bead	Kg/cm ²	Ar*1.5/Ac	0.4	0.6	0.9	1.3	1.9	2.4	3.0	4.0	5.0	6.2	7.9	9.7	12.2	15.4
Forming bead	sec	Ht*0.25	3.7	4.6	5.5	6.6	8.0	9.1	10.2	11.7	13.2	14.6	16.5	18.3	20.5	23.0
Heating(Hp)	Kg/cm ²	Ar*0.1/Ac	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.8	1.0
Heating(Ht)	sec	12t	14.6	18.4	22.0	26.3	32.2	36.6	41.0	46.8	52.7	58.5	65.9	73.2	82.0	92.2
Remove Heater	sec	3+0.02Od	4.0	4.3	4.5	4.8	5.2	5.5	5.8	6.2	6.6	7.0	7.5	8.0	8.6	9.3
Fusing	Kg/cm ²		same to forming bead													
Fusing	sec	(3+t)*0.8	3.4	3.6	3.9	4.2	4.5	4.8	5.1	5.5	5.9	6.3	6.8	7.3	7.9	8.5
Cooling	Kg/cm ²		same to forming bead													
Cooling Time			10MINUTE <= COOLING TIME <= 35MINUTE													
-9	sec	0.8	70	89	105	126	155	176	197	225	253	281	316	351	393	443
10-22	sec	0.9	79	100	119	142	174	198	221	253	284	316	356	395	443	498
23-	sec	1.2t	88	111	132	158	193	220	246	281	316	351	395	439	492	553



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URL <http://www.selding.com> E-mail : selding@selding.com

ISO 9001 Registered

AUTOMATIC & MANUAL BUTT FUSION MACHINE / ELECTRO FUSION PROCESSOR

SDR- 51	Units	Remark	ISO - SDR51.0-HDPE													
Cylinder area(Ac)	cm ²	7.22														
Spec	mm		50	63	75	90	110	125	140	160	180	200	225	250	280	315
Out dia(Od)	mm		50	63	75	90	110	125	140	160	180	200	225	250	280	315
Thickness(t)	mm	Od/SDR	1.0	1.2	1.5	1.8	2.2	2.5	2.7	3.1	3.5	3.9	4.4	4.9	5.5	6.2
In dia(Id)	mm	Od-t*2	48.0	60.5	72.1	86.5	105.7	120.1	134.5	153.7	172.9	192.2	216.2	240.2	269.0	302.6
Area(Ar)	cm ²		1.5	2.4	3.4	4.9	7.3	9.4	11.8	15.5	19.6	24.1	30.6	37.7	47.3	59.9
Heater Temp																
-9	°C		210<215<220													
10-22	°C		205<210<215													
23-	°C		200<205<210													
Forming bead	Kg/cm ²	Ar*1.5/Ac	0.3	0.5	0.7	1.0	1.5	2.0	2.5	3.2	4.1	5.0	6.3	7.8	9.8	12.4
Forming bead	sec	Ht*0.25	2.9	3.7	4.4	5.3	6.5	7.4	8.2	9.4	10.6	11.8	13.2	14.7	16.5	18.5
Heating(Hp)	Kg/cm ²	Ar*0.1/Ac	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.7	0.8
Heating(Ht)	sec	12t	11.8	14.8	17.6	21.2	25.9	29.4	32.9	37.6	42.4	47.1	52.9	58.8	65.9	74.1
Remove Heater	sec	3+0.02Od	4.0	4.3	4.5	4.8	5.2	5.5	5.8	6.2	6.6	7.0	7.5	8.0	8.6	9.3
Fusing	Kg/cm ²		same to forming bead													
Fusing	sec	(3+t)*0.8	3.2	3.4	3.6	3.8	4.1	4.4	4.6	4.9	5.2	5.5	5.9	6.3	6.8	7.3
Cooling	Kg/cm ²		same to forming bead													
Cooling Time			10MINUTE <= COOLING TIME <= 35MINUTE													
-9	sec	0.8	56	71	85	102	124	141	158	181	203	226	254	282	316	356
10-22	sec	0.9	64	80	95	114	140	159	178	203	229	254	286	318	356	400
23-	sec	1.2t	71	89	106	127	155	176	198	226	254	282	318	353	395	445