

RESISTANCE WELDING MACHINE

PL 40 / 63 / 80 / 100

rapid –
SPOT welding machine
 Spot fitting with foot switch and
 frontmounted electrode holder,
 closed cooling circuit

**TECHNICAL DATA**

Type	PL 40 / 63	PL 80 / 100
Power rating at 50 % d.c.	40 / 63 kVA	80 / 100 kVA
Secondary short-circuit current	26,2 / 31,5 kA	35 / 41,5 kA
Throat depth	250 - 550 mm	350 - 650 mm
Throat gap	160 mm	160 mm
Electrode force	360 daN	360 daN
Single stroke cylinder	max. 65 stroke	max. 90 mm stroke

TECHNICAL DETAILS

- switching cabinet for taking the welding control, mounted on the right of the machine, ready wired
- lockable viewing window
- slide-in control MPS 10
- 5-time synchronised welding control with 8 welding programs for operation with thyristor power stage
- digital current and time setting
- upslope and impulse function
- mains voltage compensation
- automatic mains frequency recognition 50/60
- parameter entry via keys in operator console
- status display via LED's
- international operating symbols
- stepping and locking contact
- main switch acc. to VDE 0113
- correspondent to the standard VDE 0545-1, EN 60204-1, EN 50 240, EN 292 part 1+2, EN 1050
- CE-symbol

SPOT WELDING MACHINE Type **PL 40 / 63 / 80 / 100**

Technical Data* acc. to DIN 44753 / ISO 669			PL 40	PL 63	PL 40	PL 63	PL 80	PL 100		
Electrical Part	Throat depth	mm	250 - 550 ⁴⁾		450 - 750 ⁴⁾		350 - 650 ⁷⁾			
	Machine power	Power rating, 50 % d.c.	kVA	40	63	40	63	80	100	
		Continuous output	kVA	28,3	44,5	28,3	44,5	56,6	70,7	
		Maximum short-circuit power	kVA	148	228	123	192	306	425	
		Maximum welding power	kVA	118	182	98	154	245	340	
	Machine voltage	Secondary idling voltage	V	5,5	7,02	5,5	7,02	8,33	9,9	
		Number of regulating steps		0	0	0	0	0	0	
	Mains Connection	Rated primary voltage	V	400	400	400	400	400	400	
		Rated frequency	Hz	50/60	50/60	50/60	50/60	50/60	50/60	
		Continuous output	kVA	89	137	74	115	184	255	
		Main switch / Fusing ¹⁾	A	P3 63/63	KG 251/100	P3 63/50	KG 251/80	KG 251/125	KG 316/160	
		Wire range, cable shorter = 15 m	mm ²	16	25	10	16	25	35	
	Secondary current	Rated operating current	kA	7,22	8,77	7,14	8,7	9,34	9,62	
		Continuous current	kA	5,11	6,2	5,05	6,15	6,61	6,8	
		Short-circuit current	kA	26,2	31,5	21,5	26,3	35	41,5	
		Highest welding current	kA	21	25,2	17,2	21	28	33,2	
		Permitted duty cycle at highest welding current	%	5,9	6	8,6	8,5	5,5	4,2	
	Mechanical Part	Cylinder EH single stroke	Electrode stroke max.	mm ²	65		65		90	
			Electrode force min. / max.	daN	100/600		100/600		100/600	
Max. movements at 10 mm stroke			min ⁻¹	300		300		300		
Air consumption / 1000 strokes ²⁾			m ³	0,75		0,75		0,9		
Cylinder DH double stroke		Electrode stroke max.	mm	65		65		90		
		Work stroke+ approach stroke max.	mm	45 + 20		45 + 20		65 + 25		
		Electrode force min. / max.	daN	100/600		100/600		100/600		
		Max. movements at 10 mm stroke	min ⁻¹	300		300		300		
		Air consumption / 1000 strokes ²⁾	m ³	0,85		0,85		1,1		
Spot mounting		Throat gap min. / max.	mm	150/310		150/310		160/360		
		Electrode arm -Ø	mm	50 above / 60 below		50 above / 60 below		60 above / 70 below		
		Electrode holder -Ø	mm	25		25		30		
		Electrode holder, adjustability	mm	130 above / 120 below		130 above / 120 below		110 above / 170 below		
		Spot electrode seat No. / outer -Ø	mm	2/18		2/18		2/18		
Comp. air		Pipe connection, Nominal width/ connecting thread		NG 13 / G ^{1/2}		NG 13 / G ^{1/2}		NG 13 / G ^{1/2}		
		Operating press. min. / max.	bar	6/10		6/10		6/10		
Cooling water		Pipe connection, Nominal width/ conn. thread		NG 20 / G ^{3/4}		NG 20 / G ^{3/4}		NG 20 / G ^{3/4}		
		Operating pressure min. / max.	bar	2/5		2/5		2/5		
		Consumption at max. loading ⁷⁾	l/min ⁻¹	4		4		8		
Machine dimensions	Width x depth x height ⁴⁾	mm	657 x 1000 - 1300 x 1510 EH / 1620 DH		657 x 1200 - 1500 x 1510 EH / 1620 DH		701 x 1220 - 1520 x 1584 EH / 1702 DH			
	Weight of machine switching cabinet compl.	kg	315	325	340	350	480	495		
Shipping data	Gross weight	kg	455	465	480	490	620	635		
	Box: width x depth x height	mm	842 x 1150 x 1601		842 x 1350 x 1601		882 x 1370 x 1725			
	Volume	m ³	1,28		1,82		2,08			
Operational Part	Welding waves	Steel steel (C-content ≤ 0,2 %) ³⁾	mm	6 + 6	7 + 7	5 + 5	6 + 6	8 + 8	8 + 8	
		CrNi sheet ³⁾	mm	1,5 + 1,5	1,5 + 1,5	1,5 + 1,5	1,5 + 1,5	1,5 + 1,5	1,5 + 1,5	
		Brass sheet ³⁾	mm	3 + 3	4 + 4	2 + 2	3 + 3	5 + 5	5 + 5	
		Aluminium sheet ³⁾	mm	1,5 + 1,5	2 + 2	1 + 1	1,5 + 1,5	3 + 3	3 + 3	
	Round steel (C-content ≤ 0,2 %) ³⁾	mm	18 + 18	20 + 20	16 + 16	18 + 18	22 + 22	22 + 22		
Power Stage	Thyristor – power stage		1/60 L	1/90 L	1/60 L	1/90 L	1/500 IW	1/500 IW		

Notes:

- operating class gL
- at operating pressure 6 bar
- subject to size influences
- excl. switching cabinet width: at PL 40/63 = 502

- real value = nominal value + 40mm
- real value = nominal value + 50 mm

- by circulatory cooling = pressure difference between recooling and cooling water

Technical alterations reserved.
*details for shortest throat depth

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