

PMS

RESISTANCE WELDING MACHINE

PMS 12-6



A SPOT welding machine



TECHNICAL DETAILS

- non-distortion machine frame with ribbed shell construction
- generously-dimensioned switching cabinet for taking welding and machine controls
- absolute Separation between machine and switching unit
- infinitely adjustable height of lower arm
- electrode force cylinder with precision guide and external rotational protection
- very good performance factor via the close coupling of the secondary circuits
- electrode force can be infinitely regulated
- speed of working and return strokes of the cylinders can be regulated separately via throttle
- 4 separate cooling water circuits for cooling the current-carrying parts and the power stage
- welding transformer cast in resin for water-cooling and thermal protective switch is fully enclosed in the primary side
- primary and secondary coils vacuum cast
- compressed air service unit as standard, consisting of filter, regulator and manometer
- menu-driven, multilingual synchronised welding control with bilingual LDC-Display

TECHNICAL DATA

Power rating at 50 % d.c.	100, 160 or 200 kVA
Throat depth	350, 550, 750 or 1050 mm
Electrode force	120 - 720 daN, 165 - 990 daN, 215 - 1290 daN, 300 - 1800 daN
Electrode stroke	max. 100 mm

OPTIONAL FEATURES

- double stroke cylinder (DH), 75 + 25 mm Hub
- double stroke cylinder with approach stroke and sequencing (DHZF) 0 - 100 mm approach stroke for working stroke , 0 - 100 mm operational stroke or 100 mm long stroke
- cylinder with extended force range 95 - 1290 daN or 135 - 1800 daN
- flow monitor for monitoring the cooling water amount
- adjusting device for raising and lowering the lower arm
- pressure-free lowering of upper arm via hand-valve
- electronic electrode force switch
- pressure-compensator to reconcile tool tolerances

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Technical Data according to DIN 44753

	Group	Parameters		Nominal Throat Depth 350 mm 8) 9)	
				Model A	
Electrical Part	Machine Power	Power rating (50 % d.c.)	kVA	100	160
		Continuous output	kVA	70,7	113
		Maximum short-circuit power	kVA	390	548
		Maximum welding power	kVA	312	438
	Machine voltage	Secondary idling voltage	V	8,33	9,75
		Number of regulating steps		0	0
	Mains con- nection	Rated primary voltage	V	400	400
		Rated primary current	A	250	400
		Rated frequency	Hz	50	50
		Supply power	kVA	234	329
		Primary short-circuit current	A	975	1370
		Main switch / fusing ¹⁾	A	KG 251/160	KG 316/200
		Wire range 12)	mm ²	35	50
	Secondary current	Rated operating current	kA	11,7	16
		Permanent current ²⁾	kA	8,3	11,3
		Short-circuit current	kA	46	55
Highest welding current		kA	36,8	44	
permitt. duty cycle at high. weld. cur.		%	5,1	6,6	
Mechanical Part	Cylinder EH	Electrode stroke max.	mm	100	100
		Electrode force min. / max.	daN	165 / 990 ¹⁰⁾	215/1290 ¹¹⁾ i.e. 95/1290 ⁷⁾
		Max. movements / 10mm stroke	min ⁻¹	200	200
		Air consumption / 1000 strokes ³⁾	m ³	3	3,1
	Cylinder DH	Electrode stroke. max. work.+oper. str.	mm	100/75 + 25	100/75 + 25
		Electrode force min. / max.	daN	165/990 ¹⁰⁾	215/1290 ¹¹⁾ i.e. 95/1290 ⁷⁾
		Max. movements / 10mm stroke	min ⁻¹	200	200
		Air consumption / 1000 strokes ³⁾	m ³	3,3	3,4
	Spot mount- ing "A"	Throat gap min. / max.	mm	110/410	---
		Electrode arm-Ø	mm	75	---
		Electrode holder-Ø	mm	35	---
		Electrode holder adjustability	mm	150	---
		Spot electrode seat no. / outer Ø	mm	3/25	---
	Comp. air	Pipe conn., nom. width / thread		NG 20/G ^{3/4}	NG 20/G ^{3/4}
		Operating pressure min. / max.	bar	6/10	6/10
	Cooling water	Pipe connection in/ out.		NG 20/G ^{3/4}	NG 20/G ^{3/4}
		Operating pressure min. /max. ⁶⁾	bar	4/6	4/6
		Consumption at max. loading	l/min ⁻¹	10	12
	Machine dimensions	Width x depth x height	mm	775 x 1330 x 1745,5 EH / 1876,5 DH	
		Weight machine /cabinet	kg	705 EH / 715 DH	760 EH / 770 DH
	Shipping data	Gross weight	kg	---	---
		Box: Width x depth x height	mm	---	---
		Volume	m ³	---	---
Op. Part	Welding values	Steel sheet C-content < 0,2 % ⁴⁾	mm	12 + 12	12 + 12
		Brass sheet ⁴⁾	mm	6 + 6	7 + 7
		Aluminium sheet ⁴⁾	mm	4 + 4	5 + 5
		Round steel Ø C-content < 0,2 % ⁴⁾	mm	26 + 26	28 + 28
	Power stage	Thyristor power stage ⁵⁾	IW	1/500 IW	1/900 IW
Notes	Technical alterations reserved. The table contents refer to standard models.				
	¹⁾ operating class. GL ²⁾ at max. transformer level ³⁾ at operating pressure 6 bar ⁴⁾ subject to size influences		⁵⁾ relative duty cycle and max. current time during the total time, see appropriate load diagram ⁶⁾ circulatory cooling = pressure difference between coolant forward motion/return motion ⁷⁾ special models with extended electrode force range, only for throat depth 350 and 550 mm		⁸⁾ act. throat depth 353 mm ⁹⁾ data for other mountings upon request ¹⁰⁾ from throat depth 750 mm: 120/720 daN ¹¹⁾ from throat depth 750 mm: 165/990 daN ¹²⁾ cable length < 15 m