

DALEX

SCHWEISSTECHNIK



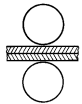
A
SPOT
Welding machine



B
SPOT/PROJECTION
Welding machine



C
PROJECTION
Welding machine



N
SEAM
Welding machine with cross and long
seam arm

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



fig. PMS 16-4 in model A
as spot welding machine

TECHNICAL DATA

Power rating at 50 % d.c:	200 or 250 kVA
Machine throat depth:	250, 350, 550, 750, 1050 mm
Electrode force:	340 – 2040 daN, 140 – 2040 daN or 500 – 3000 daN
Electrode stroke:	max. 120 mm

EXTRA EQUIPMENT

- double stroke cylinder (DH), 90 + 30 mm stroke
- double stroke cylinder + travel for working stroke (DHZ), 0 - 90 mm working stroke + 30 - 120 mm operational stroke
- double stroke cylinder with approach stroke and sequencing (DHZF) 0 - 120 mm approach stroke for working stroke , 0 - 120 mm operational stroke or 120 mm long stroke
- cylinder with extended force range 140 - 3000 daN
- cylinder with increased force range 500 - 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
- doubled secondary idling voltage
- 4-step switch mounted in switching cabinet
- main switch mounted in switching cabinet
- pressure-compensator to reconcile tool tolerances
- model as 3-phase direct current machine
- synchronised thyristor control unit acc. to choice

PMS 16-4

Resistance Welding machine

Resistance Welding machine Type PMS 16-4

TECHNICAL DATA acc.to DIN 44753

09/2006

			Nominal Throat Depth 350 mm 8)						
Group	Parameters		Model			Model			
			A	B	C	A	B	C	
Electrical Part	Machine power	Power rating (50 % d.c.)	kVA	200			250		
		Continuous output	kVA	141,4			176,5		
		Maximum short-circuit power	kVA	604	848	908	920	1268	1380
		Maximum welding power	kVA	483	678	726	735	1015	1104
	Machine voltage	Secondary idling voltage	V	6,15/7,54/8,88/10,25			7,7/9,3/10,8/12,5		
		Number of regulating steps		4			4		
	Mains connection	Rated primary voltage	V	400			400		
		Rated primary current	A	500			625		
		Rated frequency	Hz	50			50		
		Supply power	kVA	362	508	545	550	761	828
		Primary short-circuit current	A	1510	2120	2270	2300	3170	3450
		Main switch / Fusing ¹⁾	A	MC 408/200	MC 408/250	MC 408/315	MC 408/315	MC 408/400	MC 408/400
		Wire range ¹⁰⁾	mm ²	50	70	95	95	150	150
	Secondary current	Rated operating current	kA	19,25	19,29	19,3	19,47	19,52	19,54
		Permanent current ²⁾	kA	13,61	13,64	13,65	13,77	13,8	13,82
		Short-circuit current	kA	57,8	81,3	87,7	72	99,6	108
Highest welding current		kA	46,2	65	70,2	57,6	79,7	86,4	
permitt. duty cycle at high. weld. curr.		%	8,7	4,4	3,8	5,7	3	2,5	
Mechanical Part	Cylinder EH	Electrode stroke max.	mm	120			120		
		Electrode force min. / max. ⁹⁾	daN	340/2040 i.e. 140/2040			340/2040 i.e. 140/2040		
		Max. movements / 10mm stroke	min ⁻¹	300			300		
		Air consumption / 1000 strokes ³⁾	m ³	3,2			3,2		
	Cylinder DH, DHZ DHZF	Electrode str. max. work. + oper. str.	mm	120 / DH = 90 + 30 / DHZ = 0 - 90 + 30-120 / DHZF = 0 - 120 + 0-120					
		Electrode force min. / max.	daN	340/2040 i.e. 140/2040			340/2040 i.e. 140/2040		
		Max. movements / 10mm stroke	min ⁻¹	300			300		
		Air consumption / 1000 strokes ³⁾	m ³	3,4			3,4		
	Spot mounting "A"	Throat gap min./max.	mm	160/460			160/460		
		Electrode arm-Ø	mm	90			90		
		Electrode holder-Ø	mm	35 i.e. on-flange model at "B4"			35 i.e. on-flange model at "B4"		
		Electrode holder adjustability	mm	160			160		
		Spot electrode seat no./outerØ	mm	3/25			3/25		
	Projection mounting "B" and "C"	Clamping plate above W x D	mm	200 x 200			200 x 200		
		Clamping plate below W x D	mm	200 x 200			200 x 200		
		Clamping plate sep. min. / max.	mm	200/500			200/500		
T-grooves/separation mm x no.		mm	14 DIN 650/126 x 2			14 DIN 650/126 x 2			
Seam mounting "N"	Roller electr.aboveØcross / long	mm	---			---			
	Roller electr.belowØcross / long	mm	---			---			
	Travel speed min. / max.	m/min ⁻¹	---			---			
Comp. air	Pipe conn., nom. width / thread		NG 16/G 1/2			NG 16/G 1/2			
	Operating pressure min. / max.	bar	6/10			6/10			
Cooling water	Pipe conn., nom. width / thread		NG 20/G 3/4			NG 20/G 3/4			
	Operating pressure min. / max.	bar	2/5			2/5			
	Consumption at max. loading ⁷⁾	l/min ⁻¹	14 i.e. 10			14 i.e. 10			
Machine dimensions	Width x depth x height ⁶⁾	mm	900 x 1425 x 1885 EH / 1945 DH / 2020 DHZ / 2078,5 DHZF						
	Weight machine / cabinet ⁴⁾	kg	1030/70	1060/70	1055/70	1070/20	1100/70	1095/70	
Shipping data	Gross weight ⁴⁾	kg	1450	1480	1475	1490	1520	1515	
	Box: Width x depth x height	mm	1100 x 1625 x 2085 EH / 2145 DH / 2220 DHZ / 2279 DHZF						
	Volume	m ³	3,8 EH / 3,9 DH / 4,0 DHZ / 4,1 DHZF						
Op. Part	Welding values	Steel sheet C-content < 0,2 % ⁵⁾	mm	14 + 14			14 + 14		
		Brass sheet ⁵⁾	mm	8 + 8			8 + 8		
		Aluminium sheet ⁵⁾	mm	6 + 6			6 + 6		
		Round steel Ø C-content < 0,2 % ⁵⁾	mm	30 + 30			32 + 32		
Power stage	Thyristor power stage	IW	1/900 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, stroke 20 mm 4) DH+20 kg, DHZ+25 kg, DHZF+30 kg	5) subject to size influences 6) excl. switching cabinet, width = 600 mm 7) excl. thyristor power stage 8) act. throat depth = model A + 8 mm/B u. C - 22 mm	9) special models with extended electrode force range 10) cable length < 15 m						