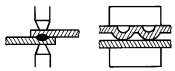


DALEX

SCHWEISSTECHNIK



A
SPOT
Welding machine



B
SPOT/PROJECTION
Welding machine



C
PROJECTION
Welding machine



fig. PMS 10-4 in model C
as projection 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

TECHNICAL DATA

| | |
|----------------------------|---|
| Power rating at 50 % d.c.: | 50 or 80 kVA |
| Throat depth: | 250, 350, 550 or 750 mm |
| Electrode force: | 65 - 390 daN, 20 - 390 daN or. 115 - 690 daN |
| Electrode stroke: | max. 65 mm |

EXTRA EQUIPMENT

- double stroke cylinder (DH), 45 + 20 mm Hub
- double stroke cylinder (DH), 45 + 20 mm Hub
- double stroke cylinder + travel for working stroke (DHZ), 0 - 45 mm working stroke + 20 mm operational stroke
- double stroke cylinder with approach stroke and sequencing (DHZF) 0 - 65 mm approach stroke for working stroke, 0 - 65 mm operational stroke or 65 mm long stroke
- cylinder with extended force range 20 - 390 daN
- cylinder with increased force range 115 - 690 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 with rubber cushion to compensate workpiece tolerances and tool inaccuracy
- model also as 3-phase direct current machine
- synchronised Thyristor control as option

PMS 10-4

Resistance Welding machine

Resistance Welding machine Type PMS 10-4

TECHNICAL DATA acc. to DIN 44753

09/2006

| | | Throat depth 250 mm | | | | | | | |
|---|--|--|-------------------|---|--|---|---|------------------------|------|
| Group | Parameters | Model | | | Model | | | | |
| | | A | B | C | A | B | C | | |
| Electrical Part | Machine Power | Power rating (50 % d.c.) | kVA | | | 50 | | | |
| | | Continuous Output | kVA | | | 35,4 | | | |
| | | Maximum short-circuit power | kVA | 171 | 196 | 207 | 326 | 368 | 387 |
| | | Maximum welding power | kVA | 137 | 157 | 165 | 261 | 294 | 310 |
| | Machine voltage | Secondary idling voltage | V | 5,0 i.e. (2,5/3,4/4,2/5,0) ¹²⁾ | | | 7,0 i.e. (3,5/4,75/5,93/7,0) ¹²⁾ | | |
| | | Number of regulating steps | | 0 i.e. 4 ¹²⁾ | | | 0 i.e. 4 ¹²⁾ | | |
| | Mains connection | Rated primary voltage | V | 400 | | | 400 | | |
| | | Rated primary current | A | 131 | | | 210 | | |
| | | Rated frequency | Hz | 50 | | | 50 | | |
| | | Supply power | kVA | 103 | 117 | 124 | 196 | 221 | 232 |
| | | Main switch / Fusing ¹⁾ | A | HL 125/80 | | | HL 250/125 | HL 250/160 | |
| | Wire Range ¹³⁾ | mm ² | 16 | | | 25 | 35 | | |
| | Secondary current | Rating operated current | kA | 9,69 | 9,74 | 9,79 | 11,23 | 11,27 | 11,3 |
| | | Permanent current ²⁾ | kA | 6,85 | 6,89 | 6,92 | 7,94 | 7,97 | 7,99 |
| | | Short-circuit current | kA | 34 | 39 | 41 | 46 | 51,7 | 54,5 |
| Highest welding current | | kA | 27,7 | 31,2 | 32,8 | 36,8 | 41,4 | 43,6 | |
| permitted duty cycle of highest welding current | | % | 6,3 | 4,9 | 4,5 | 4,7 | 3,7 | 3,4 | |
| Mechanical Part | Cylinder EH | Electrode stroke max. | mm | | | 65 | | | |
| | | Electrode force min. / max. | daN | | | 65-390 i.e. 20/390 ⁹⁾ 115/690 ¹⁰⁾ | | | |
| | | Max. movements / 10mm stroke | min ⁻¹ | | | 400 | | | |
| | | Air Consumption / 1000 strokes | m ³ | | | 0,65 i.e. 0,75 ¹⁰⁾ | | | |
| | Cylinder DH, DHZ, DHZF | Electrode stroke max. working + operational str. | mm | | | 65 / DH = 45 + 20 / DHZ = 0-45 + 20 - 65 / DHZF = 0 - 65 + 0 - 65 | | | |
| | | Electrode force min. / max. | daN | | | 65-390 i.e. 115/690 ¹⁰⁾ only DHZF | | | |
| | | Max movements / 10mm strokes | min ⁻¹ | | | 400 | | | |
| | | Air consumption / 1000 strokes ³⁾ | m ³ | | | 0,75 bzw. 0,85 ¹⁰⁾ | | | |
| | Spot mounting "A" | Throat gap min. / max. | mm | | | 95/295 | | | |
| | | Electrode arm-Ø | mm | | | 60 | | | |
| | | Electrode holder-Ø | mm | | | 25 | | | |
| | | Electrode holder adjustability | mm | | | 120 | | | |
| | | Spot electrode seat no. / outerØ | mm | | | 2/19 | | | |
| | Projection mounting "B" and "C" | Clamping plate above W x D | mm | | | 100 x 130 | | | |
| | | Clamping plate below W x D | mm | | | 100 x 130 | | | |
| Clamping plate sep. min. / max. | | mm | | | 120/320 | | | | |
| T-grooves/separation mm x no. | | mm | | | 10 DIN 650/63 x 2 | | | | |
| Comp. air | Pipe conn., nom. width / thread. | | | | NW 10/R ^{3/8"} | | | | |
| | Operating pressure min. / max. | bar | | | 6/10 | | | | |
| Cooling water | Pipe conn., nom. width / thread. | | | | NW 20/R ^{3/4"} | | | | |
| | Operating pressure min. / max. | bar | | | 2/5 | | | | |
| | Consumption at max. loading | l/min ⁻¹ | | | 8 i.e. 4 ⁷⁾ | | | | |
| Machine dimensions | Width x depth x height ⁶⁾ | mm | | | 792x1040x1421,5 EH/1506 DH/1542 DHZ/1609 DHZF/1510,6 EH ¹⁰⁾ /1714 DHZF ¹⁰⁾ | | | | |
| | Weight machine / cabinet ⁴⁾ | kg | | | 345 ¹¹⁾ /65 | 355 ¹¹⁾ /65 | 390 ¹¹⁾ /65 | 400 ¹¹⁾ /65 | |
| Shipping data | Gross weight ⁴⁾ | kg | | | 555 | 565 ¹¹⁾ | 605 | 615 ¹¹⁾ | |
| | Box: Width x depth x height | mm | | | 922x1240x1622 EH/1706 DH/1742 DHZ/1809 DHZF/1711 EH ¹⁰⁾ /1914 DHZF ¹⁰⁾ | | | | |
| | Volume | m ³ | | | 2,0 EH/2,1 DH/2,14 DHZ/2,2 DHZF/2,1 EH ¹⁰⁾ /2,35 EHZF ¹⁰⁾ | | | | |
| Op. Part | Welding values | Steel sheet C-content < 0,2 % ⁵⁾ | mm | | | 8 + 8 | | 8 + 8 | |
| | | Brass sheet ⁵⁾ | mm | | | 4,5 + 4,5 | | 5 + 5 | |
| | | Aluminium sheet ⁵⁾ | mm | | | 2,5 + 2,5 | | 3 + 3 | |
| | | Round steel Ø C-content < 0,2 % ⁵⁾ | mm | | | 22 + 22 | | 22 + 22 | |
| Power stage | Thyristor power stage | IW | 1/250 IW | | | 1/500 IW | 1/500 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+5 kg, DHZ+6 kg, DHZF + 8 kg 5) subject to size influences 6) excl. switching cabinet, width = 502 mm 7) excl. thyristor power stage 8) act. throat depth = at model B, C - 10mm 9) special models with extended electrode force range 10) special models with increased electrode force range 11) increased electrode force range + 5 kg 12) special models with stepping 13) cable length < 15 m | | | | | | | | |