

DR. FRITSCH

SONDERMASCHINEN

Sintering Press

DSP 518



Dr. Fritsch Sondermaschinen GmbH, 70736 Fellbach, Germany

Technical Specification

DSP 518

DESIGN

- > robust, welded frame
- > water-cooled high-current transformer
- > integrated hydraulic unit
- > fully electronic power control
- > thermocouple for temperature measuring and regulation (0 up to 1200 °C)
- > programmable control with the possibility of memorising sintering programmes. (100 programs as standard)
- > operating panel with operator guidance for programme input and error display
- > vacuum/inert gas system, complete with fittings and vacuum pump
- > automatic fully-electronic stroke-measuring system

ESSENTIAL CHARACTERISTICS

- > high output
Large-surface graphite electrodes with large opening height
- > suitable for sintering metal powder bonds, ceramic bonds and resin bonds
- > flexibility through shortest cycle times due to direct heating of the mould
(typical sintering time 15 – 45 min.)
- > highest segment quality thank to the precise control of the sintering parameters temperature pressure, time (stroke measuring system standard, measurement and control of pressure force optional)
- > lowest graphite cost due to closed a vacuum/inert gas equipment
- > easy access of main components, especially of the thermocouple
(for easy maintenance)
- > specific dewaxing via the central suction system by means of a programme-controlled dewaxing phase
- > easy handling due to touch-screen with the possibility of storing complete sinter programmes. Sinter stages can be entered via pressure (bar), force (kN) or surface pressing (kN/cm²)

OPTIONS

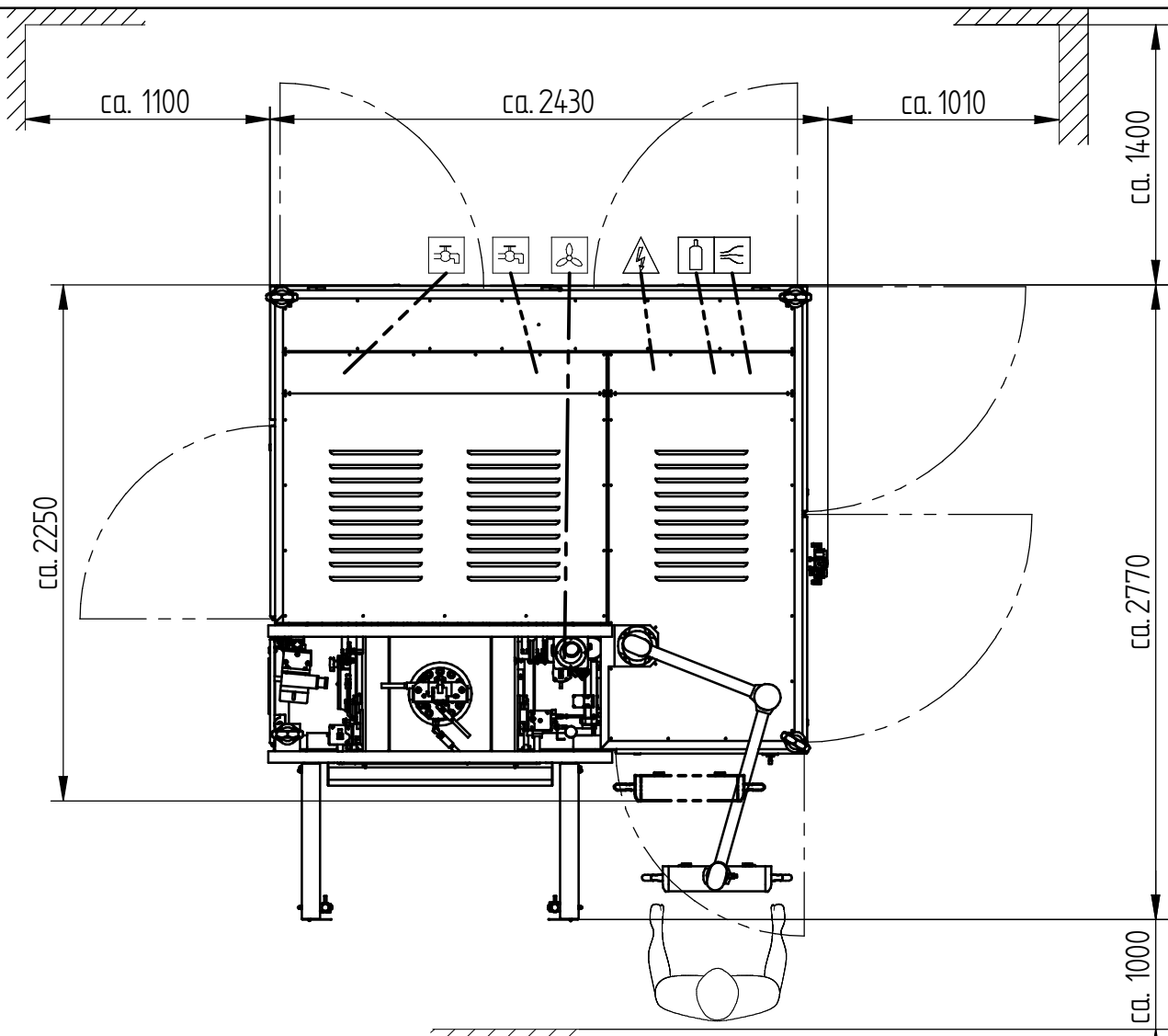
- > higher compacting force up to 2000 kN
- > energy saving system POWER+
- > optimal quality by process monitoring software for display and administration of all sintering parameters, such pressure. Temperature, stroke and time
- > enlarged compacting force; 2-100 %
- > shorter sintering cycle by using additional cooling plates
- > spacer block to reduce the opening height
- > additional exhaust fan to be connected to the in-house suction system
- > temperature control with pyrometer (250 - 1.400 °C)

TECHNICAL DATA

Total electric power:	approx. 180 kVA
Nominal current:	3 x 260 A
Fuse protection (by customer):	3 x 315 A
Supply voltage:	400 V, 50/60 Hz, 3 phases Other voltages upon request
Cooling water	
- Pressure:	2 – 4 bar
- Consumption:	approx. 150 l/min.
- with additional cooling plates:	approx. 250 l/min.
- Temperature:	15 – 25 °C
- Connections:	supply: G 1 1/2" inside thread/discharge: G 2" inside thread
Inert gas	
- Types:	Nitrogen, forming gas, noble gas
- Consumption:	depending on process (approx. 300 1000 l/h)
- Pressure:	1 – 5 bar
Suction system:	provided by the customer (flow approx. 800 m ³ /h)
Connection:	connecting piece Ø 100 mm
Temperature control:	thermocouple Ni-Cr-Ni (0 up to 1200 °C)

Compacting force:	38 – 603 kN
Graphite electrodes:	350 x 350 mm or Ø 350 mm height 130 mm
- max. opening height:	320 mm
- min. opening height:	170 mm
- specific resistance:	12 – 14 $\mu\Omega\text{m}$
Upper cylinder stroke:	150 mm
Dimensions of the machine	
- Length approx.:	2300 mm
- Depth approx.:	2500 mm
- Height approx.:	2900 mm
Weight approx.:	5500 kg

- Technical data and design are subject to modifications -



max. Maschinenhöhe: 3000 mm
(max. machine height)
erforderliche Raumhöhe: 3500 mm
(clear height required)

Symbol	Bedeutung (meaning)	Symbol	Bedeutung (meaning)	45 cm — —	DFT027568.dft ASM026293.asm	Aufstellplan floor plan										
Elektrik (electrics)	Gas (gas)				<table border="1"> <tr> <td></td> <td>Datum</td> <td>Name</td> </tr> <tr> <td>Bearb.</td> <td>07.09.2011</td> <td>e_freitag</td> </tr> <tr> <td>Gepr.</td> <td></td> <td></td> </tr> <tr> <td>Norm</td> <td></td> <td></td> </tr> </table>				Datum	Name	Bearb.	07.09.2011	e_freitag	Gepr.		
	Datum	Name														
Bearb.	07.09.2011	e_freitag														
Gepr.																
Norm																
 	Elektrik (electrics) Pneumatik (pneumatics) Kuehlwasser (cooling water) Absaugung (suction)	 	Gas (gas) Wand (wall) Arbeiter (operator)		DR. FRITSCH Sondermaschinen GmbH D-70722 Fellbach	Maschinen Typ : DSP518 machine type :	Zeichnungs Nr.: 30	Bl. 4 / 6								