

DR. FRITSCH

SONDERMASCHINEN

Sintering Press DSP 510 / 515



with magazine
MFZ 554



Technical Specification

DSP 510 / DSP 515

ESSENTIAL CHARACTERISTICS

- high output
large-surface graphite electrodes with large opening
- highest segment quality thanks to the precise control of the sintering parameters temperature, pressure, time (stroke measuring system standard, measurement and control of pressure force optional)
- lowest graphite costs due to a closed vacuum/inert gas equipment
- low energy costs due to a heating system with water-cooled high-current transformer, fully electronic power controller and hybrid electrodes (optional)
- 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 programs
Sinter stages can be entered via pressure (bar), force (kN) or surface pressing (kN/cm²)
- automatic cyclic cleaning of electrodes
- possibility of quality control and quality documentation by connecting a PC control system.
IPA NT Monitor for recording and display of process curves and data is provided as standard.
Optional: Further IPA NT modules (Organizer, Analyzer, Messenger)
- high automation degree due to automatic loading and unloading of the sintering moulds by means of magazining units for 12 resp. 54 clamping frames (optional) and integrated coding system (optional)

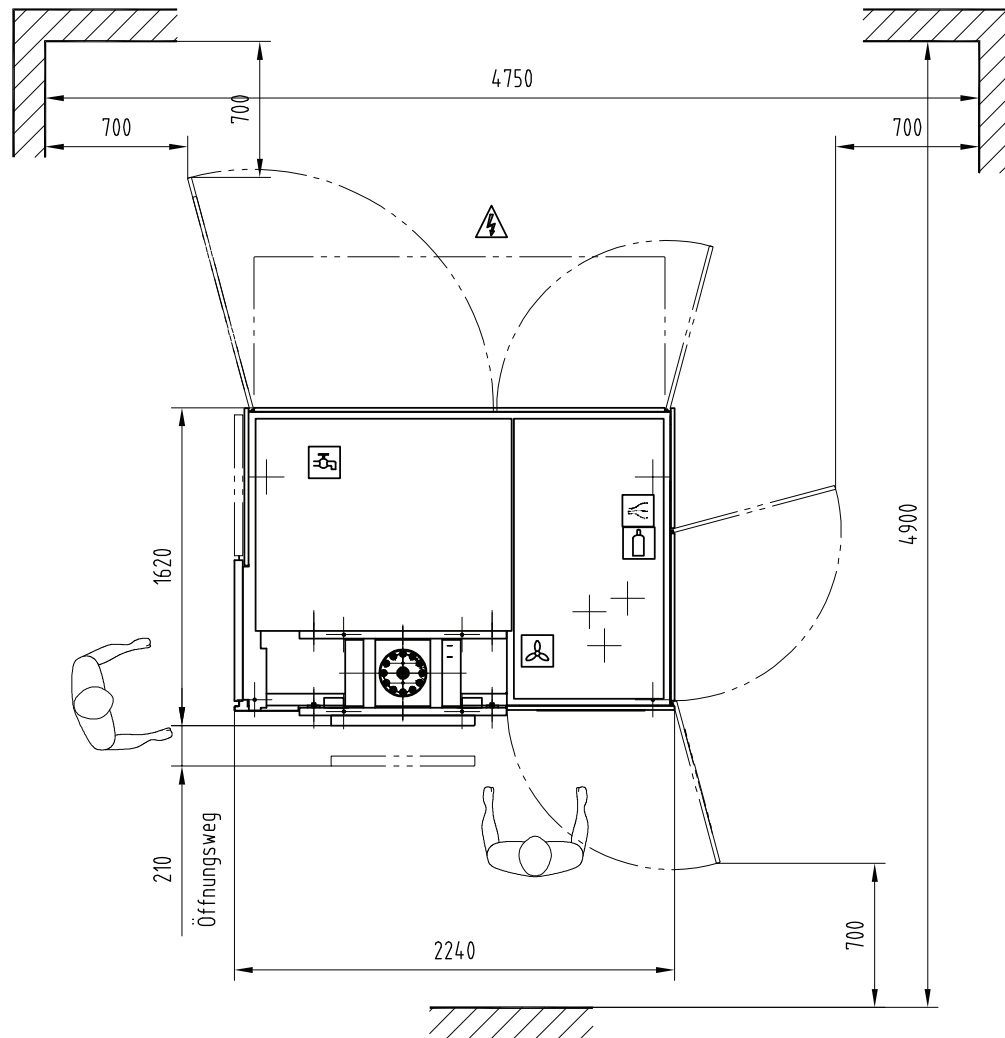
DESIGN AND FUNCTIONING

- robust, welded frame
- water-cooled high-current transformer
- integrated hydraulic unit
- fully electronic power control
- thermocouple or pyrometer (optional) for temperature measuring and regulation
- programmable control with the possibility of memorising sintering programmes
(100 programs as standard, 600 programs optional)
- operating panel with operator guidance for programme input and error display
- vacuum/inert gas system, complete with fittings and vacuum pump
- automatic device for loading and unloading of the sintering moulds to and from the machine
- coding system for the automatic recognition of sintering moulds and selection of the corresponding sinter program (optional)
- automatic fully-electronic stroke-measuring system

TECHNICAL DATA

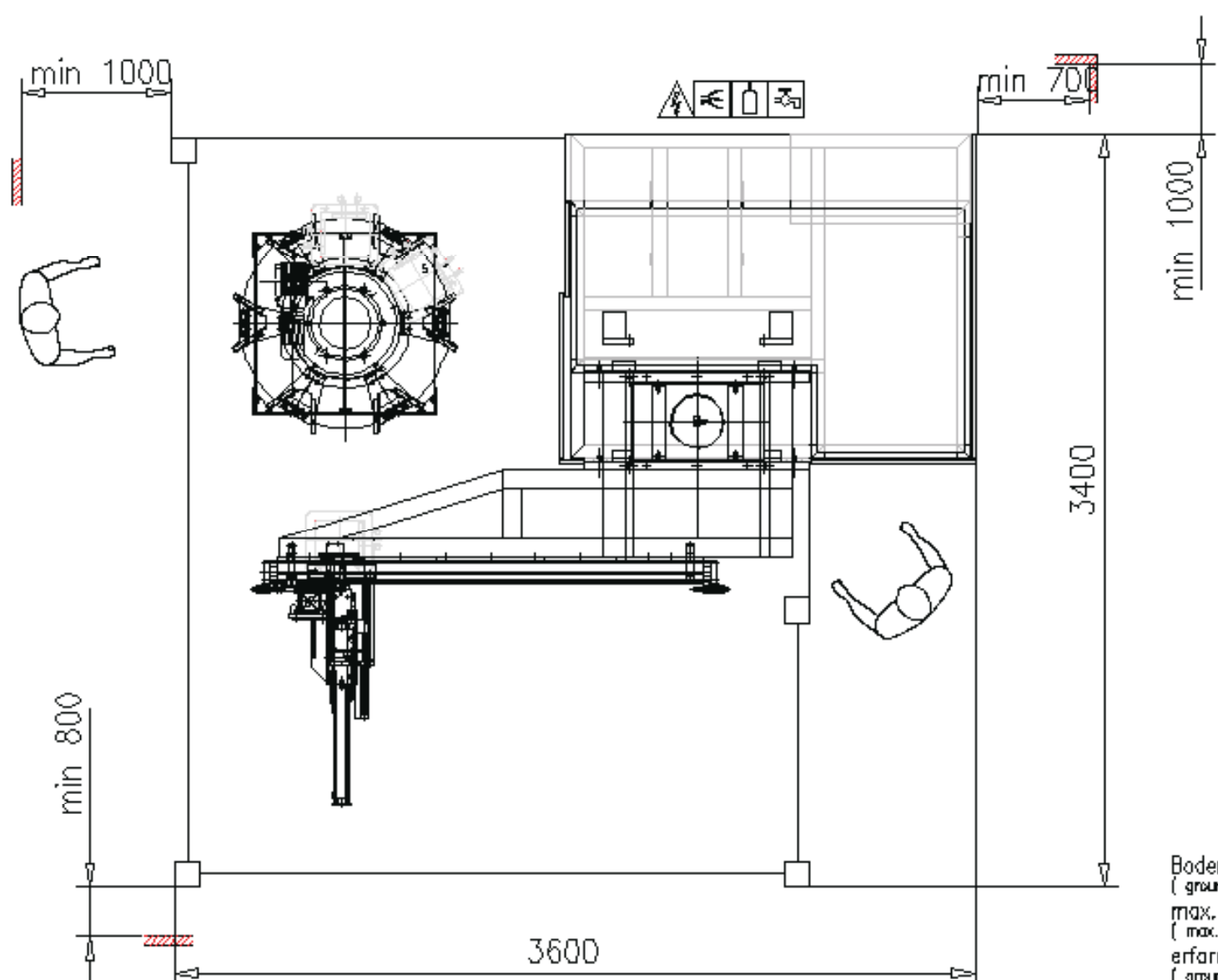
	DSP 510	DSP 515
Total electric power:	110 kVA	155 kVA
Supply voltage:	3 x 400 V, 50/60 cps (other voltages upon request)	3 x 400 V, 50/60 cps (other voltages upon request)
Nominal current:	3 x 158 A	3 x 224 A
Fuse protection (provided by customer):	3 x 200 A	3 x 315 A
Cooling water:		
- pressure:	2 – 4 bar	2 – 4 bar
- consumption:	approx. 80 - 100 l/min.	approx. 120 - 150 l/min.
- temperature:	15 – 25 °C	15 – 25 °C
- connections:	Supply: G 1 1/2" inside thread Discharge: G 2" inside thread	Supply: G 1 1/2" inside thread Discharge: G 2" inside thread
Compressed air:		
- consumption:	depending on process (approx. 20 l/min.)	depending on process (approx. 20 l/min.)
- pressure:	4 – 6 bar	4 – 6 bar
Inert gas:		
- type:	nitrogen, forming gas, noble gas	nitrogen, forming gas, noble gas
- consumption:	depending on process (approx. 300 ... 1000 l/h)	depending on process (approx. 300 ... 1000 l/h)
- pressure:	1 – 5 bar	1 – 5 bar
Suction system:		
- connection	provided by the customer air flow approx. 800 m ³ /h connecting piece Ø 100 mm	provided by the customer air flow approx. 800 m ³ /h connecting piece Ø 100 mm
Temperature control:		
- pyrometer:	250 – 1400 °C	250 – 1400 °C
- thermocouple:		
Ni-Cr-Ni	0 - 1200 °C (suitable for use up to 1100 °C)	0 - 1200 °C (suitable for use up to 1100 °C)
Pt-Rh-Pt (option)	0 - 1400 °C	0 - 1400 °C
Pressure force:		
- differential switching (max./min.)	285 / 24 kN	462 / 38 kN
- nominal switching (max./min.)	368 / 31 kN	603 / 50 kN
Graphite electrodes:		
- dimensions (WxLxH)	180 x 180 x 60 mm	180 x 180 x 60 mm
- max. opening	145 mm (up to 200 mm when using lower graphite electrodes)	145 mm (up to 200 mm when using lower graphite electrodes)
- specific resistance	12 – 14 µΩm	12 – 14 µΩm
Sintering mould:		
- specific resistance	21 – 24 µΩm	21 – 24 µΩm
Dimensions of the machine:	Width: approx. 2.240 mm Depth: approx. 1.620 mm Height: approx. 2.300 mm	Width: approx. 2.240 mm Depth: approx. 1.620 mm Height: approx. 2.300 mm
Weight:	approx. 3.700 kg	approx. 3.800 kg

- Technical data and design are subject to modifications -



max. Maschinenhöhe 2300 mm
 (max. machine height)
 erforderliche Raumhöhe 2400 mm
 (ground clearance)

Symbol	Bedeutung (meaning)	Symbol	Bedeutung (meaning)	30 cm ---	0:\ZA3\ Z14611		AUFSTELLPLAN layout plan
	Elektrik (electricity)		Gas (gas)			Datum	
	Pneumatik (pneumatic)		Wand (wall)		Bearb. 25.07.2003	FREITAG	
	Kuehlwasser (cooling water)		Arbeiter (operator)		Gepr.		Maschinen Typ : DSP500; ohne MFZ
	Absaugung (suction)				Norm		Zeichnungs Nr.: 3D APL 003 01
					DR. FRITSCH Sondermaschinen GmbH 70722 Fellbach		



Bodenfreiheit 120 mm
 (ground clearance)
 max. Maschinenhöhe 2350 mm
 (max. machine height)
 erforderliche Raumhöhe 2550 mm
 (ground clearance)

Symbol	Bedeutung (meaning)	Symbol	Bedeutung (meaning)	1,49xMa?stab 	O:\ZAJ\ Z14225	AUFSTELLPLAN layout plan											
Elektrik (electricity) Pneumatik (pneumatic) Kuehlwasser (cooling water) Absaugung (suction)	Gas (gas) Wand (wall) Arbeiter (operator)				<table border="1"> <tr><td>CM</td><td>Datum</td><td>Name</td></tr> <tr><td>Bohr.</td><td>22.05.2003</td><td>FUNK</td></tr> <tr><td>Gepr.</td><td></td><td></td></tr> <tr><td>Norm</td><td></td><td></td></tr> </table>		CM	Datum	Name	Bohr.	22.05.2003	FUNK	Gepr.			Norm	
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