Magnesium und Aluminium
Gas-Injektions-Technologie

Technical Data Sheet MAGIT PM500 Power Module

Application & use:

The MAGIT PM500 power module is an independently operating functional unit for pressure generation and both pressure and time-controlled gas injection in die casting moulds for aluminium, magnesium and zinc.
The PM500 power module can be adapted to all hot-chamber and cold-chamber die casting machines, regardless of type and manufacturer.
Intelligent software enables flexible adaptation of production parameters to suit individual requirements.

Numerical key:

PM500-1-2-1-2001

- Control version number
- 0 = without hydraulics
  continuous pressure of 250bar required from DCM
  1 = integrated hydraulics
- 1 = single stage compression
  min. upstream gas pressure 200bar
  2 = dual stage compression
  min. upstream gas pressure 30bar
- 1 = one control unit
  2 = two control units

Technical data:

Number of control units	Optionally 1 or 2
Control range	30-500bar
Response time	5 ms (PLC 200 µs)
Hydraulics	250bar 4 l/min
Hydraulic fluid	Ultra Safe 620
Compressor output	min. 80 Nl/min 80bar for 30bar N2 inlet
Comp. air consumption	5700 Nl/min
N2 tank system pressure	5 litres / 500 bar
N2 tank injection pressure	3 litres / 500 bar per control unit
N2 tank holding pressure	3 litres / 500 bar per control unit
Electrical connection	220V / 11A
Dimensions (W/D/H)	720x1100x1300 mm
Weight	380 - 520kg

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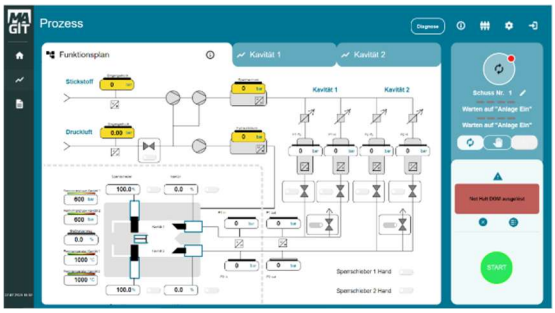
Control system & visualisation:

Three operating modes available:
Automatic / Manual (run without pressurisation) and Setup mode.
Control system type: B&R X20CP1585 (1GHz) with cycle times of up to 200 µs – safety functions via B&R X20SLX806.
Control of process variables via separate reAction technology: B&R X20RT8202 (IEC 61131-3 compliant)
This means that response times and actuations of I/Os can be reproduced up to 1 µs.
Visualisation: Web-based MappView visualisation enables accessing with all terminals, provided a browser (e.g. Chrome) is installed on these.

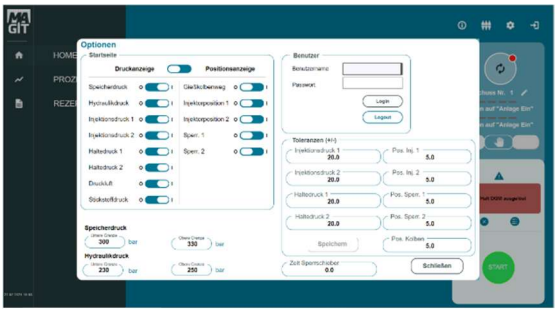
Homescreen
All pending machine and system parameters at a glance



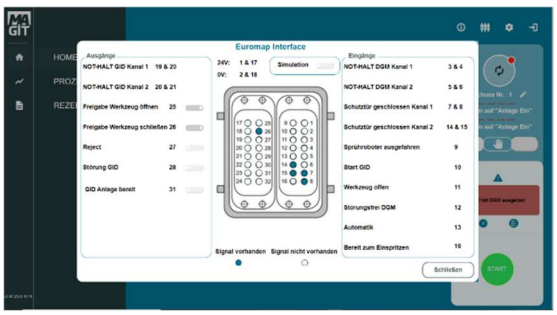
Function chart
Real-time visualisation with all relevant data during the active process

Recipe
Freely programmable time and pressure parameters for each channel

Process
Recording of pressure and time sequence for each shot



Settings
Parameterisation and interface monitoring



Interfaces
Visualisation of all signals facilitates installation and setup

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Optional accessories:

Designation	Item no.
Cable duct 1700 mm*	A10.0023
MSI connector box IP67	C30.0005
MDI connector box IP67	C30.0006
5m display cable*	C20.0001
10m display cable*	C20.0002
20m display cable*	C20.0003
10m MSI interface cable*	C20.0004
10m MDI interface cable*	C20.0005
10m MMI interface cable*	C20.0006
4m process gas hose extension, incl. double nipple*	C20.0007
4m hydraulic hose extension, incl. double nipple*	C20.0008
5 l Ultra Safe 620 hydraulic fluid	B20.0061
*Special lengths available on request	

Dimensions:

Fluid

Process gas outputs
Control unit I ERMETO 12S
Control unit II ERMETO 12S

N2 gas bottle connection
W24.32 x 1/14“(200 bar)
M30 x 2 (300 bar)

Hydraulics
Pressure ERMETO 12L
Tank ERMETO 12L

Process gas input:
ERMETO 12S

Compressed air input:
BSP ¾“ internal thread

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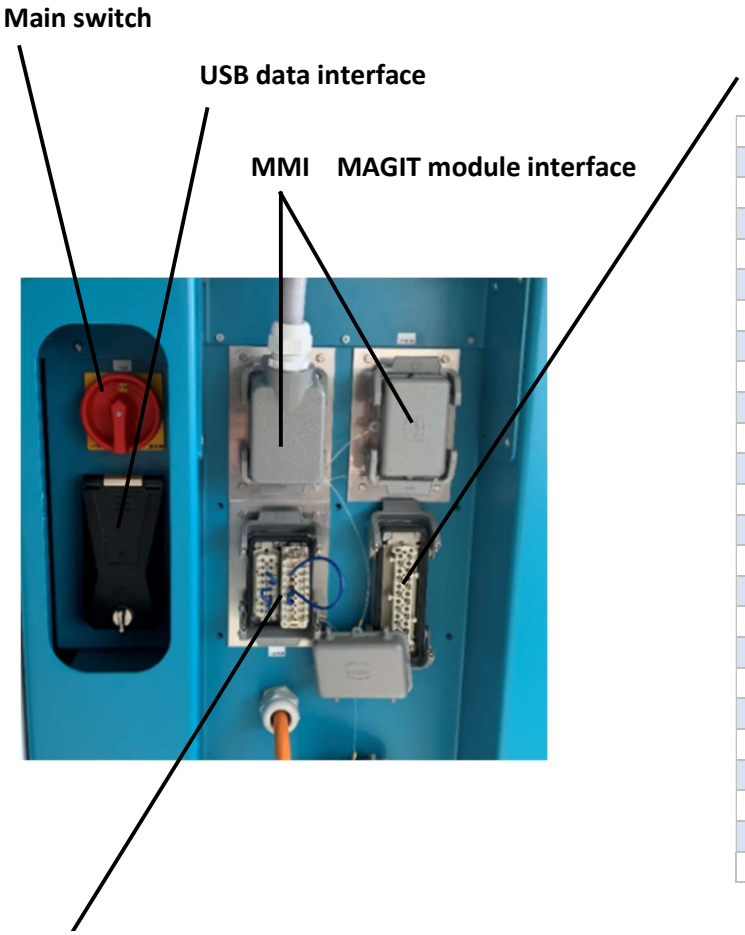
Electrical interfaces:



PIN	Function
1	24V DC MAGIT PM
2	MFKS 1
3	24V DC MAGIT PM
4	Start 3th-Phase
5	Reserve
6	Reserve
7	Reserve
8	Reserve
9	Reserve
10	Reserve
11	Reserve
12	Reserve
13	Die temp. 1 +
14	Die temp. 1 -
15	Die temp. 2 +
16	Die temp. 2 -
17	Die pressure 1 +
18	Die pressure 1 -
19	Die pressure 2 +
20	Die pressure 2 -
21	Plunger stroke +
22	Plunger stroke -
23	Reserve
24	Reserve

PIN	Function
1	24V DC from PM500
2	0V DC from PM500
3	EMERGENCY STOP DCM channel 1
4	EMERGENCY STOP DCM channel 1
5	EMERGENCY STOP DCM channel 2
6	EMERGENCY STOP DCM channel 2
7	Safety door closed channel 1
8	Safety door closed channel 1
9	Die closed
10	Start PM500
11	Start spry
12	Fault-free DCM
13	Automatic
14	Safety door closed channel 2
15	Safety door closed channel 2
16	Ready for injection

PIN	Function
17	24V DC from DCM
18	0V DC from DCM
19	EMERGENCY STOP PM500 channel 1
20	EMERGENCY STOP PM500 channel 1
21	EMERGENCY STOP PM500 channel 2
22	EMERGENCY STOP PM500 channel 2
23	Reserved
24	Reserved
25	Enable open die
26	Enable close die
27	Reject
28	Fault PM500
29	Reserved
30	Reserved
31	PM500 system ready
32	Reserve

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