

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.

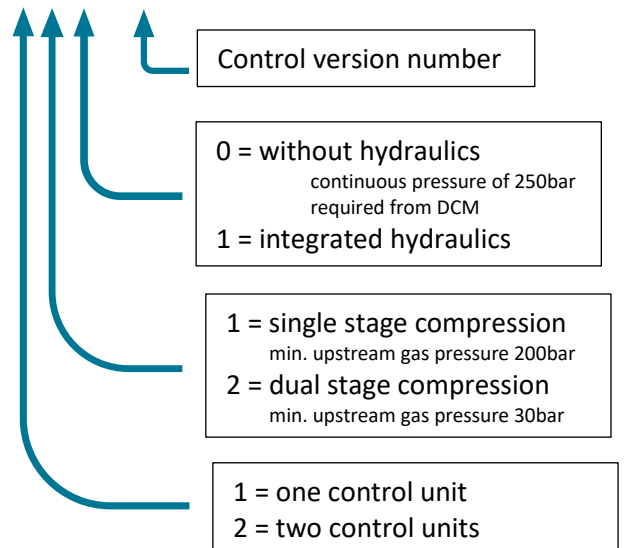
The PM500 power module can be adapted to all hot-chamber and cold-chamber die casting machines, regardless of type and manufacturer.

Intelligent software enables flexible adaptation of production parameters to suit individual requirements.



Numerical key:

PM500-1-2-1-2001



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 NI/min 80bar for 30bar N2 inlet |
| Comp. air consumption | 5700 NI/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 |



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 μ s – safety functions via B&R X20SLX806.

Control of process variables via separate reAction technology: B&R X20RT8202 (IEC 61131-3 compliant)

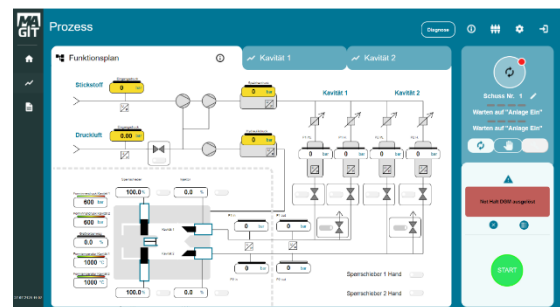
This means that response times and actuations of I/Os can be reproduced up to 1 μ s.

Visualisation: Web-based MappView visualisation enables accessing with all terminals, provided a browser (e.g. Chrome) is installed on these.



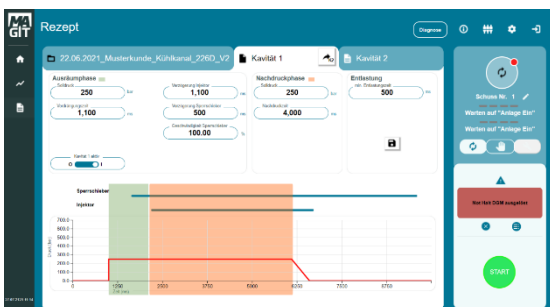
Homescreen

All pending machine and system parameters at a glance



Function chart

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



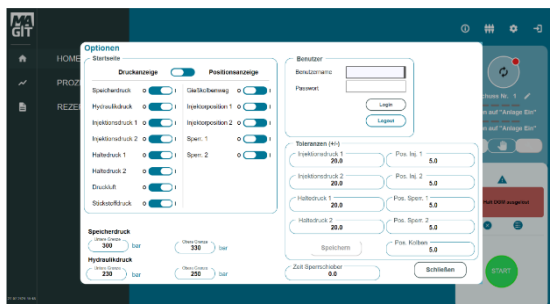
Recipe

Freely programmable time and pressure parameters for each channel



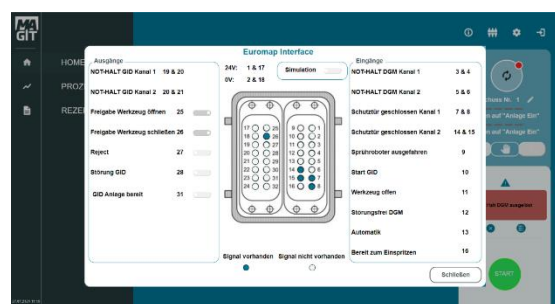
Process

Recording of pressure and time sequence for each shot



Settings

Parameterisation and interface monitoring



Interfaces

Visualisation of all signals facilitates installation and setup

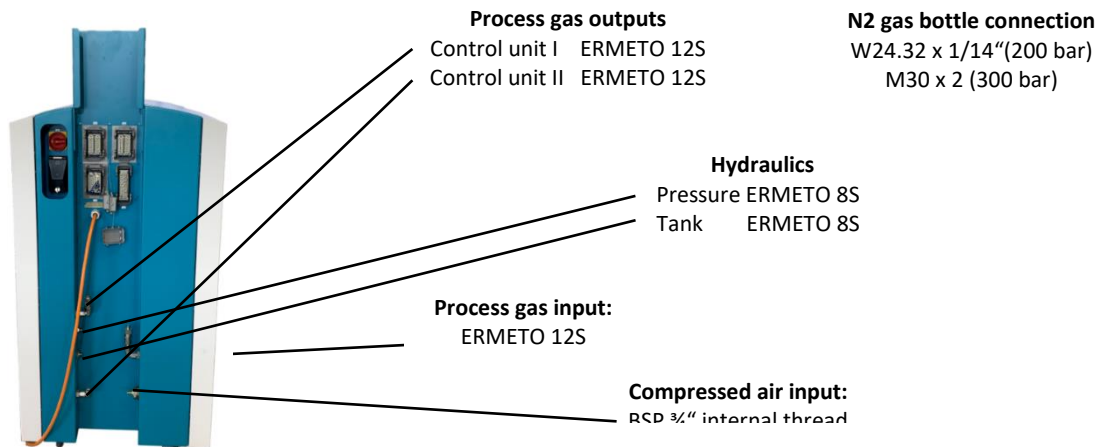
Optional accessories:

| 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



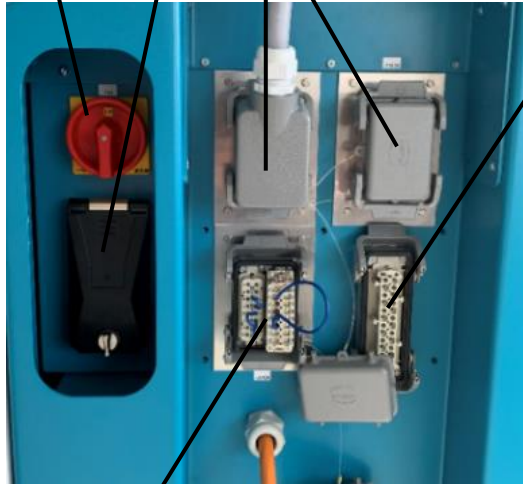
Electrical interfaces:

Main switch

USB data interface

MMI MAGIT module interface

MDI MAGIT data interface



| 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 |

MSI MAGIT safety interface

| 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 |