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ISO 9001 BUREAU VERITAS Certification

ISO 14001 BUREAU VERITAS Certification

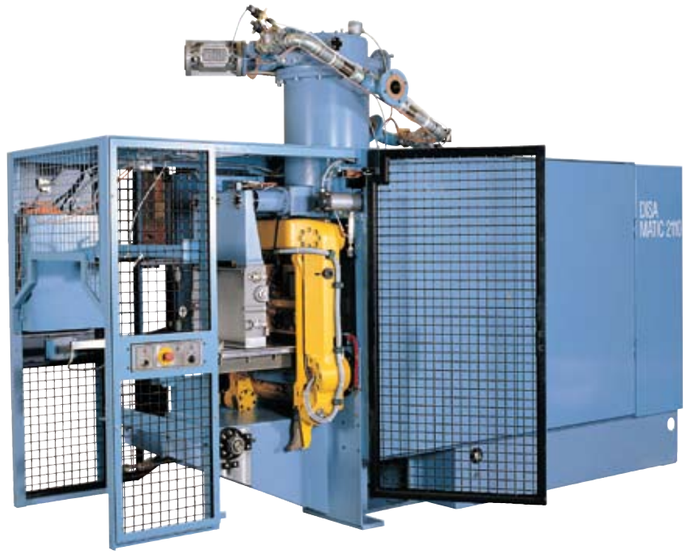
DISA
shaping industry

Norican Group is the parent company of DISA and Wheelabrator.

DISAMATIC® 2110

DISA
shaping industry

Compact, precise and fast casting production



DISAMATIC® 2110

Fitting (brass)

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DISA is committed to contributing to the success of our customers with decades of experience gained from installations all over the world. DISAMATIC® customers draw on the expertise of our experienced engineers and service technicians throughout the lifetime of their plants – from initial business plans and feasibility studies through installation, service and maintenance.

The DISAMATIC® 2110 is a compact vertical moulding machine with the power and precision to increase competitive edge, both for smaller foundries and foundries producing smaller mass-produced castings, through higher output and quality.

Since its inception in 1987, the DISAMATIC® 2110 has established an unbeaten track record with more than 140 machines in operation all over the world. Many smaller foundries have used the DISAMATIC® 2110 to extend their businesses into new, higher-value markets where competitively priced quality and reliability are at a premium.

High speed and high quality

The DISAMATIC® 2110 is available in two versions, the high-output MK3 and the standard LP. Both versions provide an integrated solution with relatively few movements and are ideal for high-speed, high-quality production of smaller ferrous, aluminium and copper castings.

Performance benefits for the modern foundry

Casing flange (aluminium)

Crankshaft (ductile iron)

Nut (bronze)

Features that make the difference

Excellent accuracy

The mechanical design of the DISAMATIC® 2110 means that DISA is able to guarantee moulds with a machine-dependent mismatch of less than 0.20 mm. The need for machining is thereby reduced to an absolute minimum – or even eliminated.

High density moulds

The DISAMATIC® 2110 incorporates the following standard features to ensure consistent and dense moulds:

- Double-sided mould squeeze operation
- High squeeze pressure up to 12.5 kp/cm²
- Centering of the pattern plates under the sand injection slot ensuring optimum sand filling

Unbeatable uptime

The vertical moulding technology of the DISAMATIC® 2110 incorporates numerous features making operation straightforward, reliable and cost effective:

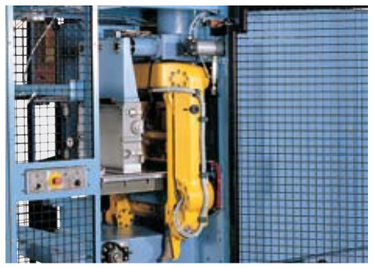
- Minimal load on fewer moving parts means less wear and less maintenance
- Standardised and interchangeable components mean short maintenance times
- Pre-set production parameters enable fast and reliable pattern changes
- Total process control with on-screen messages
- Integrated operation with perfect synchronisation between DISA moulding line units ensures mould integrity

"The DISAMATIC 2110 is significantly more cost-effective in terms of speed and precision than other processes for the mould sizes we needed. In addition, the precision of the DISA vertical greensand moulding process gives a superb finish."

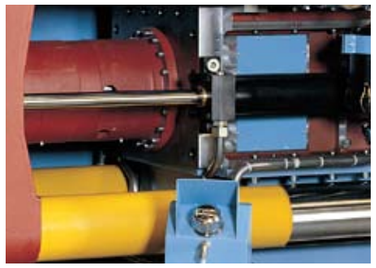
Sushil Kumar Saxena, Plant & Commercial Manager
Al Jaber Iron & Steel Foundry, United Arab Emirates

Perfect synchronisation and moulding control

Operator panel



Swing plate



Squeeze mechanism

The high level of automation of the DISAMATIC® 2110 is achieved by embedding the latest know-how of DISA in the control system and operator interface. This reduces manning requirements to a minimum.

PLC control system

The DISAMATIC® 2110 Moulding System is as standard provided with a modern PLC control system housed in a cabinet incorporated in the moulding machine.

The basic PLC-configuration includes:

- Interface to all moulding line units
- Auto-diagnosis of electrical hardware for fast troubleshooting
- Monitoring of positions and velocities of movements to ensure perfect synchronisation between all system units
- Automatic machine setting adjustments based on pre-entered pattern data

Operator panel

The VDU (Visual Display Unit) provides operator information and instructions in clear text. The control system can provide instructions in two languages which can be selected at the operator's convenience.

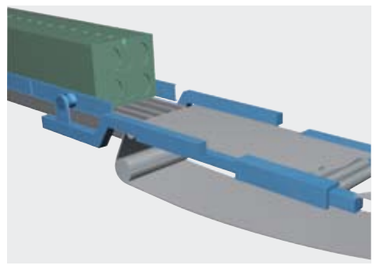
A key pad is used for selecting logic menus and for entering production related data into the control system.

The VDU provides the following information:

- Current status of operations and production at any time
- Pattern data for the current and next pattern set
- Machine settings support
- Diagnostics for troubleshooting
- Instruction for use/help function

Moulding equipment flexibility

Automatic mould conveyor



Synchronised belt conveyor

Automatic core setter

Automatic Mould Conveyor (AMC)

The DISAMATIC® Automatic Mould Conveyor is a unique mould transport system available in two standard lengths of 12 and 15 m.

The perfectly synchronised movements of the DISAMATIC® 2110 moulding machine and the AMC ensure optimum control of the forces between the moulds.

During transport, the moulds remain on the same level. This ensures that the integrity of each mould cavity is maintained until the castings are separated from the mould.

Synchronised Belt Conveyor (SBC)

The DISAMATIC® 2110 Synchronised Belt Conveyor extends the cooling zone beyond the AMC when longer in-mould cooling is required. The SBC is powered by and fully synchronised with the AMC via a mechanical link, thus avoiding mould gaps at the critical transition point between the AMC and SBC.

The sturdy SBC features a multiply, heat-resistant rubber belt that is clamped on both sides by pneumatic clutches.

The SBC is available as a 4.5 m basic unit and can be extended up to a total length of 35 m using 1.9 m sections.

Automatic Core Setter (CSE)

The DISAMATIC® 2110 features a CSE that can be installed on either side of the moulding machine.

The operator feeds the cores by hand into the core mask where they are retained by vacuum. In perfect synchronisation with the moulding cycle, the CSE then automatically and precisely sets the cores into the cavity of the last mould produced with no tear-off.

Precision movements together with controlled acceleration and deceleration of the CSE ensure that even complex cores are set perfectly into the moulds.

High speed, high accuracy and low costs

Impeller (alu bronze)

Crankshaft (ductile iron)

Valve (bronze)

10 good reasons for choosing
DISAMATIC 2110:

- Up to 300 uncored moulds per hour
- Machine-related mismatch of less than 0.20 mm for minimum trimming and fettling
- High density moulding with double-sided squeeze operation for high quality moulds
- Superiour uptime with few moving parts, robust design and minimum maintenance and spare part requirements
- Fast and easy installation with no special foundation needed
- Easy to operate - operation including core feeding by a single person
- Safe, clean and quiet for a good working environment
- User-friendly operator panel for easy operation and quick troubleshooting
- Low sand consumption with consistent sand-metal ratio
- Comprehensive customer documentation

"We needed a ROI in three years and the DISAMATIC 2110 was the only machine that could compete on payback. We think we're the best in the business when it comes to brass and we owe a large part of that success to DISA."

David Smith, Vice President of Operations
Lee Brass Foundry, USA

Technical Data

Type			LP		MK3	
Measurements:	Metric	US	Metric	US	Metric	US
Mould dimensions:						
Height	mm	inches	400	15.7	400	15.7
Width	mm	inches	500	19.7	500	19.7
Thickness	mm	inches	100-315	3.9-12.4	100-315	3.9-12.4
Mismatch:	mm	inches	0.2	0.008	0.2	0.008
Mould capacity:						
Uncored	mould/hour*	mould/hour*	205	205	300	300
Cored	mould/hour*	mould/hour*	185	185	275	275
Conveyor length max:	m	ft	50	164.1	50	164.1
Cooling time max:	min*	min*	70	70	50	50
Sand consumption max:	tonnes/h**	tons/h**	20	22	27	30
Power consumption:	kW	kW	16	16	22	22
Free air consumption:	m^3/min	cu ft/min	3.2	113.0	4	141.3
Water consumption:						
At 25°C inlet temp.	litres/min	gallons/min	10	2.6	15	4.0

* At 200 mm (7.9 inches) mould thickness
** At max. mould thickness

The technical data is not binding and may be subject to change.