



DISAMATIC® C₃

The clever choice

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DISA
A Norican Technology

For foundries with big ambitions



DISAMATIC C3 – Advanced vertical moulding technology made affordable for small-series and low volume foundries

Advanced, high-performance moulding technology used in high-volume production has, for a long time, been uneconomical for foundries that produce slightly lower volumes or smaller-series castings.

The result: less sophisticated moulding technologies abound, with many foundries across the globe still relying on jolt-squeeze machines or manual methods. Yet we know that lower-volume, small-series or jobbing foundries have big ambitions too.

It's these foundries that the DISAMATIC C3 moulding machine was developed for. If you belong to this big, ambitious global family of foundries, the DISAMATIC C3 will enable you to introduce advanced vertical moulding technology that is affordable even for small-series or lower-volume production.

It will give you the enhanced casting quality and higher levels of automation that have so far simply not made business sense for you.

The DISAMATIC C3 in brief

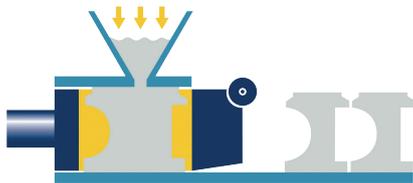
The DISAMATIC C3 is a vertical, greensand moulding system capable of producing a wide range of grey iron, ductile iron and other metal castings in various sizes. The basic equipment includes the moulding machine and the automatic mould conveyor system.

The DISAMATIC C3 benefits from the knowledge, expertise and technology gained from DISA's high-performance D-lines, applied to a lower price point, but without compromising on quality.

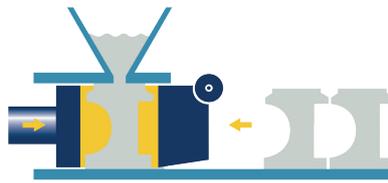
This means maximum performance for minimum investment, and a high ROI over a long service life, even if capacity is not always fully utilised. It's the clever choice for lower-volume foundries with big ambitions.

The DISAMATIC C3 is available globally in three speed versions: C3-150, C3-250 and C3-350.

Step up your performance



1. Sand shot



2. Mould squeeze



3. Stripping and chamber opening



4. Mould close up



5. Stripping and returning



6. Closing the chamber

Better vertically

The DISAMATIC C₃ is part of DISA's high-performance moulding machine line-up and uses the same vertical greensand moulding principle, invented and developed by DISA.

The DISAMATIC blow-squeeze system produces a continuous string of vertically-parted, flaskless moulds, enabling the fast production of high-integrity castings with low mismatch (max. 0.25 mm) and minimal finishing costs.

Straightforward operation...

All of the DISAMATIC C₃'s mechanical, hydraulic, pneumatic and electrical systems are based on straightforward principles that have been tried, tested and refined on other DISA solutions.

This means maximum reliability and uptime, as well as minimal maintenance requirements. Day-to-day operation is simple, with maintenance carried out using general skills.

... meets sophisticated automation

The DISAMATIC C₃ is a robust, entry-level vertical moulding solution, but it also offers a step change in automation and process control. High-accuracy controls ensure strict adherence to pre-programmed settings, both to eliminate the risk of human error and uphold state-of-the-art safety.

"The DISAMATIC C₃ is the perfect moulding line for ambitious foundries that want to achieve a step-change in performance with a relatively small investment. For our customers in China and India, where the DISAMATIC C₃ was first introduced, it has been a real game-changer."

*Nina Rasmussen,
Vice President, Product Portfolio Development at DISA*

The speed you need



DISAMATIC C3-150

The DISAMATIC C3-150 offers the following main features:

- up to 150 moulds per hour (uncored)
- manual core setting: 120 moulds per hour (includes 15 secs. core setting time)
- high accuracy (0.25 mm mismatch)
- suitable for flexible & jobbing foundries

The machine uses approximately 20-23 t/hour sand, depending on the speed as well as the castings produced.

The DISAMATIC C3-150 is perfect for foundries that want to free up man hours and are looking for a cost-effective moulding solution.

DISAMATIC C3-250

The DISAMATIC C3-250 offers the following main features:

- up to 250 moulds per hour (uncored)
- automatic core setting (CSE): 220 moulds per hour
- high accuracy (0.25 mm mismatch)
- suitable for flexible & jobbing foundries

The machine uses approximately 31-37t/hour sand, depending on the speed as well as the castings produced

DISAMATIC C3-350

The DISAMATIC C3-350 offers the following main features:

- high capacity of 350 moulds per hour (uncored)
- automatic core setting (CSE): 300 moulds per hour
- high accuracy (0.25 mm mismatch)
- suitable for flexible & jobbing foundries
- optimises foundry output

The machine uses approximately 44-53t/hour sand, depending on the speed as well as the castings produced.

The DISAMATIC C3-350 is perfect for foundries looking for a cost-effective, advanced moulding solution for an annual production output of 5,000-10,000 t finished castings.

Features and options



Automatic Mould Conveyor (AMC)



Automatic Core Setter (CSE)



Quick Pattern Change Unit (QPC)

Automatic Mould Conveyor

The Automatic Mould Conveyor (AMC), 12m or 18m long, is synchronised with the DISAMATIC C3 moulding machine for high-precision, hydraulically-driven mould transport through the pouring, solidifying and cooling zones – and without shifting, distortion or displacement of moulds. The AMC features replaceable wear strips for easy maintenance.

Synchronised Belt Conveyor

Used to extend cooling time, the Synchronised Belt Conveyor (SBC) is available in 1.9*-metre rubber belt modules that run on precisely positioned rollers with dustproof bearings. The SBC is powered by and synchronised with the AMC (see above), ensuring steady transport of the entire mould string without mould gaps, thereby ensuring mould integrity.

Automatic Core Setter

The Core Setter (CSE)** automatically inserts cores into the mould, thereby optimising the speed of the line by eliminating the risk of bottlenecks. The movements of the CSE and the core setting force can be individually adjusted to allow automatic set-up of the core setting sequence.

Data collection

Monitizer® | CIM is an optional on-premise solution for foundry data collection, data visualisation and machine automation. Delivering a synchronised, reliable digital view of your DISA equipment, this well-proven Industry 4.0 platform helps you increase uptime, reduce scrap and optimise production. Working in your local language, it is the perfect digital foundation for your foundry.

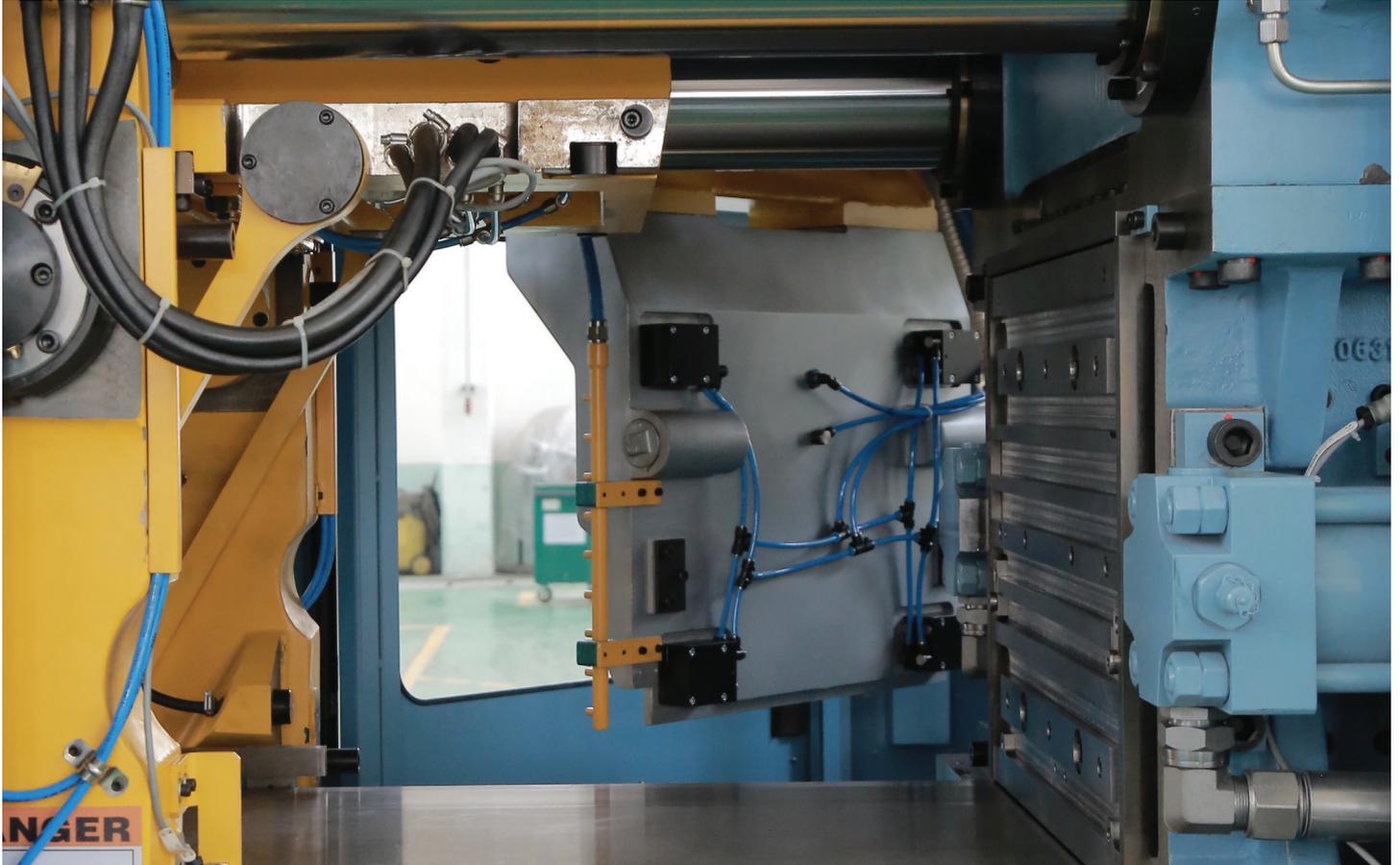
Quick Pattern Change Unit

The Quick Pattern Change unit (QPC) facilitates and speeds up pattern changing on the DISAMATIC C3 moulding machine. The QPC makes pattern changes easier, faster, more precise and less dependent on the skills and routine of the operator, thereby reducing pattern changing time and minimising the risk of errors.

* 2-metre module for C3-350 X size

**Only available for DISAMATIC C3-250 & 350

DISA quality pays off



Quality that pays

DISA is renowned for engineering and design quality that ensures:

- high uptime
- less scrap and lower finishing costs
- higher profitability over a longer service life
- safe, easy and clean operation

Design that pays

The new DISAMATIC C3 is designed to deliver a competitive advantage and fast payback for small and medium-sized foundries.

It does this by enabling a step change in capacity, productivity, automation and quality through:

- up to 350 uncored moulds per hour and/or up to 300 cored moulds per hour
- high-pressure double-sided squeeze for high-density mould consistency
- easy operation and maintenance
- lower capital investment
- service concept to ensure optimum equipment lifetime

Support that pays

DISA offers worldwide support of the DISAMATIC C3 to help maximise foundry performance at all times, thanks to:

- fast delivery of original spare parts
- on-site technical support from offices close to you
- 24-hour support hotline
- DISA TOPS, DISA's exclusive customer inspection, service and maintenance programme

DISAMATIC C₃ technical data

DISAMATIC		C3-150		C3-250		C3-350		
		A	B	A	B	A	B	X
Mould dimensions:								
Height	mm	480	535	480	535	480	535	535
Width	mm	600	650	600	650	600	650	750
Thickness	mm	120-340	120-340	120-340	120-340	120-340	120-340	120-395
Mismatch:	mm	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Mould capacity:								
Uncored	mould/hr.*	150	150	250	250	350	350	350
Cored	mould/hr.*	120	120	220	220	300	300	300
Cooling time max.	min.*	131.5	131.5	72	72	53	53	62
Sand consumption max.	tonnes/hr.**	19	22	36	44	43	52	61
Power consumption	kW	75	75	81	81	67	67	77
Compressed air consumption	Nm ³ /min.	4.5	4.5	6.5	6.5	8	8	8
Conveyor length max.:	m	52.6	52.6	52.6	52.6	56.5	56.5	66.5
Cooling water consumption (DMS):								
at 15 °C inlet temp.	litres/min.	40	40	40	40	23	23	23
Pressure:								
Squeeze pressure	kp/cm ²	1-12	1-12	1-12	1-12	1-12	1-12	1-12
Machine dimensions (DMM):								
Height with CSE	mm	N/A	N/A	3800	3800	3800	3800	4000
Width with CSE	mm	N/A	N/A	2500	2500	2500	2500	2600
Length with CSE	mm	N/A	N/A	5800	5800	6350	6350	6500
Height without CSE	mm	3800	3800	3800	3800	3800	3800	4000
Width without CSE	mm	1600	1600	1600	1600	1600	1600	1700
Length without CSE	mm	5800	5800	5800	5800	6350	6350	6500

* At 200 MM MOULD THICKNESS / ** At MAX. MOULD THICKNESS

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