DISA MATCH

A match you can count on

DISA
A Norican Technology

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Agility and reliability for your production

For foundries that specialise in the short to medium-run, high-efficiency production of quality castings, superior uptime and fast pattern changes are key to maximise earnings and maintain a competitive edge.

The DISA MATCH moulding line is the perfect fit for this type of foundry. Patented DISA matchplate technology combined with the unique DISAMATIC® Blow/Squeeze mechanism means it produces consistently high-quality castings at high speeds, with fast pattern changing times.

With an installed base of over 120 machines worldwide, the DISA MATCH is trusted as the most reliable matchplate moulding system on the market for iron, aluminium or other alloys.

The DISA MATCH in brief

The DISA MATCH matchplate, green-sand moulding machine is available in five mould sizes – 14/19, 20/24, 24/28, 28/32 and 32/32 – and reaches speeds of up to 180 uncored moulds per hour (for the DISA MATCH 20/24).

The DISA MATCH is the most rigid and accurately-controlled matchplate system available. It delivers a maximum machine-related mismatch of only 0.2mm (0.25 for the two larger mould-size versions).

With rapid, precise pattern changes and an easy-to-use operator interface, the DISA MATCH enables jobbing foundries to achieve the lowest cost per casting – even for short runs.

Maintenance-friendly design, including easy access to the moulding area, reliable service support and wrap-around preventive maintenance ensure your DISA MATCH moulding line is up and running when you need it.

No time for anything less than perfect

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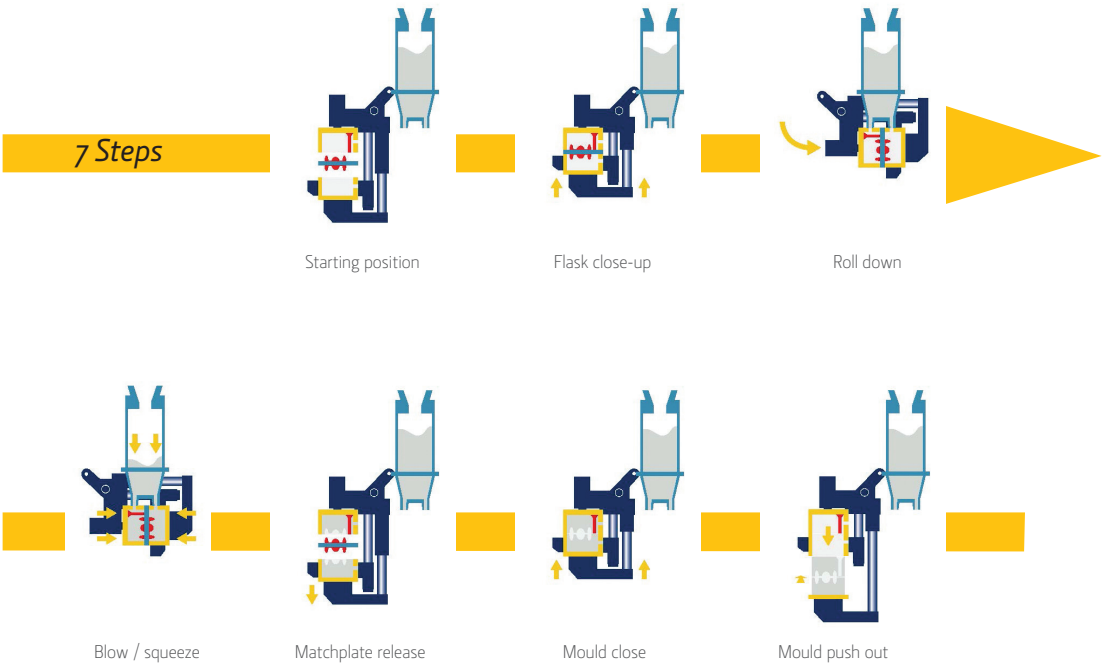


Quality moulds, lower costs

The DISA MATCH's rigid design and smooth operation produces premium-quality moulds with

- maximum machine-related mismatch of between 0.2 and 0.25mm (depending on mould size)
- DISA in-chamber parting spray system to prevent sand sticking to the pattern plate
- patented sand slot design for optimum mould quality

These features mean DISA MATCH delivers consistently higher casting quality with less need for machining – keeping finishing costs to a minimum.

Deep pockets, perfectly filled

The sand blow system deployed in the DISA MATCH is based on 50 years of experience. It ensures effective sand filling, even of deep-pocket moulds, with no need for ram-up blocks and is easy to clean.

Fully adjustable stripping height and acceleration protect mould integrity and optimise the cycle time, while the adaptable mould height system ensures a constant sand-metal ratio.

Easy conversion from manual to automatic

Simple adaptors let you reuse existing jolt squeeze pattern plates or other matchplate patterns in the DISA MATCH machine with only few modifications.*

That makes upgrading from jolt squeeze or other matchplate technologies to DISA MATCH quick and painless. Our experts are ready to help you apply this proven solution.

** Subject to evaluation as some patterns may not be suitable for conversion.*

"Instead of just 16 moulds per hour using the old jolt-squeeze machines, we are now turning out 28/32 moulds at a rate of 75 an hour. The fully automated moulding machine and mould handling line are fully synchronized and our manpower requirement has dropped from 26 to just 6 people.
Our ability to produce more complex castings means we can now offer our customers a much wider range of more complex and heavier components, and our machining costs have been cut right down to the bone."

Tadeusz Jurga, Vice-Chairman
Drawski Cast Iron Foundry, Poland

A range that covers your matchplate needs

DISA MATCH 14/19 & 20/24: perfect for jobbing foundries looking to transform casting quality and production efficiency. Its match-plate adaptor makes it easy to upgrade from competitor machines

DISA MATCH 24/28: highly flexible matchplate casting production for a wide range of applications

DISA MATCH 28/32 & 32/32: perfect for a broad range of automotive and other applications that require bigger moulds

Perfect for your process

DISA MATCH machines are available in five different sizes tailored to suit each foundry's needs. For maximum output and yield, every model combines high speed, fast pattern changes and consistent mould quality with low mismatch.

Fully integrated PLC and hydraulic systems regulate every DISA MATCH machine's movements. Sophisticated Adaptive Mould Thickness control comes as standard, ensuring consistent mould thickness even when sand properties change. Added to super-rigid machine frames and guide rods, this produces very high casting accuracy and repeatability.

- fixed cope for flexible mould changes and extra-precise stripping
- enhanced pattern carrier design (28/32 and 32/32)

Flexible, clean operation...

DISA MATCH offers fast and simple pattern changes with completely flexible, easily-adjusted Down Sprue positions.

Operators have increased workspace, with a cleaner and quieter working environment.

- in-chamber pattern spray reduces parting fluid usage and airborne parting fluid
- light curtain for easy and safe operation
- large colour VDU for user-friendly operation and trouble shooting

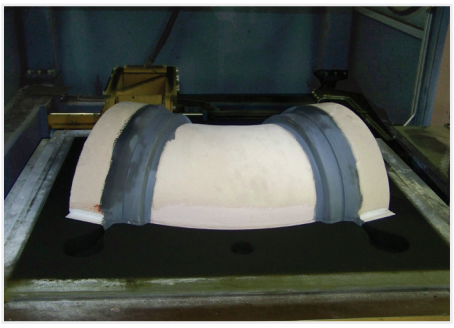
...that's easy to live with

DISA MATCH's robust and simple design employs the minimum of moving parts. That means less maintenance and unbeatable uptime. Service-friendly access and clever features further reduce maintenance time and cost.

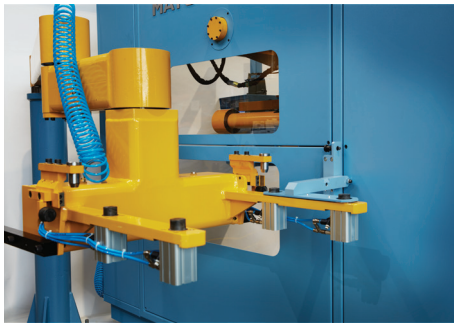
- easy-to-change cope and drag wear plates
- automatic lubrication system
- external hydraulic power unit (14/19, 20/24 and 24/28)
- patented easy-to-exchange chamber wear plates

Every DISA MATCH is delivered fully tested and installation-ready for fast commissioning. In operation, you can rely on the industry's best aftermarket parts and service network.

Options that make a difference



DISA Automatic Core Setter (CSE) for easy, precise core setting



DISA Quick Matchplate Changer (QMC) with safety locking on DISA MATCH 20/24

DISA Computer Integrated Manufacturing (CIM) for monitoring your DISA MATCH data

DISA Automatic Core Setter (CSE)

The Automatic Core Setter is a simple, reliable design that is fully integrated with the MATCH machine. Available for all DISA MATCH sizes, the CSE is particularly valuable for long production series and for setting heavy cores precisely into the drag mould.

The DISA CSE for DISA MATCH 28/32 and 32/32 gives the operator 36 seconds to place the cores in the core mask. Built-in alignment between the core mask and drag mould aids rapid matchplate changes.

DISA Quick Matchplate Changer (QMC)

The Quick Matchplate Changer enables the precise changing of matchplates within two minutes.

It is highly recommended for both smaller and larger moulding machines where matchplates can weigh up to 400 kilos (900 pounds).

Monitizer® | CIM

Monitizer | CIM is an on-premise solution for foundry data collection, data visualisation and machine automation.

Monitizer | CIM enables direct connectivity between the DISA MATCH and reporting applications on the foundry network.

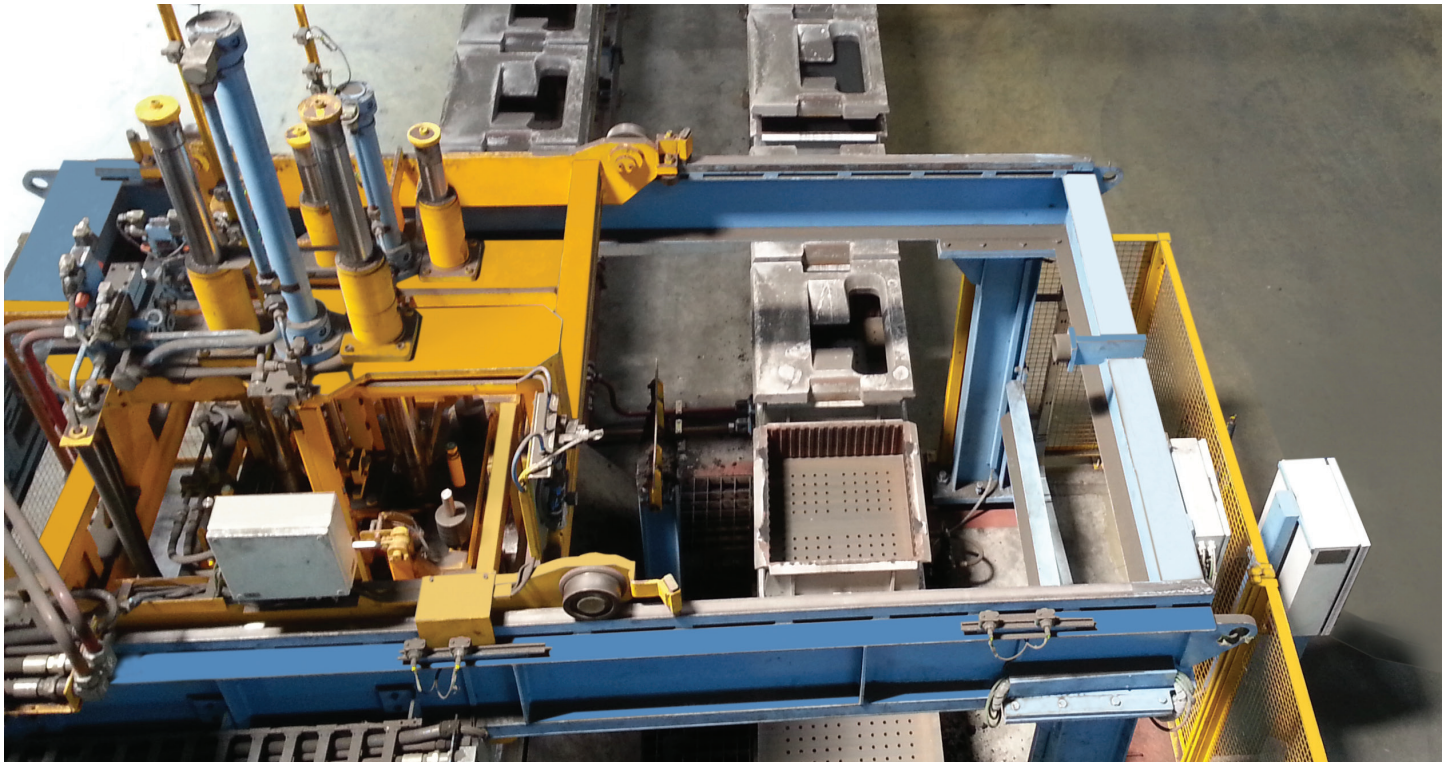
It facilitates real-time production monitoring, reporting and pattern-related parameter download to the moulding machine.

"We have several thousand patterns of which all are active, and we have 1,000 - 1,500 very active patterns, meaning that we make them at least once every couple of months. None of our work is long-run work, and thus part of the DISA package that was so attractive to us was the job change time.

It is much, much quicker on this machine than on any other matchplate machine I have been around"

Mike Slaydon, Operations Manager
Rochester Metal Products, US

Perfectly orchestrated automatic mould handling



Mould integrity throughout pouring, solidification and cooling is critical in casting production. Automatic mould handling (AMH) ensures steady, controlled transport of poured moulds - for mould integrity end to end.

In tune with your DISA MATCH

DISA's Automatic Mould Handling system has been designed specifically to work in tandem with the DISA MATCH moulding machine.

Consisting of a variable-length pouring/cooling line and an automatic weight and jacket transfer cleaning station, the DISA AMH synchronises perfectly with the DISA MATCH to ensure mould integrity all the way to the shakeout.

After the last mould has been transferred to the shakeout or belt conveyor, the pallet cars pass through a pallet cleaning station, before a new mould is placed on the pallet car again.

Keeping up with high speeds

The high speed of the DISA MATCH requires a mould handling system that enables effective mould cooling.

The AMH allows effective cooling on minimum floor space, without having to compromise on moulding speed. This is achieved through up to two parallel conveyor sections installed between the DISA MATCH and the final shakeout.

Remote troubleshooting

As with DISA MATCH, the DISA AMH also supports the DISA Remote Diagnostic Access. This allows a DISA engineer to connect directly to both the DISA MATCH and AMH operator panels to obtain the information necessary to fix problems and maximise performance and availability.

DISA MATCH Technical data

Type:		14/19	20/24	24/28	28/32	32/32
Mould dimensions:						
Lenght	mm	483	610	711	813	813
Width	mm	356	508	610	711	813
Height, min-max of drag	mm	150-200	150-200	180-255	225-300	225-300
Height, min-max of cope	mm	150-200	150-200	180-255	225-350	225-350
Mismatch, max:	mm	0.2	0.2	0.2	0.25	0.25
Machine capacity:						
Uncored	moulds/hr*	180	180	120	100	100
Automatically cored	moulds/hr*	145	145	100	75	75
Sand consumption max	tonnes/hr**	18	33	40	58	67
Average power consumption	kW	30	30	50	60	60
Connected load	kVA	67	67	110	136	136
Compressed air consumption	Nm^3/min	6	6	8	10	10
Cooling water consumption (DMM):						
at 15 °C inlet temp.	litres/min	17	17	10	13	13
Pressure:						
Squeeze pressure	bar	3-10	3-10	3-10	1.2-10	1.2-10
Shot pressure	bar	0 - 4.5	0 - 4.5	0 - 4.5	0-5	0-5
Compressed air requirements:						
Air pressure min	bar	5.5	5.5	5.5	5.5	5.5
Hydraulic fluid:	litres	370	370	650	400	400
Machine dimensions:						
Length, DMM	mm	3965	3965	4610	5565	5565
Length, DMM + CSE	mm	4400	4400	5609	6500	6500
Width	mm	1850	1850	2180	2410	2410
Height, top of sand inlet	mm	3910	3910	4283	4732	4781
Height, top of machine frame	mm	2455	2455	2650	3060	3060
Height, mould bottom push out	mm	560	560	655	596	596
Net weight:	tonnes	11	11	15.5	25	25

** At 250 mm (200 mm for MATCH 20/24) mould thickness / ** At max mould thickness*

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