DISAMATIC D5

Cutting-edge molding technology for the lowest cost per casting

DISA
A Norican Technology

disagroup.com

Introducing the DISAMATIC D5

The bigger the casting, the greater the challenge

Foundries that want the highest casting quality and productivity must deal with complex, deep-pocketed geometries while handling large pattern plates and heavy cores efficiently and safely.

The DISAMATIC® D5 meets that challenge with ease. Based on the revolutionary D3 platform, the D5's multiple innovations and cutting-edge technology deliver the fastest throughputs, highest yields and maximum uptime for large castings.

Next generation technology for big casting performance

Replacing the legendary DISAMATIC 240 and 250, the D5 is available in three mold sizes up to 650x850mm and 500mm thick. With three speeds up to 450 uncored molds per hour, it combines premium mold quality with breathtaking speed, short-run flexibility and minimum downtime.

It features all-new hydraulics and a state-of-the-art control system, with a host of smart innovations and powerful automation options that handle large pattern plates, cores and filters precisely, quickly and safely.

Simple, robust and reliable with standardized components, the D5 is built for easy servicing, lower maintenance costs and a clean and modern working environment.

The digital-ready DISAMATIC D5 is perfect for ambitious foundries that want a future-proof way to transform big casting production–and achieve the very lowest cost per casting.

Sustainable innovation

With the DISAMATIC D5, sustainability and profitability combine seamlessly. The D5's energy efficiency and clever enhancements cut CO_2 emissions and reduce scrap.

DISA's sustainable innovation isn't just green–it makes sound business sense too. The DISAMATIC D5's many new features deliver lower running costs, higher yields and greater productivity for large castings.

- **A redesigned hydraulic system** cuts oil consumption and keeps oil cleaner, with a patented, high-efficiency pump. Optional air cooling of hydraulic oil can eliminate water consumption altogether.
- Mold-ability innovations like Adjustable Squeeze Distribution let your foundry produce a wider range of large, complex castings with higher quality.
- The new **Adaptive Pouring Position** feature keeps the distance between the D5 and the pouring unit constant to minimize pouring cup movement, improving quality and line speed.
- Less loose or sticking sand means fewer sand inclusions, improved surface quality and less scrap. That's why the D5 incorporates features like re-squeeze, enhanced sand blow-off and extra heating in the sand shot system and hopper.

Smart innovation

Adjustable Squeeze Distribution (ASD) balances the swing plate and the pressure plate squeezing distance to completely fill deep pockets and deliver optimum surface finish with consistent mold hardness. ASD handles difficult castings with ease, accommodating higher pattern heights, thinner molds and molds with low swing plate heights.

"Efficient and high-quality casting production is key for us. We produce in small series, so we need molding lines that deliver an extremely stable process despite multiple pattern changes per shift. DISAMATIC molding lines deliver consistent, repeatable and high quality molds right from the start–exactly what we need."

–Folkmar Ukena, Managing Director, LEDA Werk Germany

Smart upgrades

Add powerful accessories and digital options that increase the D5's productivity, quality and connectivity.

Ready for a smarter foundry

Digital technology helps transform foundry efficiency, which is why the DISAMATIC D5 arrives ready for Industry 4.0 with a pre-installed NoriGate gateway. To start turning your D5's data into value, simply connect it to one or more of DISA's Monitizer® applications.

- **Monitizer | CIM** is an on-premise solution for foundry data collection, data visualization and machine automation.
- **Monitizer |DISCCOVER** helps you collect, monitor and analyze all your foundry data—including data from legacy software systems.
- **Monitizer | PRESCRIBE's** AI-driven analytics optimize the whole green sand process to significantly reduce scrap and increase profit.

Choose your accessories

The **Quick Pattern Changer (QPC)** is standard on the D5 to accelerate manual pattern changes. An **Automatic Pattern Changer (APC)** triples pattern change speed to boost flexibility and increase short-run efficiency.

The **Automatic Core Setter (CSE)** inserts cores in to the mold completely automatically. Combined with the compact, semi-automatic **Quick Core Mask Changer (QCC)**, changing core masks is easy, fast and precise. The QCC's new ability to lift and set heavy cores further reduces cycles times and helps avoid possible operator injury.

Add an **Automatic mold Conveyor (AMC)** or a **Precision mold Conveyer (PMC)** for synchronized, high-precision mold transportation. Redesigned for less wear and lower energy consumption, optional thrust bar heating prevents sand sticking while optional melt overflow protection covers protect the **AMC** and **PMC's** working parts.

"Digitalization is an important tool in the continuous improvement of our products and processes. It's therefore important to us to capture the digital state of the art when we buy any new equipment. DISA molding lines are digitally enabled, allowing us to introduce digital tools in a way and at a pace that suits us."

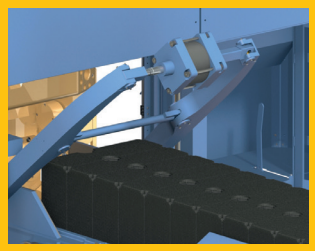
–Folkmar Ukena, Managing Director, LEDA Werk Germany

Automatic Pattern Changer (APC)

The APC can change a set of pattern plates in under a minute. Compared to the manual QPC, it increases production by up to 16 molds per pattern change and cuts the time taken by 300%.

Mold Accuracy Controller (MAC)

The DISA MAC is a high-precision measuring device that captures mold-related mismatch, mold gaps, mold steps and parallelism for each mold before pouring– reducing scrap and improving quality.



Double Index System (DIS)

DISA's patented DIS feature lets you transport, then pour two molds simultaneously for higher yield and casting quality.

Safe, clean and lean

Create a clean, safe and quiet working environment for your operators

As well as delivering superb molding, the DISAMATIC D5 is user-friendly, quiet and dust-free in operation. Built to comply with the latest safety and ergonomic standards, operators will love its intuitive touchscreen control panel and clever automation options that reduce manual strain—and cycle times too.

The D5's doors lock automatically during molding, with new seals that prevent dust escaping. Features like the filtered extraction system, in-chamber spray and integrated chamber exhaust pipe all combine to create a dust-free foundry that's a safe, pleasant and healthy place to work.

Inspection and maintenance are fast and easy too, with rapid access to all fluids and wear parts. For example, it's easy to clean behind the chamber wear plates without removing them.

Advanced aftermarket support reduces the risk of unplanned downtime

- **Remote Monitoring Services (RMS):** DISA specialists monitor and analyze your process and machine data via a secure connection and alert you to any developing issues.
- **Remote Smart Services (RSS):** fast virtual support when needed. Using augmented reality, DISA engineers can visually inspect your machine while showing you instructions on how to repair your technical issue.
- **Total Optimization Production Services (TOPS):** the exclusive on-site inspection, service and maintenance program that ensures optimum machine performance.
- **Application:** expert consultancy from the industry's best troubleshooters overcomes the toughest foundry challenges.
- **Training on demand:** create your own foundry specialists.
- **24-hour support hot-line:** always ready to help if you have a problem.

"With this latest upgrade, we have now replaced all our vertical molding machines with the latest D-series DISAMATICs and have future-proofed our processes. The investment in new state-of-the-art equipment has enabled us to reduce our operating and maintenance costs, improve our energy costs and achieve high machine availability."

–Rochus Hiller, Foundry Manager, LEDA Werk Germany

Technical data

DISAMATIC D5		B	C	Z
Mold Dimensions:				
Height	mm	600	600	650
Width	mm	775	850	850
Thickness	mm	150-500	150-500	150-500
Mismatch:	mm	0.15	0.15	0.15
DISAMATIC D5-355				
Uncored	mold/hour*	355	355	355
Cored	mold/hour*	330	330	330
Cooling time max	min*	92	92	92
Sand consumption max	tons/h**	103	113	122
Power consumption	kW	119.9	119.9	119.9
Connected load	kVA	149.9	149.9	149.9
Compressed air consumption	Nm3/min	16	16	16
DISAMATIC D5-415				
Uncored	mold/hour*	415	415	415
Cored	mold/hour*	385	385	385
Cooling time max	min*	78	78	78
Sand consumption max	tons/h**	113	124	135
Power consumption	kW	119.9	119.9	119.9
Connected load	kVA	149.9	149.9	149.9
Compressed air consumption	Nm3/min	18.5	18.5	18.5
DISAMATIC D5-450				
Uncored	mold/hour*	450	450	450
Cored	mold/hour*	415	415	415
Cooling time max	min*	71	71	71
Sand consumption max	tons/h**	126	138	149
Power consumption	kW	119.9	119.9	119.9
Connected load	kVA	149.9	149.9	149.9
Compressed air consumption	Nm3/min	20	20	20
Conveyor length max:	m	100	100	100
Cooling water (DMS):				
at 15 °C inlet temp.	liters/min	37	37	37
Pressure:				
Squeeze pressure	kp/cm2	1.5-16	1.5-16	1.5-16
Shot pressure	bar	0-4	0-4	0-4
Compressed air requirements:				
Air pressure min.	bar	5.5	5.5	5.5
Hydraulic fluid (DMM):	liters	1100	1100	1100
Machine Dimensions (DMM):				
Height	mm	3875	3875	3875
Width	mm	1920	1920	1920
Length	mm	8150	8150	8150
Net weight:	tons	30	30	30

* At 200 mm mold thickness / ** At max. mold thickness

DISA
A Norican Technology

About DISA

DISA, a Norican Group technology, develops and manufactures a complete range of metal casting production solutions for the ferrous and non-ferrous foundry industries. Headquartered in Taastrup, Denmark, DISA is the world-leading supplier of complete foundry solutions and services, as well as state-of-the-art green sand molding equipment.

DISA's long-standing tradition of innovation and our unrivalled global support network have earned us the trust and loyalty of foundries worldwide. We have the industry's broadest molding product portfolio, comprising vertical (DISAMATIC®), matchplate (DISA MATCH) and horizontal (DISA FLEX) green sand molding systems.

DISA provides complete, integrated foundry lines for a wide variety of customers–lines which, in addition to our molding technology platforms, include complete sand plants, sand mixers, conveyor systems and cooling drums, as well as our unparalleled services and spare parts network.

DISA also offers its class-leading Monitizer digital solutions, developed in partnership with Norican Digital Lab, that support the whole digital journey from data collection to AI-driven casting quality optimization. Monitizer works in all types of foundries and processes, and with any vendor equipment, to deliver serious process improvements–fast.

We are Norican: DISA | ItalPresseGauss | Monitizer | Simpson | StrikoWestofen | Wheelabrator

Subject to technical alterations | 05/24 | ©disagroup

DISA Industries Inc. | North America
1606 Executive Drive, LaGrange, GA 30240
Phone: 706-884-6884 Email: Sales.NA@noricangroup.com

DISA Industries A/S | Headquarters
Hojager 8, 2630 Taastrup, Denmark
Phone: +45 44 50 50 50, Email: info@disagroup.com

disagroup.com