DISA 131

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ISO 9001 BUREAU VERITAS Certification

ISO 14001 BUREAU VERITAS Certification

Norican Group is the parent company of DISA and Wheelabrator.

DISA
shaping industry

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shaping industry

Quality and precision

The DISA 131 makes DISA's latest technology affordable for foundries looking for medium capacity output of precision castings. Offering the same mould dimensions as the faster DISA 231, the DISA 131 is the perfect solution for many jobbing foundries and foundries looking for a replacement for an older machine such as the DISAMATIC® 2013.

New green sand vertical moulding machine with DISA precision and reliability

The introduction of DISA New Generation moulding machine technology signalled a radical change in vertical moulding. The new technology meant a new, even more rigid, mechanical design, more mould sizes, fewer moving parts, a cutting-edge PLC solution and standardized components, which enabled even greater precision and reliability, lower maintenance costs and an improved working environment.

With the DISA 131, these benefits are now available on a medium capacity vertical moulding machine that delivers superior quality and performance at significantly lower cost.

Higher quality and performance

The rigid mechanical design of the DISA 131 takes quality to the limit with a machine-dependent mismatch close to zero, meaning a dramatic reduction or even elimination of the need for fettling.

The DISA 131 combines unsurpassed quality with high throughput of up to 400 uncored or 350 cored moulds an hour. The secret is the new, simplified hydraulics system together with a state of the art electrical control system. This enables production of castings with high accuracy and lower cost per mould.

High-performance benefits for the modern foundry

Impeller (grey iron)

Pand roll (ductile iron)

Flange (aluminium)

Features that make the difference

Flexible capacity and optimised mouldability

Cutting-edge production monitoring and control using a state of the art PLC system enables straightforward pre-setting and adaptation of all production parameters. This enables rapid pattern changes with the assurance of optimised production without compromising speed or quality.

Double side mould squeeze operation as standard together with individual positioning of pattern plates in the chamber means high mouldability, consistent casting tolerance, optimised utilisation of the pattern plate area and less wear on the pattern plates.

Unbeatable uptime

The vertical moulding technology of the DISA 131 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 and instructions as well as threshold alarms dramatically reduces stoppages
- Integrated operation with perfect synchronisation between DISA moulding line units ensures mould integrity

A sustainable solution

DISA 131 with inspection windows for easy surveillance

Designed to be safe, clean and lean

The DISA 131 offers the following advantages to satisfy increasing demands concerning health, safety and consumption:

- In-chamber spray for enhanced workplace air quality, prevention of wear on pattern plates and minimised consumption of spray liquids
- Easy maintenance access for a safe working environment and time efficiency
- Quieter operation for a more comfortable working environment
- Prepared for air exhaustion from the moulding chamber for clean working environment
- Optional air cooling of hydraulic oil to eliminate water consumption
- Manufactured using environmentally responsible materials and processes according to ISO 14001 certification

Performance-enhancing options

10" colour VDU

CSE with light curtain

AMC conveyor

Optional additions and accessories

Automatic Core Setting (CSE)

CSE inserts cores automatically in the rear face of the last produced mould. A light curtain guard ensures easy, fast and safe access for the operator to insert cores in the core mask.

Quick Pattern Change unit (QPC)

The QPC enables quick, semi-automatic pattern change. It makes pattern changing, even of heavy patterns, easier, faster and more precise, regardless of operator skills and routine.

Automatic Mould Conveyor (AMC)

The AMC conveys the mould string from the moulding machine through the pouring, solidifying and cooling zones. High-precision transport and synchronisation ensures no shifting, distortion or displacement of moulds.

Synchronised Belt Conveyor (SBC)

The SBC extends the cooling zone. Available with 2 m sections to increase length, the SBC is powered by the AMC drive mechanism to ensure transport of the entire mould string without mould gaps or mould deformation.

Sand Spillage Conveyor (SSC)

The SSC collects and conveys spillage sand along the length of the mould conveyor and can be extended under the Synchronised Belt Conveyor.

Shuttle for foundries with limited space

The standard DISA SHUTTLE configuration features two or three SBCs running side by side. This enables almost triple in-mould cooling time within a defined space without significant production loss.

Computer Integrated Manufacturing modules (CIM)

CIM modules collect, store and distribute process information along the entire moulding line, enabling real-time monitoring and reporting in order to optimise production process efficiency and quality.

Remote Monitoring Services (RMS)

RMS reduces unscheduled downtime to a minimum through maximum support of the DISA line. A DISA engineer can connect directly to the VDU during troubleshooting for immediate assistance.

High reliability, excellent castings and low scrap

Pump wheel (grey iron)

Stator Housing (Grey iron)

12 good reasons for choosing the DISA 131

- Up to 400 uncored moulds per hour
- Machine-related mismatch of less than 0.10 mm for minimum trimming and fettling
- Double side mould squeeze operation for consistent and dense moulds
- User-friendly operation and maintenance
- VDU with clear text and graphics for complete operator overview and quick troubleshooting
- Standardised DISA wear parts
- Clean and quiet for enhanced environment
- In-chamber spray, adaptive mould thickness and mould blow-off
- World-class PLC system for optimum production efficiency
- Compatible with DISAMATIC 2013 pattern plates
- Comprehensive customer documentation
- Optional remote monitoring services (RMS) for high uptime

Technical Data

DISA 131-350			A		B		C		X		Y		Z	
Measurements:	**Metric**	**US**	**Metric**	**US**	**Metric**	**US**	**Metric**	**US**	**Metric**	**US**	**Metric**	**US**	**Metric**	**US**
Mould dimensions:														
Height	mm	inches	480	18.9	535	21.1	550	21.7	535	21.1	550	21.7	570	22.4
Width	mm	inches	600	23.6	650	25.6	675	26.6	750	29.5	750	29.5	750	29.5
Thickness	mm	inches	150-395	5.9-15.6	150-395	5.9-15.6	150-405	5.9-15.9	150-395	5.9-15.6	150-395	5.9-15.6	150-395	5.9-15.6
Mismatch:	mm	inches	0.1	0.004	0.1	0.004	0.1	0.004	0.1	0.004	0.1	0.004	0.1	0.004
Mould capacity:														
Uncored	mould/hour*	mold/hour*	350	350	350	350	350	350	350	350	350	350	350	350
Cored	mould/hour*	mold/hour*	320	320	320	320	320	320	320	320	320	320	320	320
Conveyor length max:	m	ft	86.5	283.8	86.5	283.8	86.5	283.8	86.5	283.8	86.5	283.8	86.5	283.8
Cooling time max:	min*	min*	70	70	70	70	70	70	70	70	70	70	70	70
Sand consumption max:	tonnes/h**	tons/h**	47	52	56	62	61	67	66	73	68	75	70	77
Power consumption:	kW	kW	60	60	60	60	60	60	60	60	60	60	60	60
Free air consumption:	m^3/min	cu ft/min	11	388.5	11	388.5	11	388.5	11	388.5	11	388.5	11	388.5
Water consumption:														
At 25°C inlet temp.	litres/min	gallons/min	40	10.6	40	10.6	40	10.6	40	10.6	40	10.6	40	10.6

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

DISA 131-400			A		B		C		X		Y		Z	
Measurements:	**Metric**	**US**	**Metric**	**US**	**Metric**	**US**	**Metric**	**US**	**Metric**	**US**	**Metric**	**US**	**Metric**	**US**
Mould dimensions:														
Height	mm	inches	480	18.9	535	21.1	550	21.7	535	21.1	550	21.7	570	22.4
Width	mm	inches	600	23.6	650	25.6	675	26.6	750	29.5	750	29.5	750	29.5
Thickness	mm	inches	150-395	5.9-15.6	150-395	5.9-15.6	150-405	5.9-15.9	150-395	5.9-15.6	150-395	5.9-15.6	150-395	5.9-15.6
Mismatch:	mm	inches	0.1	0.004	0.1	0.004	0.1	0.004	0.1	0.004	0.1	0.004	0.1	0.004
Mould capacity:														
Uncored	mould/hour*	mold/hour*	400	400	400	400	400	400	400	400	400	400	400	400
Cored	mould/hour*	mold/hour*	350	350	350	350	350	350	350	350	350	350	350	350
Conveyor length max:	m	ft	86.5	283.8	86.5	283.8	86.5	283.8	86.5	283.8	86.5	283.8	86.5	283.8
Cooling time max:	min*	min*	61	61	61	61	61	61	61	61	61	61	61	61
Sand consumption max:	tonnes/h**	tons/h**	54	60	64	71	70	77	75	83	78	86	80	88
Power consumption:	kW	kW	60	60	60	60	60	60	60	60	60	60	60	60
Free air consumption:	m^3/min	cu ft/min	12	423.8	12	423.8	12	423.8	12	423.8	12	423.8	12	423.8
Water consumption:														
At 25°C inlet temp.	litres/min	gallons/min	40	10.6	40	10.6	40	10.6	40	10.6	40	10.6	40	10.6