

KOENIG & BAUER

MetalStar 4



we're on it.



Pioneering in Metal Decorating

The objective for the development of the new generation of MetalStar was to make the world's most successful metal decorating press even more effective. The result is the new performance benchmark in metal decorating – the MetalStar 4. It has an exclusive, modern look and continues to set the standard in terms of production speed and make-ready times in metal decorating. And yet it remains what it has always been: the most innovative and modern high-performance press in metal decorating.

The latest generation of the MetalStar presents itself in a modern, inspiring design. This makes the MetalStar 4 not only a highly productive metal decorating press but also an eye-catcher in your print shop.

Rely on flexibility – almost without limits.

Whether it's closures, food packaging or chemical-technical packaging – thanks to the various accessories and equipment options, the MetalStar 4 meets every requirement of modern metal decorating. You simply choose the technical solutions that suits your range of products best. This applies to the number of printing units, including drying units or coating units, as well as automation modules or solutions for inline color control.

Modern operating concepts based on touch panels not only make routine processes such as job changeover, production run and quality control a pleasure. The clear and intuitive user interface shortens the learning curve, and intelligent processes such as the job change program help you get the most out of the MetalStar 4.

You can look forward to a new performance dimension in metal decorating.



Perfect for Every Application – At Home in All Market Segments

The MetalStar 4 suits every application in metal decorating. It gives you every opportunity to produce economically and successfully in all market segments. Special equipment and automation details generate high output and consistent quality.

The equipment options for the MetalStar are just as varied as its area of application. Machines from 2 to 11 printing and coating units are in operation every day. Among other things, they produce long caps, canned fish, infant formula and chemical-technical containers. The machine spectrum here ranges from 21-meter-long MetalStar presses with two printing units for the production of 2-colour print jobs to lines over 100 meters long with integrated front and back coating for maximum product quality and a reduction in production steps.

Whether UV, UV-LED or conventional printing, the MetalStar 4 is ideally equipped for everything. Special UV and UV-LED equipment packages ensure the highest possible production stability and work safety. In combination with UV dryers from Koenig & Bauer, you get the best possible ergonomics, safety and reliability. If printing is done with conventional inks, Koenig & Bauer's world-renowned and highly valued drying ovens complete the overall package.

If you want to combine several production steps in one, there are various options for inline coating. For UV coating, the MetalStar 4 coating tower or the MetalCoat 480 inline coating machine with anilox coating unit are particularly suitable. For conventional coatings, the MetalStar 4 can also be equipped with a MetalCoat 470 or MetalCoat 483, depending on how much automation is required.

No matter what your ideas are, the MetalStar 4 will meet them.

Printing Units – The Key to Best Print Quality

Productivity is nothing without quality. That's why the MetalStar 4 has the most advanced inking and dampening unit in metal decorating.

Fundamental to the printing units of MetalStar presses is a substructure cast in one piece for maximum torsional rigidity. The double-size impression cylinders and transfer systems run in multi-row roller bearings which ensure maximum running smoothness and precision.

In the inking unit, the ColorTronic ink fountain with its side-effect-free ink zones ensures high reproducibility and very precise ink metering. The ceramic-coated ink duct follows the press

speed and thus guarantees stable ink feed regardless of the production speed. The short inking unit of the MetalStar 4 responds quickly and dynamically to ink changes. To ensure that you are quickly back in colour after a press stop, the inking units of the MetalStar 4 are equipped with an ink train separation system. This system splits the ink train so that you are quickly back in stable operation when the press starts. The speed-compensated film dampening unit guarantees a stable ink/water balance.



Modern multi-roller inking unit

Fast Job Changes and Automation for More Revenue

The MetalStar 4 is equipped with a high level of automation and state-of-the-art features for job changeover. This ensures that the MetalStar 4 is back in production in the shortest possible time and meets your objectives.

Operator guidance on the ErgoTronic console enables simple and intuitive pre-planning of the next jobs. The respective job change

programmes can be preset during production; thus, no time is wasted during the job change.



The fully automatic plate change (FAPC) works without tools and without manual intervention. The printing plates are changed in three cycles, regardless of the number of printing units. Plate changing is conveniently selected at the ErgoTronic console in the job change programme and runs fully automatically, leaving you free for other tasks.

In addition to automatic plate changing, the MetalStar 4 has a wide range of options for automatic and parallel cleaning of the MetalStar 4, enabling the best washing results to be achieved in the shortest possible time.



Cleaning options at a glance:

- **CleanTronic:**
One washing beam for blanket washing
- **CleanTronic Multi:**
A swing-action washing beam for sequential cleaning of the blanket and impression cylinder
- **CleanTronic Synchro:**
Two separate washing beams. For parallel cleaning of blanket or impression cylinders or quick cleaning of the blanket with two washing beams
- **CleanTronic UV:**
Safety equipment to avoid waiting times before or after cylinder washing in UV production
- **DriveTronic SRW:**
Simultaneous roller washing during blanket and impression cylinder cleaning

MetalStar 4

Technology at a Glance



Layouts

Customer specific line configurations

- Application-oriented layout of the production line
- Equipment packages available for UV and UV-LED applications
- Flexible equipment options for the number of printing units, coating units and drying units
- Sheet management systems in a wide range of variants for reliable sheet ejection
- Proven drying solutions for UV or conventional printing

Console

Made by Koenig & Bauer

- Advanced operating concept at the ErgoTronic console (incl. touchscreen for convenient and easy handling)
- Wall screen for visualisation of all machine settings
- Job changeover programme for fully automatic and coordinated make-ready processes
- Storage of job profiles for repeat jobs
- Integrated measuring and control technology
- Integration into the LogoTronic production data acquisition system
- Remote maintenance access conveniently from the console

MetalControl

Always in colour

- Integrated inline closed loop colour measurement system
- Measurement of each sheet during production and automatic adjustment of ink keys according to defined target densities
- Fully automatic operation during production
- Visualisation on the wallscreen
- Support mode during setup – different levels of support depending on the application
- Automatic waste sheet detection

MetalCure drying systems

Efficient and powerful

- Drying technologies as a core competence of Koenig & Bauer
- Flexible use of dryers for intermediate and final drying
- Proven MetalCure UV drying technology
- Energy saving MetalCure UV-LED dryer available for highest reduction of energy consumption

Coating unit

Brilliant prospects

- State-of-the-art chambered doctor blade technology
- Remote adjustment of the pressure supply as well as the lateral, circumferential and diagonal registers
- Fully automatic coating supply
- Fully automatic cleaning processes controllable from console

CleanTronic

Excellent cleaning

- CleanTronic: Washing system for blanket
- CleanTronic Multi: Combination washing system for blanket and impression cylinder with swing-action washing beam
- CleanTronic Synchro: Combination washing system for blanket and impression cylinder with two washing beams for parallel washing of the cylinders
- CleanTronic UV: Blanket washing in stand-by mode of the UV lamps
- CleanTronic SRW: Roller washing parallel to blanket and impression cylinder washing

Plate change

Application oriented automation

- Semi-automatic plate change with SAPC (Semi Automatic Plate Change)
- Time-optimised fully automatic plate change with FAPC (Fully Automatic Plate Change)

Inking unit

Perfection in colour

- High reproducibility thanks to side-effect-free ink metering in the ColorTronic ink fountain
- Stepless oscillation adjustment from the ErgoTronic console during press operation
- Maintenance-free pneumatic ink fountains for UV-LED production
- EasyClean ink fountain plates for fast ink changes
- Ink train separation at machine stop
- Individual shutdown of unneeded inking units to reduce roller wear and make-ready times
- Temperature control of the ink fountain roller and distributor rollers
- Speed-compensated VariDamp film dampening units for stable ink/water balance

Printing unit

Clockwork precision

- One-piece cast box provides high stability and torsional rigidity
- Patented sheet infeed system
- Electronically controlled lateral alignment
- Gentle sheet positioning with maximum alignment accuracy
- Completely operator-free, as integrated into automatic format adjustment system
- Side, circumferential and diagonal registers adjustable at the ErgoTronic console
- Automatic adjustment of substrate thicknesses
- Two-stage, pneumatic pressure start-up and shut-off

DriveTronic SIS

Patented sheet infeed

- Sensoric Infeed System (sidelay free infeed system)
- Patented sheet infeed system
- Electronically controlled lateral alignment
- Gentle sheet positioning with maximum alignment accuracy
- Completely operator-free, as integrated into automatic format adjustment system

DriveTronic feeder

Maximum ease of operation

- DriveTronic feeder for continuous, stepless pile lift with automatic lift adjustment
- Optimised blowing air supply and control to optimise sheet transport even with challenging materials
- Suction belt table with electronically controlled sheet deceleration for optimum sheet arrival speeds at the front lays
- Automatic format adjustment and side edge control
- Sheet separator on the infeed table for reliable sheet positioning
- User-friendly, large touch panels for all necessary functions

Logistics

Always the right system

- Roller conveyors or chain conveyors available in various lengths
- Stop & Turn in the feeder for gentle pile alignment without damaging of sheet edges
- Intermediate feeders and intermediate stacker for maximum flexibility

High Quality – Sheet for Sheet

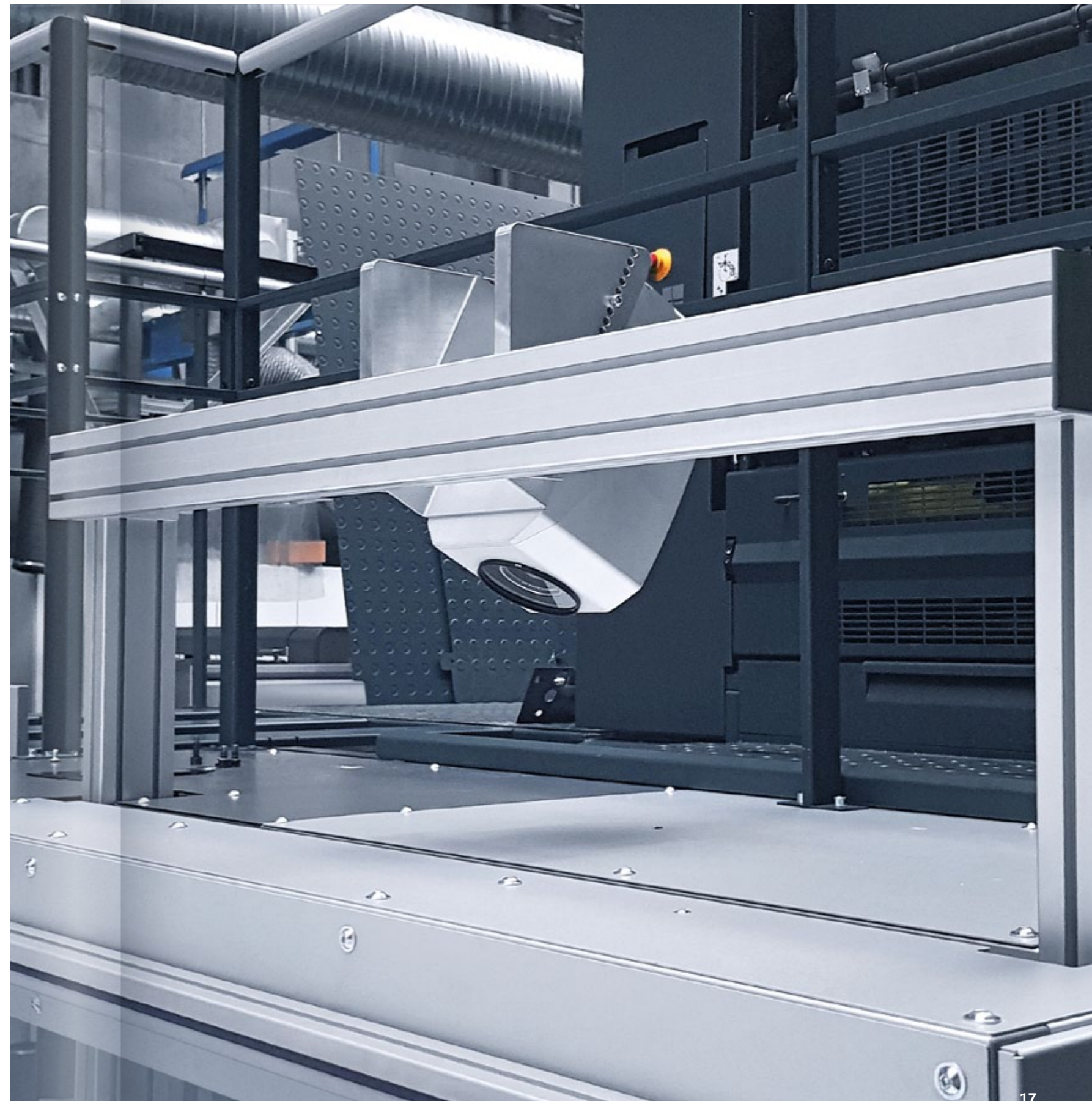
To meet the increasing demands for higher quality, the MetalStar 4 can be equipped with inline control systems. They help to cut make-ready times, save waste, and ensure consistently high print quality.

Register measurement and setting is done with the ErgoTronic ACR. You simply measure the register marks with the ErgoTronic ACR and transfer the measured values to the MetalStar 4 at the touch of a button. Register setting is done with a control print.

Another system measures and controls the colour. MetalControl controls the ink densities in the print control strip or individual colour spots. The camera for the colour measurement is integrated on the belt delivery; thus, no extension of the line by an additional wide belt transport is needed. The water-cooled high-performance LED illumination guarantees stable measuring results even over a long period of time.

MetalControl measures each sheet and readjusts the ink zones every ten sheets to ensure that the target densities are always within tolerance. Completely automatically and without manual operator intervention. The target densities are achieved, whether on the day or night shift.

Additionally, MetalControl supports you during the colour set-up. If target densities are known, MetalControl can achieve the target densities completely automatically. Alternatively, if the colour set-up is done with single prints, MetalControl creates automatic suggestions for the ink settings to help you to approach your colour target faster.



High Performance Made Simple

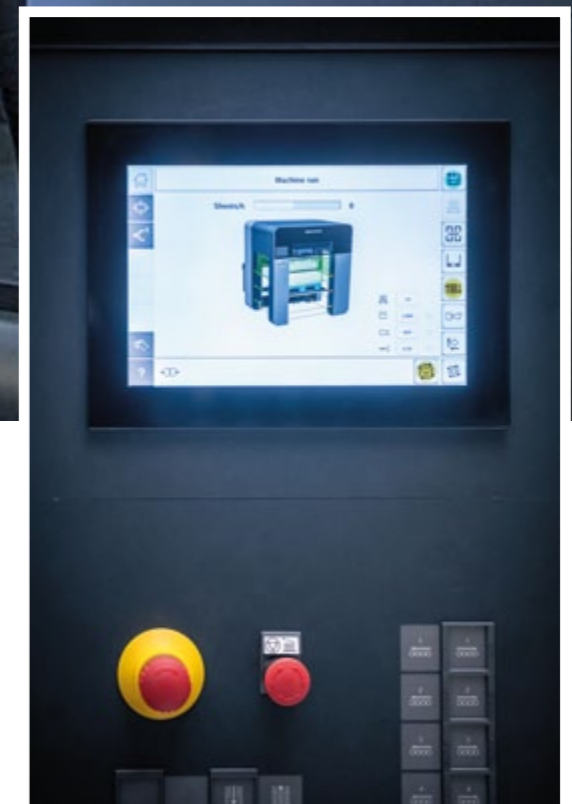
The MetalStar 4 is a high-performance machine. But to make sure you always get the best out of it, the MetalStar 4 supports you wherever you need it with an intuitive user interface on all touchscreens and with ergonomically designed control panels.



The ErgoTronic console is the heart of the operation of the MetalStar 4. All functions of the MetalStar 4 can be conveniently controlled on the 23" touchscreen, such as setting the job changeover programmes or preparing new print jobs. The 75" wall screen continuously displays the measuring results from MetalControl and,

if required, live videos from the observation cameras installed on the MetalStar 4. This means you always have everything in view and are always in control. The daylight illumination with LED technology is just as much a part of the ErgoTronic console as the sheet table.

There are additional touchscreens at the feeder and at the infeed, which can be used to control all relevant functions at the respective positions. For example, the air setting can be conveniently adjusted on the touchscreen at the feeder. Control panels with buttons are located in ergonomically practical positions around the printing units, as are the control panels for logistics at the feeder.



Professional Services for Your Koenig & Bauer MetalPrint Products

We are at your service! Our experts provide assistance and support to your production lines. All over the world and over the full service life.

Time & productivity gains

Only original

Taylored partnership

24/7 Support

Spare Parts

Service Contracts

Stay up-to-date

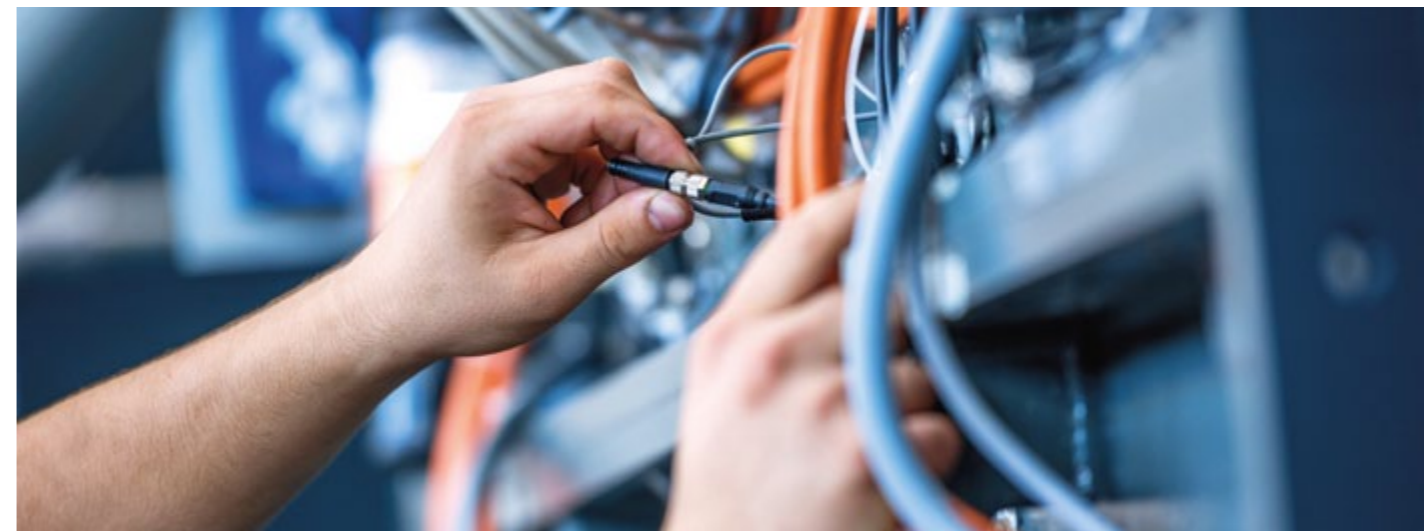
Preventing unplanned downtime

Optimised production

Upgrades

Preventive Maintenance

Training & Consulting



MetalStar 4

Technical Data

Sheet format

Maximum	1000 x 1200	mm	39.37 x 47.24	inch
Minimum	510 x 710	mm	20.08 x 27.95	inch
Thickness ¹	0.12 – 0.40 for tinplate	mm	0.0047 – 0.0157	inch
	(optional) 0.10 – 0.40 for tinplate		0.0039 – 0.0157	
	(optional) 0.15 – 0.40 for aluminium		0.0059 – 0.0157	

Sheet material

Tinplate and ECCS (TFS) complying with EN 10202
 (optional) Aluminium complying with EN 541

Sheet cut

Straight
 (optional) Scroll

Print format

Maximum printing area	995 x 1200	mm	39.17 x 47.24	inch
Gripper margin	3	mm	0.1181	inch
Print start	5	mm	0.1969	inch
	from edge of sheet		from edge of sheet	

Plate and blanket dimensions

Size of printing plate	1095 x 1220	mm	43.11 x 48.03	inch
Plate thickness	0.40	mm	0.0157	inch
	(optional) 0.30		0.0118	
Blanket size	1220 x 1275 x 1.95	mm	48.03 x 50.19 x 0.0767	inch

Production speed ²

6000 – 8500 sheets/h 100 – 142 spm

Feeder pile

Maximum weight 3500 kg 7716.18 lbs

Operating environment

Electric power supply	3 x 400 V +/-5 %, 50 Hz
	(optional) Other voltage and/or frequency on request
Compressed air	6 bar (constantly applied to conditioning unit)
Relative humidity	45 – 60 %
Ambient temperature	Max. 35 °C
	(optional) Max. 40 °C with cabinet climate control
Installation altitude	Max. 1000 m above sea level
	(optional) Above 1000 m sea level on request

Remote maintenance

via internet connection

¹ Printability is also influenced decisively by the flexural rigidity of the substrate.

² Depending on quality, format and thickness of sheets, inks, etc. as well as drying oven specification.

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