REVOLUTION X

REVOLUTIONARY NEW:

THE INNOVATIVE GENERATION
OF PROMESS JOINING SYSTEMS.

For more efficiency.

PROMESS
ASSEMBLY + SENSOR TECHNOLOGY

THE NEW GENERATION **REVOLUTION X**

THE NEW INNOVATIVE ASSEMBLY PRESS SERIES

Modern production processes can no longer be imagined without digitization. In order to offer the best basis for technical developments in the automation of manufacturing processes, we have developed a new assembly press series. With REVOLUTION X, the proven assembly and testing technology from PROMESS goes into the next round in a sustainable way.

The new joining system is suitable for simple and complex assembly and joining processes, as well as for test applications in the force range from 0.2 to 500 kN.

The heart of our new system is the new, stand-alone control and our new software for parameterisation and visualisation of the joining process via web interface.

THESE ARE THE KEY FACTS

MULTI-AXIS CAPABILITY

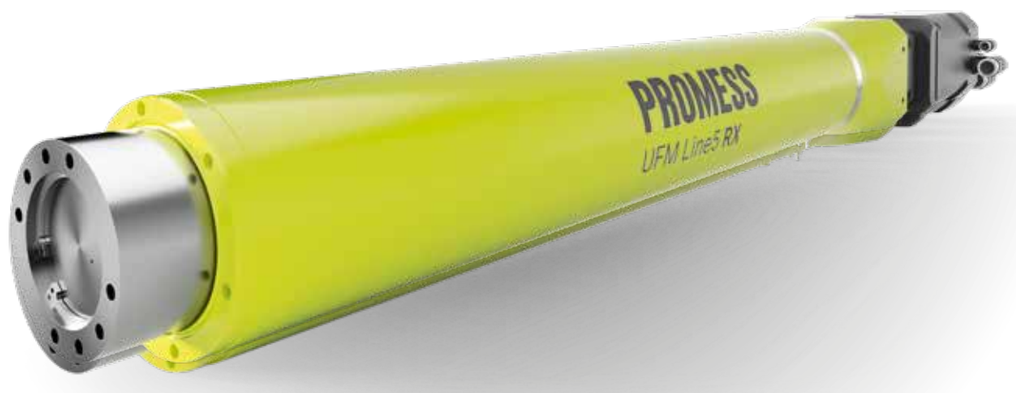
Previously, one control had to be integrated per assembly press. With REVOLUTION X, up to four presses can be controlled and monitored in one assembly station, resulting in a considerable reduction in investment costs. Examples include synchronization tasks in which several units work together synchronously or forming tasks with a forming press and a downhold press.

INTUITIVE WEB INTERFACE

The visualisation, parameterisation and maintenance of the joining system takes place via web interface in all common browsers and on various terminal devices. The web interface allows for Intuitive operation via touch interface. A clear dashboard with drag & drop configuration and input validation support the user during parameterization and avoids errors. Programming knowledge is not required.

INDUSTRY 4.0

Smart and sustainable – REVOLUTION X is fit for industry 4.0. The controller RX can be integrated into the particular system architecture via OPC UA. The software is prepared for virtual commissioning (digital twin). Special diagnostic tools and input assistance enable intuitive error detection and proactive maintenance of the joining system in order to reduce downtimes.



THE COMPONENTS

POWERFUL CONTROL

The new control is a powerful, self-sufficient system. With a measuring frequency of 2 kHz, it is able to control and monitor fast assembly processes with maximum precision. Benefit from faster program loading times and faster processing of your process data directly in the controller RX. Thanks to the integrated data memory, up to 1001 programs and 100,000 process curves can be stored directly. The controller RX can be easily integrated into existing systems via various fieldbuses.

LOSS-FREE SIGNAL TRANSMISSION

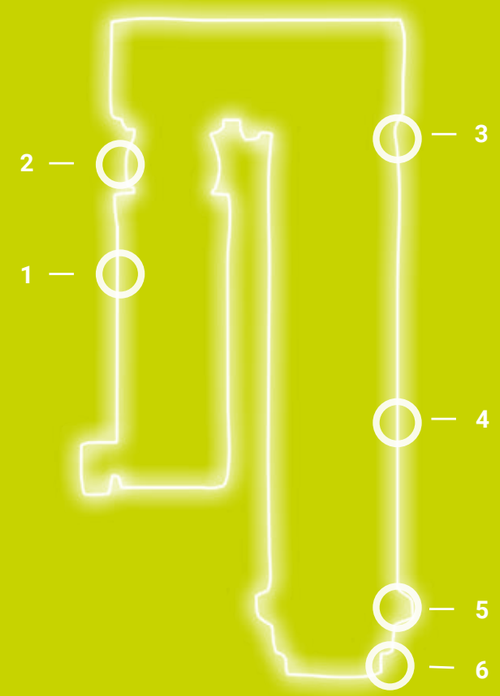
The force signal of the joining module is transmitted digitally and without loss from the new PDM-S RX preamplifier to the controller. A measuring frequency of 2 kHz and the data transmission via EtherCAT will reduce the cycle time significantly. The new PDM-S RX allows the connection of additional sensors. A TTL input for measuring sensors offers extended diagnostic options.

ROBUST MECHANICS WITH AUTOMATIC LUBRICATION

The assembly presses UFM Line5 RX are characterized by their robust mechanics and their optimized price-performance ratio. They are designed for extremely long life cycles of at least 15 million strokes, with average standard assembly processes. An intelligent system for automatic lubrication of the assembly press and a safety coupling to protect the mechanics against overload optimise the use of the press.

MECHANICAL DESIGN

1. Servomotor with absolute encoder
2. Gear
3. Integrated strain gauge force transducer
4. Steel housing
5. Mounting flange
6. Non-rotating press ram



01 CONTROLLER RX

- Central control unit
- Controls one or more mechanics, e.g. UFM or UDM

02 SOFTWARE RX

- Intuitive web interface
- Parameterisation and visualisation of the assembly process
- Support of multiple process axes and up to 16 sensors
- Comprehensive diagnostic functions

03 PDM-S RX

- Generates digital force signal
- Loss-free transmission to the controller
- TTL input for measuring sensors

04 SERVO AMPLIFIER

- Supplies the servomotor with power
- Precisely controls the ram position

05 SAFETY MODULE

- Extensive, expandable safety technology
- On the current status of standards and laws

06 UFM LINE5 RX

- Long periods of use (> 15 million strokes)
- Optimized price-performance ratio
- Short delivery times

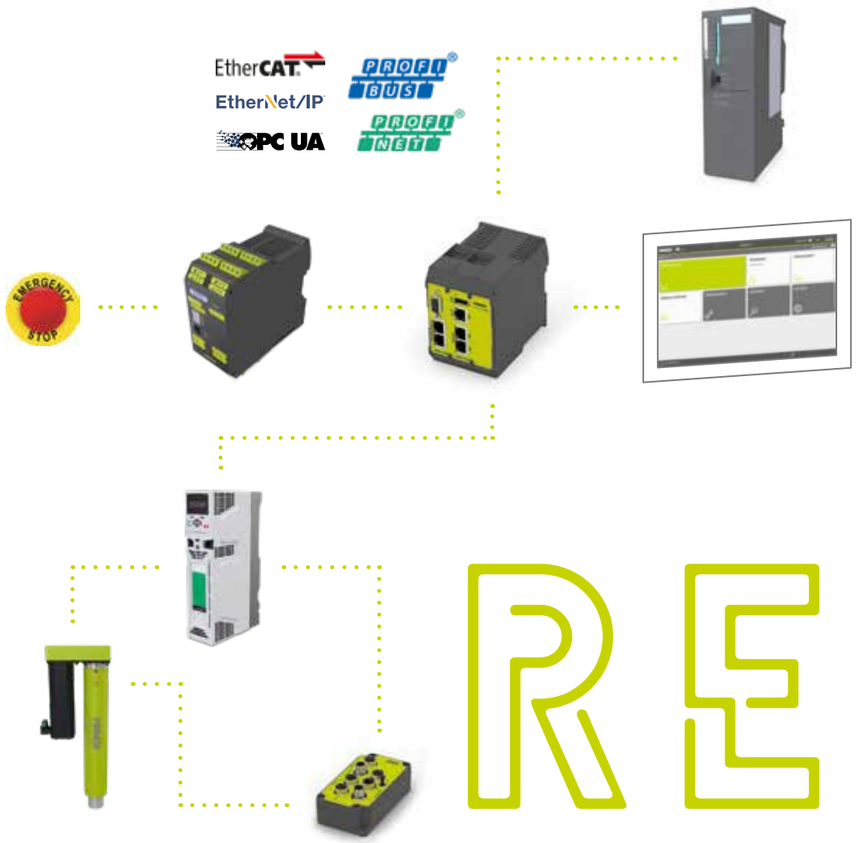
07 UDM5 RX

- Integrated solution of drive and torque measurement
- High accuracy
- Extremely robust construction

SINGLE-AXIS OPERATION

REVOLUTION X AS BASIC VERSION FOR SINGLE-AXIS OPERATION

In the basic version, the new REVOLUTION X joining system comprises the components shown. The basic version can be extended as required, e.g. by integrating additional sensors or additional joining axes.

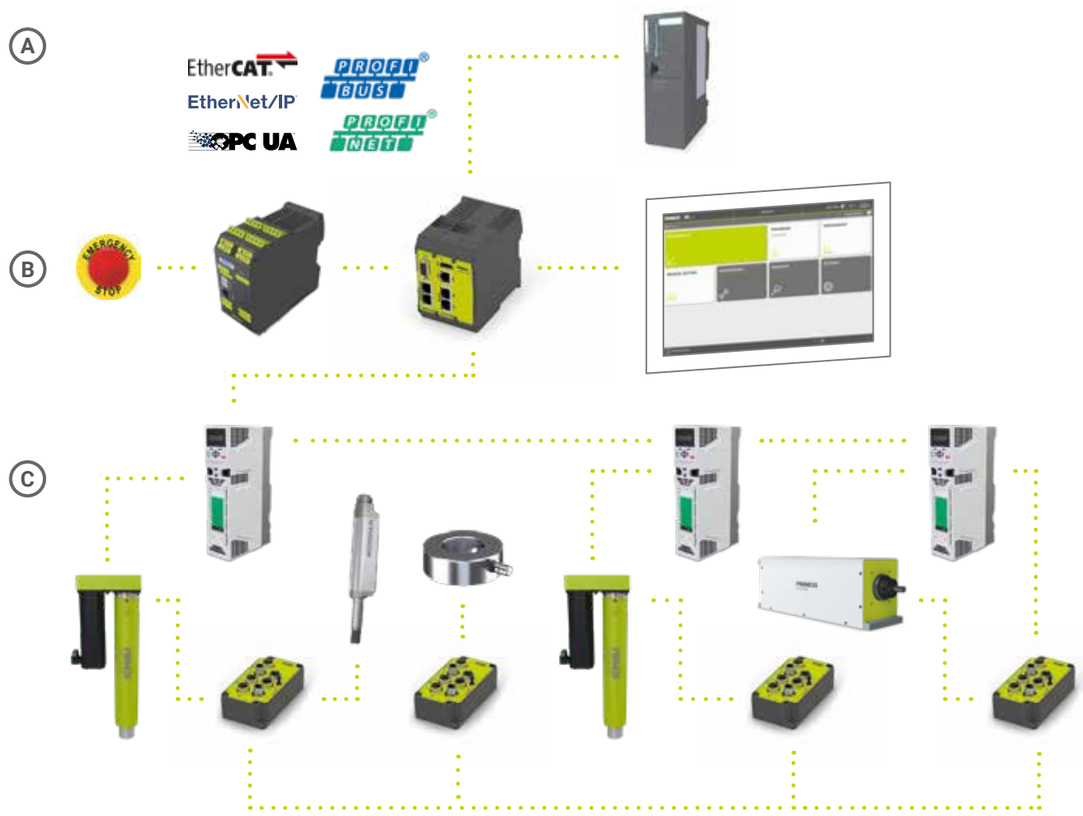


REVOLUTION X

MULTI-AXIS OPERATION

REVOLUTION X FOR MULTI-AXIS OPERATION

Use Revolution X for your multi-axis applications. With the new system you can control and monitor up to four joining axes or torque modules in one assembly station.



(A) Line level (B) Control level (C) Field level

DISCOVER NEW **DYNAMICS**

PROMESS
Gesellschaft für Montage- und Prüfsysteme mbH

Nunsdorfer Ring 29 | D-12277 Berlin
Fon +49 (0)30 / 62 88 72 - 0
Fax +49 (0)30 / 62 88 72 - 59
promess@promessmontage.de

www.promessmontage.de

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ASSEMBLY + SENSOR TECHNOLOGY