





Is your production asleep?

Your machines are profitable when they are producing. They should run during the day, in off-peak hours and at night, even on weekends. Achieving this goal means combining all production requirements in a plan.

The plan is called "Flexible Manufacturing Concept – FMC". It is implemented in carefully measured steps.





Loading Around the Corner				
Always sufficient space in front of the machine for manual work				



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ailored to the requirements of the practice	



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Move any size with the ingenious adapter pallets	



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Configuring for a project, expanding later	



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Easy linking of manufacturing steps	



Automating the Production				
Automatic manufacturing of individual parts and small batches				



Line Management16Automatic and secure manufacturing of single parts and small batches



25 Years of Experience				
Standard components are quickly installed				

Loading Around the Corner

The Robot Dynamic is located laterally offset from the machine. Despite loading through the front door, a safe operating zone remains accessible for manual operation. That is flexibility!

Robot Dynamic



An 2D scanner continuously monitors the operator area. If a person is located in the area, pallet changes are not allowed. If the area is free, the Robot Dynamic loads the machine as planned.



The additional joint allows operating even in a small space.



The robot's arm has a long reach of 2,350 mm. This leaves ample space in front of the machine for the operator.

Teleskop axis with maximum travel and minimal interference contour





While transporting the pallets, the robot travels in a compact, stable position.



min. interference contour ø 2.1 m - 47 %



ø 2.4 m - 28 %

FACTS

Machine is readily accessible Large coverage of the robot 2D scanner for access safety Optimized footprint Long range All grippers usable

Extendable

The EROWA Robot Dynamic can always be adapted and extended. The basic investment is protected. So it's always the right decision to go for the modular concept of the Robot Dynamic.



At a first stage, configure the machine such that hours at night can be utilized for the most part. As one magazine is sufficient, at an average machining time of 30 minutes per workpiece, 5 hours can be utilized productively.



The production cell is extended. A second machine is integrated. The robot is equipped with rails, additional magazines, and a loading station. The initial investment is completely utilized and complemented; the manufacturing cell now has twice the capacity.

FACTS

Manageable investment steps Extendable at any time The basic investment is protected

Big and Small

The Robot Dynamic is suitable for loading large and small workpieces. One of the important features for automated manufacturing of single parts and small batches is that the system can switch automatically between different pallet sizes.





The different system sizes are used at one and the same machine. Depending on the assigned jobs, the Robot Dynamic switches to the fitting system automatically.



The right gripper for each tooling system size. Stored in the GripperDock and automatically employed when needed.



The Robot Dynamic changes pallets with a total weight up to 250 kg reliably on to the machine ...



... and just as reliably it takes small workpieces from the magazine to the machining location.

FACTS

Mixed part sizes in manufacturing Transfer weight up to 250 kg Automatic seal management

The Modules

A Robot Dynamic consists basically of a transfer unit and various magazines. They are supplemented with a gripper pool, loading station, and linear axis. Extensions are sure to fit any existing installations.



A highly efficient system for automating the manufacture of single parts and small batches. Workpieces are supplied and removed via the integrated set-up and loading stations. When needed, another magazine is added.



The robust linear rail is extended in segments to the right length.



Each magazine position and each pallet is continuously monitored. The EWIS™ Rapid identification system ensures a clear view.



Extending the machine's tool storage; made easy with a Rotary Magazine for tool holders.

FACTS

Magazines for all possible EROWA clamping system pallets

Matching setting-up and loading stations

Automatic pallet identification with EWIS™ chips

Automating Tool and Die making

Automation tailored to the requirements of tool and die manufacture. The Robot Dynamic provides machines of different technologies with workpieces, electrodes and tools. With the process guidance system proven in practical application, the operator is on top of all jobs and priorities.



The process control system, a critical factor for production reliability, helps the operator to keep track at all times.



Washing, drying and quality measurement. These important steps are fully integrated in the system. At the end, it puts out completely finished workpieces with a quality certificate!





FACTS

Controlled sequence of steps Integrated quality measurement Automatic manufacturing of single parts

Automating the Production

Automation tailored to the requirements of manufacturing. The Robot Dynamic provides workpieces to CNC machines. Rack magazines are the most space-saving solution when a large number of pallets are to circulate. The new jobs are prepared at the loading stations. If required, the machined parts are delivered with a measurement report.





These days, integrated quality control is a must. Integrating a Qi measuring station from EROWA in your processing line will take care of this requirement.



The pallets are equipped depending on the workpiece. Vise, fixture or vacuum clamping plate – EROWA tooling systems get a competent grip on everything.

FACTS

Rack magazines with high capacities Recorded quality measurement Automatic manufacturing of small batches

Line Management

One of the basic conditions for automatic manufacturing of small batches and single parts is having all information available at one glance. The EROWA process control system has been developed for exactly this purpose. All relevant information and diverse planning aids are available to the machine operator in real-time and on-line.





The operator is always being kept in the loop. CNC programmes, prepared workpieces, tool life and further details are available at the push of a button.

FACTS

Operation per push of a button Clear display Intuitive graphic interface

	Priorität	Status	Werkstück	Positio	Bearbeitungsdauer	Vor
					00:01:00	Lad
	5	Bereit	EROWA	1	00:40:00	Bea
					00:01:00	Lad
	9	Bereit	EROWA	3	00:40:00	Bea
					00:01:00	Lad
	10	Bereit	EROWA	13	00:40:00	Bea
					00:01:00	Lad
í.	20	Bereit	EROWA	11	00:40:00	Bea
Dru	cken		Gesar	nte Bearbei	tungsdauer : 7 Stu	nden

How much time is left in the automatic cell cycle? Information by mouse click. Depending on what the display shows, further jobs are loaded.



Which tools have to be changed before the end of the day? The display shows exactly how much tool life is left at which position. The system checks internally if the available tool life is sufficient for the released jobs.



How are we doing? Dif-ferent colors clearly indicate the current status.





25 Years of Experience

Long experience - short start-up. EROWA robots consist of sophisticated, standardized components. This allows short set-up times.



Your critical benefits

- Everything from one single source
- Experience with over 3000 robots
- Standard machine interface
- Long-life systems
- Independent partner
- Integrated safety system
- Perfect service with worldwide presence
- Integrated swivel axis horizontal / vertical
- Superior dynamics and perfect positionning

The Facts

- Up to 20 m rail length
- Machines can be positioned on all four sides
- Transfer weight up to 250 kg
- Transfer axis with long range
- Telescopic axis for optimal use of space
- Automatic gripper change depending on pallet size

Extension options

- More machines
- More magazines
- Cleaning, loading or set-ting-up stations
- Loading station with user guide
- Tool management
- Connection to CAD/CAM and production planning and control systems
- Fixture management

ERD Rack Magazine





* Number of possible magazine positions per level or plate

TECHNICAL DETAILS

TRANSFE	R WEIGHT		
RCS		130 kg	
Fixed gripp	ber	250 kg	
Telescopic	X-axis	200 kg	
Swivelarm		yes	
Gripper ch	lange	yes	
DIMENSI	ONS		
Gripper m	ovement X	1500 mm	
Telescopic	movement X	1950 mm	
Gripper m	ovement X/D	2350 mm	
Gripper m	ovement Z	1750 mm	
Gripper m	ovement Y	up to 20 m	
No. of ma	chines	up to 8	
System he	ight	3250 mm/with linear axis 3550 mm	
Space heig	ght min.	3800 mm for Linear	
MAGAZIN	NES LEVELS	LOAD PER LEVEL / MAGAZINE	
Rack	max. 9	750 kg / 2000 kg	
Rotary	max. 9	650 kg / 2000 kg	
ELECTRO	NIC SYSTEM		
Automatic	pallet identification	yes / EWIS™	
Process co	ntrol system	yes	

ERD Rotary Magazine



SYSTEM GRIPPERS



Load capacity horizontally 250 kg. RCS 5 gripper for MTS, UPC, PalletSet W and FrameSet.

At the same time, interface for all other exchange grippers. Load capacity horizontally/vertically max. 130 kg. Reduced axis travel speed at 200 kg.

PC210 gripper for PC210 pallets with ring groove. Load capacity horizontally/vertically max. 130 kg.

ITS 148 gripper for ITS 148 pallets. Load capacity horizontally max. 40 kg, vertically max. 30 kg.



Load capacity horizontally max. 40 kg, vertically max. 30 kg.

PM 56 gripper for PM tooling. Load capacity horizontally/vertically max. 5 kg.



Gripper for ITS holder 72. Load capacity horizontally max. 20 kg, vertically max. 10 kg.



Combo gripper for ITS and Compact tooling. Load capacity horizontally max. 8 kg, vertically max. 5 kg.

The next step

Important things need to be planned. And your next step is certainly among the important things. For it is your start into a new, efficient era. We are pleased to be with you on the way. As consultants, in practice. For you to know at all times what you're engaging in. The next EROWA branch office is not far – **take the step**.





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