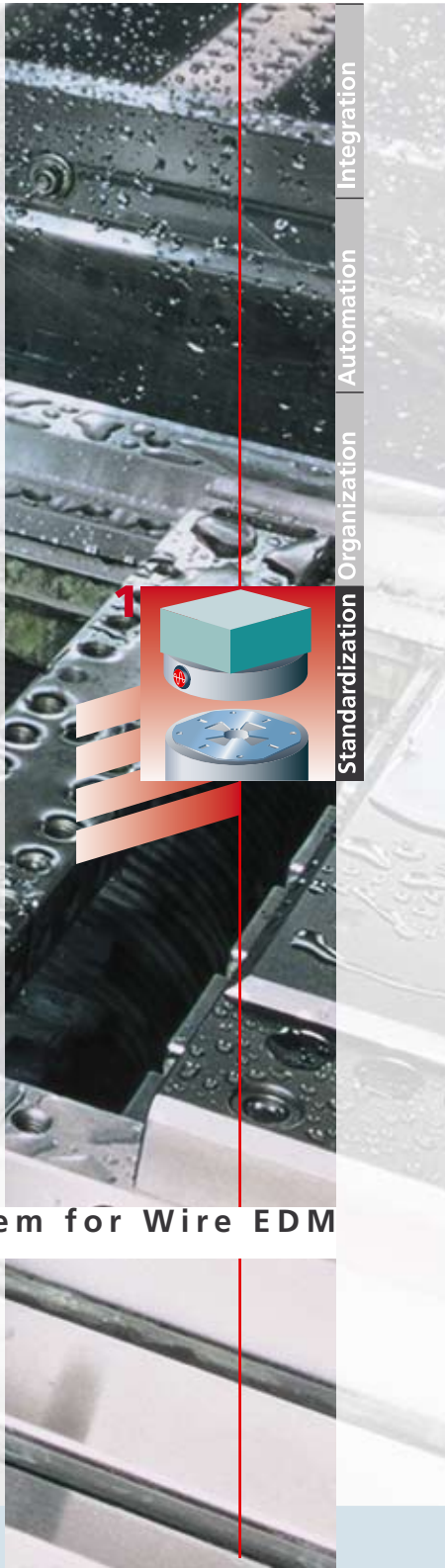


EROWA Wire EDM Tooling System



Integration
Automation
Organization
Standardization

The modular tooling system for Wire EDM



EROWA®
System solutions
from one single source

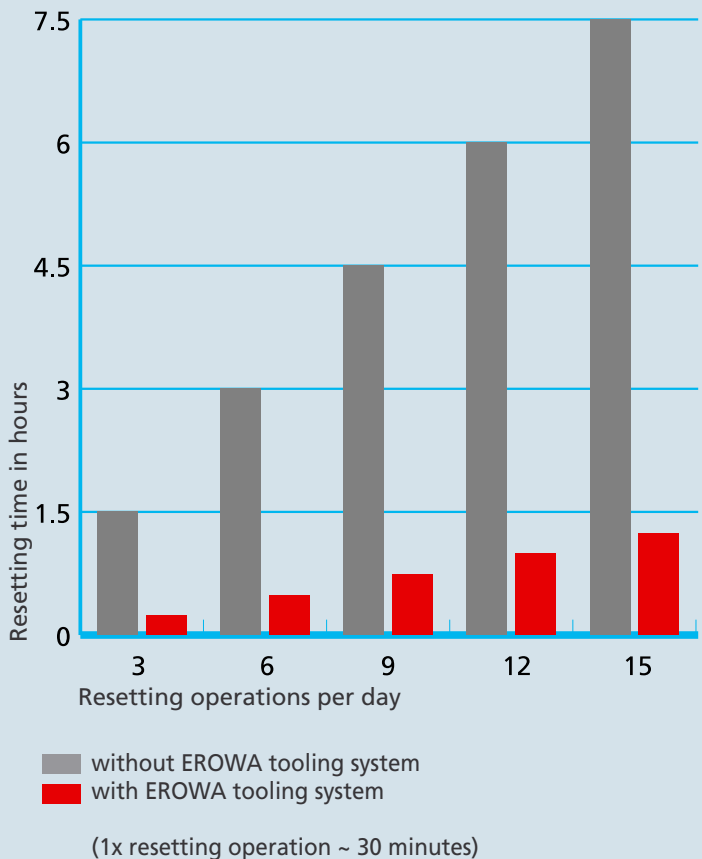
«We save 660 productive hours a year. This makes us highly competitive!»

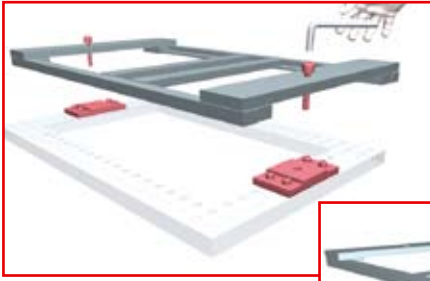
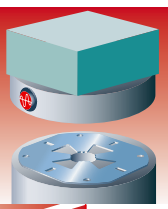
Free your valuable WEDM centers from unproductive setting-up and presetting time. EROWA's Wire EDM Tooling System will enable you to generate considerably higher profits from your investments.

Resetting costs time.
 Time is money
Resetting costs money.

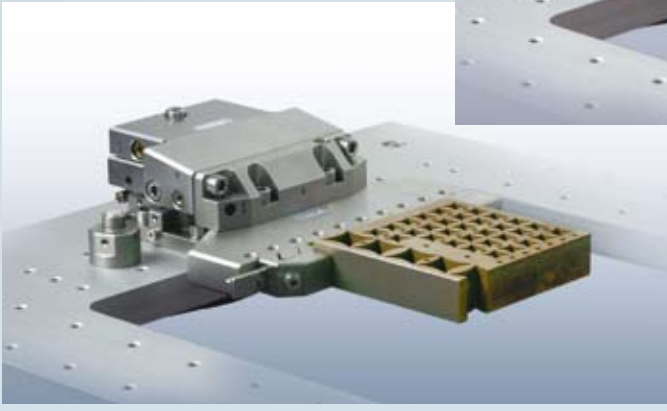
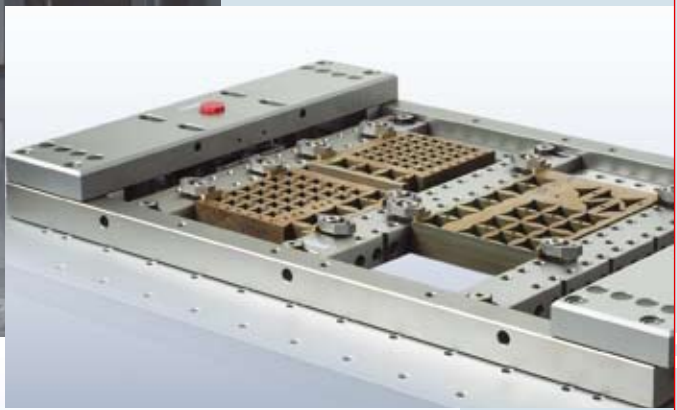
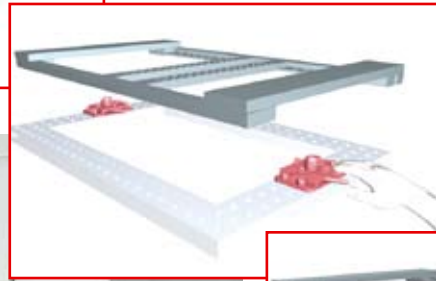
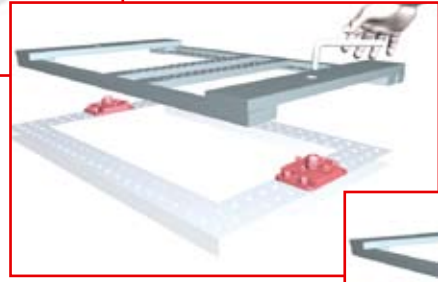
Investment calculation	
Investment in tooling system:	\$ 20,000.–
Productive hours gained per year:	3 hours x 220 days
Hourly rate, machine:	\$ 60.–
Additional gain per year:	660 hours x 60 = \$ 39,600
Amortization of tooling system:	20,000 : 39'600 = 0.5 year

An optimal utilization of machines is a central factor for competitiveness.



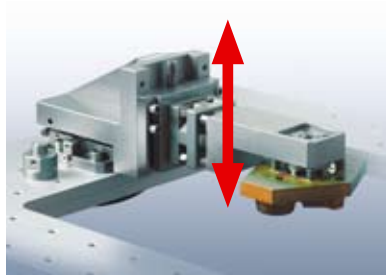


The right choice:
The expandable EROWA Wire EDM
Tooling System.
It grows according to your
requirements.



«I have enough time for careful and correct preparation while the machine is running!»

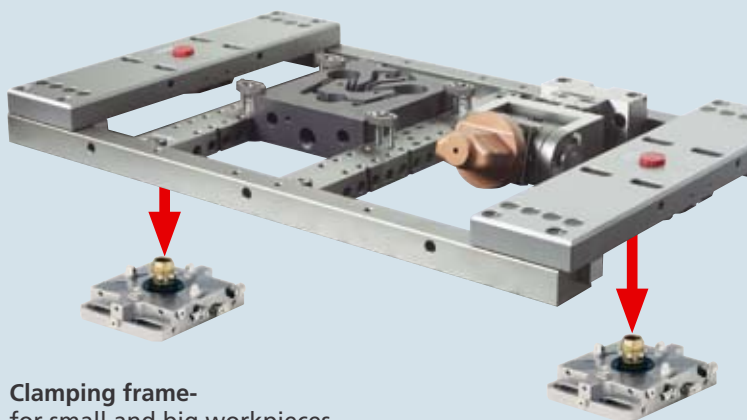
While the next order is being prepared, the machine remains productive. Set-up is carried out in an optimal environment and without any time pressure. Machining times are reduced to a considerable extent since no set-up has to be done on the machine itself.



Z-Vario – every workpiece at the correct height.



PreSet 3D CNC – presetting made easy.

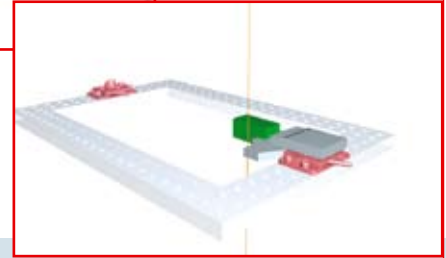
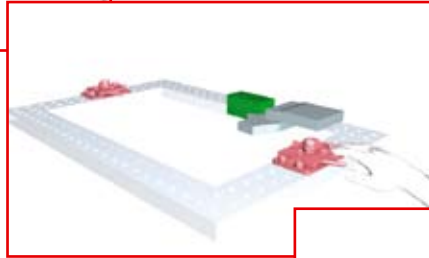
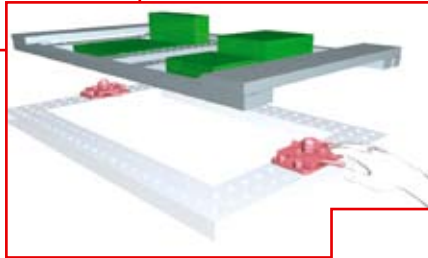
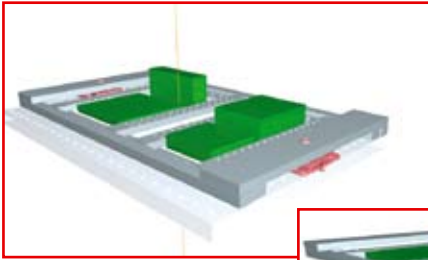


Clamping frame – for small and big workpieces.





Express job? – Pleased to do it!



Loading Robot – for more machine autonomy at night and on weekends.

EROWA Lift – to take care of your back and easy on the machine.

Wire EDM Tooling System

Find a workpiece you can't clamp!

The right solution for every application.

With well-thought-out combinations of vises, clamping elements and clamping beams, any conceivable workpiece can be clamped. The repeatability of EROWA's Wire EDM tooling system allows for workpieces to be preset outside the machine and for safe automatic loading. Ongoing jobs can be interrupted for express jobs and then continued later.



The universal vise - serves virtually any application.



Multiple palletizing increases machine autonomy. Unmanned shifts can be put to use.



The perfect connection for electrode manufacturing.

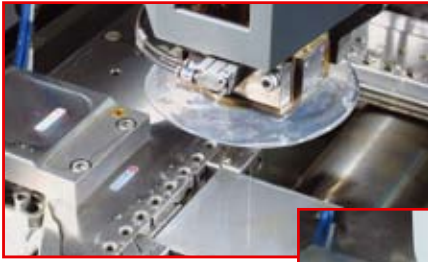


Big workpieces are clamped singly.

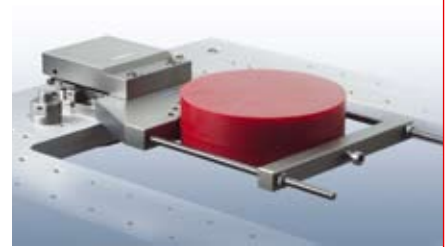
- Reset quickly
- Clamped with precision
- Production time utilized



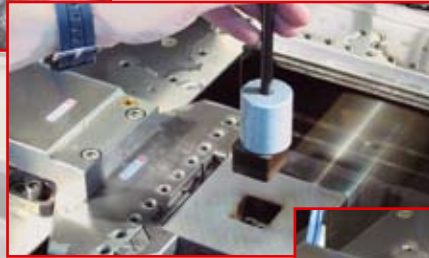
Free access to wire guides even if the workpieces is only a few millimeters thin.



Scrap is removed next to the machine. The finishing cut is carried out in the same clamping process.



Special fixture for **cylindrical parts**. Fitted to a pendulum holder, the workpiece can be adjusted in three axes.



Single palletization in a manned shift: this is where the tricky jobs are done.



Combination of frame and UnoSet for electrode machining.

EROWA Wire EDM Tooling: clamping elements for all workpieces

Clamping elements for fixtures

ER-033958



ER-031952



ER-016914



ER-008231



ER-008875



ER-008873



ER-007990



ER-008220

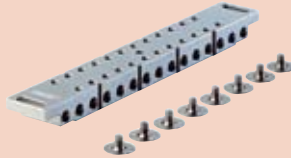


Fixtures for adapters

ER-031945



ER-017645



ER-030110



ER-018940



ER-019248



ER-018941



ER-025115



Adapters for interfaces

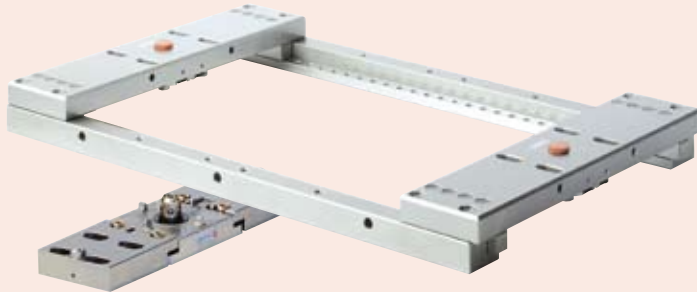
ER-033955



ER-031942



ER-039214



ER-037888



ER-035294



ER-035156



ER-055158



Interfaces to machine table

ER-040641





Standardization

ER-008221



ER-029229



ER-029228



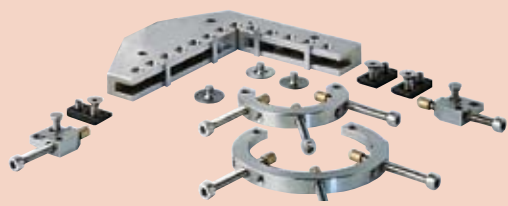
ER-025895



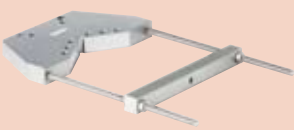
ER-054922



ER-018938



ER-038891



ER-018937



ER-028425



ER-051800



ER-038710



ER-033974



ER-008814



ER-008842



ER-007935



ER-008856



ER-016691



ER-030678



ER-039795



ER-014722



ER-014698



ER-055535



ER-030923



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ER-038711



ER-028471



ER-035714



ER-035715



ER-017198



ER-007852

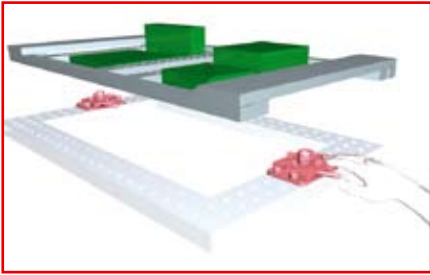


ER-022583

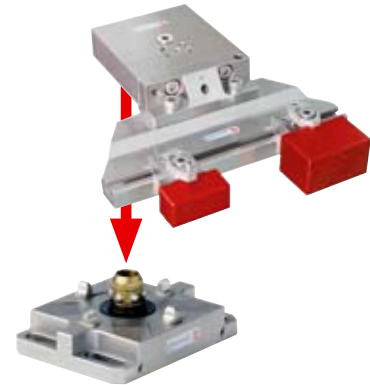
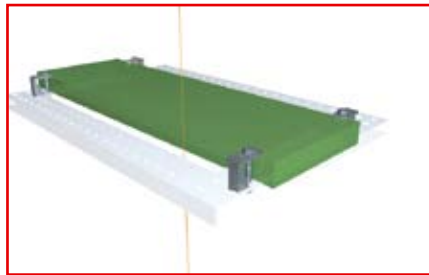


Wire EDM Tooling System

Well-thought-out, precise, variable and extendable: **EROWA Wire EDM Tooling**

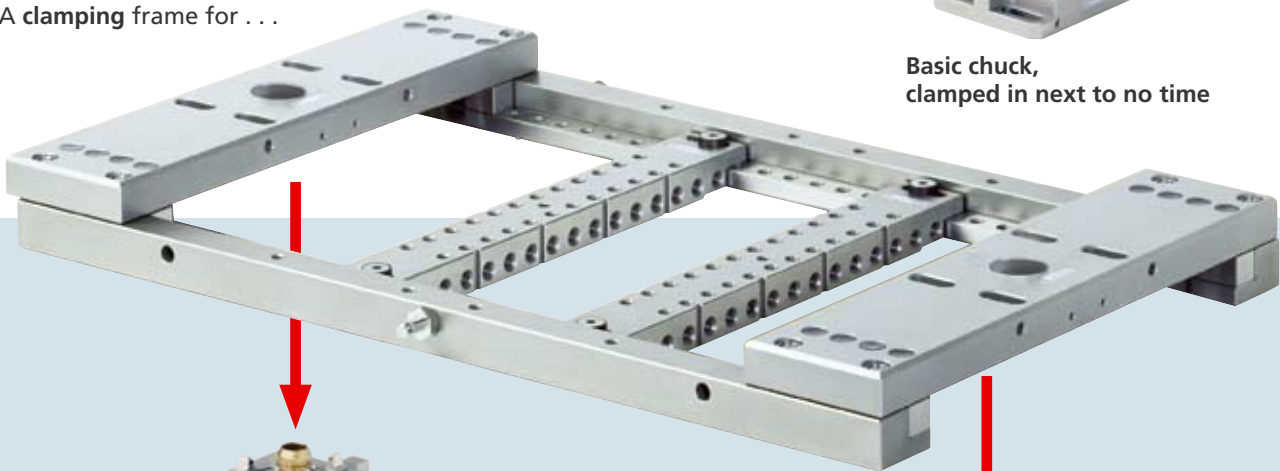


Easily removed when workpieces become too big. The base can be re-mounted and ready for action within 30 minutes.

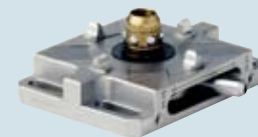


Basic chuck,
clamped in next to no time

A clamping frame for . . .



. . . four types of basic equipment

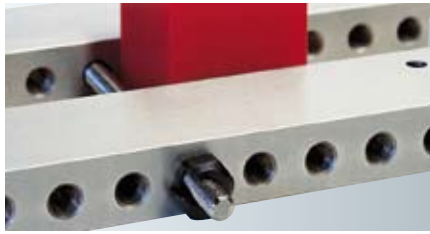




Standardization



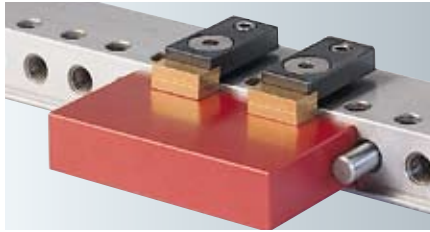
The support lifts the clamping beam to Z=0.



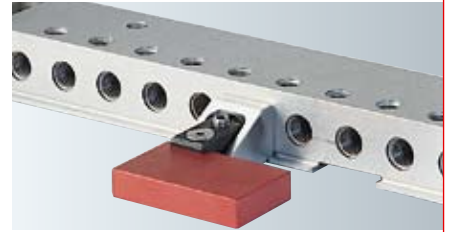
Clamping as in a vise: with threaded pins and clamping beams.



Use removable supports where they make sense. Thread in EDM wire through the special grooves.



Accurately positioned with a stop pin.



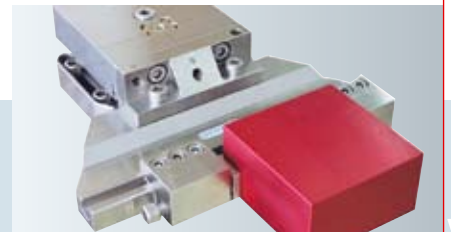
Mini spacer support for small parts.



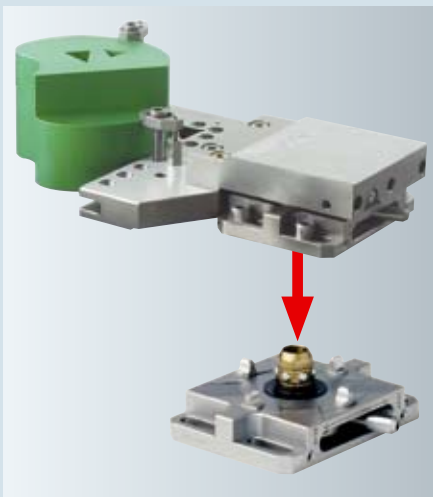
Adjustable in all axes: the pendulum holder.



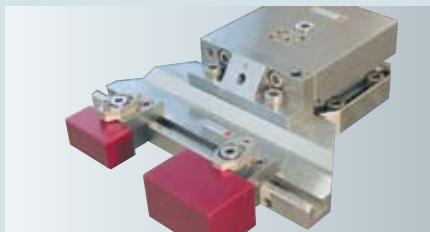
For free wire guide access: the flat vise.



A quickly adapted vise.



Single palletization:
On the same basis as clamping frames. Well-thought-out vises for the dexterous attachment of workpieces.



Rearrange things with modular elements.



For particular angles: continuously adjustable around 90°.



Indexation around 4x90°, positioning guaranteed in 0.002mm accuracy.



Vises with continuously rotatable clamping part.

Organization of workpieces

Machining centers must be relieved of any unproductive work as much as possible. Presetting and measuring workpieces and electrodes are jobs that can be more efficiently done on a measuring station. Setting up while the machine is in operation results in more productive time on the machining centers. Quick in-between measurements enable operators to increase production safety.



Determine the starting borehole coordinates, fix the position of workpieces in space, and carry out quick interim checks.

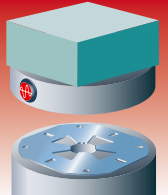


Precise presetting of workpieces simplifies all the following work.



Simple and quick presetting to micro accuracy.





Automation

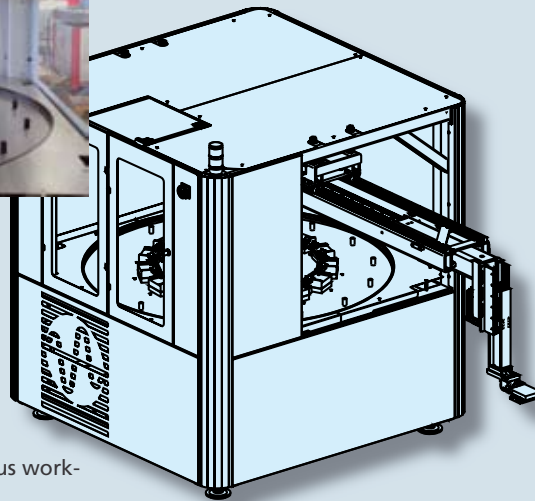
increase productive time

If machine tools are loaded/unloaded automatically, this results in a substantial increase in the share of productive hours. Production cells can be automated in all sorts of ways. EROWA's wide range of handling systems is capable of satisfying your requirements with regard to transfer weight, magazine capacity and control interface.



The workpiece carrier is positioned on the chuck with precision.

We have a suitable automation solution for you, too! EROWA offers a wide range of handling facilities. We'll be glad to advise you!



Great magazine capacity for various work-piece carriers.



With the EROWA Lift, you can load/unload the clamping frames onto/from the machine quickly and safely.



Save time and money with EROWA

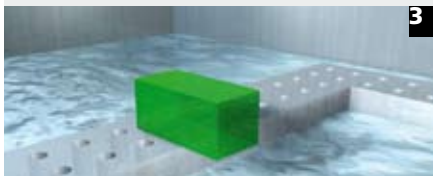
Resetting without EROWA



Remove machined part



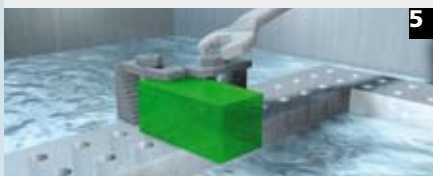
Clean the base surfaces



Position new workpiece



Look for fittings



Attach workpiece with bolts and brackets



Align workpiece



Move to starting/reference point

START after 30 minutes

Resetting with EROWA



Open chuck, remove holder and workpiece



Insert preset workpiece with holder and clamp it



Move to starting/reference point

START after 5 minutes

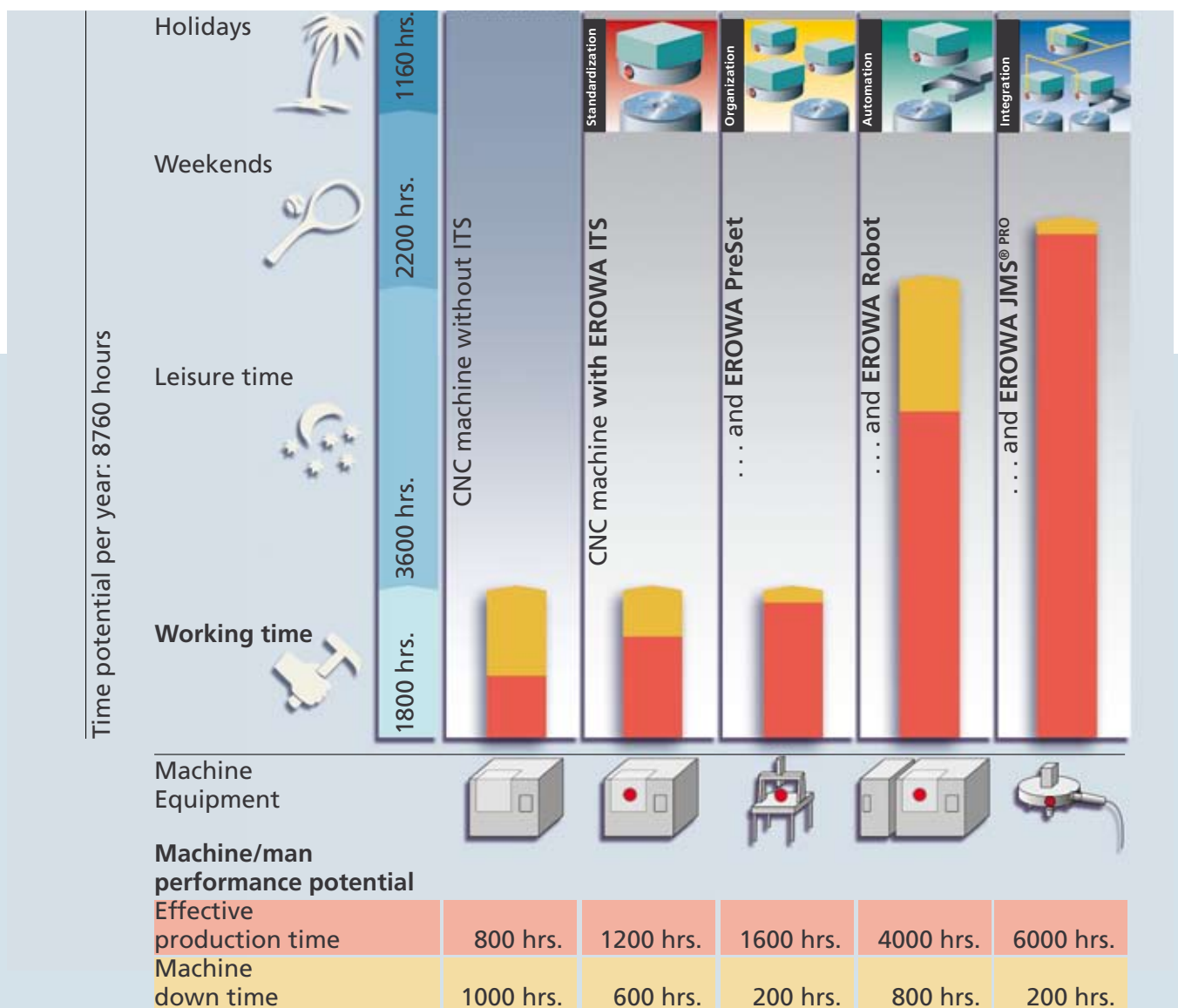
By palletizing parts and fixtures, you open up many ways to increase the efficiency of your manufacturing operation. It starts with palletizing, on to automatic handling, then leads to workflow management on the computer.

Optimal use of resources

As a responsible investor, you make sure that the resources in your company are used as well as possible. Machines must be utilized to the greatest possible extent. Only in this manner can competitive product prices be realized.

This is where EROWA's FMC concept comes in: productivity is increased through the elimination of setting-up work from the machines. The autonomy of the machines is improved through the automatic workpiece change during marginal hours and night hours. Round-the-clock production is achieved with one single manned shift. Flexibility in production planning is kept high with the use of the easy-to-handle JobManagement System.

You will put your machines to optimal use with appropriate EROWA components. We will be glad to give you the benefit of our long years of experience. You call us - we'll come round.



EROWA[®]

The next step is up to you.

Important matters require planning. And your next step is certain to be such an important matter. After all, you are setting off into a new, rational age. We will gladly accompany you on your way with advice, in daily operating procedures, so that you will know at any time what you are letting yourself in for.

The nearest EROWA agency is not far away. Take that important step.

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