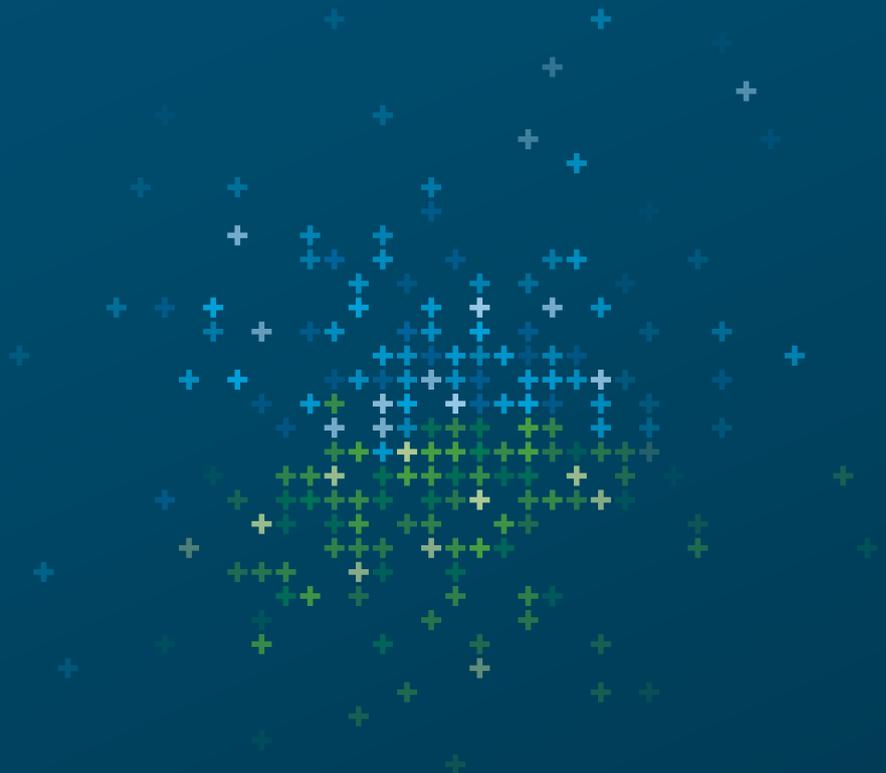# WorkPartner 1+

When all you need is everything, it's good to know that there is one company that you can count on to deliver complete solutions and services. System 3R equips world-class electrical discharge machines (EDM), Laser texturing and Additive Manufacturing through to first-class Milling by Tooling, Automation and software systems — all backed by unrivalled customer service and support — we, help you raise your game and increase your competitive edge.

Swedish design and quality

Contents

Automation

Partnering your production
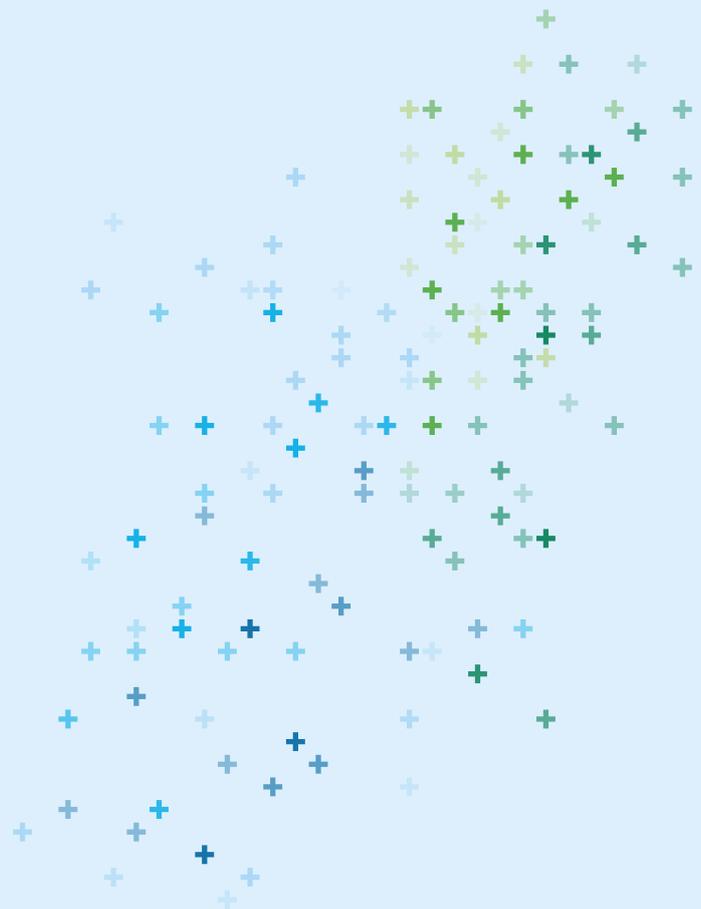+ Can serve one or two machines in a production cell.
+ One or two magazine capability gives exceptionally flexible capacity.
+ Large doors facilitate loading of workpieces and tools into the magazines.
+ Integrated pneumatic control of gripping devices and table chucks.
+ Minimal floor space requirements.

Achieve greater return on your investment!

Customer-specific Solutions

Modularly adapted to your needs

Milling application

WorkPartner 1 + (LR Version)
Large magazine capacity
Two types of tooling
Heavy loading station

Automation   Milling

Wire-cutting EDM (wireEDM) application

WorkPartner 1 + (LH Version)
Heavy loading station

Automation   Wire cutting

EDM application

WorkPartner 1 + (LH Version)
Heavy loading station
Drain station

Automation   Die sinking

Laser application
WorkPartner 1 + (LL Version)

Automation   Laser

Mixed technologies EDM & Milling
WorkPartner 1 + (LH Version)
Large magazine capacity
Two types of tooling
Heavy loading station
Drain station

Automation   Milling   Die sinking

Rail application for front loaded milling machines
WorkPartner 1 + (LH Version)
Heavy loading station

Automation   Milling

Standardized modules

8 modular models!

WorkPartner 1+ offers maximum magazine capacity in minimum floor space. Unlike many other solutions on the market, there is no risk of "painting yourself into a corner". Our modular magazines give an unprecedented flexibility that can be adapted to each user's needs. If you start with a single magazine, one more can be added whenever required.

WorkPartner 1+ is equally ideal for milling machines, die-sinking, wire EDM machines, laser machines and grinding machines. Similarly, it is equally efficient whether used in one-off or series production.

With generous magazine doors that facilitate loading/ unloading, WorkPartner 1+ is extremely user friendly. Other advantages include rapid change cycles, integrated pneumatic control of gripping devices and table chucks and minimal floor space requirements.

Modular components

Manipulator unit

Light magazine

Heavy magazine

Rotary magazine

WorkPartner 1 +

With two magazines (LL version):
+ Two light magazines (in this case 16 levels and 10 pallets/level. Total 160 Macro 54 pallets)

WorkPartner 1 +

With two magazines (LH version):
+ One light magazine (in this case 8 levels and 10 pallets/level. Total 80 Macro 54 pallets)
+ One heavy magazine (in this case 5 levels and 2 pallets/level. Total 10 Dynafix 350 pallets).

WorkPartner 1 +

With two magazines (LR version):
+ One light magazine (in this case 8 levels and 10 pallets/level. Total 80 Macro 54 pallets)
+ One rotary magazine (in this case 5 levels and 4 pallets/level. Total 20 Dynafix 350 pallets).

WorkPartner 1 +

With one magazine (L version):
+ One light magazine (in this case 8 levels and 10 pallets/level. Total 80 Macro 54 pallets)

WorkPartner 1 +

With two magazine (HR version):

+ One heavy magazine (in this case 5 levels and 2 pallets/level. Total 10 Dynafix 350 pallets)
+ One Rotary magazine (in this case 5 levels and 36 pallets/level. Total 180 Macro 54 pallets).

WorkPartner 1 +

With one magazine (H version):

+ One heavy magazine (in this case 5 levels and 2 pallets/level. Total 10 Dynafix 350 pallets)

WorkPartner 1 +

With two magazines (HH version):

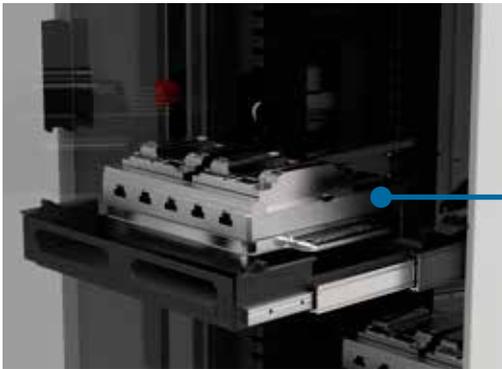+ Two heavy magazines (in this case 10 levels and 2 pallets/level. Total 20 Dynafix 350 pallets)

WorkPartner 1 +

With one magazine (R version):

+ One rotary magazine (in this case 5 levels and 4 pallets/level. Total 20 Dynafix 350 pallets)

Options

Loading door
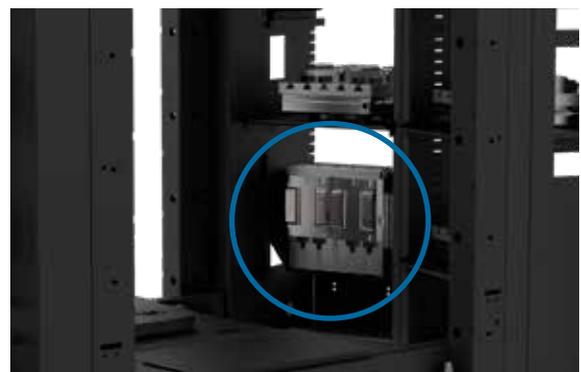With one sliding shelf as a loading station.

+ Doors for loading & unloading
+ Security glass door, 10 mm
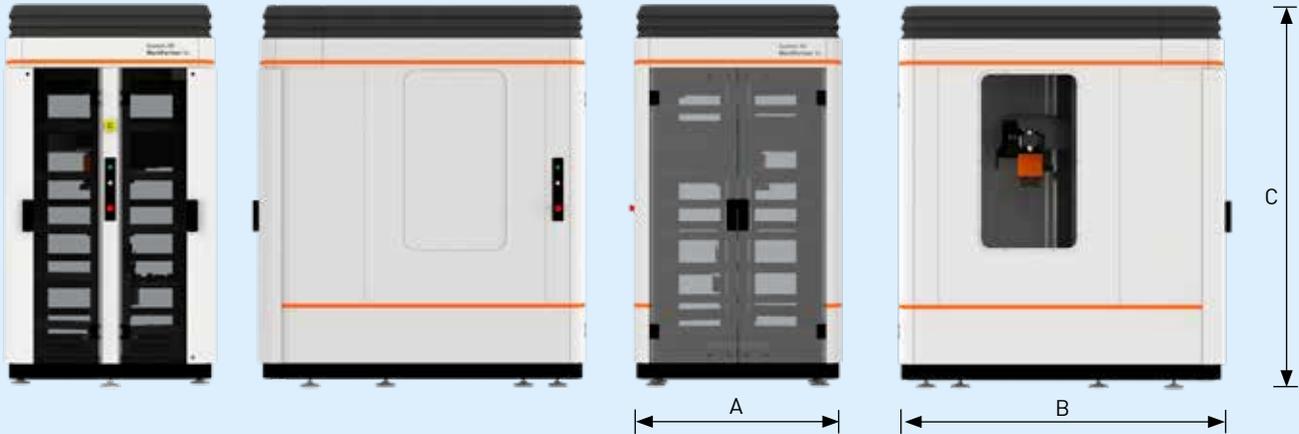

Cell PC
WorkPartner 1+ equipped with Cell PC.

Drain station
For emptying fluids from workpieces.

Technical specifications
WorkPartner 1+

Foot print

One light magazine	A = 1310, B = 1800, C = 2460 mm (A = 52, B = 71, C = 97 in)
One heavy magazine	A = 1310, B = 2060, C = 2460 mm (A = 52, B = 81, C = 97 in)
One rotary magazine	A = 1310, B = 2638, C = 2460 mm (A = 52, B = 104, C = 97 in)
Two light magazines	A = 1310, B = 1800, C = 2460 mm (A = 52, B = 71, C = 97 in)
Two heavy magazines	A = 1310, B = 2480, C = 2460 mm (A = 52, B = 97.5, C = 97 in)
One light magazine & one heavy magazine	A = 1310, B = 2060, C = 2460 mm (A = 52, B = 81, C = 97 in)
One light magazine & one rotary magazine	A = 1310, B = 2638, C = 2460 mm (A = 52, B = 104, C = 97 in)
One heavy magazine & one rotary magazine	A = 1310, B = 3060, C = 2460 mm (A = 52, B = 120, C = 97 in)

Specifications

Transfer weight	80 kg. (pallet with workpiece) 177.8 lbs (pallet with workpiece)
Max. X-reach	1244 mm (two magazine versions), 49 in (two magazine versions)
Max. Z-reach	1500 mm 59 in
Max. C-rotation	330°
Required air pressure	6 ± 1 bar, 150 litres/minute
Required power supply	Single-phase, 180-240 V AC, 14 A at 180 V AC, 20 A at 230 V AC.
Interface	RS-232, 24V I/O, (Various) Industrial Field Buses
Double emergency stop	

Options and accessories

Loading station
Draining station
ID-system with or without automatic scanning
Internal magazine lighting (LED)
Cell PC with WSM software
Customer chosen color for outer casings
Manual rail

Technical specifications
WorkPartner 1+

Double   Tilting   Turning

Optional grippers

Option   Manual rail – slide away WorkPartner 1+ for manual operation of front-loaded machines

Magazine capacity

There are three types of magazine, light (L), heavy (H) and rotary (R).
Up to two magazines can be connected to the changer.

One magazine: L, H or R.
Two magazines: L + L, H + H, L + H, H + R or L + R.
Note: Each individual magazine is intended for one and the same pallet system.

The magazine capacity is determined entirely by the shape and size of the workpieces. The tables below show only "guideline values" for each pallet system carrying workpieces of a "standard" size and shape.

Pallet systems in the LIGHT magazine	No of levels	No of pallets/level	Total
Macro 54/70	8	10	80
Macro PT (70x70)	8	10	80
Macro 116	8	6	48
Macro Chip Guard	8	6	48
Matrix 110	8	6	48
Matrix 142	5	5	25
MacroMagnum 156	5	5	25
GPS 70	8	10	80
GPS 120	8	6	48
ITS50	8	10	80
ITS72	8	9	72
ITS115	8	6	48
ITS148	5	5	25

Pallet systems in the HEAVY magazine	No of levels	No of pallets/level	Total
MacroMagnum 156	5	4	20
Matrix 110	5	4	20
Matrix 142	5	4	20
GPS 240	5	2	10
Dynafix 280/350	5	2	10
ITS148	5	4	20
UPC 320 Fork/RCS	5	2	10

Note: When carrying out wire EDM with Macro, MacroTwin or Unimatic, solutions are customer specific – the number of positions per rack is entirely determined by the nature of the devices securing the workpiece and not by the pallet system.

Pallet systems in the ROTARY magazine	No of levels	No of pallets/levels	Total
Macro 54	7	36	252
Macro 70	7	30	210
Macro 116	5	12	60
Matrix 110	5	12	60
Matrix 142	5	12	60
MacroMagnum 156	5	12	60
GPS 70	7	20	140
GPS 120	5	12	60
GPS 240	5	6	30
Dynafix 280	5	5	25
ITS50	7	36	252
ITS148	5	12	60
UPC 320 Fork/RCS	5	4	20

Note: When carrying out wire EDM with Macro, MacroTwin or Unimatic, solutions are customer specific – the number of positions per rack is entirely determined by the nature of the devices securing the workpiece and not by the pallet system.
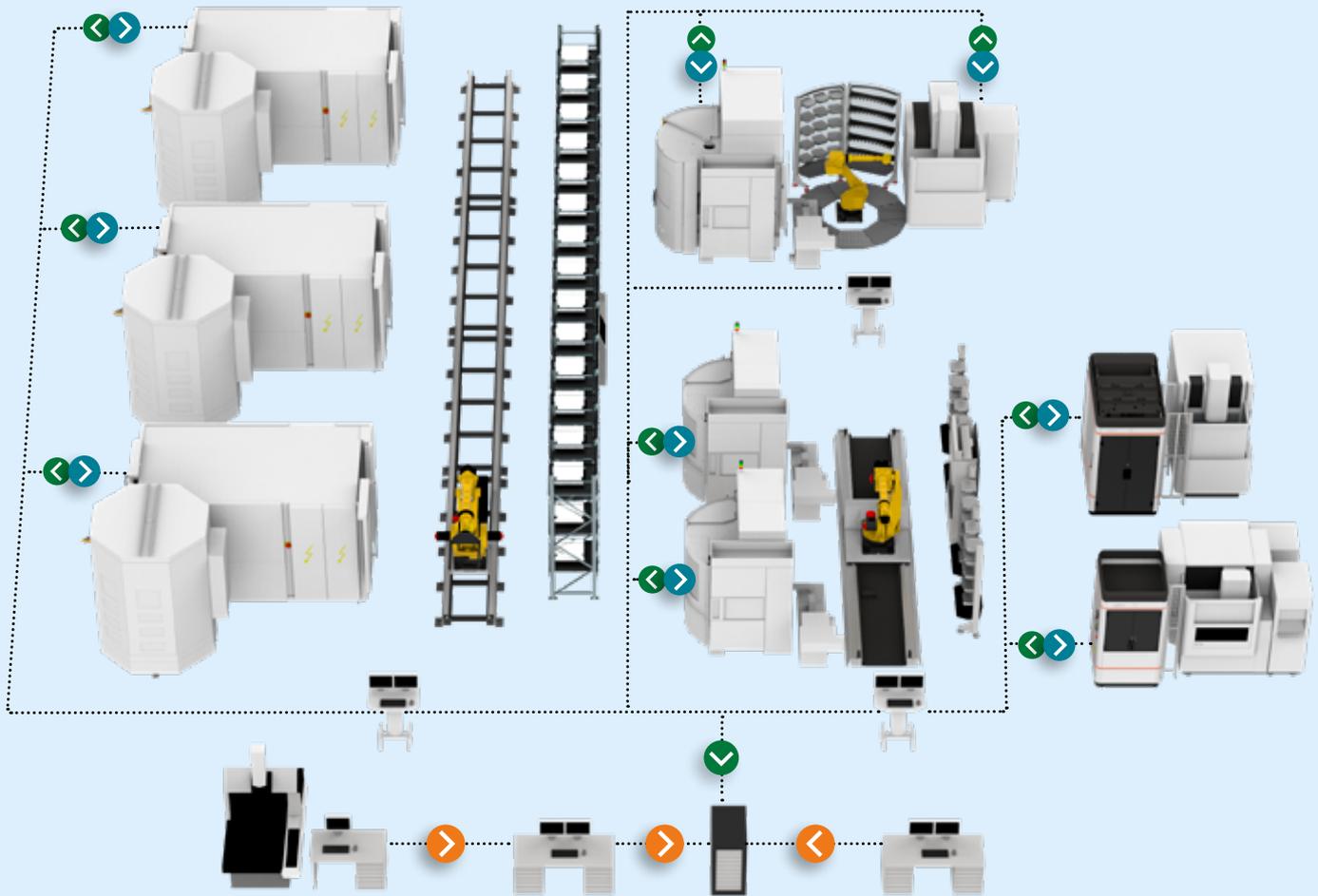

Light magazine

Heavy magazine

Rotary magazine

WSM – WorkShopManager

User-friendly Cell Management Software

+ Necessary data is entered quickly and in a structured manner.
+ Quick, precise overview of the entire process chain.
+ Increased flexibility: The order of priority can be changed at any time.
+ Simpler, safer preparation of automated cells.
+ The risk of errors due to the human factor is minimized.
+ Increased process security.

Preparation – WorkCenter

+ Create an order
+ Assign operations and NC programs
+ Retrieve offset values
+ Release the order for production.

Monitoring – CellMonitor

+ Display status of all cells
+ Display status of individual
  machines and processes.

Statistics – WSM Statistics
+ Retrieve and analyze
  cell utilization data
+ Retrieve and analyze order data.

Execution – CellManager

+ Manage the pallet ID codes
  and magazine positions
+ Create priority lists
+ Automatically start available jobs in
  the order of the priority list
+ Update the information in the
  database with the status and
  machining times of individual
  orders.

Optimize the uptime of your equipment with our Customer Services

System 3R's Customer Services is uniquely positioned to help you maximize the availability, value, precision and productivity of your System 3R equipment. Our cost-effective, customer-centric and expert services put your success at the center, ramp up your productivity and ensure predictable, uninterrupted uptime. System 3R's service engineers are your expert partners for a wide range of success-triggering services.

For more info ask your local System 3R dealer.

For contact details, please refer to:
www.system3r.com.

+GF+