



The all new SherpaLoader[®]

CNC Automation for small & medium batches

Challenges for SME Contract Manufacturers

Decreasing
Batch Sizes often 20-500 parts

Increasing
Production Cost

Fluctuating
Order Intake

Shorter **Delivery Periods**
at no extra margin

Lack of skilled
Operators

Price pressure
from Eastern Europe



The solution: a camera-laser-dual-gripper-six-axes-robot, or simply:

The SherpaLoader®



Camera-guided

The SherpaLoader®
sees what it loads



Intuitive

Touch screen replaces
robot programming



Profitable

Payback usually
within year one



Precision Camera.

At the heart of the SherpaLoader® lies its precision camera. With an accuracy of just 0.5 mm, its vision system reliably recognizes all workpieces placed on your loading device. So, for any new workpiece or job, you do not have to set up new grid plates or stacking tables; and no time-consuming, complex configuration of the robot programs is required. After all, mechanic magazine automation is costly, and prone to failure.

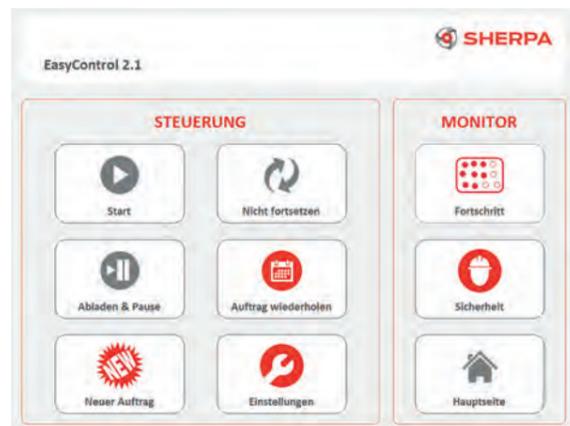


Profitabel.

SherpaLoader® maximizes the spindle time of costly production machines while reducing workforce requirements to a minimum. Replacing traditional mechanics with digital innovations, the pay-back period of SherpaLoader® can be as short as 12 months.



Intuitive Touch Control.



The SherpaLoader® comes ready to use, with teach-in completed and automated routines programmed. Jobs are simply started from intuitive screens on a huge 15-inch touch panel display. You do not need to be a robot specialist to operate the SherpaLoader®, in fact, your existing team can instantly do so.





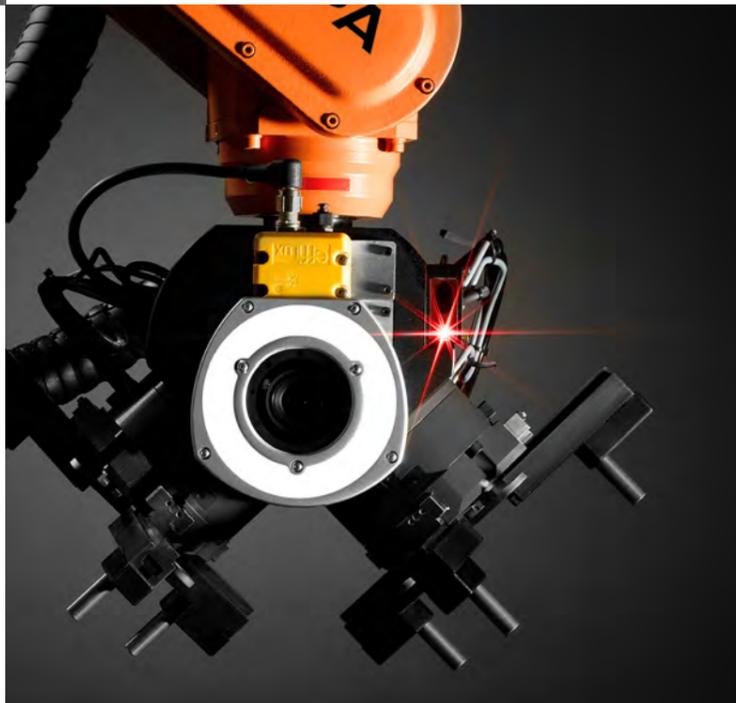


Universal Gripper

The SherpaLoader® is built to handle all common workpiece dimensions. Its gripper, designed for quick adjustments, holds cylinders and cuboids from 10 to 200 mm, as well as shafts up to 400 mm in length and 12 kg of weight. One SherpaLoader®, covers your entire production portfolio!

Laser Sensor

The SherpaLoader® comes equipped with a laser sensor system. Prior to picking up a workpiece, the system measures its exact length. This ensure not only perfect clamping in robot gripper but also it allows excluding workpieces beyond a specific tolerance from being loaded. Adding a laser sensor to the 2D camera system gives the SherpaLoader® 3D capabilities, without relying on a fragile and costly 3D vision system.



Mobile & Compact

Manipulator and cabinet of the SherpaLoader® are bolted on a mineral cast machine bed. Occupying less than one square meter, the unit is both compact and mobile. With a manual fork lift, you easily move your SherpaLoader® to the CNC machine with the highest capacity load.





Air Blow

For various machining operations and materials, spindle, chuck and workpieces must be regularly blown off. The SherpaLoader® is equipped with a blower nozzle that can be activated/deactivated for specific operations.



Universal I/O Interface

The interface of the SherpaLoader® is compatible with all common CNC lathes and milling machines of all years of construction. Use the same SherpaLoader® to automate existing machines, or to pair it with a brand-new CNC machines from any manufacturer.

Euro Pallet Functionality

Not only unload finished parts on euro pallets, but also pick up unfinished parts directly from pallets. SherpaLoader® is the only automation system in the world that can be loaded with material from standard pallets, without costly special mechanics and at no extra cost.



15

Seconds

Featuring a double gripper, the SherpaLoader® completes the unloading from the CNC machine and its loading with the next part within only 15 seconds. When machining is in progress, the SherpaLoader® places the unloaded part on the material car, picks up a new one, and waits in front of the CNC machine door for the next cycle to begin.

5

Minutes

Unbeatable: In just 5 minutes the SherpaLoader® is set up for a different workpiece. How that is possible? By optical recognition of workpieces, even randomly placed ones, that displaces mechanical positioning systems. When changing a workpiece, only the gripper fingers need to be adjusted. Your SherpaLoader® is up and running again while traditional loading systems are still adapted to the next workpiece.

12

Months

SherpaLoader® maximizes the spindle time of costly production machines while reducing workforce requirements to a minimum. Replacing traditional mechanics with digital innovations, the pay-back period of SherpaLoader® can be as short as 12 months.

1000

Parts

Operated with two material cars, the SherpaLoader® offers a space of 0.9 square meters to supply workpieces. Randomly placed at a distance of 20 mm to neighboring parts, the capacity exceeds 240 cylinders 40 mm, or 64 cuboids 90x90 mm. With the SpaceBox, capacity even exceeds 1000 parts, allowing for autonomous running over an entire weekend.

0%

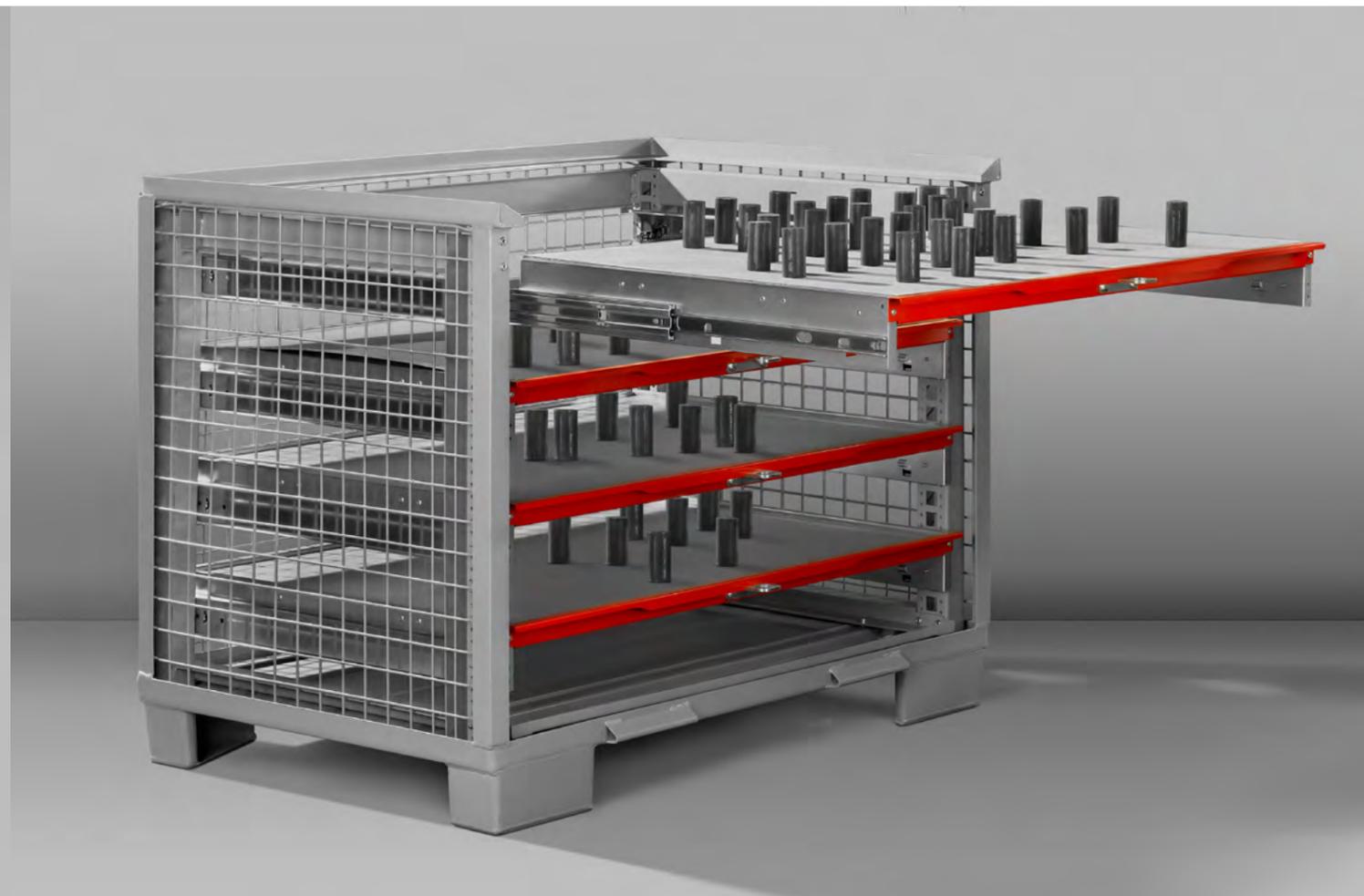
Redundancy

Applying camera and laser technology, the SherpaLoader® dispenses with grid plates and magazines. Once loaded on material cars, euro-pallets, or the SpaceBox, workpieces are not manually handled again until the end of the production process. This feature reduces the manual workload, and it increases the ergonomics for CNC operators.

100%

Service

All standard components of the SherpaLoader® are stocked and available for shipment within 48 hours. With the network of authorized service partners, competent assistance is available on-site within a few hours' drive, in the unlikely case that things go wrong.



Technical Data

SherpaLoader®

Hyundai Robotics x-axis robot
 SherpaVision® Fully automated camera control
 Integrated mineral cast machine bed
 Mobile design
 2-finger gripper for cuboid loading
 3-finger gripper for cylinder loading

T20/M20

HH020
 x
 x
 x
 x
 x

T50/M50

HH050
 x
 x
 -
 x
 x

Workpieces

Cylinders [mm]

Ø 15 - 220
 l 10 - 200

Ø 20 - 300
 l 10 - 400
 min. 15 x 15 x 15
 max. 300 x 300 x 300

Cuboids [mm]

min. 15 x 15 x 10
 max. 200 x 200 x 200

Drive shaft [mm]

Ø 15 - 70
 l 60 - 550

Ø 15 - 100
 l 60 - 750

Weight feedstock max. [kg]

13

35

Capacity

2 loading areas, total max. [mm]

1,200 x 900

Ø bzw. Kantenlänge 40 mm [Anzahl Bauteile]

250

Ø bzw. Kantenlänge 100 mm [Anzahl Bauteile]

56

Ø bzw. Kantenlänge 140 mm [Anzahl Bauteile]

30

Zutritt zum Gefahrenbereich abgesichert mit Sicherheitslichtvorhang gemäß ISO 13855 und Sicherheitstür gemäß EN 953

Supply

Three phase power

400V, 16A

400V, 16A

Pressured air [bar]

3 - 8

3 - 8

Dimensions

Length [mm]

1,350

1,410

Width [mm]

750

850

Height [mm]

2,300

2,300

Weight [kg]

985

1,830

Errors and changes excepted.

References



SHERPA Robotics

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ABOUT



MAZAK CNC-Automation mit SherpaLoader®

QUICK TURN 250-II MSY



MORI SEIKI CNC-Automation mit SherpaLoader®

SL-250



DOOSAN CNC-Automation mit SherpaLoader®

PUMA TL 2400 LM



DMG MORI CNC-Automation mit SherpaLoader®

CLX 350



HAAS CNC-Automation mit SherpaLoader®

UMC 750



OKUMA CNC-Automation mit SherpaLoader®

LB35-II



MAZAK CNC-Automation mit SherpaLoader®

QUICK TURN 250 MY



OKUMA CNC-Automation mit SherpaLoader®

LB3000 EX



DMG MORI CNC-Automation mit SherpaLoader®

CLX 350



MORI SEIKI CNC-Automation mit SherpaLoader®

SL-204



DOOSAN CNC-Automation mit SherpaLoader®

PUMA TL 2400 LM



CNC-Automation mit der SpaceBox

500 Ringe über Nacht

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