



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 low-cost countries

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

The SherpaLoader®



Camera-guided

SherpaLoaders®
see what they load



Intuitive

Easy-to-use touchscreens
replacing complex
robot programming



Profitable

Pays back its
investment often
within year one

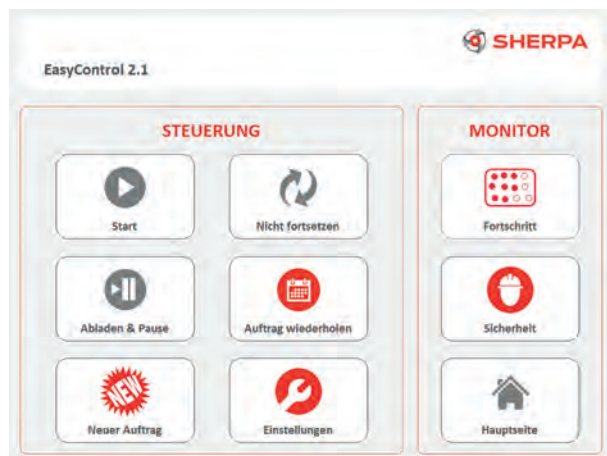


3D Vision System.

At the core of the loading automation lies a fully automated 3D camera system SherpaVision®. With its precision of just 0.5 mm, the system digitally detects 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.



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.

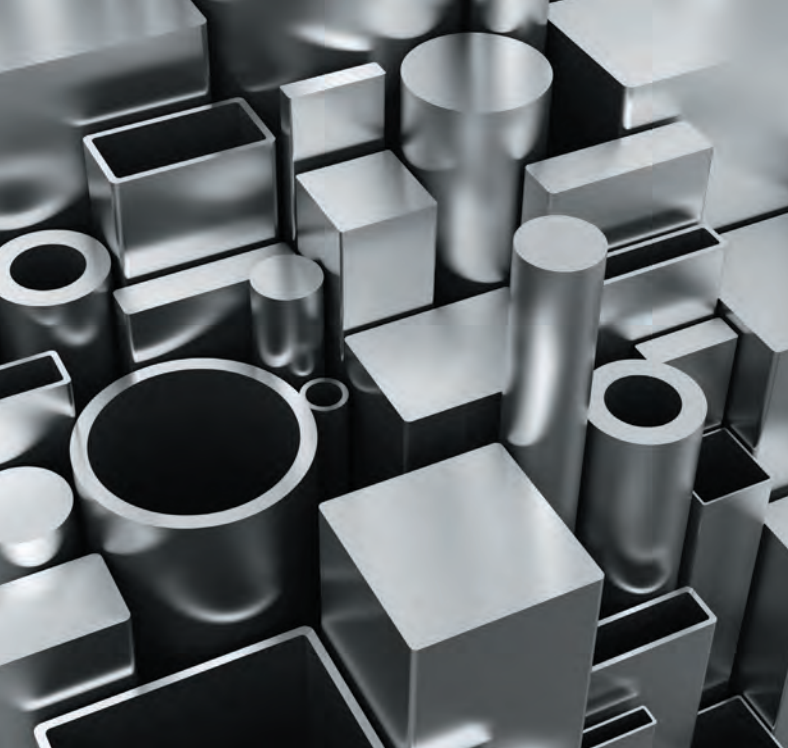


Maximum Profitability.

SherpaLoaders® maximize the spindle time of costly production machines while reducing workforce requirements to a minimum. Replacing traditional mechanics with digital innovation, SherpaLoaders® pay back their investment often in just 12 months.





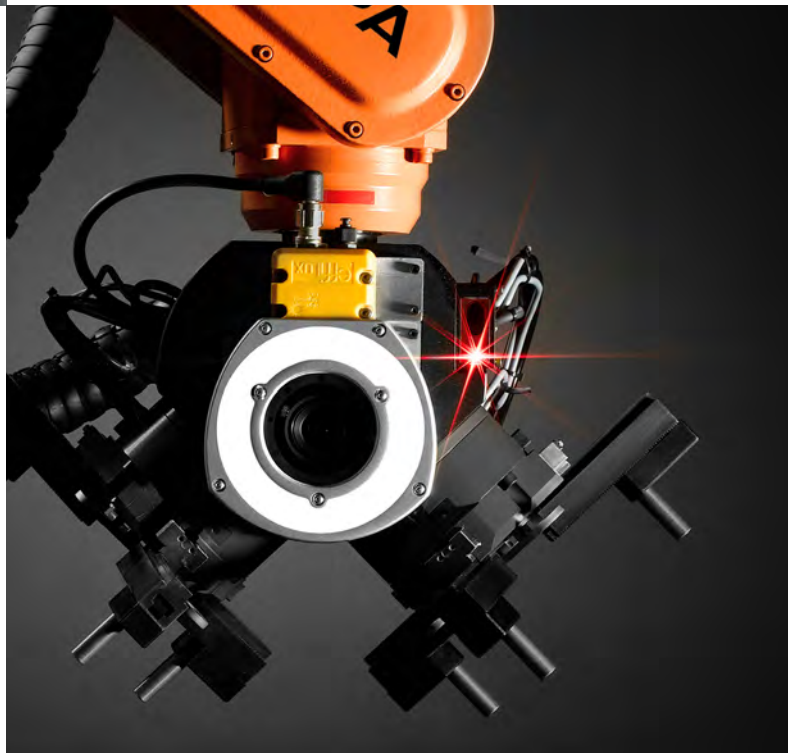


Universal Gripper

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 combination of machine vision and laser sensor measuring ensures a robust recognition of workpieces; and it allows feeding workpieces from any type of material cars and pallets. No milled or form-fitting devices are required, which provides extra flexibility and suitability for everyday use, unmatched by conventional robot systems.



Mobile & Compact

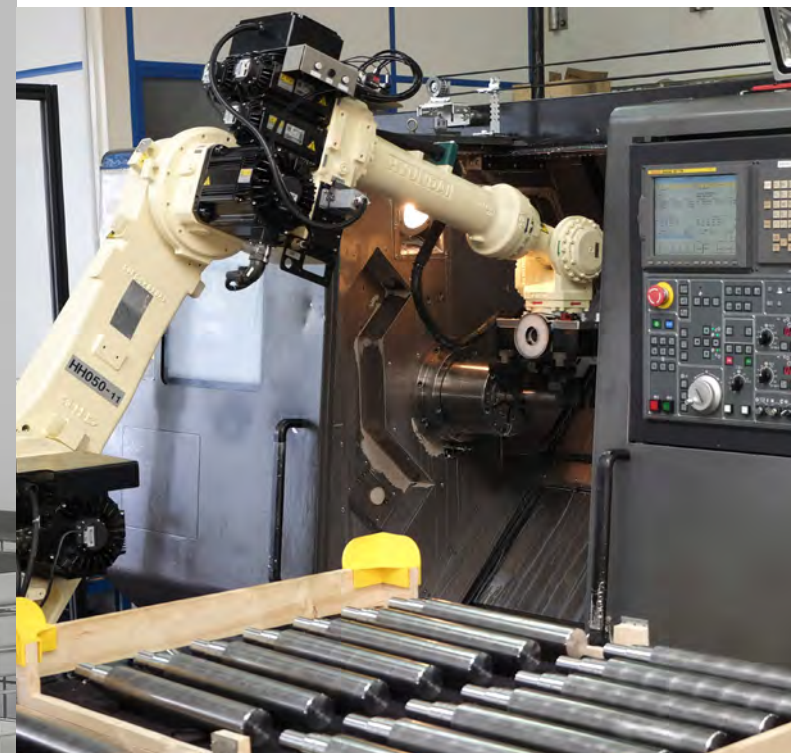
Manipulator and cabinet of the SherpaLoader® are bolted on a mineral cast machine bed. Occupying less than one square meter, the unit is both compact and mobile. With a manual fork lift, you easily move your SherpaLoader® to the CNC machine with the highest capacity load.





Air Blow

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



Universal 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

The SherpaLoader® unloads finished parts on euro pallets, and it picks up raw material directly from pallets – without special mechanics and at no extra cost. This functionality of both loading and unloading material from standard pallets is a global innovation by SHERPA Robotics.



15

Seconds

Featuring a double gripper, the SherpaLoader® completes each loading/unloading cycle within just 15 seconds. When CNC-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

In just 5 minutes the SherpaLoader® is set up for a different workpiece type. This is made possible by digital recognition of workpieces, displacing mechanical positioning systems. When changing a workpiece, all you need to do is adjust the gripper fingers. Your SherpaLoader® is up and running again while traditional loading systems are still being adapted.

12

Months

This is how short it takes for a productive SherpaLoader® to pay back its initial investment. With no costly mechanical structures or over-engineered components, each SherpaLoader® increases the spindle time of valuable CNC machines, while costing a fraction of them only.

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.

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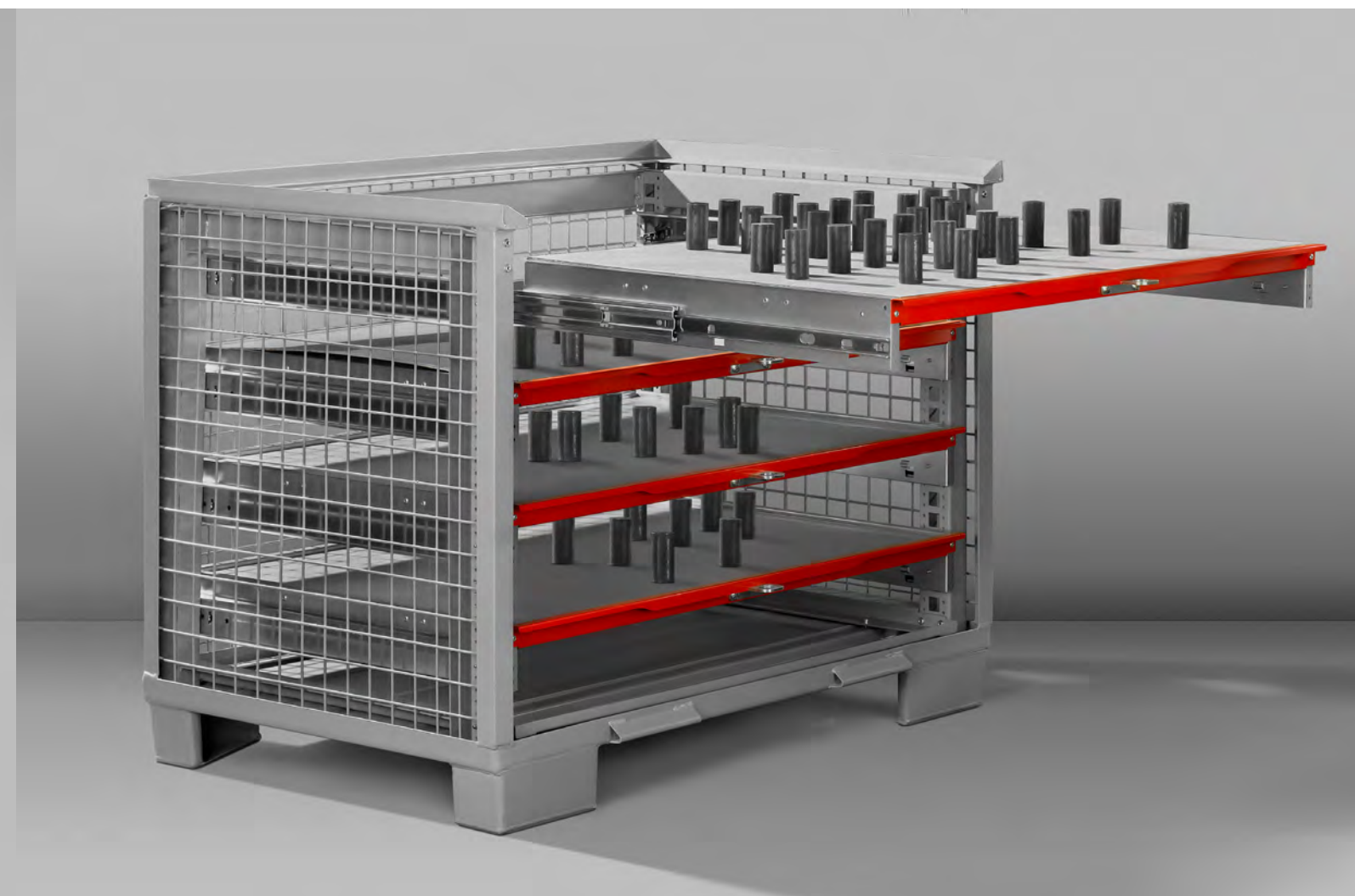
Magazines

Made possible by 3D vision, the SherpaLoader® dispenses with magazines and grid plates. Once loaded on material cars, euro-pallets, or in the SpaceBox, workpieces are not manually handled until the end of the production process. This reduces 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 Specifications

References

SherpaLoader®

- Hyundai Robotics 6-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

Workpieces

Cylinders [mm]	Ø 15 - 220 l 10 - 200	Ø 20 - 300 l 10 - 400
Cuboids [mm]	min. 15 x 15 x 10 max. 200 x 200 x 200	min. 15 x 15 x 15 max. 300 x 300 x 300
Shafts [mm]	Ø 15 - 70 l 60 - 550	Ø 15 - 100 l 60 - 750
Weight [kg]	max. 13	max. 35

Capacity

- 2 loading areas, total [mm]
- Ø or length 40 mm [number of parts]
- Ø or length 100 mm [number of parts]
- Ø or length 140 mm [number of parts]
- Access to loading area controlled by light curtain in accordance with ISO 13855 and by safety door according to EN 953

Supply

- Three-phase alternating current
- Compressed air [bar]

Dimensions

Length [mm]	1,350	1,410
Width [mm]	750	850
Height [mm]	2,300	2,300
Weight [kg]	985	1,830

Subject to errors and changes.

T20/M20

- HH020
- ✓
- ✓
- ✓
- ✓
- ✓

T50/M50

- HH050
- ✓
- ✓
- ✓
- ✓
- ✓



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QUICK TURN 250-II MSY



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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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