INNOVATION

LOSONCZI

— INNOVATION —

— BROCHURE —

INNOVATION

ABOUT US

Our company was founded as a family business in 1995, it is now supported by the second generation and more than 30 employees. Our main profile is the design and manufacture of custom-made measuring machine, workpiece gripping devices, special cutting tools, tool holders and custom-made parts.

We aim to cover the entire production process with our products, according to our customers' needs. We design and manufacture the equipment required to grip the workpiece, the turning tool and tool clamp for machining, and the special measuring equipment for checking the operation.

Our company philosophy is based on continuous innovation and technological development. We believe that those who want something are looking for a solution, those who don't, an excuse. And at Losonczi Innovation we always strive to find the best solutions to our customers' technical challenges.

Losonczi Innovation awards:

ÉV SZÉCHENYI VÁLLALKOZÁSA 2022

Üzleti Etikai Díj

AZ ÉV FELELŐS FOGLALKOZTATÓJA

Magyar Gazdaságért Díj 2013

CSALÁDBARÁT MUNKAHELY

ÉV GYÁRA PROJEKTVERSENY | GRAND PRIX 2023

K&H családi vállalatok kiválósági díj

VOSZ ÉV VÁLLALKOZÓJA 2004

VOSZ ÉV VÁLLALKOZÓJA 2023

The main partners of Losonczi Innovation are:

Our main partners are automotive and machine parts manufacturers, as well as companies producing machined components for the energy and railway industries.

Our regular customers include:

Audi Hungaria

AIRBUS

elso – Ein Unternehmen der Elbe Group

HANON SYSTEMS

HÖD

HOWMET AEROSPACE

KENNAMETAL

LEAX

LINAMAR

NCT – KEEP MOVING

RÁBA

SANDVIK Coromant

INNOVATION

PRO MEASURING INSTRUMENT PRODUCT RANGE

The story of the PRO family of measuring machines started in 2021 with the AXIS PRO measuring machine, but two decades of professional knowledge lies behind the high-tech machines, since Losonczi Innovation has been designing and manufacturing measuring devices since 2001.

All members of Losonczi Innovation's multi-award winning PRO family of measuring machines are designed to meet the challenges of Industry 4.0 and to measure each workpiece on any automated production line with an accuracy of up to 1 micron within cycle time, and in the event of dimensional changes due to tool wear, to immediately notify the machine to make the necessary tool corrections, minimising the number of scrap parts.


HOUSING PRO
TOWER PRO
HOUSING PRO
TOWER PRO

AXIS PRO

AXIS PRO was built in February 2021 as the first member of the PRO measuring instrument family as the result of a two-year development process. During the design process of the machine, the engineering team of Losonczi Innovation placed great emphasis on the standardisation of components and the modular design of the instrument, making it easier to install and maintain.

Losonczi Innovation's flagship AXIS PRO measuring machine is a computer-controlled instrument designed for measuring axis-type parts, capable of 100% in-process inspection of machined parts. It may be operated in robot-assisted mode or fed manually. The automatic measuring device identifies the workpiece to be measured, displays the evaluated measurement results and transmits them to a central database via the network.

AXIS PRO is able to inspect and document all the necessary dimensions on any parts within cycle time, as required by vehicle manufacturers. These dimensions can be internal and external diameters, lengths, shoulder and grooving widths, runouts, cylindricity, concentricity, gear tooth runout and roughness. The measuring cell can check, evaluate and record up to 20-30 different dimensions in 25-30 seconds. The AXIS PRO can be calibrated with a master pattern. The calibration frequency can be selected according to the number of pieces measured or the time elapsed. AXIS PRO has a built-in code reader that identifies each workpiece based on a unique 2D code engraved on the piece. The evaluated measurement results are attached to the identified part. AXIS PRO can communicate with the robot that serves it as well as with the manufacturing machine.

When communicating with the manufacturing machine, it sends tool correction parameters to the machine if the evaluated dimension is close to the tolerance limit. Based on the data received, the manufacturing machine makes the necessary tool correction. This minimises the percentage of scrap parts. If the measured data falls outside the specified tolerance limits, the measuring machine sends signals to the operator or robot that the workpiece should be scrapped.

Méret tulajdonságok:

AXIS PRO Awards

2021 Magyar Ipari Célgép Nagydíj – Az év célgépe

BIG SEE Product Design Award 2023 Winner

MAGYAR INNOVÁCIÓS NAGYDÍJ

MAGYAR FORMATERVEZÉSI DÍJ

ÉV GYÁRA PROJEKTVERSENY | AZ ÉV LEGINNOVATÍVABB PROJEKTJE A GYÁRTÁSBAN 2023

QUALITY INNOVATION AWARD

MACH-TECH NAGYDÍJ 2022

MINŐSÉG INNOVÁCIÓ DÍJ

AXIS PRO

TOWER PRO

The second member of the measuring instrument family is the TOWER PRO measuring machine, developed by Losonczi Innovation for measuring disc-type parts. The measuring cell is suitable for 100% documented in-process measurement of parts after the turning or grinding operation. The instrument can be served by a robot or manually, the workpieces may be identified individually, then the measured values are evaluated and stored. The dimensions to be checked can be internal and external diameters, lengths, runout, cylindricity, circumferences, grooving widths and gear runout.

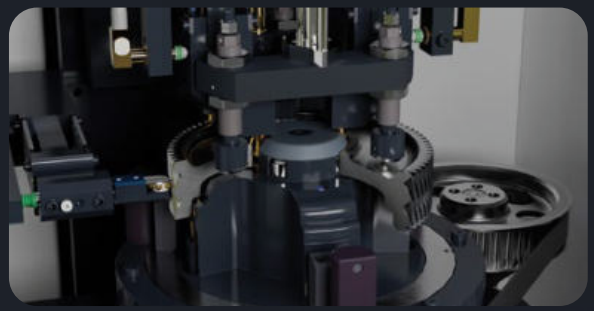
The TOWER PRO measuring machine is available in two versions. In the static version, the workpiece to be measured is clamped on fixed seats and measured with inductive probes e.g., in case of gear box parts. In the dynamic version, the workpieces e.g., gears to be measured are supported by special seats and clamped down, and rotated by an electric motor evenly during the measurement. It allows the evaluation of runout, circularity, cylindricity and gear tooth runout. In both designs, the collection of data is performed by a data collection unit designed by Losonczi Innovation. The data are evaluated and displayed using METRIX software, also own developed.

The cycle time for TOWER PRO machines is approximately 30 seconds.

When designing the machine, we focused on providing remote access to guarantee quick intervention for any repair of malfunctions; and allowing easy on-site repair.

The award-winning TOWER PRO measuring device is designed to measure each workpiece on an automated production line with an accuracy of up to 1 micron and to communicate with the robot and the manufacturing machine. When communicating with the machine, it sends tool correction values to the machine if there is a dimensional deviation due to tool wear. This correction minimises the number of rejects.

Measured characteristics:



MACH-TECH GRAND PRIX 2024

MACH-TECH
NAGYDÍJ 2024

HOUSING PRO

The third member of the PRO measuring machine family, the HOUSING PRO measuring machine has been developed for 100% in-production measurement of electric car gear box cases and covers. This measuring machine is basically designed for manual feeding, but can also be fed by robot thanks to its large operator window.

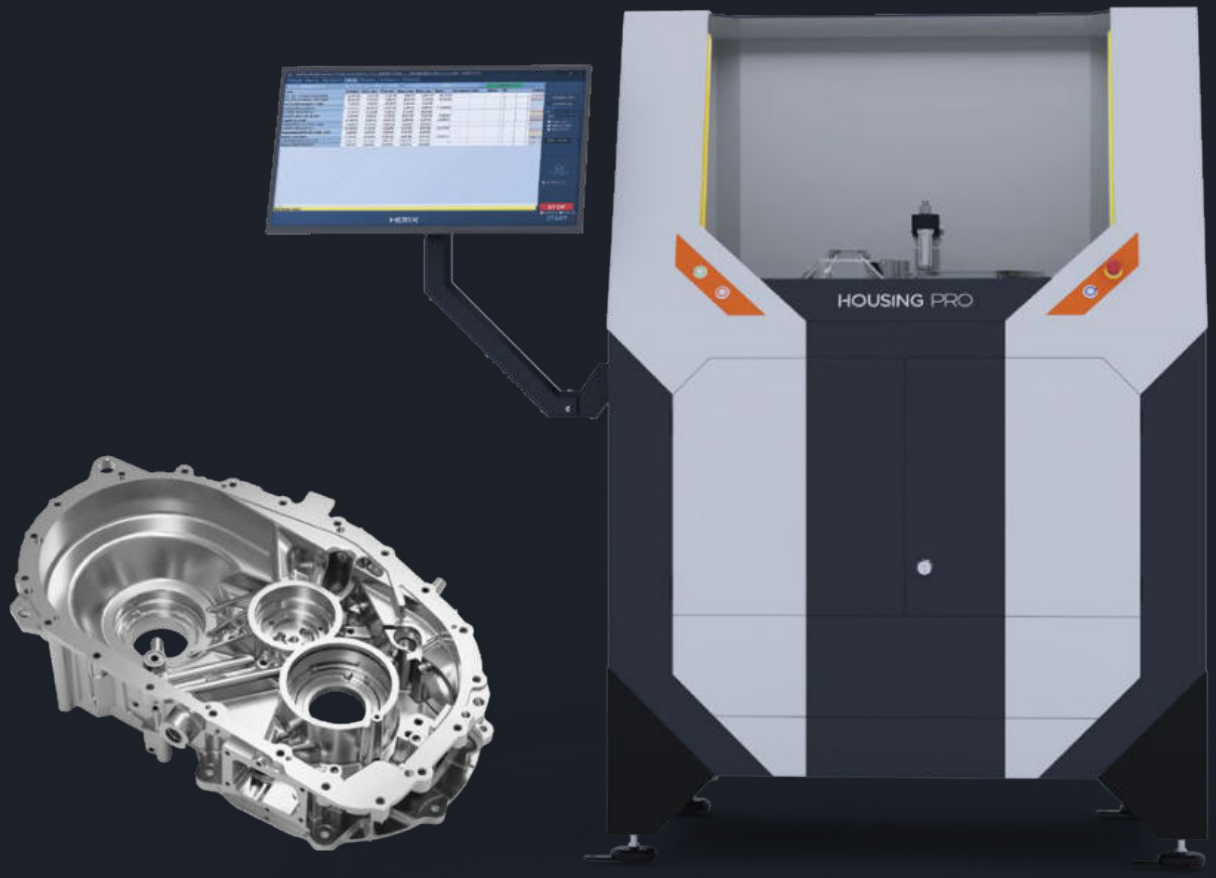
The HOUSING PRO measuring machine is suitable for measuring the diameter, depth and position of the bearing mounting hole. The evaluation of the obtained results is performed by the METRIX software, developed specially for the PRO measuring machines. The parts to be measured are identified by the built-in code reader based on the unique 2D code engraved on the parts. The evaluated measurement results are stored in a central SQL database after reading the QR-code successfully. The measuring cycle takes 30-40 seconds. The stored measurement results help to determine the required shimming washer thickness during the subsequent assembly operation.

Measured characteristics:

The calibration of the measuring machine can be carried out – in the same way as on AXIS PRO - with a calibrated masterpiece, on a CMM measuring machine after a pre-set number of pieces or elapsed time. The masterpiece is made by modifying a selected part. Heat treated steel bushings, glued in at the measuring points, and carbide inserts at the seating and measuring points give the masterpiece its durability.

As the gear housings are made of aluminium and are relatively large, significant thermal expansion during operation is to be expected. There may be a difference of 5-10°C in the temperature of the workpieces produced in different shifts, so the instrument compensates for the dimensions during the measurement.

To solve this problem, the engineering team at Losonczi Innovation developed a uniquely designed contact thermometer sensor with digital output for the HOUSING PRO measuring devices. This allows the temperature of the current workpiece to be checked during each measuring cycle. Based on the temperature data, the software performs the size compensation.

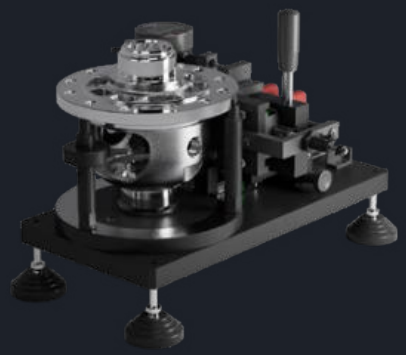


HOUSING PRO

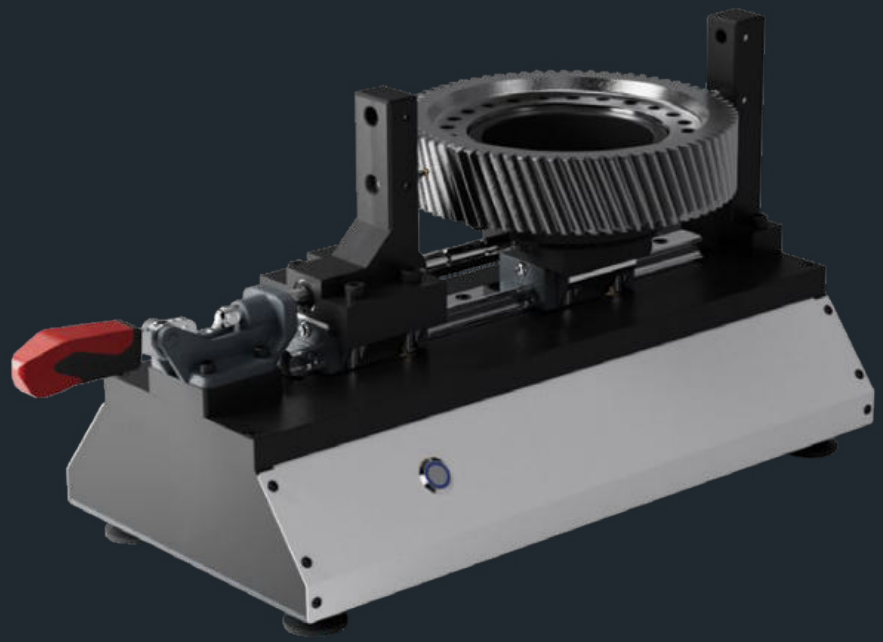
MECHANICAL MEASURING DEVICES

Losonczi Innovation's mechanical measuring instruments are suitable for in-process and final inspection measuring operations. The simple design ensures long life and accurate operation for each measurement.

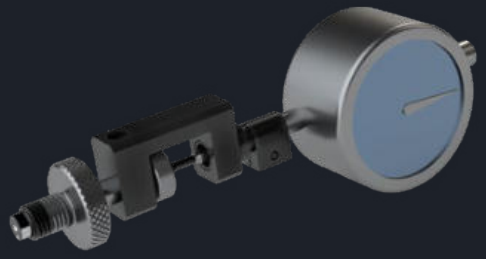
Measuring device for measuring the internal spherical surface of the differential housing



Two-ball measuring device
for gears with computer evaluation



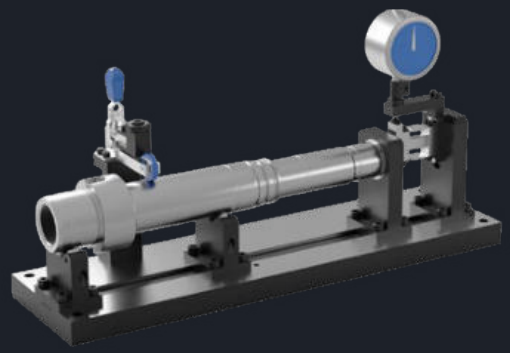
Common Rail hole runout checker



Position Checking Device

Bore Depth Tester

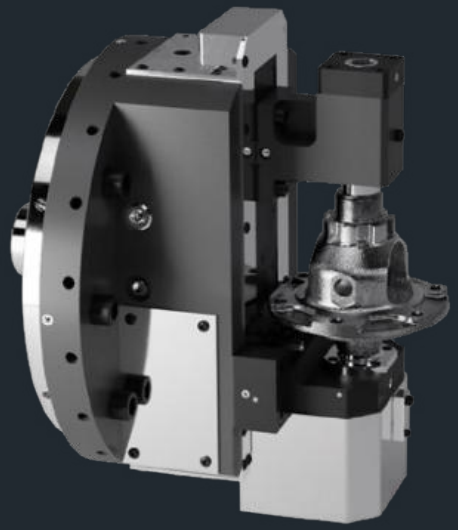
Shaft bore radial runout checker



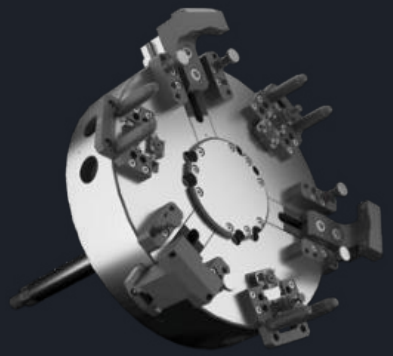
WORKPIECE GRIPPING DEVICES FOR LATHES

Losonczi Innovation can provide a complete solution for the design and manufacture of gripping devices for lathes, whether hydraulically operated chucks, cartridge grippers, custom designed chuck jaw sets or workpiece stops and their variations with seat monitoring.

Special turning fixture for special shaped parts

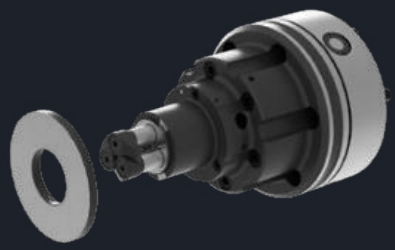


Hydraulic chuck with seat monitoring

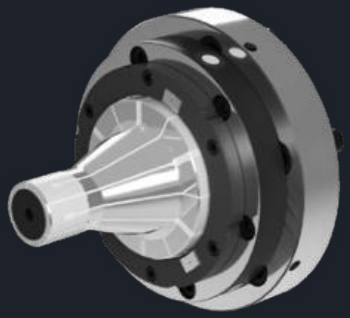


Chuck jaw and locating pin set

Special chuck with swing clamps



Cartridge lathe for gripping differential housing

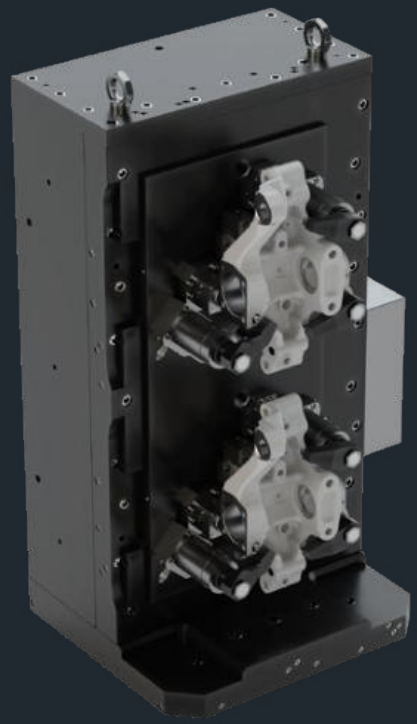


Special clamping device for turning axle parts

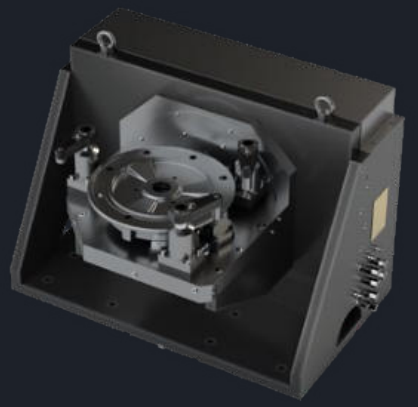
WORKPIECE GRIPPERS FOR MILLING MACHINES

We design and manufacture hydraulic and mechanical workpiece grippers for special shaped parts. Precise clamping and fixing adapted to the part, up to several operations from one gripping.

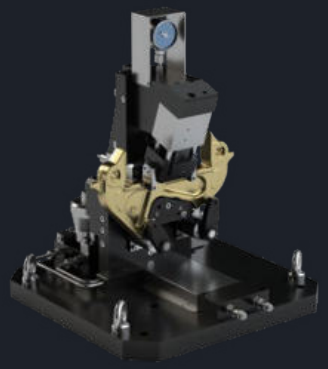
Gripping device for two truck axle joints



Rotating hydraulic milling attachment



Truck brake caliper machining equipment



Gear-gripping device for gear hobbing

Hydraulic drilling and milling attachment with seat monitoring

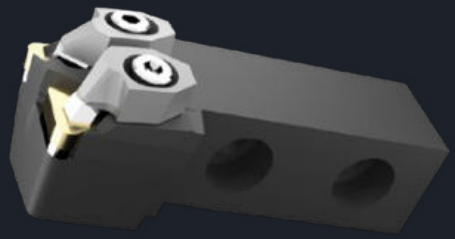
Hydraulic/mechanical milling attachment for two operations

INDEXABLE CUTTING TOOLS

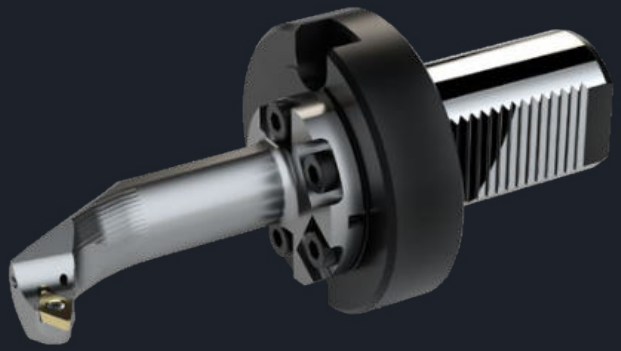
Since the turn of the millennium, Losonczi Innovation has been making unique turning tools with indexable inserts, whether for turning, milling or countersinking. With custom tools, operations can be consolidated, saving time and money.

LATHE TOOLS

Double-edged group tool for external turning with internal cooling



Boring tool with internal cooling made of Densimet



Double-edged group tool for boring

COUNTERSINKING TOOLS

Stepped countersinking tool

Combined countersinking tool

Shaft machining tool

MILLING TOOLS

Two-piece indexable disc milling cutter for stepped surfaces

Special milling tool with 4 edges and 16 inserts

Milling tool with 5 edges and 30 inserts

Special-shaped milling tool for rails

Profile disc milling tool with special profiled inserts

CUSTOM TOOL HOLDERS

Standard catalogue toolholders sometimes do not meet customer needs because the operation requires a specially designed toolholder, be it a lathe or milling toolholder with different connections, layouts, drives, lengths or toolholders.

MILLING TOOLHOLDERS

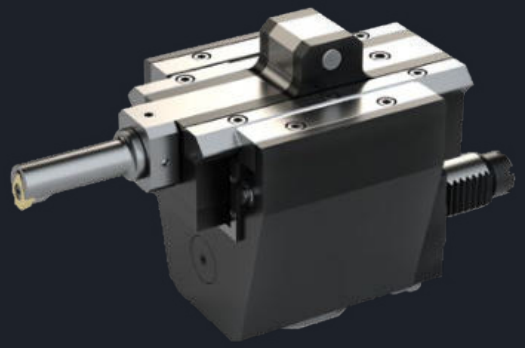
Turning tool holder for milling machines

Indexable finishing tool for milling machines

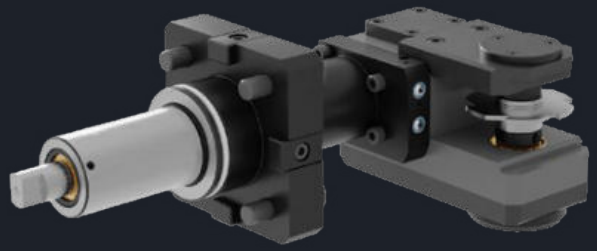
TURNING TOOLHOLDERS

Adapter tool holder
with adjustable tip height

Driven slotting head for lathe



Driven tool holder for disc cutters



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