



#OTAL#EST

CYLINDERS REFLUSHING TESTING

ACCURACY IN

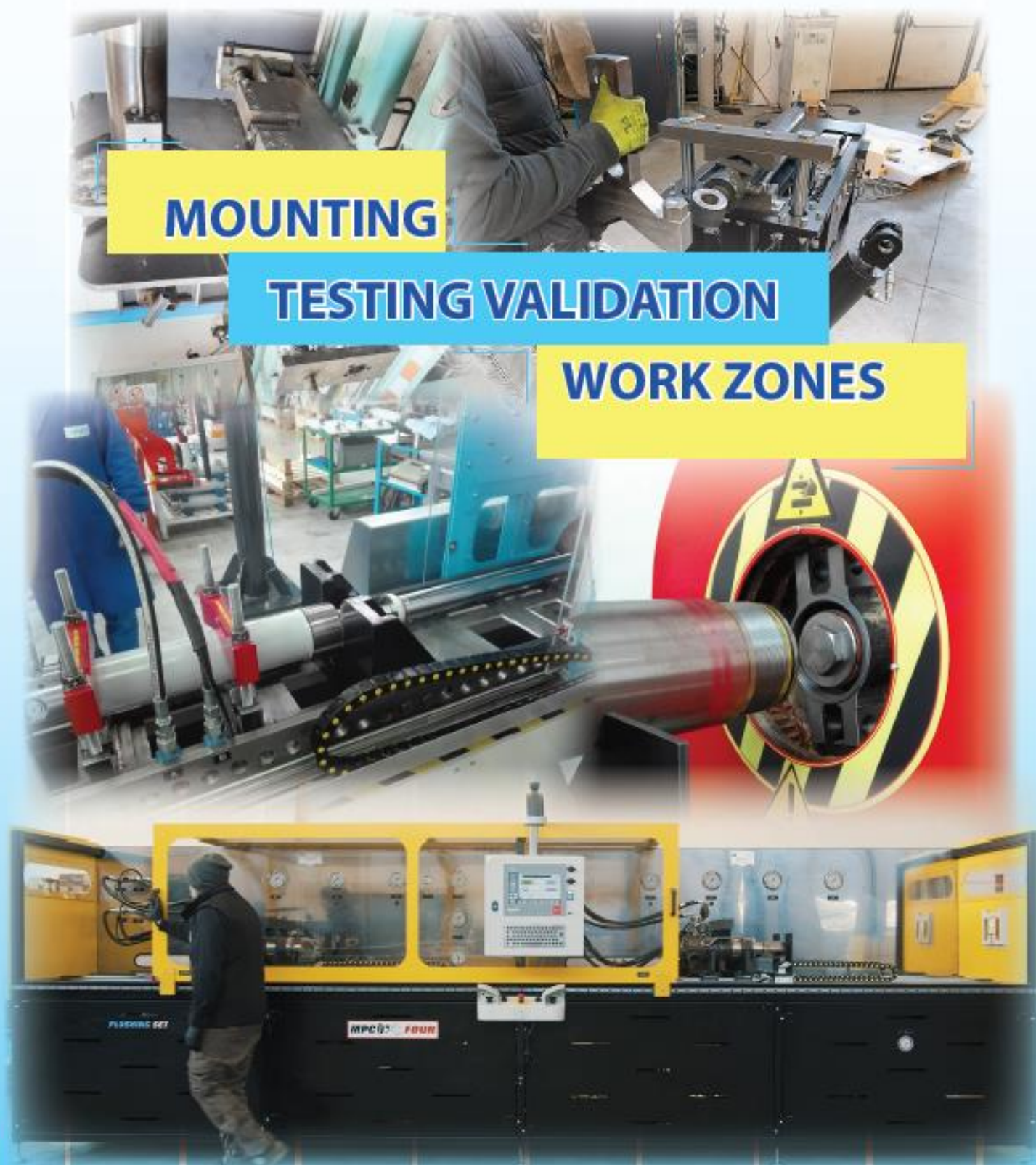
TESTING
FLUSHING
MOUNTING

CYLINDER AUTOMATION 2024

MOUNTING

TESTING VALIDATION

WORK ZONES





#TOTAL#EST

We have experience with every type of cylinder

Double effect

From normal cylinder to system containing externally controlled valves.



Simple effect

Both for cylinders that work in push and pull.



Telescopic

Full extension vertical or horizontal tests.
Checking the closing force for single acting.



Diving

Customized tests according to the type of test requested by the customer.



To each their own 'support':

Fully customizable automatic testing based on customer specifications.



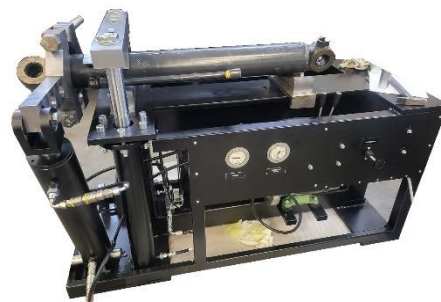
Hydraulic cylinder testing machine



Hydraulic cylinder assembly machine



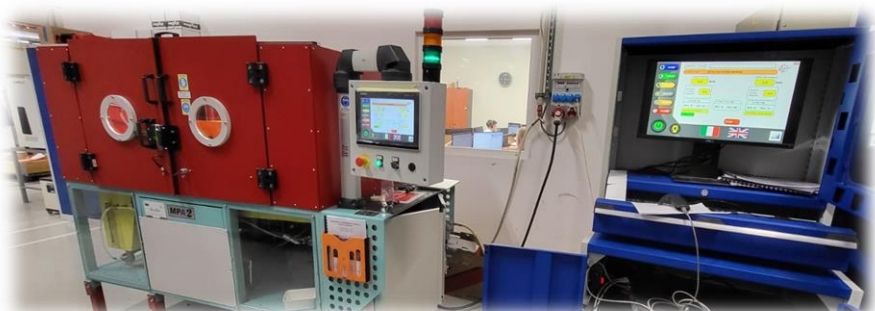
Hydraulic cylinder repair machine



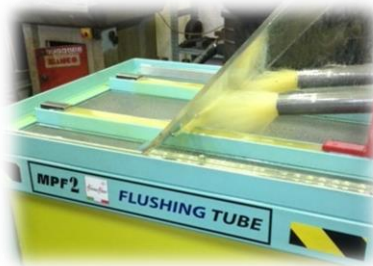
Oil Filtration unit



Special machine



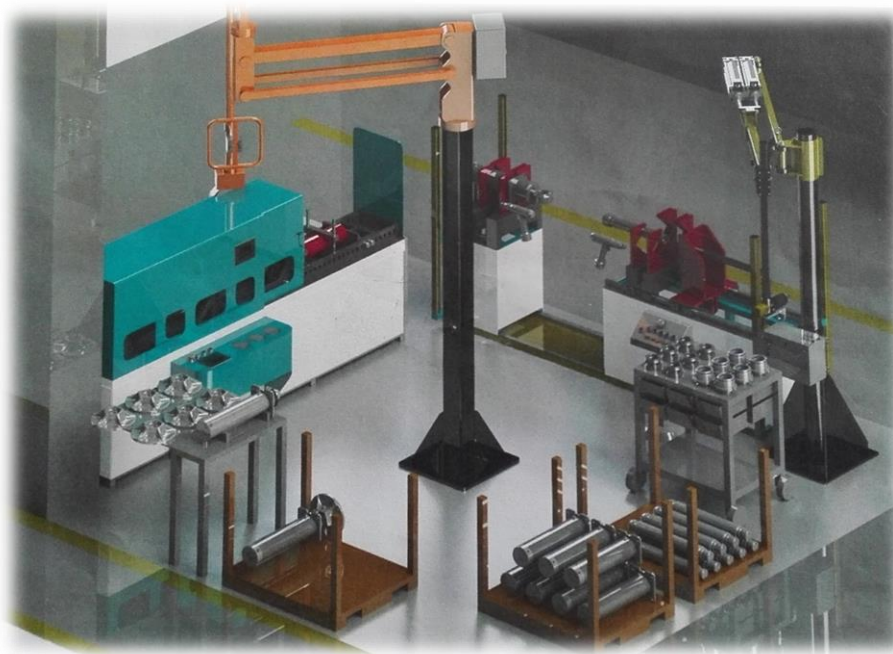
Hydraulic cylinder cleaning machine



Hydraulic hose cleaning machine



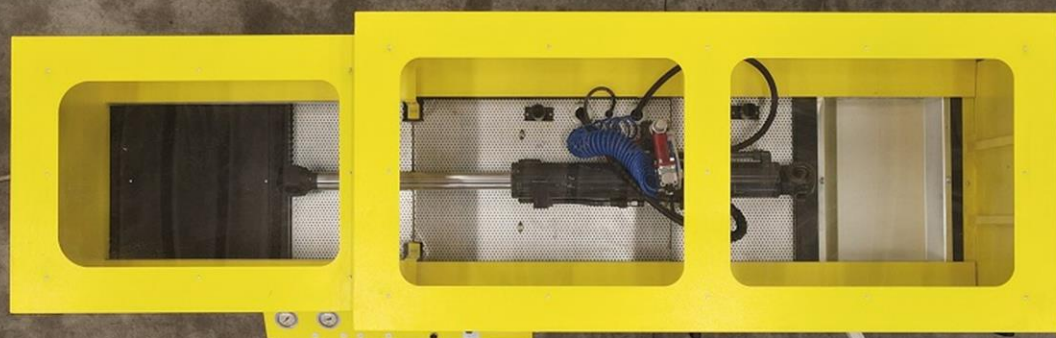
Working area



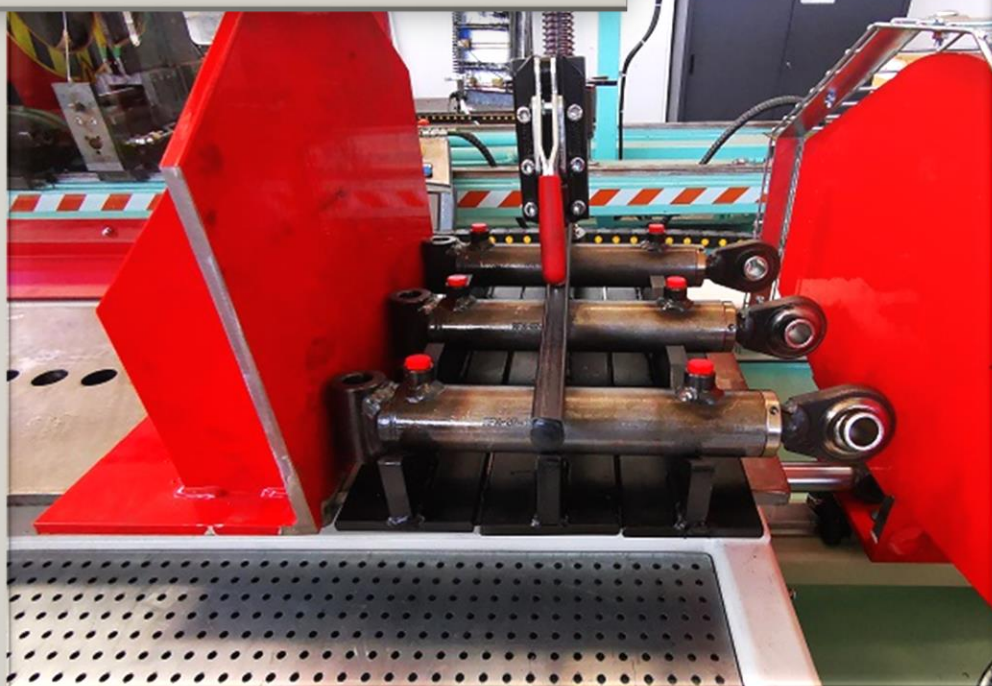
Total Test Hydraulic cylinder testing machine production:

MPC0.1	Little cylinder testing machine, power unit and supply in the same Frame, MANUAL REGULATION
MPC0.2	Multiple Little cylinder testing machine, power unit and supply in the same Frame, MANUAL REGULATION
MPC0.3	Endurance cycle testing machine, power unit and supply in the same Frame, MANUAL REGULATION
MPC0.4	Water immersion and oil pressure testing possibility, for little cylinder to be tested, MANUAL REGULATION
MPC0.5	Medium and quite big cylinder testing machine, power unit and supply in the same Frame, FULL AUTOMATIC MACHINE
MPC0.7	Big cylinder testing machine, power unit and supply in the same Frame, FULL AUTOMATIC MACHINE
MPC0.7 TWO STATION	Big cylinder testing machine, up to test little cylinder in two different side, power unit and supply in the same Frame, FULL AUTOMATIC MACHINE
MPC0.7 FOUR	Up to test quite big cylinder, up to test four cylinder in the same time and in the same station, FULL AUTOMATIC MACHINE
MPC0.8	Double effect and telescopic cylinder testing machine, FULL AUTOMATIC MACHINE
MPC1	Little cylinder testing machine, power unit and supply in two different Frame, FULL AUTOMATIC MACHINE
MPC2	Medium cylinder testing machine, power unit and supply in two different Frame, FULL AUTOMATIC MACHINE
MPC3	Big cylinder testing machine, power unit and supply in two different Frame, FULL AUTOMATIC MACHINE
MPC3 DOUBLE STATION	Big power unit connect two different supply can execute two different test in same time, FULL AUTOMATIC MACHINE

MPC0.1



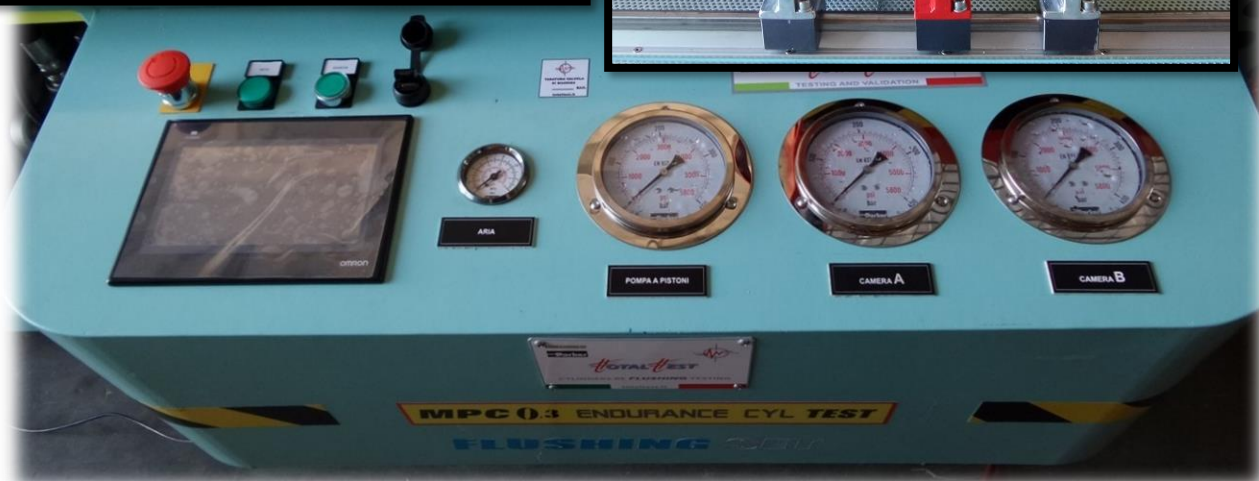
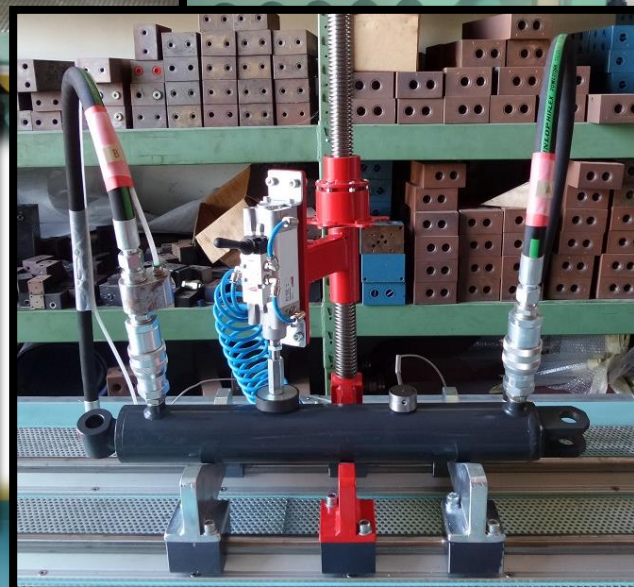
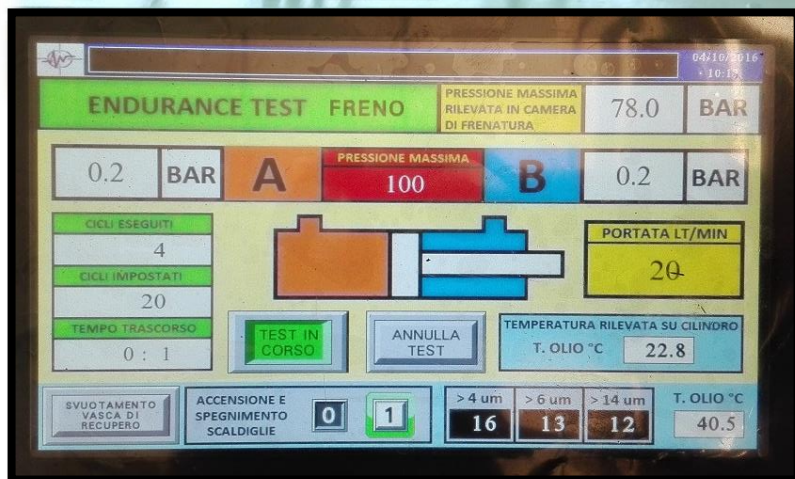
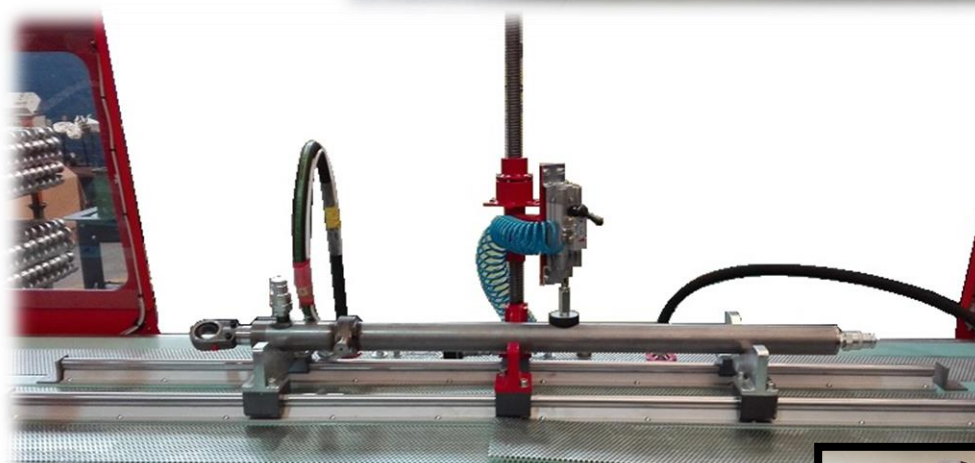
MPC0.2



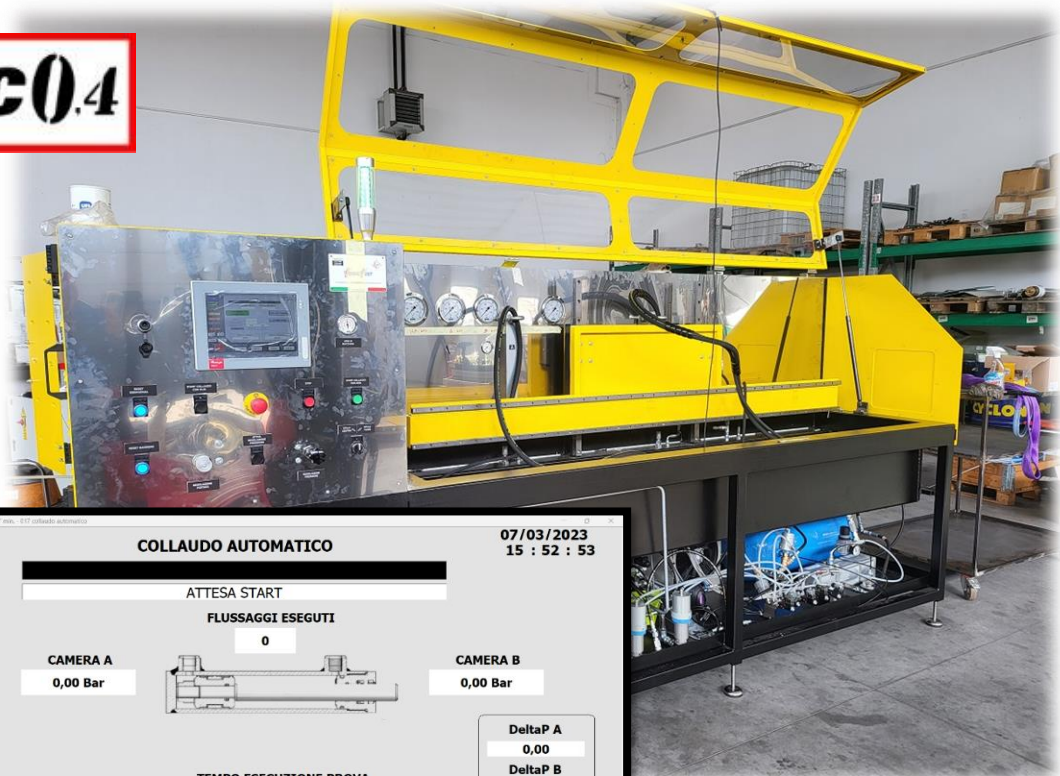
MPC0.3



MPC0.3 ENDURANCE CYL TEST



MPC0.4



COLLAUDO AUTOMATICO 07/03/2023 15:52:53

ATTESA START

FLUSSAGGI ESEGUITI 0

CAMERA A	CAMERA B
0,00 Bar	0,00 Bar

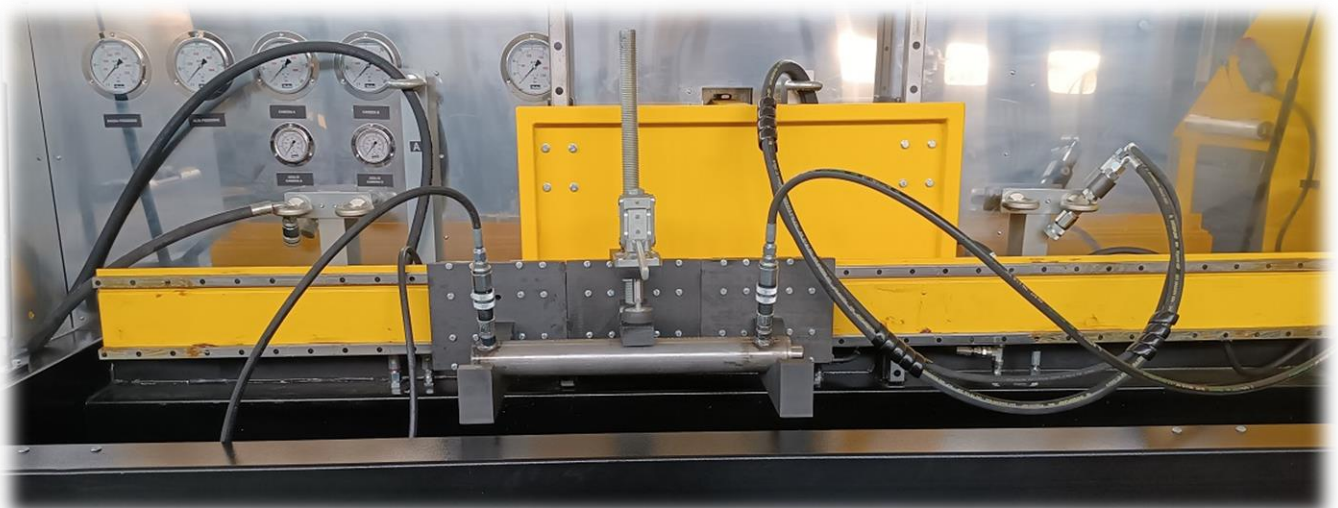
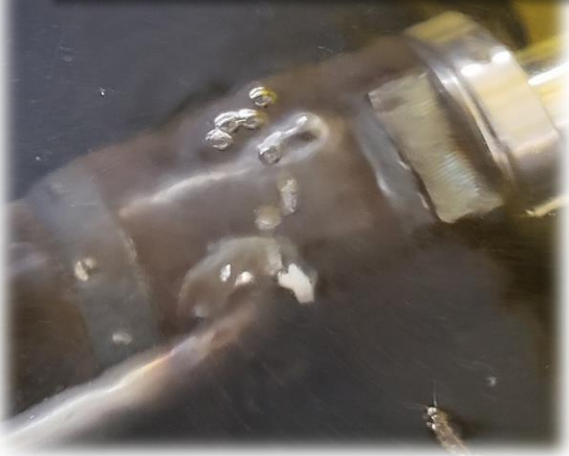
TEMPO ESECUZIONE PROVA

Ore	Minuti	Secondi
00	00	00

Delta P A 0,00
Delta P B 0,00
Delta P B Intermedio 0,00

CAMERA A ARIA 0,00 Bar
CAMERA A 0,00 Bar
CAMERA B 0,00 Bar
CAMERA B ARIA 0,00 Bar

HOME
GESTIONE UTENTI
LOG-IN
LOG-OUT
RICETTE
SETUP
ALLARMI
>4 um >6 um
00 00
>14 um T.OLIO
00 00 °C
STOP



MPC0.5



HOME

LOG-IN

LOG-OUT

RICETTE

SETUP

ALLARMI

29/11/2022 09:12:36

ALLARME 82 - Manca comunicazione con gestore report

COLLAUDO AUTOMATICO

COLLAUDO MANUALE

CILINDRO PNEUMATICO AVANTI

CILINDRO PNEUMATICO INDIETRO

CALIBRAZIONE

LOTTO DI PRODUZIONE

CODICE CILINDRO

N° PEZZI LOTTO

0

10

RESET

IMPOSTATI

ATTUALI

RICETTA CARICATA

de-1

UTENTE COLLEGATO

> 4 um

> 6 um

> 14 um

0

0

0

T° OLIO

+17,0

HOME

LOG-IN

LOG-OUT

RICETTE

SETUP

ALLARMI

24/07/2024 16:04:54

Avviso 1 - Emergenza presente

COLLAUDO AUTOMATICO: Attiva Ciclo

TEMPO ESECUZIONE PROVA

Ore: 0 Min: 0 Sec: 0

Pressione A

0,2

Pressione B

0,8

Pressione C

0,5

FLUSSAGGI FSE GUITI

3

DELTA P A

3,3

DELTA P B

3,8

DELTA P C

10,0

DELTA P INTERMEDIA

3,0

START

ARRESTO

> 4 um

> 6 um

> 14 um

0

0

0

T° OLIO

+35,3

pag. 9



MPC0.7

TWO STATION





MPC0.7 FOUR

HOME

LOG-IN

LOG-OUT

RECIPE

19/08/2024 07:37:29

Warning 5 - Safety barriers OFF

AUTOMATIC TEST

MANUAL TEST

ACTIVATED TEST STATION

1

2

3

4

W.O. NHL n-3-12-08-24

CYLINDER CODE

BMR00003-01-A

N°CYLINDER BATCH

20

16

RESET

CALIBRATION MACHINE

ESTING PROGRAM CHARGE

BMR00003-01-A

USER CONNECTED

TotalTest

> 4 um

> 6 um

> 14 um

0

0

0

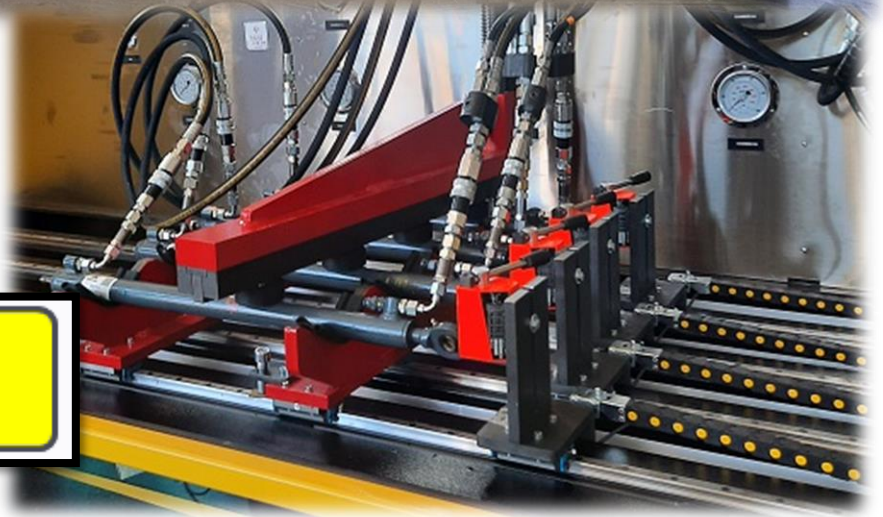
T° OIL +41.0



AUTOMATIC TEST

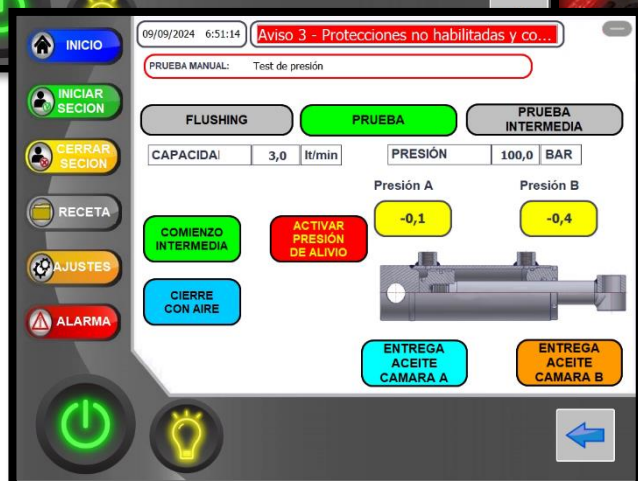
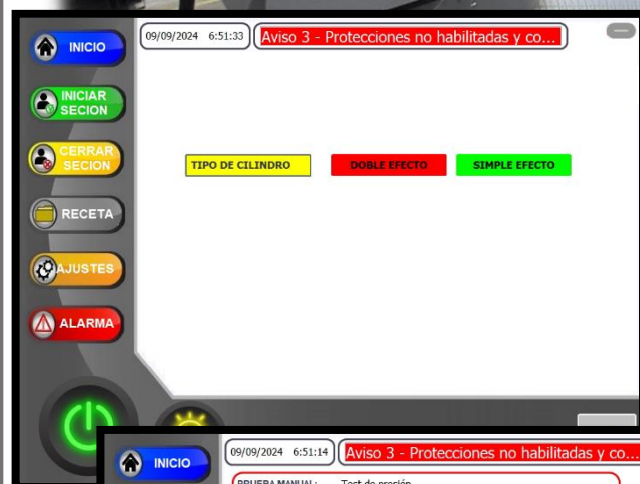
MANUAL TEST

CALIBRATION MACHINE

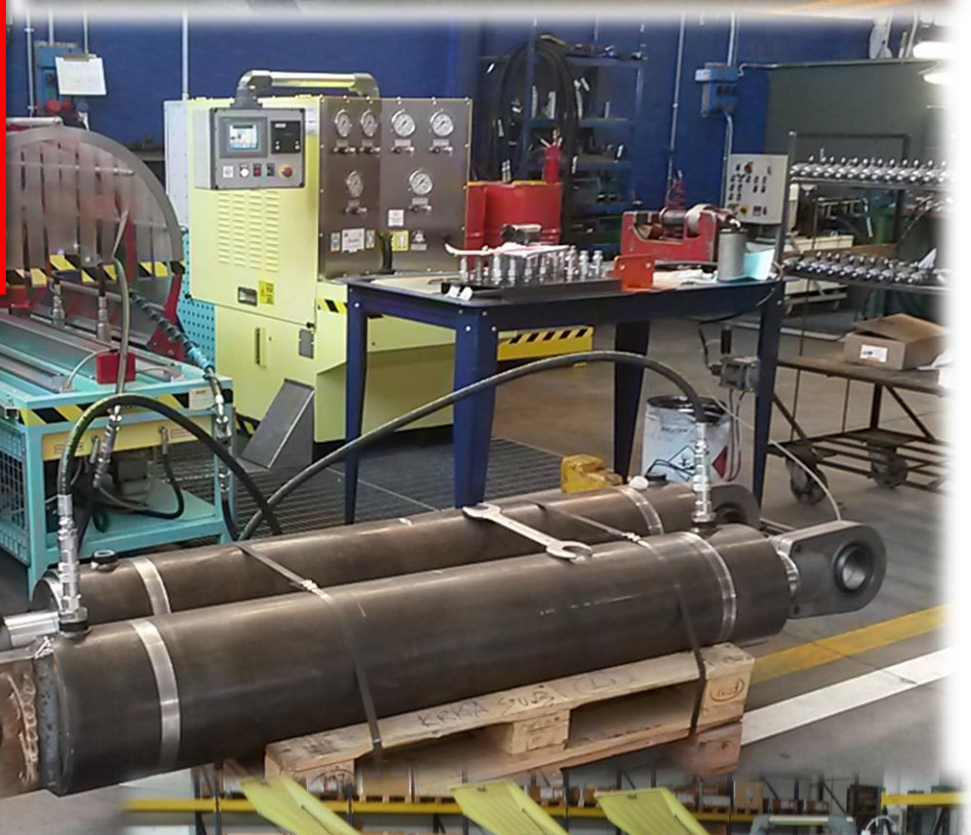
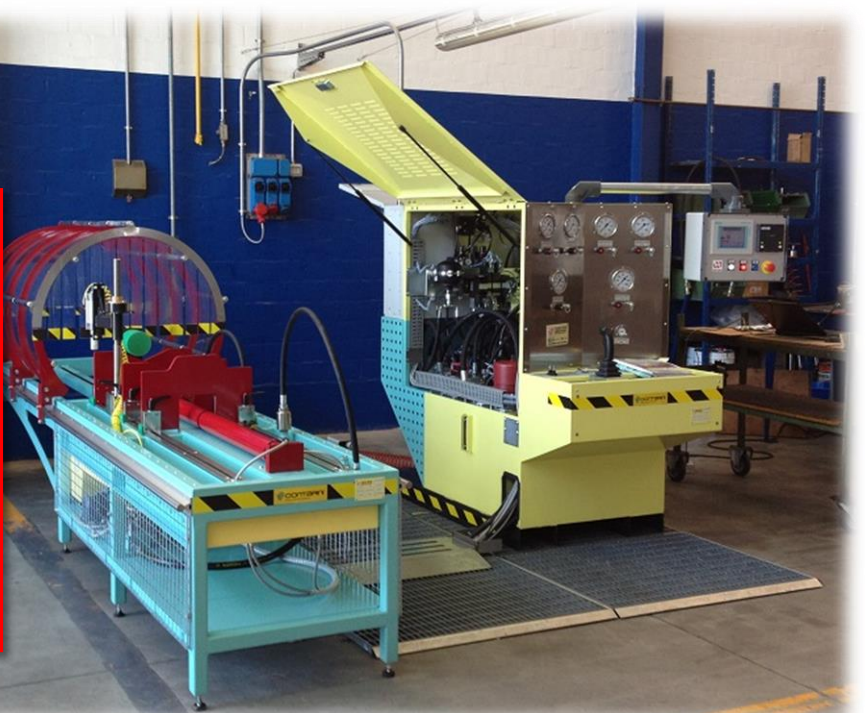


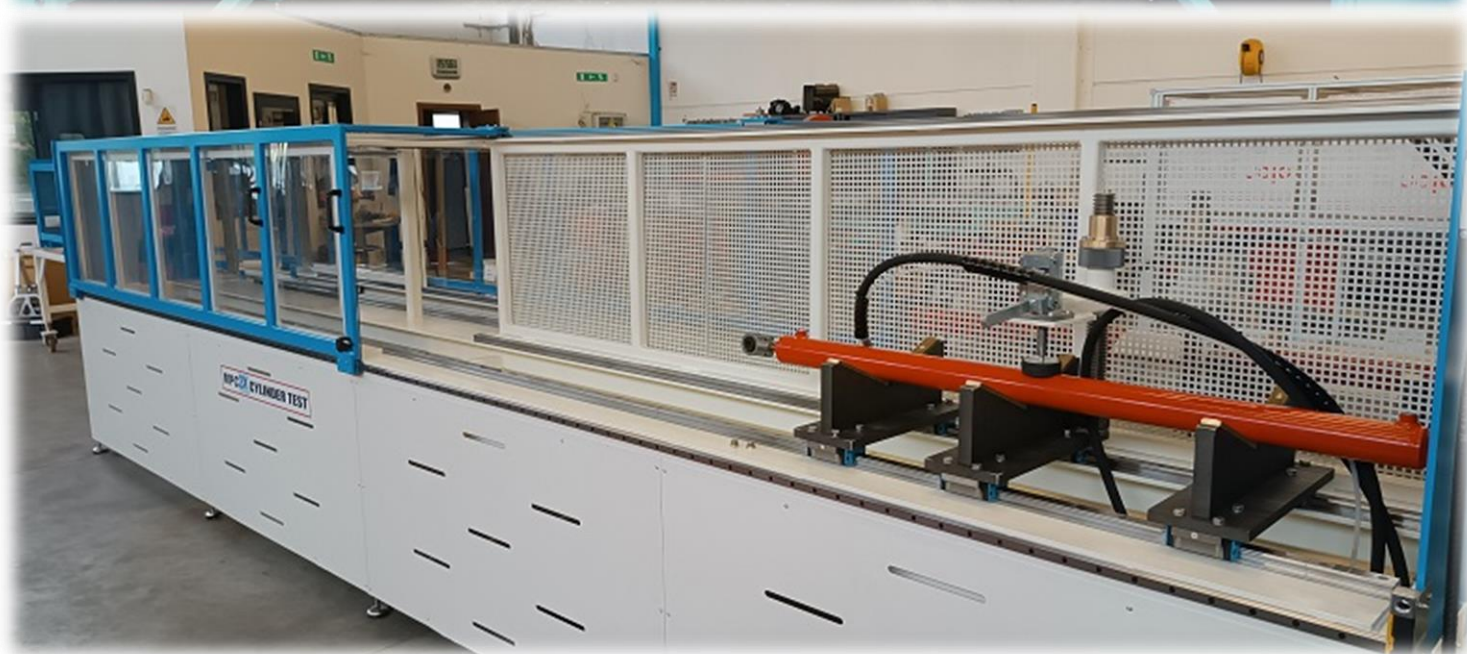


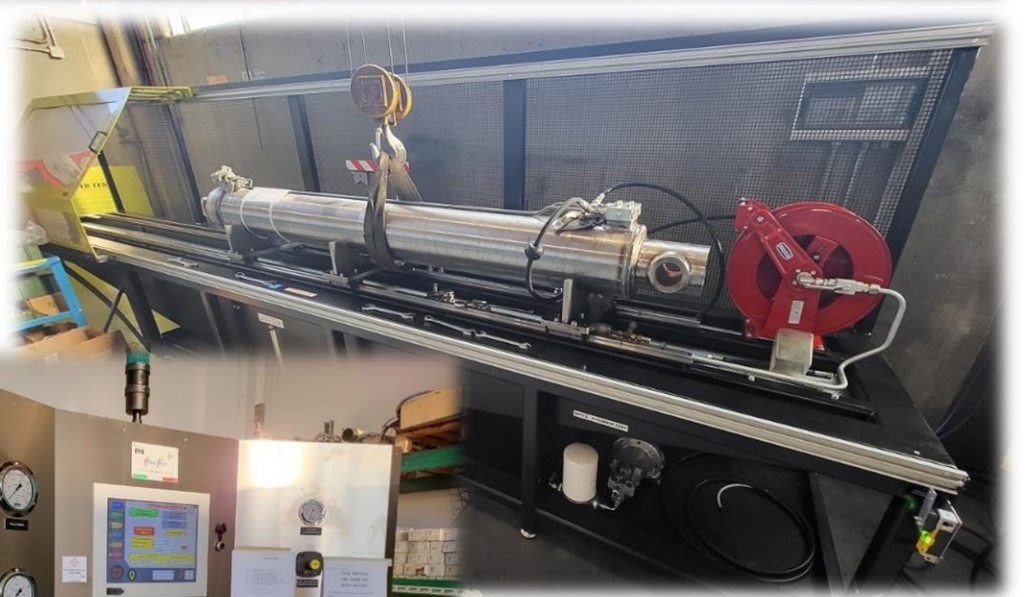
MPC0.8



MPC1

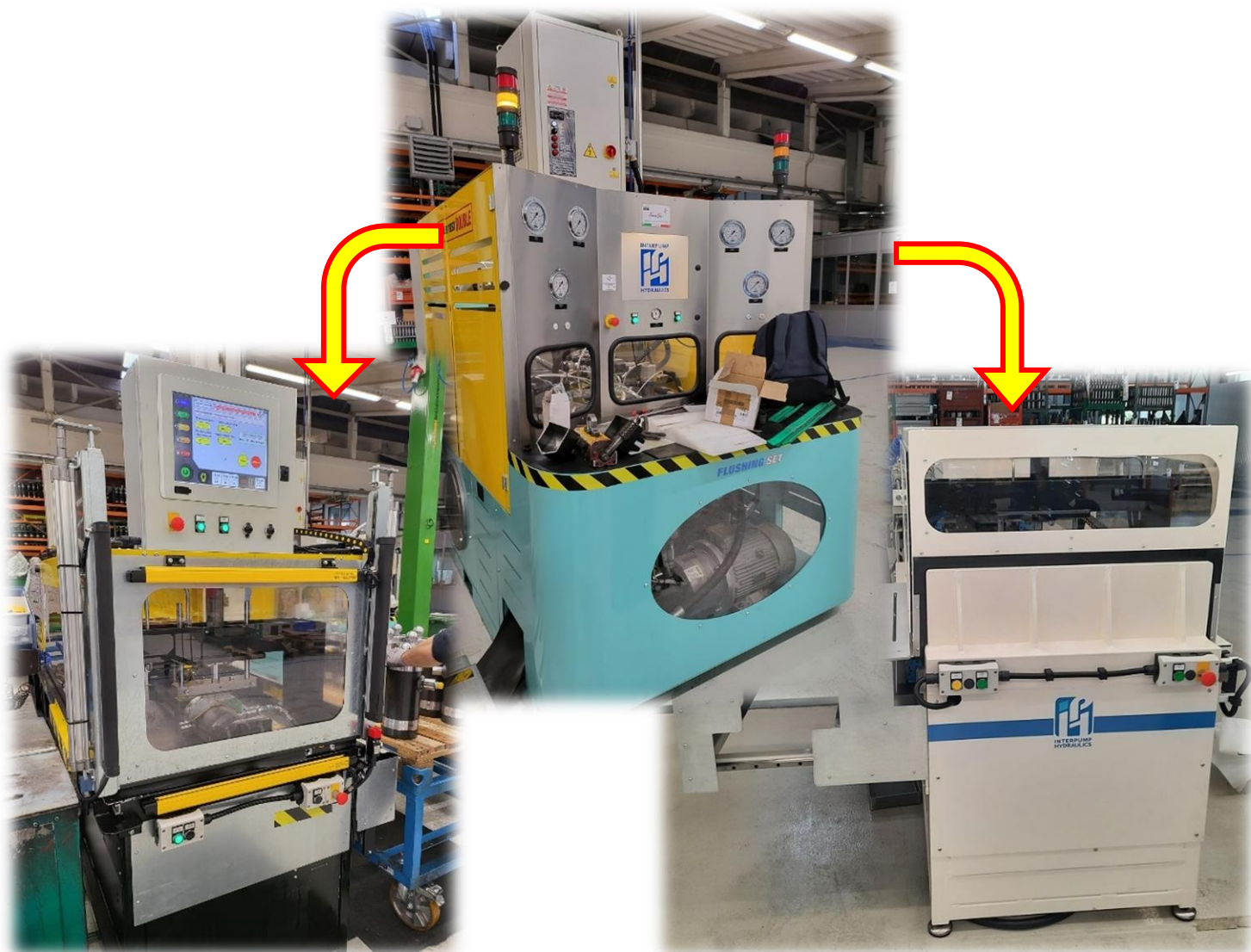






MPC3

DOUBLE



MODEL MACHINE DESCRIPTION

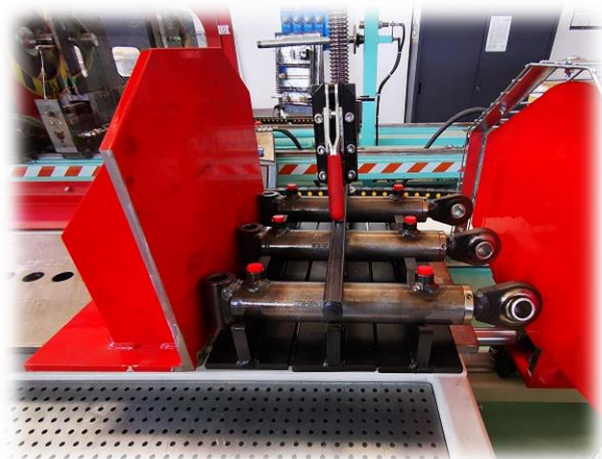


Automatic and manual testing machine.

This model has pressure and flow adjustments to be made manually by the operator.

The tests can be carried out in automatic mode until closing with final air and the machine releases test reports for each test performed.

Minimum cylinder to test dimension	No minimum dimension needed
Maximum cylinder to test dimension	Max external diameter: 350 mm Max open cylinder length: 2850 mm Larger dimensions will have to be specifically requested.
Max test pressure	450 BAR
Max flow rate	20 Lt/min
Test Report	In PDF format, created for every cylinder tested, downloadable using USB port in the panel.
Connection to customer company PC	OPTIONAL
Oil temperature in tank	<ul style="list-style-type: none"> ➤ Controlled temperature by sensor in tank; ➤ Heat exchanger for cooling oil in tank;
Oil contamination sensor control	OPTIONAL



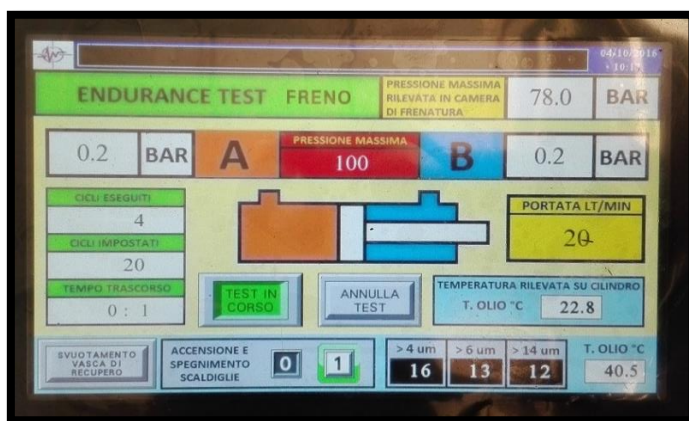
MPC0.2

Automatic and manual testing machine.

This model has pressure and flow adjustments to be made manually by the operator.

The tests can be carried out in automatic mode until closing with final air and the machine releases test reports for each test performed.

Minimum cylinder to test dimension	No minimum dimension needed
Maximum cylinder to test dimension	Max external diameter: 350 mm Max open cylinder length: 2850 mm Larger dimensions will have to be specifically requested.
Maximum number of cylinder to be tested	3 in the same time
Max test pressure	450 BAR
Max flow rate	20 Lt/min
Test Report	In PDF format, created for every cylinder tested, downloadable using USB port in the panel.
Connection to customer company PC	OPTIONAL
Oil temperature in tank	➤ Controlled temperature by sensor in tank; ➤ Heat exchanger for cooling oil in tank;
Oil contamination sensor control	OPTIONAL



MPC 0.3

Automatic endurance testing machine.

In this machine we have an automatic flow and pressure control system.

This ENDURANCE machine is designed to be able to carry out long-term tests to stress the cylinder and verify its durability.

The machine uses the necessary safety devices to be able to work even unattended.

Minimun cylinder to test dimension	No minimum dimension needed
Maximum cylinder to test dimension	Max external diameter: 350 mm Max open cylinder lenght: 2850 mm Larger dimensions will have to be specifically requested.
Mas test pressure	350 BAR
Max flow rate	40 Lt/min
Test Report	In PDF format, created for every cylinder tested, dowloadable using USB port in the panel.
Connection to customer company PC	OPTIONAL
Oil temperature in tank	<ul style="list-style-type: none"> ➤ Controlled temperature by sensor in tank; ➤ Heat exchanger for cooling oil in tank;
Oil contamination sensor control	OPTIONAL



MPC0.4

Automatic and manual testing machine.

This model has pressure and flow adjustments to be made manually by the operator.

The tests can be carried out in automatic mode until closing with final air and the machine releases test reports for each test performed.

Minimum cylinder to test dimension	No minimum dimension needed
Maximum cylinder to test dimension	Max external diameter: 350 mm Max open cylinder length: 2850 mm Larger dimensions will have to be specifically requested.
Max test pressure	400 BAR
Max flow rate	20 Lt/min
Test Report	In PDF format, created for every cylinder tested, downloadable using USB port in the panel.
Connection to customer company PC	OPTIONAL
Oil temperature in tank	<ul style="list-style-type: none"> ➤ Controlled temperature by sensor in tank; ➤ Heat exchanger for cooling oil in tank;
Oil contamination sensor control	OPTIONAL



Automatic and manual testing machine.

This model has pressure and flow adjustments to be made manually by the operator.

The tests can be carried out in automatic mode until closing with final air and the machine releases test reports for each test performed.

Minimum cylinder to test dimension	No minimum dimension needed
Maximum cylinder to test dimension	Max external diameter: 350 mm Max open cylinder length: 2850 mm Larger dimensions will have to be specifically requested.
Max test pressure	450 BAR
Max flow rate	20 Lt/min
Test Report	In PDF format, created for every cylinder tested, downloadable using USB port in the panel.
Connection to customer company PC	OPTIONAL
Oil temperature in tank	<ul style="list-style-type: none"> ➤ No heater system; ➤ Controlled temperature by sensor in tank; ➤ Heat exchanger for cooling oil in tank;
Oil contamination sensor control	OPTIONAL



MPC0.7

Automatic and manual testing machine.

This model has pressure and flow adjustments to be made manually by the operator.

The tests can be carried out in automatic mode until closing with final air and the machine releases test reports for each test performed.

Minimun cylinder to test dimension	No minimum dimension needed
Maximum cylinder to test dimension	Max external diameter: 350 mm Max open cylinder lenght: 2850 mm Larger dimensions will have to be specifically requested.
Mas test pressure	450 BAR STANDARD 600 BAR OR MORE OPTIONAL
Max flow rate	120 Lt/min
Test Report	In PDF format, created for every cylinder tested, downloadable using USB port in the panel.
Connection to customer company PC	OPTIONAL
Oil temperature in tank	➤ No heater sistem; ➤ Controlled temperature by sensor in tank; ➤ Heat exchanger for cooling oil in tank;
Oil contamination sensor control	OPTIONAL



MPC0.7 **FOUR**

Automatic and manual testing machine.

This model has pressure and flow adjustments to be made manually by the operator.

The tests can be carried out in automatic mode until closing with final air and the machine releases test reports for each test performed.

Minimum cylinder to test dimension	No minimum dimension needed
Maximum cylinder to test dimension	<p>Max external diameter: 350 mm</p> <p>Max open cylinder length: 2850 mm</p> <p>Larger dimensions will have to be specifically requested.</p>
Max test pressure	450 BAR
Max flow rate	20 Lt/min
Test Report	In PDF format, created for every cylinder tested, downloadable using USB port in the panel.
Connection to customer company PC	OPTIONAL
Oil temperature in tank	<ul style="list-style-type: none"> ➤ No heater system; ➤ Controlled temperature by sensor in tank; ➤ Heat exchanger for cooling oil in tank;
Oil contamination sensor control	OPTIONAL



MPC0.8







Automatic and manual testing machine.

This model has pressure and flow adjustments to be made manually by the operator.

The tests can be carried out in automatic mode until closing with final air and the machine releases test reports for each test performed.

Minimum cylinder to test dimension	No minimum dimension needed
Maximum cylinder to test dimension	Max external diameter: 350 mm Max open cylinder length: 2850 mm Larger dimensions will have to be specifically requested.
Max test pressure	450 BAR
Max flow rate	20 Lt/min
Test Report	In PDF format, created for every cylinder tested, downloadable using USB port in the panel.
Connection to customer company PC	OPTIONAL
Oil temperature in tank	<ul style="list-style-type: none"> ➤ No heater system; ➤ Controlled temperature by sensor in tank; ➤ Heat exchanger for cooling oil in tank;
Oil contamination sensor control	OPTIONAL

OPTIONAL		
TYPE OF OPTIONAL	DESCRIPTION	IMAGE
CONTAMINATION READER	<i>DIGITAL CONTAMINATION READER TO HAVE CONSTANT CONTROL OF THE CONTAMINATION CLASS OF THE PROCESS OIL AND BE ABLE TO REPORT THE VALUES IN REPORTS</i>	
AIR PRESSURE MULTIPLIER	<i>COMPRESSED AIR PRESSURE MULTIFICATION SYSTEM TO FACILITATE AND SPEED UP THE FINAL CLOSING OF THE CYLINDERS WITH AIR</i>	
AIR PRESSURE MULTIPLIER WITH AIR TANK	<i>COMPRESSED AIR PRESSURE MULTIFICATION SYSTEM TO FACILITATE AND SPEED UP THE FINAL CLOSING OF THE CYLINDERS WITH AIR, INCLUDING A STORAGE TANK FOR MULTIPLIED PRESSURE AIR TO SPEED UP THE CLOSING OF LARGE CYLINDERS</i>	
OIL HEATER KIT	<i>RESISTANCES INTERNAL TO THE OIL TANK TO HEAT THE OIL AT THE START OF THE WORKING DAY</i>	

OIL HEATER KIT WITH CHILLER FOR TEMPERATURE CONTROL AND STABILITAZIONE	<i>THE KIT INCLUDES CHILLERS AND RESISTORS INSTALLED TOGETHER WITH THE MACHINE TO HAVE PERFECT THERMO REGULATION OF THE PROCESS OIL TEMPERATURE</i>	 
INTERNAL LEAKAGE MEASUREMENT KIT BETWEEN THE CHAMBERS	<i>MECHANICAL KIT AND SOFTWARE TO PERFORM INTERNAL SEAL SEARCH WITH DECIMAL MEASUREMENT OF CYLINDER MOVEMENT AND FIND INTERNAL LEAK OF OIL</i>	
AUTOMATIC OPEN AND CLOSE FOR MACHINE SECURITY PROTECTION – ORIZZONTAL OPEN		
AUTOMATIC OPEN AND CLOSE FOR MACHINE SECURITY PROTECTION – VERTICAL OPEN		 

Hydraulic cylinder assembly machine

Total Test offers a wide range of machines for assembling hydraulic cylinders, following the customer's specifications we can offer the ideal equipment for your needs.

BMC-1:

Workbench designed for the assembly of small cylinders:



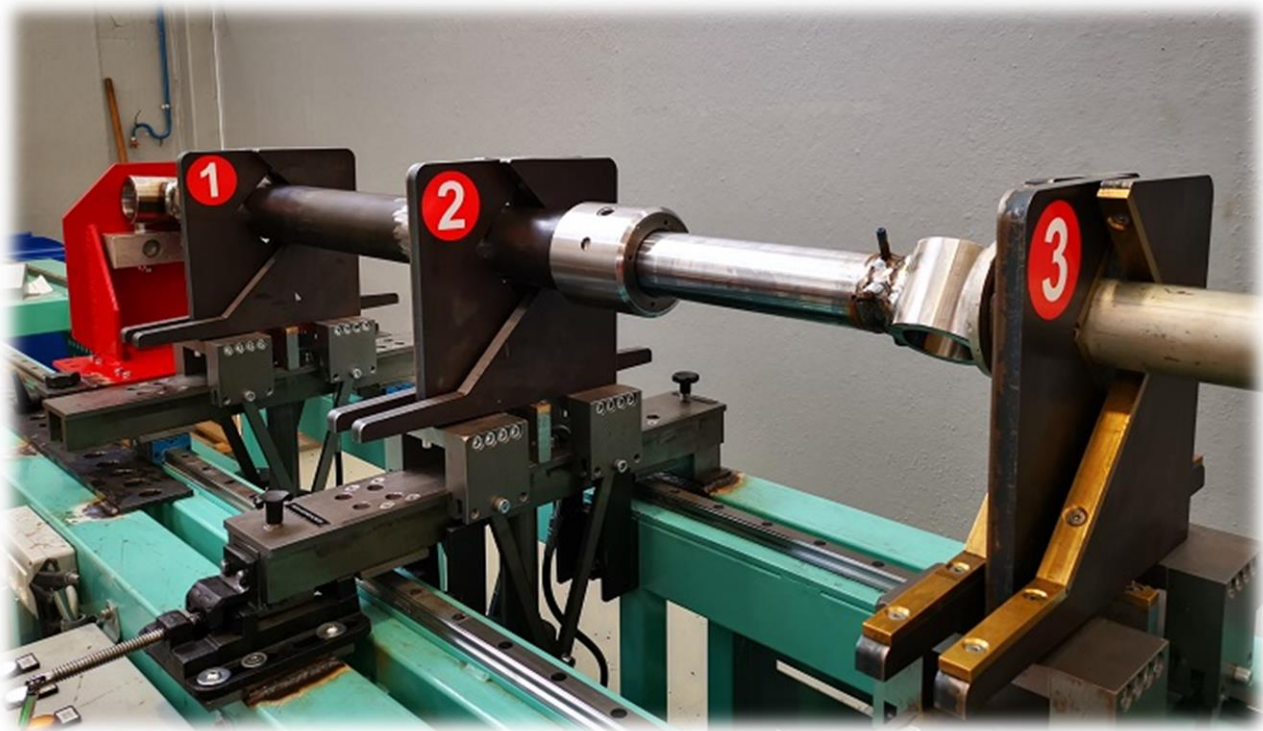
BMC-2:



BMC-2X:



Machine equipped for complete support of the components being processed, with a self-centering system for inserting the stem:



BMC-3:

Manual machine for assembling large and heavy cylinders:



BMC-3X:

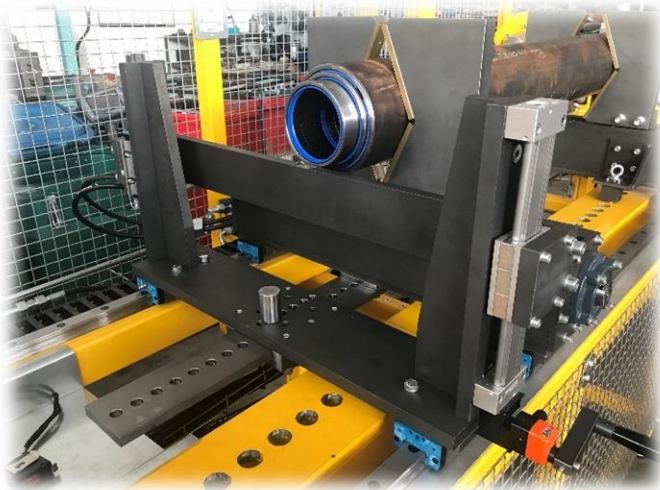


BMC-3L:



BMT-1:

Assembly bench for telescopic cylinder:





Hydraulic cylinder repair machine **BRC-1:**

Functioning description Cylinder Repair Bench model BRC-1

Below is a description of how the Cylinder Repair Bench works:

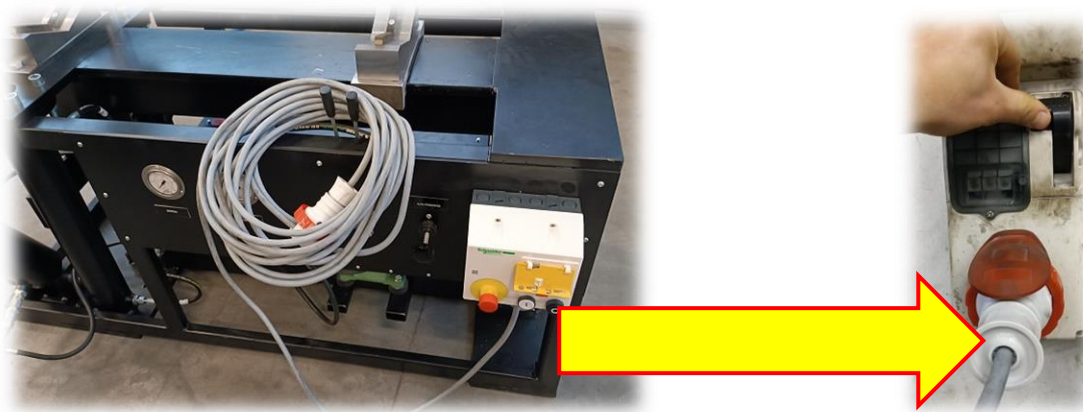
1) Lifting for transport:

The central frame of the bench can be used as a gripping point for lifting the equipment:



2) Electrical connection:

To start up the hydraulic unit, we will have to electronically connect the voltage socket to a 380 V 16 A connection, the socket will be connected to the starter switchboard:



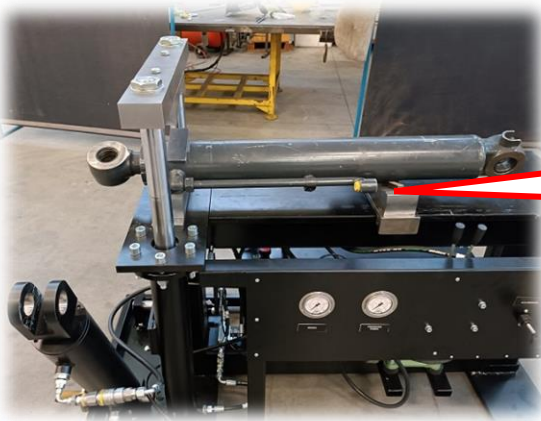
3) Hydraulic unit start-up:

The hydraulic unit can be activated electronically via the appropriate electrical panel for the START / STOP of the electric motor:



4) Loading cylinder in position:

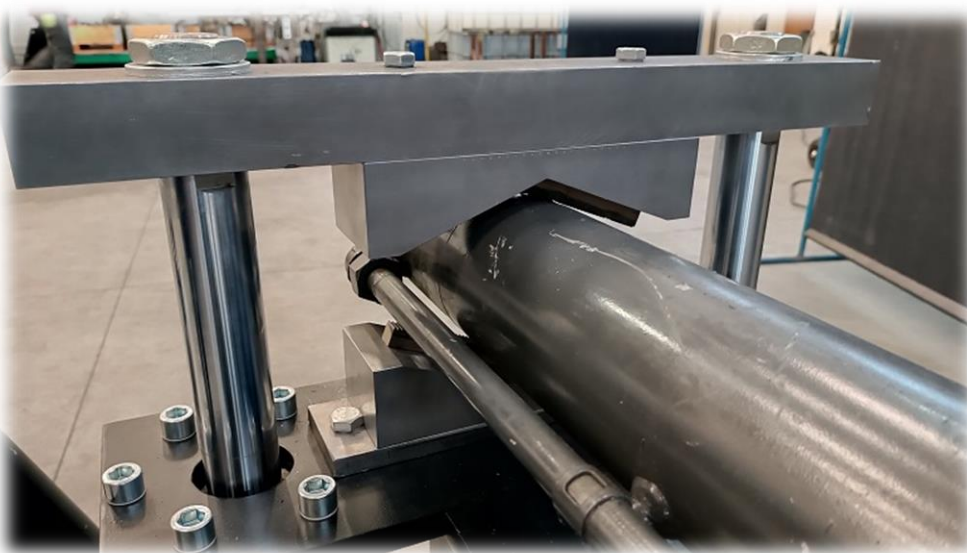
The cylinder to be disassembled will be positioned on the appropriate support prisms:



Mobile prism

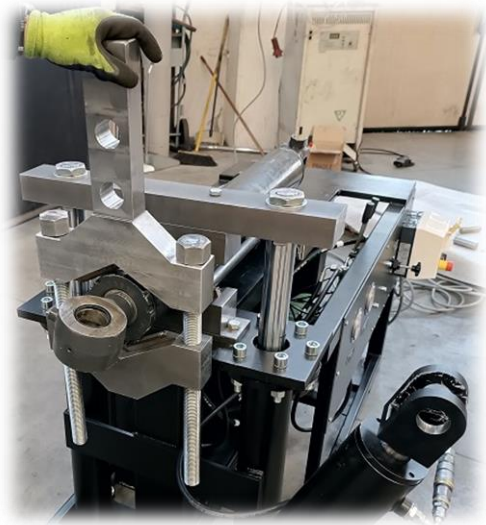
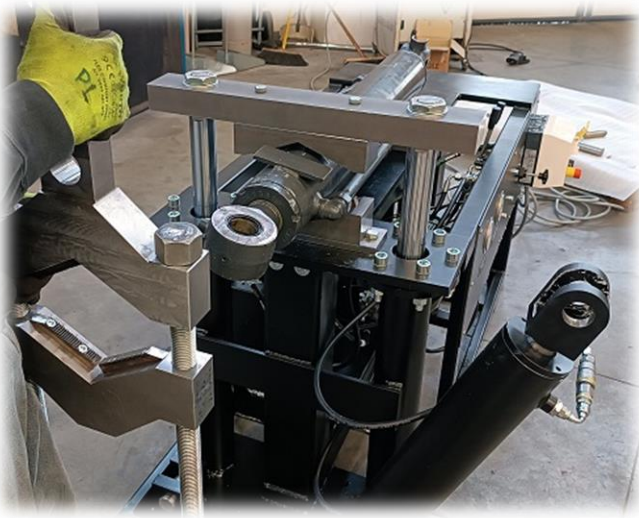
5) Locking of the loaded cylinder:

Vice locked on shirt:



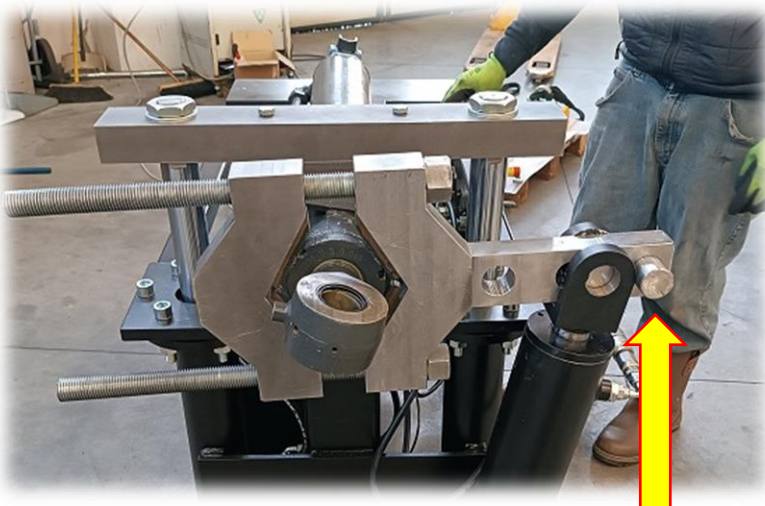
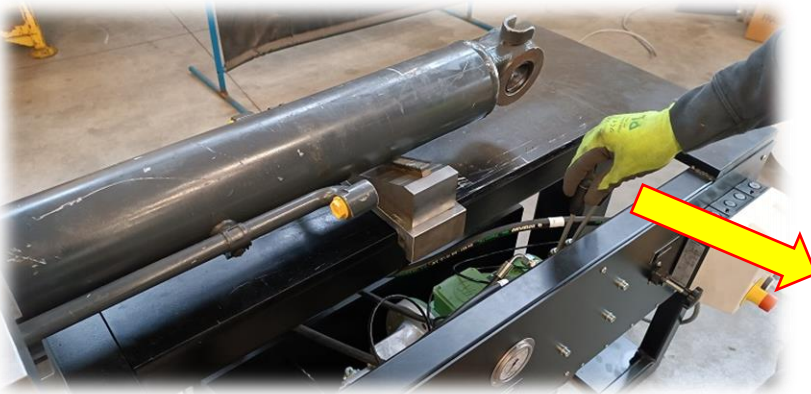
6) Cylinder head disassembly key connection:

Connect the disassembly key to the cylinder head:



7) Releasing the head with cylinder in thrust:

To unlock the head, the operator will have to push the cylinder, using the left lever, pulling it towards you, the cylinder will start pushing towards the key connected to the cylinder:

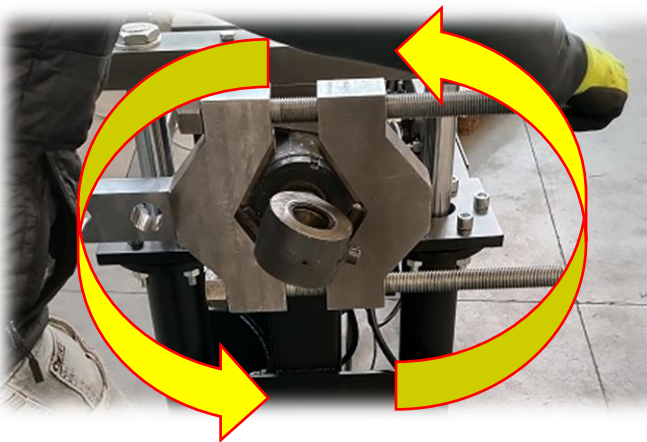


8) Unscrewing the manual head:

Since we have unlocked the head, we could manually check if it can be rotated, to do this we should disconnect the cylinder that pushes on the key and trying to rotate the key connected to the cylinder by hand, we will see if the unlocking was sufficient to completely unscrew the header:



Once the release cylinder has been disconnected, the operator will have complete freedom to rotate the key manually to unscrew the head:



Head completely unscrewedx

BRC-2:

