

## Instruction Manual

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# ATTREZZATURA AUSILIARIA AUXILIARY EQUIPMENT PRESS PRO

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**Italiano**

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**Español**

Elaborazione grafica e impaginazione

**Ufficio Pubblicazioni Tecniche**

# ORIGINAL INSTRUCTIONS

## TECHNICAL DATA

- Maximum size of conventional tyres – see tyre changer manual	
- Maximum size of PAX tyres – as in following table	
- Tyre diameter .....	810 mm
- Minimum rim hole diameter .....	40 mm
- Operating pressure (minimum) .....	7 bar
- Operating pressure (maximum) .....	10 bar
- Pneumatic cylinder force (at 7 bar) .....	6500 N
- Total weight .....	90 kg
- Central unit weight .....	43 kg
- PAX kit weight .....	24 kg
- Beadpressing arm kit weight .....	10 kg
- Maximum UPH size:	
- Height .....	1600 mm
- Width .....	1300 mm
- Depth .....	600 mm
- Noise level when running	<70 dB (A)±3dB(A)

### UPH TECHNICAL DATA on 22 - 24 - 26 - 35 - 45

The UPH with the PAX system can operate on wheels: (For symbols A,B,D,F,X,Y see drawing on page 21).

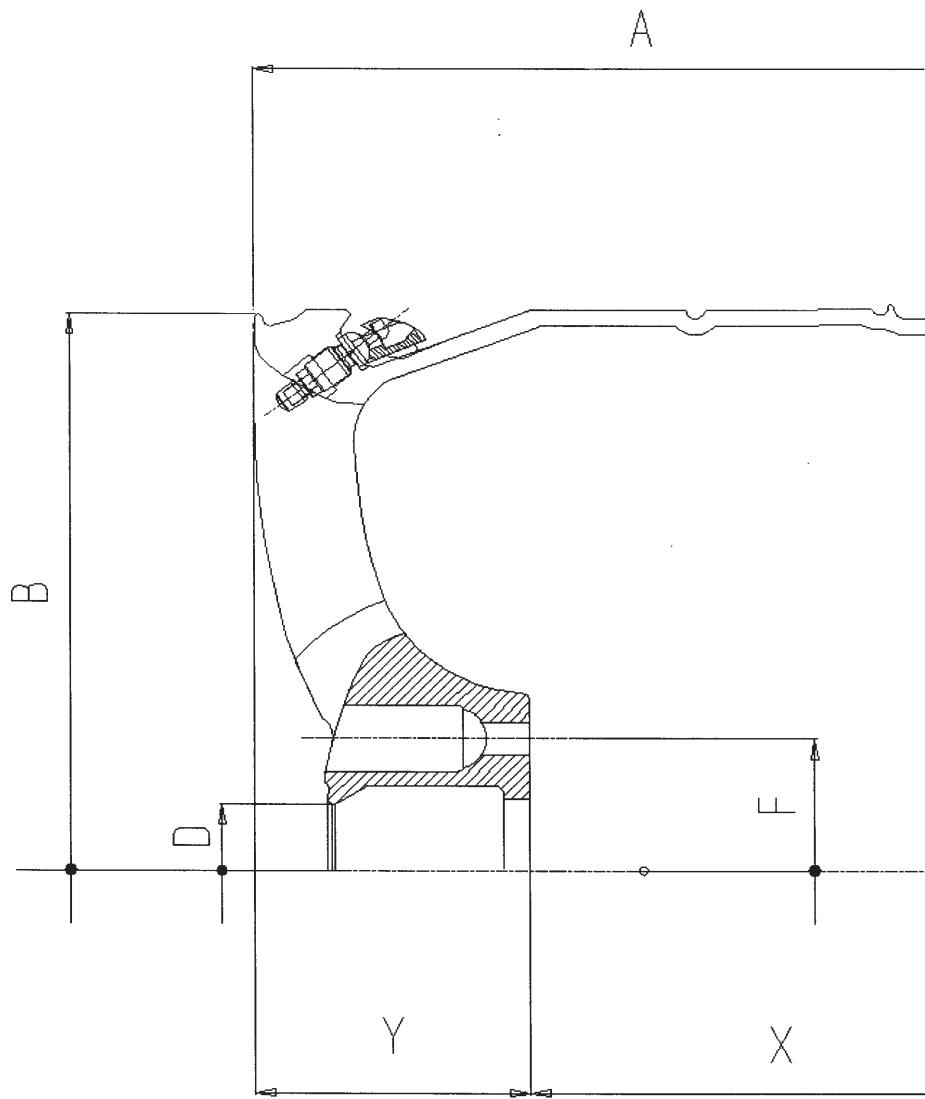
	NON CLIPÉ ROLLER(U fig. 8)	CLIPÉ TOOLS(J - Q fig. 8)
Diameter (B)	from 360 to 520	
Width (A)	from 155 to 305	
Internal Offset (X)	215 mm max	195 mm max
External Offset (Y)	170 mm max	75 mm max
Hole diameter ( D )	from 40 to 105	
Fixing holes		
circumference diameter ( F )	from 98 to 170	

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### UPH TECHNICAL DATA on 36 - 38 - 28

The UPH with the PAX system can operate on wheels (For symbols A,B,D,F,X,Y see drawing on page 4).

	NON-CLIPÉ ROLLER ( U fig. 8)	CLIPÉ TOOLS ( J - Q fig. 8)
Diameter (B)	from 360 to 520	
Width (A)	from 155 to 305	
Internal Offset (X)	195 mm max	175 mm max
External Offset (Y)	190 mm max	95 mm max
Hole diameter ( D )	from 40 to 105	
Fixing holes circumference diameter ( F )		from 98 to 170



# INSTALLATION CLEARANCES

Bring the tyre changer to the required working position, meeting the minimum measurements indicated in the tyre changer manual. Fig.1

## INSTALLATION

### Note:

Installation of the UPH on the tyre changer may be carried out by qualified and authorised personnel only. Installation by NON-qualified personnel implies the loss of the warranty on the performance of the device.

The UPH accessory may only be installed on our tyre changers of the type.

fig. 5 for

- Disconnect the electrical and pneumatic connections.
- Demount the side casing of the tyre changer.
- On a non **TI** tyre changer (i.e. a tyre changer without tubeless tyres inflating device), it is necessary to demount the reducing valve. Make a new fixing hole in the position shown in fig.3 and re-mount it.
- Check whether the machine has the holes needed to mount the UPH accessory.
- If the holes are lacking, apply them following the scheme supplied with the machine or in fig. 50. If the scheme is missing, stop installing and call the supplier.
- Fix the UPH as shown in fig 6 (using the relevant screws) taking care to insert the reinforcing plate (fig. 6) inside the body of the tyre changer.
- Demount the L connection (A fig.4) and mount in its place the double connection (B fig. 4)
- Connect the UPH supply pipe to the double connection (B fig. 4)
- Mount the side casing.

## CALIBRATION OF THE BEADPRESSING ARM VERSION OF THE UPH

fig.7

- Secure one wheel to the turntable, bring the Beadpressing Arm to the working position.
- If the centring cone of the arm is not in the centre of the wheel, act on the screws securing the UPH.

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# CALIBRATION OF THE PAX VERSION OF THE UPH

fig.7

- Secure the wheel support (C in fig. 8) to the turntable, secure one PAX wheel to the wheel support, approach the roller of the horizontal arm (B in fig.8) to the edge of the rim.
- If the roller is not tangent to the edge of the rim and/or slight misalignments are observed, act on the screws securing the UPH.

## DESCRIPTION OF THE UPH

fig. 8 , 8-1

A1. Roller arm (fig 8-1)	
B. Horizontal arm with cylindrical roller	wheels)
B1. Bead presser roller (fig 8-1)	K. Bead inserter
C. PAX wheel support	L. Bead demounting lever
D. Anti-rotation plug	M. Rim guard (Réglette)
E. Selector	N. Small cone
E1. Bead lifter disk (fig 8-1)	O. Large cone
F. Horizontal arm clamping handle	P. Tool securing pin
F1. Jack (fig 8-1)	Q. Inclined disk (for clipé wheels)
G. Pneumatic switch	R. PAX tyre fig. 30
G1. Extension for wheel centring cone (fig 8-1)	S. Support fig. 30
H. Locking ring-nut	T. Special Pax profile rim fig. 30
I. Locking ring-nut wrench	U. Cylindrical roller
J. Double roller and claw tool (for clipé	V. Rim clamp arm (fig 8-1)
	Z. Centring cone (fig 8-1)



### WARNING

Before starting demounting it is important to check the code on the wheel which indicates the type of Pax tyre - standard or Clipé -.



### WARNING

For any work on the valve or on the pressure transducer, consult and follow the operator's manual supplied by the transducer manufacturer.

# TYRE DEMOUNTING

## Procedure for PAX standard tyres

fig. 9

- Deflate the tyre
- Lock the PAX wheel support (C) on the turntable
- Place the wheel with PAX tyre on the support(C)
- Insert the anti-rotation plug (D) in one of the fixing holes of the rim
- Select the appropriate cone N or O according to the size of the centring hole
- Install the quick ring-nut H
- Clamp the wheel by locking the nut H with the wrench (I)

## SELECTOR FUNCTIONS

fig.10

The Selector has four positions:

- position 1 – memorises and corresponds to the external diameter (small diameter) in the demounting phase
- position 2 - memorises and corresponds to the internal diameter (large diameter) in the demounting phase
- position 3 – memorises and corresponds to the bead mounting phase by external and internal diameter
- position 4 – memorises and corresponds to the Clipé Support extraction phase

## Bead breaking of the lower bead

(Common procedure for Pax System with full width and clipé rest)

### IMPORTANT

Before demounting the tyre, the selector must be calibrated in order to memorise the tool position when demounting tyres of the same size.

Selector calibration

#### Note:

When working on a set of wheels of the same size, the tool positions can be memorised by means of the Selector.

- Using the pneumatic lever switch (G), lower the arm of the cylindrical roller (B). fig.11
- Place the cylindrical roller on the edge of the rim. fig.11
- Place the selector (E) on position 1 and secure it using the handle. F. fig. 12
- Move the cylindrical roller arm to the lower part of the wheel. fig. 13
- Place the selector on 2. fig. 14
- Bring the roller into contact with the lower bead. fig. 15
- Press the rotation pedal and, by activating the pneumatic switch (G), gradually start bead breaking; at the same time lubricate the bead with spray lubricant of the type recommended by the tyre manufacturer or if not available with liquid lubricant, using a special sprayer. fig. 16
- Completely bead break the bead from the rim. fig. 17

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## Extraction of the upper bead

(Common procedure for Pax System with full width and clipé rest)

- Move the arm with the cylindrical roller B to the upper part of the wheel fig. 18
- Place the selector on 1. fig. 19
- Move the roller in position on the bead. fig. 20
- Using the lever pneumatic switch (G), press the roller onto the bead of the tyre. To guarantee correct positioning of the roller, it is recommended to secure the arm (B) with the handle (F).
- During bead breaking, apply liquid lubricant by spraying. fig. 20
- It is recommended to rotate the wheel a few turns with the roller pressing on the bead in order to ease the tension on the bead.
- The réglette will be inserted in the space obtained between the bead and the edge of the rim. fig.21
- Insert the réglette as shown in fig. 22, fig. 22a.

Note:

The réglette is inserted between the edge of the rim and the bead. A notch on the réglette allows to insert the tip of the bead breaking lever.



### WARNING

The same réglette can be used for more than one demounting. First check its condition. If the tang of the réglette shows signs of deterioration, replace with a new one.

## INSERTION OF THE RÉGLETTE

There is a special way to insert the réglette. The part with the lever housing is to be held towards the exterior of the wheel. During rotational movement in order to insert the réglette, the tang must pass under the cylindrical roller.

- Lift the roller by acting on the pneumatic lever switch (G) and move it backwards.
- Insert the lever into the réglette housing, fig.22a.
- Lift the bead by pressing on the centre of the wheel, fig 22a.



### WARNING

Make sure that the lever is well inserted under the bead before lifting the bead.

- After bead breaking, immediately remove the réglette from the tyre fig. 23



### WARNING

Be careful not to drop the réglette inside the tyre. You might leave it inside the tyre during the next mounting.



### WARNING

Be very careful to avoid contact between the bead of the tyre and the pressure transducer, and between the pressure transducer and the demounting/mounting

tools. Contacts with unusual stress may damage the sensors or create sealing defects between the valve and the rim.

## **Demounting of the support**

(Procedure for Pax System with full width rest)

- Move the arm with the cylindrical roller to the lower part of the wheel
- Position the selector on 2
- Move the roller axially until it is in position, flush with the rim
- Place the roller on the bead fig. 24
- Press the rotation pedal
- During rotation, act on the pneumatic lever switch (G). The tyre will gradually un-thread from the rim dragging the support with it fig. 24
- Remove the tyre and support from the rim manually



### **WARNING**

Be very careful to avoid contact between the bead of the tyre and the pressure transducer, and between the pressure transducer and the demounting/mounting tools. Contacts with unusual stress may damage the sensors or create sealing defects between the valve and the rim.

## **Support Demounting**

(Procedure for Pax System with clipé rest)

- Replace the cylindrical roller with the inclined disk fig. 25
- Bring the arm with the disk to the lower part of the wheel
- Position the selector on 4 fig. 26
- Move the arm axially until the disk is in position, flush with the rim
- Place the disk on the bead fig. 27
- During rotation, act on the pneumatic lever switch (G). The tyre will gradually un-thread from the rim dragging the support with it.
- Remove the tyre and support from the rim manually
- Extract the support from the tyre, fig.28 and fig.29.



### **WARNING**

Be very careful to avoid contact between the bead of the tyre and the pressure transducer, and between the pressure transducer and the demounting/mounting tools. Contacts with unusual stress may damage the sensors or create sealing defects between the valve and the rim.

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# TYRE MOUNTING

The PAX System is made up of the following parts (fig. 30):

1. Special PAX System profile rim (T) (for full width contact or clipé rest)
2. Rest (S) (for full width or clipé rest)
3. PAX tyre (R)
4. Pressure control sensor (T1)

## Tyre support mounting

- Spread the inner part of the tyre with the special PAX System Gel of the mechanical support fig. 31
- Lubricate the beads of the PAX tyre (R) and the surface of the support (S) that will come into contact with the rim with standard lubricant for vehicle wheel mounting fig. 32

### IMPORTANT

When lubricating the tyre interior with the special PAX System Gel of the mechanical support, be careful not to touch the beads with that gel, since the beads are to be lubricated with standard tyre lubricant

- Insert the Support (S) inside the tyre (R) fig. 33
- Use the special levers fig. 34



### WARNING

Make sure the orientation of the rest (S) is correct when introducing it into the tyre, as described in Fig. 35 for standard, and in fig.35a for Clipé.

- Lubricate the bead housings on the rim (areas indicated with the letter T in fig. 36)
- Introduce the tyre-rest assembly on the rim fig. 36

## Mounting of the support on the rim

(Procedure for Pax System with full-width rest)

- Place the selector (E) on position 1 fig. 37
- If not present, mount the cylindrical roller on the arm fig.37a
- Move the arm axially until the cylindrical roller is brought into position, flush with the rim fig. 37
- Press the roller onto the bead of the tyre, and at the same time rotate the turntable until the rest (S) is fully inserted in the rim (T) fig. 37
- At completion lift the roller off the tyre.

## Mounting the rest on the rim

(Procedure for Pax System with clipé rest)

- Mount the double roller tool (J) in fig. 38
- Move the arm axially until the roller with the greater diameter is brought in position, flush with the rim
- Remove the tyre bead, bring the roller down to the surface of the rest while keeping the bead behind the special claw on the double roller tool fig.39
- Rotate the turntable until the rest (S) is fully inserted in the rim (T). At completion lift the roller off the tyre.

Note:

The rest is fully inserted when the small roller touches the upper edge of the rim.



### **WARNING**

While inserting the rest, the upper bead must not enter the rim housing on which the inflation pressure sensor is mounted; doing so might damage it.

### **Mounting the lower bead**

(Common procedure for Pax System with full width and clipé rest)

- Remove the lower bead from the lower edge of the rim using a standard lever (better if protected by a plastic sheath) fig. 40
- Place the selector (E) on position 3
- Move the cylindrical roller to the lower part of the tyre
- Press the roller onto the edge of the rim
- Couple the bead inserter (K in fig. 8) to the wheel support shaft and insert the mount hook between the rim and the bead, at about 10 cm from the roller fig. 41
- Put the bead in its housing, rotate the wheel at minimum speed and while advancing gradually, stop before the bead inserter interferes with the roller.
- At completion release the bead inserter from the wheel

### **Mounting the upper bead**

(Common procedure for Pax System with full width and clipé rest)

- Replace the double roller tool with the cylindrical roller
- Move the cylindrical roller to the upper part of the tyre
- While acting on the pneumatic lever switch (G), press the roller onto the edge of the rim fig. 42
- Couple the bead inserter (K in fig. 8) to the wheel support shaft, and insert the mount hook between the rim and the bead, at about 10 cm from the roller fig. 42
- Put the bead in its housing, rotate the wheel at minimum speed and while advancing gradually, stop before the bead inserter interferes with the roller.
- At completion release the bead inserter from the wheel
- Remove the roller by pushing it axially.
- Inflate the tyre fig. 43 using the special air gun connected to the tyre changer.
- Make sure the beads are properly inserted in their housing.



### **WARNING**

The maximum inflation pressure recommended by the manufacturer must never be exceeded for any reason whatsoever – DANGER OF DAMAGE TO THE TYRE.

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# DEMOUNTING-MOUNTING THE NON PAX TYRES

(Procedure with the use of the bead lifting and bead pressing arms)

The bead lifting and bead pressing arms of the UPH are intended to help the operator in the tyre demounting and mounting phases.

## Centring function

When clamping the wheel with outside rim hold, proceed as follows:

- Prepare the clamps of the turntable at a slightly higher measurement than that of the wheel, place the wheel on the turntable, position the rim clamp arm (V) in the working position Fig.44, activate valve (G) so as to press the wheel on the turntable, then clamp the wheel with the special pedal.

When working on rims with reverse drop centre, use the cone extension (G1) to reach the rim hole.

N.B. This facilitates the insertion of the sliding clamp between the tyre and the rim Fig.44.

## DEMOUNTING THE TIRE

1) Position the mount/demount tool (Fig. 45).



### WARNING

**The positioning and the removal of the operating arm of the tyre changer from the edge of the rim can be carried out only after having brought UPH arms outwards in non-working position.**

If the tyre has very stiff walls that prevent correct positioning of the mount/demount tool on the rim edge, follow these steps:

a – move the arm (A1, Fig. 8) to its working position.

b – move the bead pressing tool (B1, Fig. 8) to the tyre and close to the mount/demount tool.

Use the lever (G, fig. 8) to press down on the tyre to create enough space to position the mount/demount tool correctly and to insert the bead lifter tool (Fig. 45).



### WARNING

**Bringing the bead-pressing tool against the tyre creates a danger: the operator's hands could be crushed between the tool and the rim. Be careful and keep your hands far from the rim.**

c – Clamp the mount/demount tool, insert the bead lifter tool and raise the UPH arm.

2) Use the lever (G, Fig. 8) to raise the arm (A1, Fig. 8) and move it outwards to posi-

tion the bead presser (B1, Fig. 8) diametrically opposite the mount/demount tool.  
3) Use the lever (G, Fig. 8) to lower the arm and apply pressure against the tyre so that the bead is moved into the centre well of the rim (see Fig. 46).

This will ensure that the bead is not excessively stretched and can easily move onto the mount/demount tool.

- 4) Use the lever to move the bead over the lip of the mount/demount tool.
- 5) Raise the UPH arm and rotate it outwards to free the work top and then rotate the turntable to remove the first bead.

Bring the operating arm of the tyre changer in non-working position.

From this moment, the operating arm will not be used for the disassembling operations anymore.

- 6) In case the second bead has seated again, use the rollers (E1, fig. 8) for bead breaking .

Proceed in the following way:

- a** – bring the arm (A1, Fig. 8) in non-working position.
- b** – position both the rollers in contact with the lower edge of the rim (Fig. 47) and clamp the rollers holder arm by tightening the relative grip.  
Lift the rollers up, with the help of the control lever (G, Fig. 8), until the roller of smaller section makes a release towards the internal side of the rim.
- c** – rotate the turntable clockwise simultaneously lifting the rollers up, with the help of the control lever (G, Fig. 8), until the bead-breaking procedure is completed.  
Moreover, the rollers (E1, Fig. 8) facilitates demounting of the second bead, in particular in case of racing wheels with large track. Lift the second bead up (see Fig. 48) and bring it approx. 2 cm beyond the upper edge of the rim (Fig. 48). **During this operation, use the right hand in a position diametrically opposite the rollers, to raise the tyre and keep pressed the second bead to the inside of the centre well.** This operation ensure that the roller of bigger section can get out from the upper edge of the rim (the roller having the smaller section will be locked under the rim edge , thus preventing the tyre from sheering upwards due to the cylinder thrust).

Then, rotate the turntable clockwise, until the tyre is completely out of the rim.

**N.B.:** In case the two rollers go against the clamps that lock the wheel by mistake, a safety device will avoid the damage.

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## MOUNTING A TIRE

- 1) Clamp the rim on the table and mount the rise bead as described in the Instruction manual of the tyre changer.



### WARNING

**The positioning and the removal of the operating arm of the tyre changer from the edge of the rim can be carried on only after having brought UPH arms outwards in non-working position.**

- 2) Position the bead pressing device (B1, Fig. 8) near the mount/demount tool (at about 3-4 cm).

Lower it until the bead is level with the centre well.



### WARNING

**Bringing the bead-pressing tool against the tyre creates a danger: the operator's hands could be crushed between the tool and the rim.**

**Be careful and keep your hands far from the rim.**

- 3) As the turntable turns the bead pressing tool will revolve with the tyre and keep the bead in the well. The second bead will thus be mounted on the rim without any effort nor danger to the operator or without risking to damage the tyre (Fig. 49).
- 4) After fitting has been completed by means of the control lever (G, Fig. 8), lift the bead pressing tool and bring the arm (A1, Fig. 8) in non-working position.