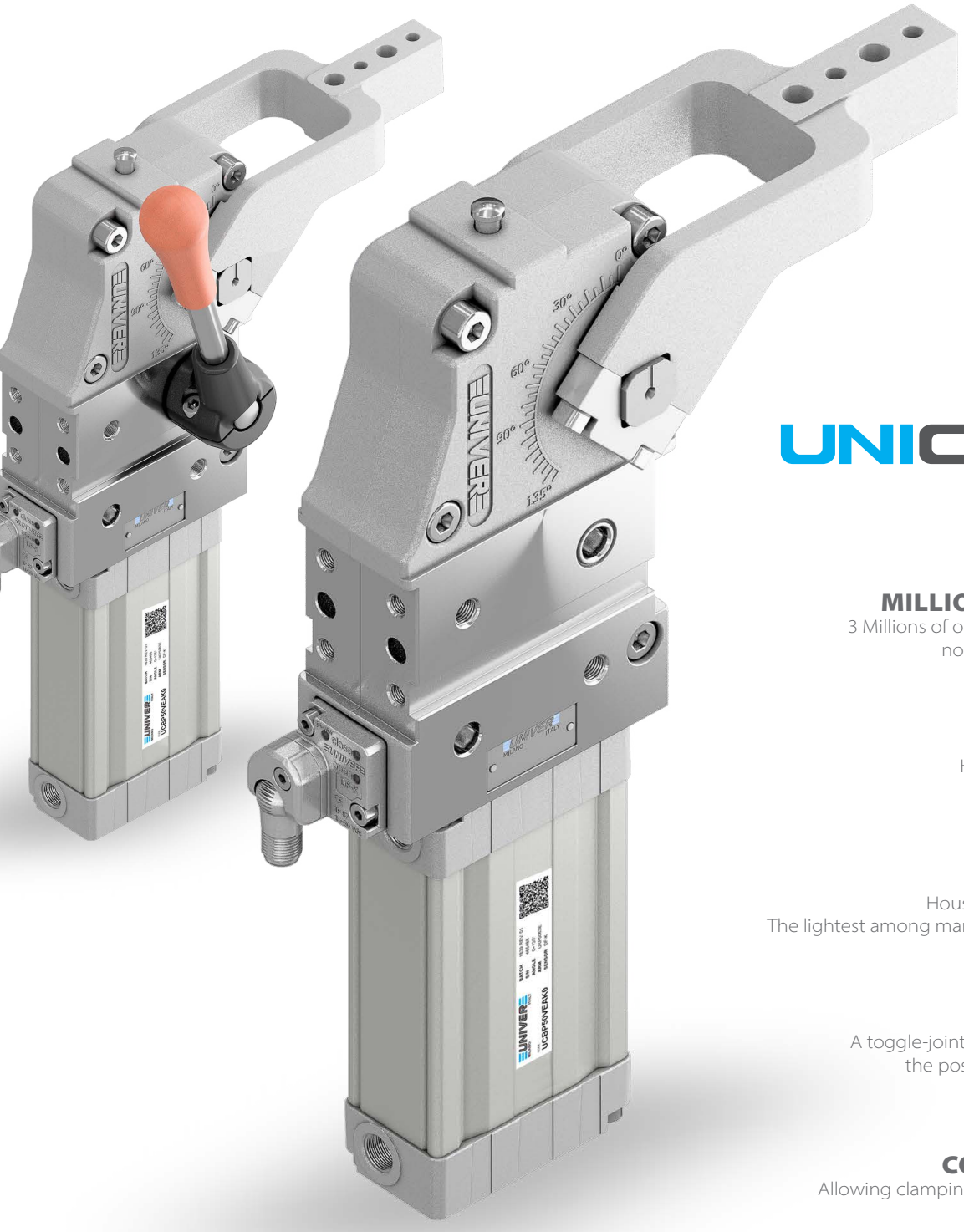
PNEUMATIC POWER CLAMPS

Pneumatic power clamps with compensation system,
toggle-joint mechanism and stepless adjustable opening angle,
tipically used for handling and holding metal sheets in welding applications,
including the most demanding aluminium welding applications,
characterized by high magnetic fields and fine dust:

- **Fully adjustable opening angle**
- **Electronic sensor with M12 swivel connector or pneumatic sensor**
- **Self-holding device for open position upon request**
- **ATEX version available**



UNICLAMP
next generation

MILLIONS OF CYCLES
3 Millions of operations granted with
no maintenance required

QR CODE
Helps identify products
quickly and easily

LIGHTWEIGHT
Housing in aluminium alloy
The lightest among market equivalent devices

IRREVERSIBLE
A toggle-joint mechanism maintains
the position even with air lack

COMPENSATION
Allowing clamping of different thickness

UNICLAMP next generation

Wide range of power clamps meeting the European standards, available in various versions:

- Pneumatic Ø 40 - 50 - 63 - 80 mm
- Pneumatic with hand lever Ø 40 - 50 - 63 - 80 mm
- Manual size 50 - 63 mm
- Double arm Ø 40 - 63 mm
- Fully protected version Ø 40 - 50 - 63 - 80 mm

GLOBAL STANDARD COMPONENTS NAAMS

Pneumatic power clamps meeting NAAMS standard (North American Automotive Metric Standard) available in both standard version and version with hand lever:

- Pneumatic Ø 50 - 63 - 80 mm
- Pneumatic with hand lever Ø 50 - 63 - 80 mm

BLUECLAMP air saving

Air saving power clamps assuring a relevant reduction in air consumption without affecting the standard performances required from the market:

- Pneumatic size 32 - 40 - 50 - 63 - 80 mm
- Pneumatic with hand lever size 32 - 40 - 50 - 63 - 80 mm
- NAAMS Pneumatic size 50 - 63 - 80 mm
- NAAMS Pneumatic with hand lever size 50 - 63 - 80 mm

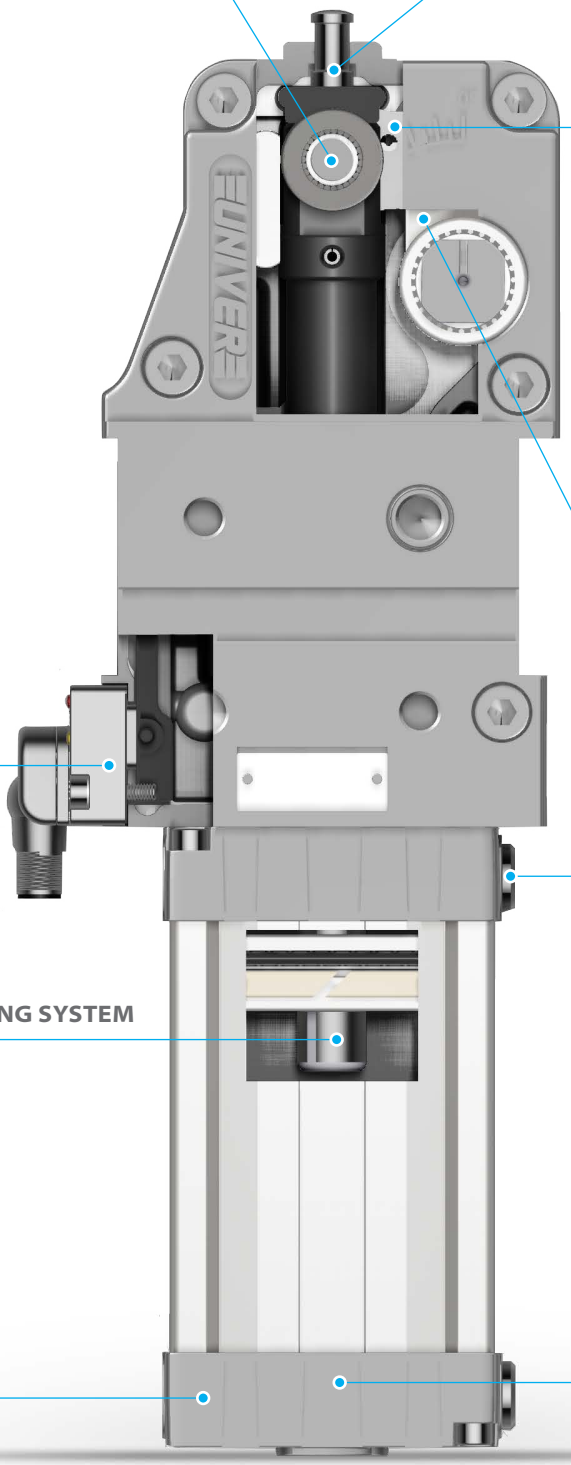
POWER CLAMPS FEATURES

ROLLER BEARINGS

Linear and rotary motion guided by roller bearings

MANUAL RELEASE BUTTON

Safety unlocking system without air supply



INTEGRATED COMPENSATION

Allows clamping of different thickness
Up to **3 mm**

TOGGLE-JOINT

Irreversible without external stops
UNIVER Original

OPTICAL SENSOR

High precision system
No adjustment required

SUPPLY PORTS ON BOTH SIDES

Calibrated holes

SELF-ADJUSTING CUSHIONING SYSTEM

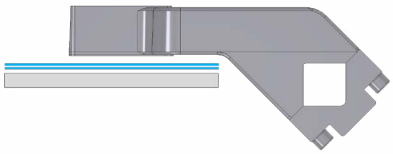
Special solution on piston rod allows flow regulation

REDUCED DIMENSIONS

Compact end caps

ANGLE ADJUSTMENT

Covers the whole range of possible opening angles



INTEGRATED COMPENSATION

The original UNIVER integrated compensation system allows to compensate metal sheet thickness variations up to 3 mm

No need to modify the shims in case of clamping of different metal sheets inside the compensation range

OPTICAL SENSOR

Fully metal body

One single sensor for the whole range of products

IP67 protection

M12 swivel connector (0-90°)

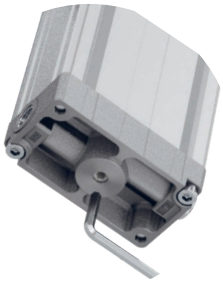
High precision

No set up

Two-parts design: electronic part outside the unit (available as spare part), optical part inside the unit (no touch point)

Insensitive to high magnetic fields, typical of new and modern welding systems like aluminium welding

Industry-recognized, tested and proven sensor



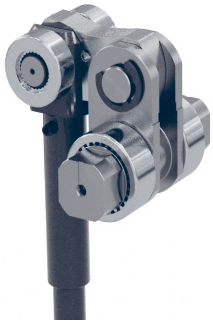
ANGLE ADJUSTMENT **0°-135°**

Stepless adjustment of the opening angle by means of a hex key from the bottom of the clamp

No need to set the sensor

Possibility to reduce the opening angle to the minimum required

One single device covers the whole range of opening angles aimed at stock reduction



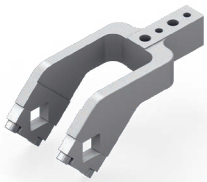
TOGGLE-JOINT MECHANISM

The original UNIVER toggle joint system allows the clamp to maintain the position even with lack of air without external stops

Position repeatability

No backlash in closed position

COMPLEMENTARY PRODUCTS



CLAMPING ARM

Aluminium or Steel

Different offsets for each arm size

NAAMS arms available upon request

PNEUMATIC SENSOR

Compact design

Fully metal body

Easy to be replaced

One-piece construction

SELF HOLDING **SYSTEM**

UNIVER original

Suitable for any opening angle

Adjustable holding force

HAND LEVER

Ergonomic design

Welding debris resistant

UCNP 80

Pneumatic power clamps conforming to the NAAMS standard, Ø80 mm

Pneumatic power clamps size Ø80 mm conforming to the NAAMS standard with compensation system, toggle-joint mechanism and stepless adjustable opening angle, typically used for handling and holding metal sheets in welding applications

- Lightweight aluminium construction
- Integrated compensation system up to 2,9 mm
- Version with manual hand lever available
- Fully optical electronic sensor or pneumatic sensor
- Fixing pattern on 4 sides
- Manual unlocking in case of air loss
- Drive shaft for wishbone or blade arms
- NPT or GAS connections
- Self-holding system for open position available

GLOBAL STANDARD COMPONENTS NAAMS

COMPENSATION

LIGHTWEIGHT

IRREVERSIBLE

ANGLE ADJUSTMENT

OPTICAL SENSOR

CHARACTERISTICS

Operating temperature	**5° ÷ 45° C**
Min./Max. operating pressure	**0,4/0,6 Mpa**
Opening angle*	**0° ÷ 135°**
Bore Ø	**80 mm**
Holding moment	**4000 Nm**
Clamping moment (0,5 MPa)	**1100 Nm**
Weight (clamping arm not included)	**8,6 Kg**
Pneumatic supply ports	**1/4 on both sides**
Sensor	**electronic (optical)**
Supply voltage	**10 ÷ 30 Vdc**
IP code	**IP65**

**The opening angle range may vary according to the arm position and style.*

CODIFICATION KEY

UC	N	P	80	N	**N**	**K**	**G**	0		
1	2	3	4	5	6	7	8	9	10	

1 SERIES
UC = UNICLAMP Power clamps

2 STANDARD
N = NAAMS Standard

3 VERSION
P = Pneumatic

4 SIZE
80 = Ø 80 mm

5 ARM POSITION
N = No arm

For clamping arms according to NAAMS standard, please contact our Sales Dept.

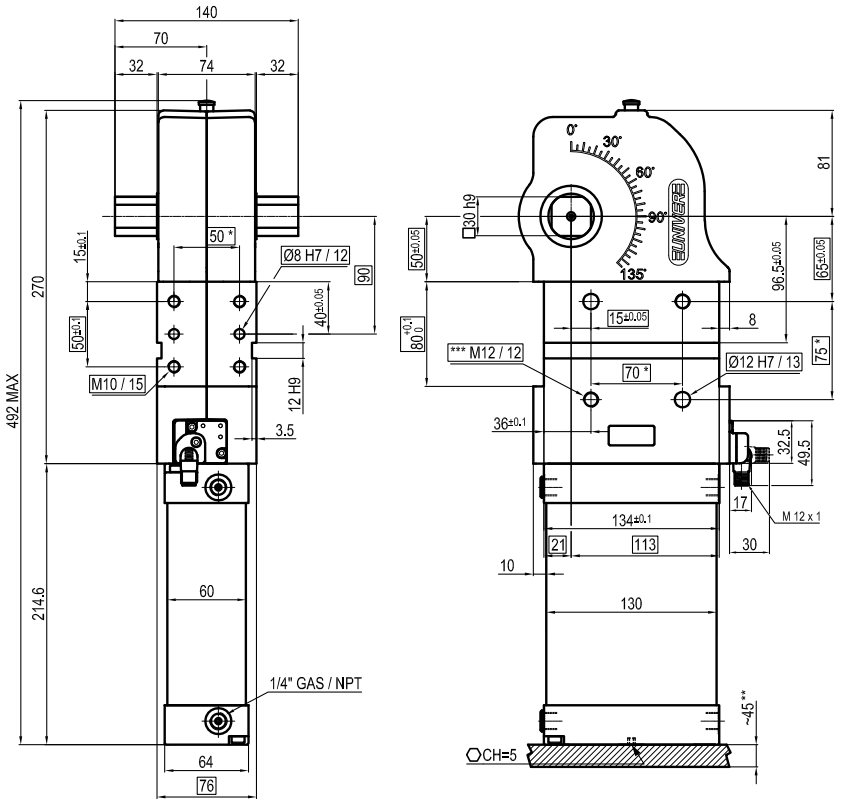
6 SQUARE SHAFT
R = Right side only
L = Left side only
N = Both sides

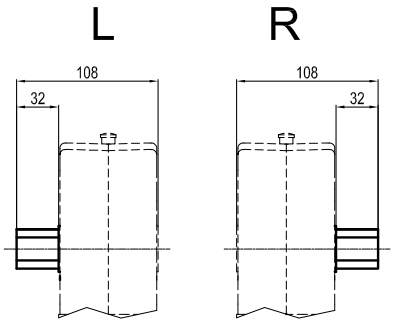
7 SENSOR
N = No sensor (with protection plate)
K = Electronic sensor PNP, M12 (DF-K)
D = Pneumatic sensor (DF-UPNW80)
J = Electronic sensor NPN, optical (DF-J)
Y = Electronic sensor PNP, M12 (DF-Y) white LED

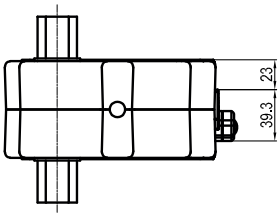
8 PORT THREAD
G = Gas
N = NPT

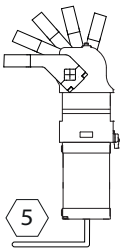
9 PRODUCT REVISION
Assigned by UNIVER

10 ATEX
X = ATEX option
See ATEX Catalogue for types and versions





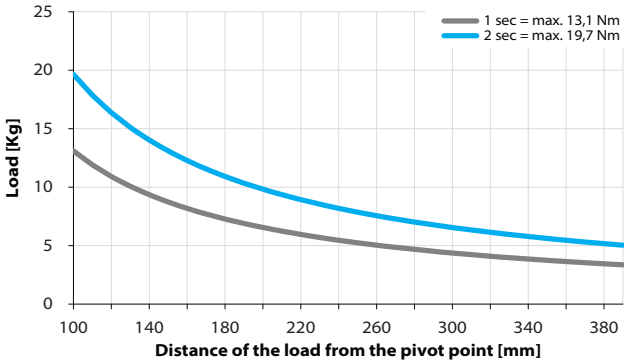




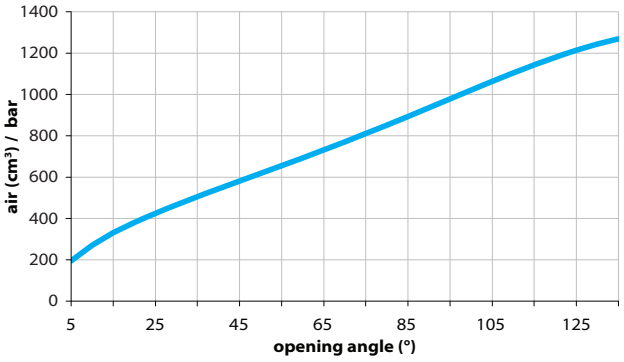
**TOLERANCE BETWEEN DOWELS ± 0,02 BETWEEN SCREW HOLES ± 0,1*
***AREA TO ACCESS ANGLE ADJUSTMENT*
****SCREW THREAD INSERT*

Maximum Applicable Load

Pressure: 5 bar - 90° cycle time (Open - Close)



Air Consumption per Cycle



Sensors

Electronic (optical)

DF-K PNP M12
DF-J NPN M12
DF-Y PNP M12 White LED

Pneumatic

DF-UPNW80

Accessories

Self holding system

UBK46P30N For blade arms
UBK46P30ND For wishbone arms