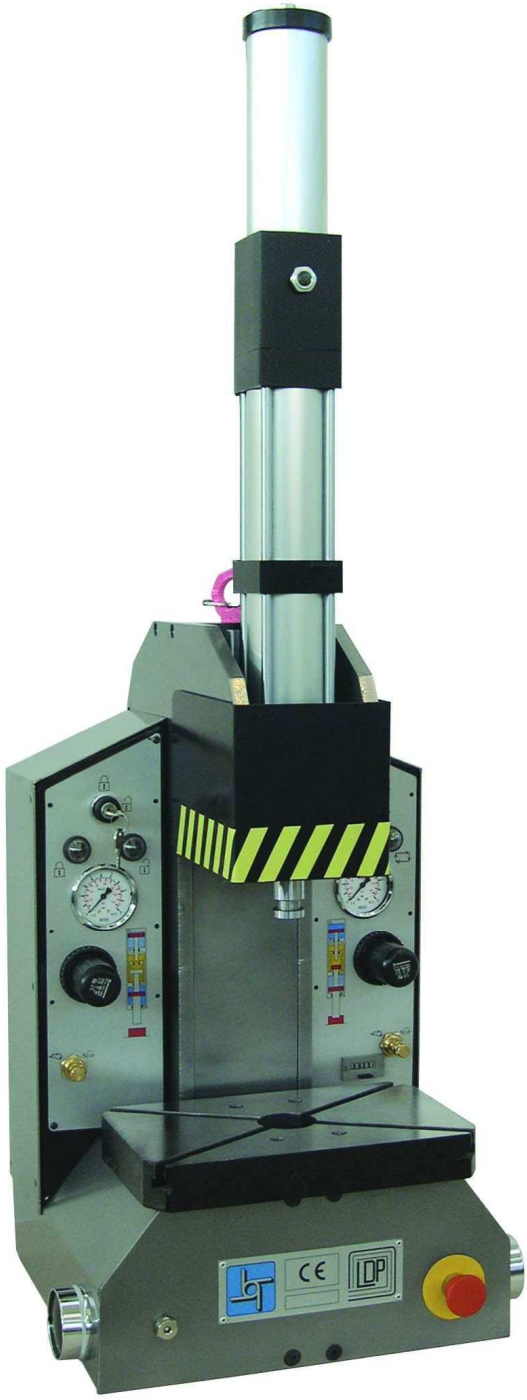
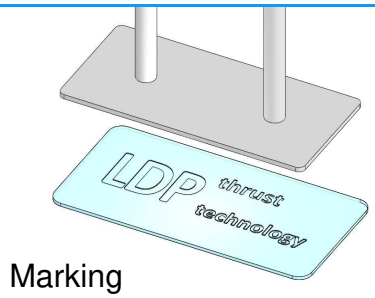
LDP thrust technology



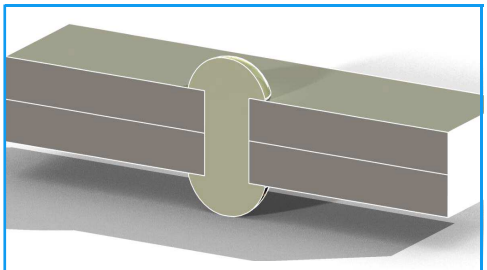
1968 ÷ 2018

Machines and components
for the automation
for over 50 years

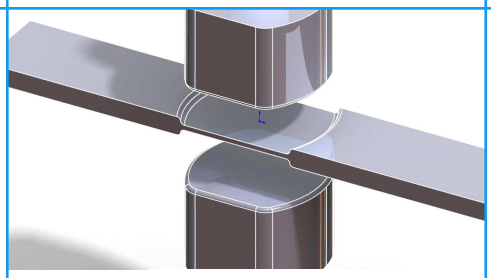
APPLICATIONS



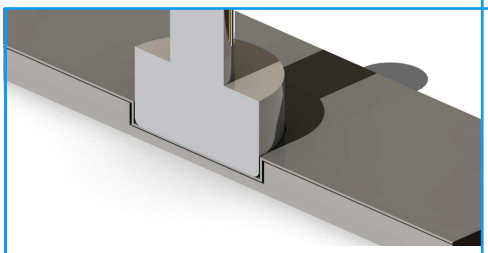
Marking



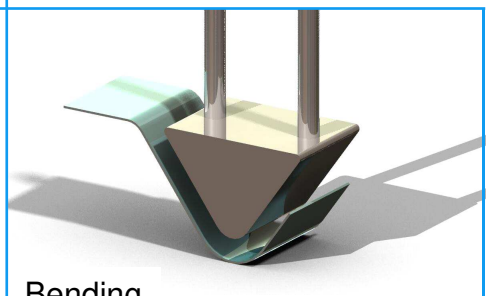
Riveting



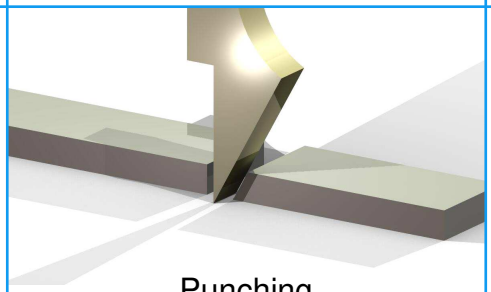
Pressing



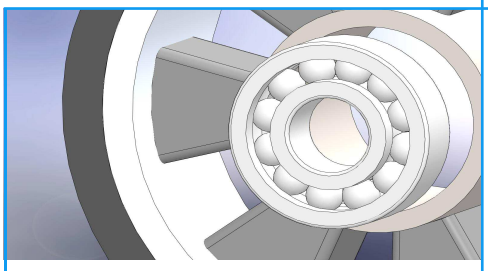
Forming



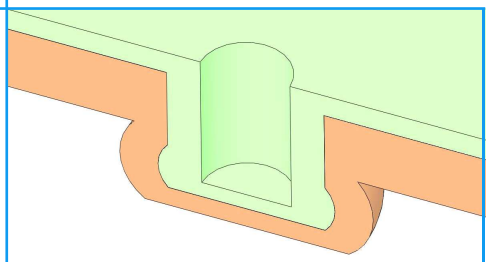
Bending



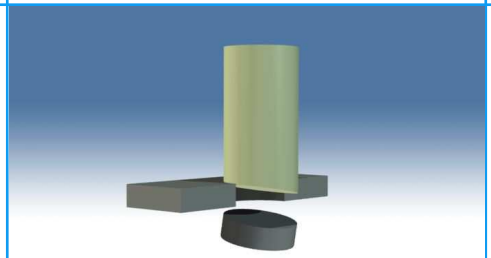
Punching



Mounting

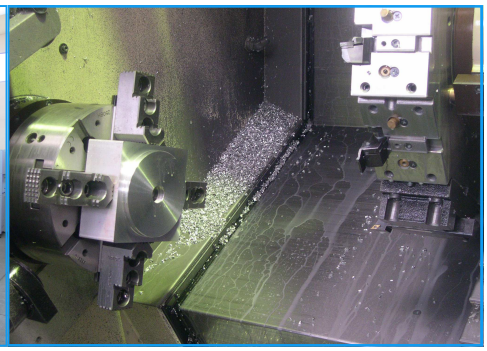


Clinching



Shearing

WHO WE ARE



The LDP was founded in 1968 as a company for pneumatic cylinders and accessories production.

After few time, in order to meet internal production requirements, rotary tables, clamps and presses were designed and built, and the common feature of these products is the use of compressed air as motor fluid.

The deep-rooted knowledge of the air - oil systems, brought the LDP to get the first patent in the field, granted by the United States, in 1976.

The expertise and research in the application of the air-oil system are consolidated in 1979, when the LDP exhibited at III EMO of Milan the full range of its products, proving to be a developed company.

Later, thanks to the passion for the work and thanks to a constant experimentation in the field of new technologies, LDP obtained new international patents to protect the Know-how that still today is in continuous development.

Today, our trust in the future brings us to massive investments in research, to constantly improve the performance of our products.

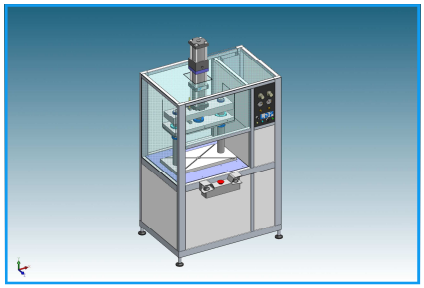
Each LDP sector, composed of young and competent staff, is prepared in order to search the optimal solution for each application.

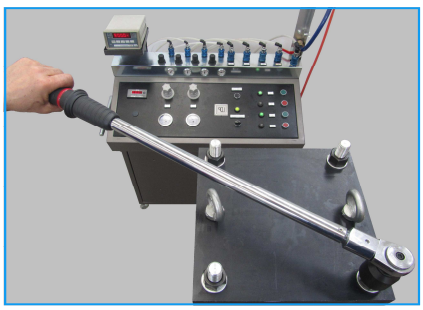
The design studio dynamism ensures specific proposals for every need of thrust (thrust technology).

The testing department, having equipment and control systems to carry out tests on sample parts of the customer, is able to locate the product that best meets the requirements.

The mechanical working is directly performed in our Workshop; in this way we manage to optimize the delivery time, and the synergy among the various departments allows us to reach the highest level of quality.

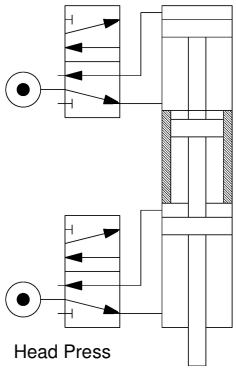
Milan, EMO 1979

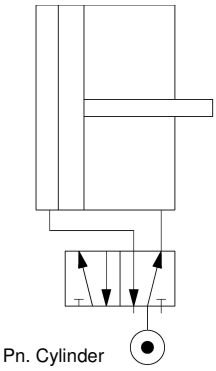


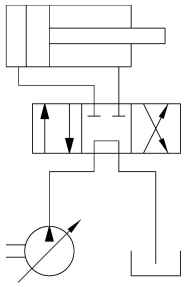


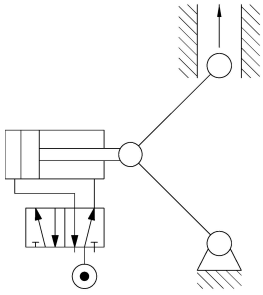
We invite you to visit our website: **www.ldpitalia.com**

ADVANTAGES OF OUR UNITS


Head Press


Pn. Cylinder


Hydraulic System


Mechanical System

HEAD PRESSES

Strenght : till 500 kN.
Investment Cost : head press + valves + pneumatic system.
Setting : silent thanks to the small impact force on the piece and discharge of a modest amount of air; possibility of use in clean rooms and food industry.
Flexibility : it's possible to use the working stroke at any point of the approaching stroke.
Quality of Working : approaching force and workforce control. Workforce control with a pressure switch or a load cell. Separate adjustment of the approach speed and the speed of work and return. Long tool life. Automatic compensation of tool consume.
Maintenance : sizes and weight allow easy handling in case of replacement of the seals. Possible need for topping up of modest quantities of liquid.
Drawbacks : cumbersome length for high working strokes.

LARGE SECTION PNEUMATIC CYLINDER

Strenght : till 30 kN.
Investment Cost : cylinder + valves + pneumatic system.
Setting : noise due to the full force impact on the piece and discharge of a substantial amount of air; possibility of use in clean rooms and food industry.
Flexibility : pressing force is throughout the stroke.
Quality of Working : adjustment of the total stroke strength and speed. Work force control with a pressure switch or a load cell. Possibility of premature consume of the tool due to the impact with the workpiece. Automatic compensation of tool consume.
Maintenance : considerable cumbersome dimensions complicate the handling in case of replacement of the seals.
Drawbacks : considerable cumbersome. High energy consumption.

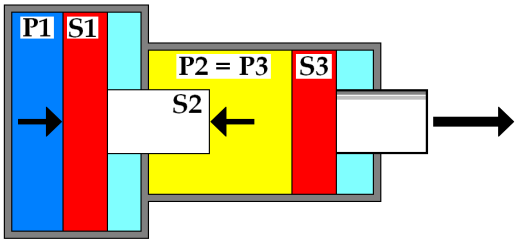
HYDRAULIC CYLINDER

Investment Cost : cylinder + valves + hydraulic system + hydraulic power unit.
Setting : noise due to the full force impact on the work piece. Continuous noise of the hydraulic pump. Heating setting. Contamination of the setting. Waste oil disposal.
Flexibility : pressing force is throughout the stroke.
Quality of Working : adjustment of the total stroke strength and speed. Control of the work force with a pressure switch or a load cell. Possibility of premature consume of the tool due to the impact with the work piece. Automatic compensation of tool consume.
Maintenance : Regular replacement of oil and filter. Required periodic cleaning because of the leakage of oil. Periodic check of system pipes.
Drawbacks : high energy consumption. Contamination.

MECHANICAL SYSTEM

Investment Cost : cylinder + valves + pneumatic system + mechanical system.
Setting : silent. Possibility of use in clean rooms and food industry.
Flexibility : It is not possible to vary the stroke. The maximum force occurs only at work end.
Quality of Working : pressing force grows up in a sinusoidal way and can't be changed. tolerance in the length of the pieces is fundamental. Delicate operations of tuning are necessary.
Maintenance : consumption of the mechanical parts with a consequent decay of performance. High cost recovery.
Drawbacks : high dimensions of the machine. Tight tolerance during work.

DESCRIPTION OF THE SYSTEM



The principle of operation of the LDP Press Heads is based on the incompressibility of liquids.
Applying the principle of Pascal in an appropriate way, using compressed air as motive fluid, building cylinders with the correct sections, we get a Press Head.

Simplifying, the LDP Head Press is constituted by a pneumatic cylinder and a hydraulic cylinder. The pneumatic cylinder has a section of the piston equal to S1, subject to a pneumatic pressure P1, and a stem section S2, subject to a pressure P2. The hydraulic cylinder has a section S3 subject to a pressure P3.

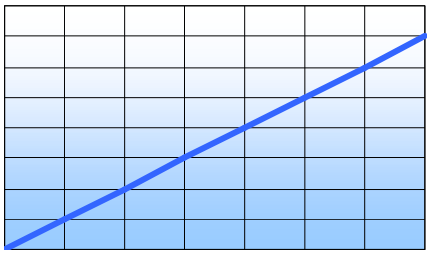
For the Third principle of Dynamics, the force resulting from the pressure P1 exerted on the section S1 must be equal to the force resulting from the pressure P2 exerted on the section S2. If the section S2 <S1, pressure P2> P1. For the particular configuration of the Press Head, the section S2 and the section S3 are in contact with the same fluid and therefore, neglecting the Stevin's Law, Pascal's Principle says that they coincide.

III Principle of Dynamics: to each force corresponds a force of equal direction and intensity, but opposite.

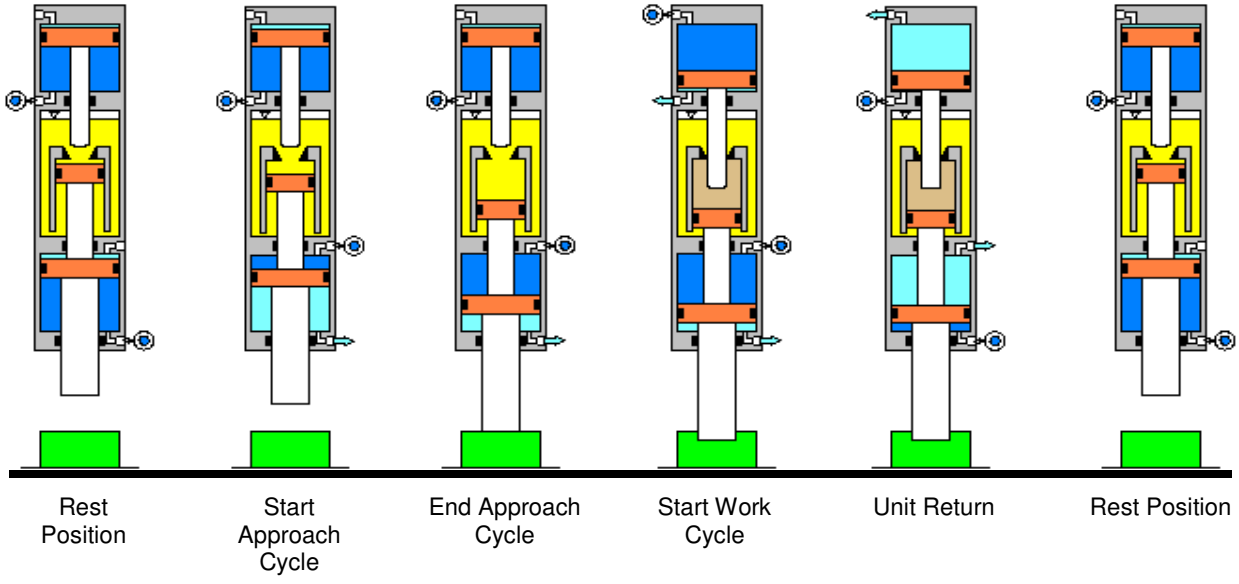
Pascal's Principle: in every point of a perfect or in the quiet fluid, the efforts of pressure, that are the normal stresses, are transmitted unaltered in all directions

Stevin's Law: considered the homogeneous liquid, the hydrostatic pressure is, in each interior point, directly proportional to the distance from the free surface, to the density of the liquid and to the gravitational acceleration of the place.

The hydraulic pressure of LDP Press Heads is directly proportional to the pneumatic pressure supply.



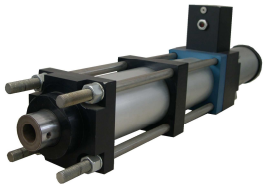
Relationship diagram hydraulic pressure — pneumatic pressure (bar)



LDP Press Heads: The whole family

E-Type e E-type TX

- In line version
- Unit attack to rods or screw (TX version)
- Vertical working Position, stem down ↓
- Range of 7,1 kN to 470 kN at 6 bar pressure
- Unit actuation with n.2 valves



EPH-Type e EPH-type TX

- In line version
- Unit attack to rods or screw (TX version)
- Horizontal working position →
- Range of 7,1 kN to 470 kN at 6 bar pressure
- Unit actuation with n.2 valves

EPSB-Type e EPSB-type TX

- In line version
- Unit attack to rods or screw (TX version)
- Sub-vertical working position, stem upward ↑
- Range of 7,1 kN to 470 kN at 6 bar pressure
- Unit actuation with n.2 valves

EP-Type e EP-Type TX

- Parallel version
- Unit attack to rods or screw (TX version)
- Universal working position ✣
- Range of 7,1 kN to 470 kN at 6 bar pressure
- Unit actuation with n.3 valves

E-Type e E-type TX - XL: for high working strokes

- Unit suitable for working strokes above 30 mm
- In line version
- Unit attack to rods or screw (TX version)
- Vertical, horizontal or Sub-Vertical working position
- Range of 7,1 kN to 115 kN at 6 bar pressure
- Unit actuation with n.2 valves

EPSQ-Type e EPSQ-type TX

- At right angles version
- Unit attack to rods or screw (TX version)
- Vertical, horizontal or Sub-Vertical working position
- Range of 7,1 kN to 470 kN at 6 bar pressure
- Unit actuation with n.2 valves

RMA: Mechanical adjustment version

- Suitable for every unit
- Mechanical adjustment bottom dead

N : Automatic control cycle work version

- Suitable for every unit
- Unit actuation with n.1 valves

HS: High speed version

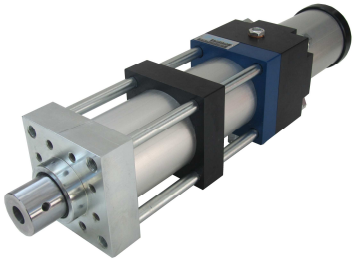
- Suitable for every unit
- For high frequencies of cycles
- Unit actuation with n.1 or n.2 valves

RCP: Pneumatic stroke adjustment version

- Suitable for every unit
- Single working stroke indirect regulation

CP: CS-Type front head version

- Suitable for every unit
- Interchangeable attack head and attack stem with LDP units mod. CS-Type



US-Type

- Separated air-oil unit
- Range of 5 kN to 300 kN at 6 bar pressure
- Universal working position
- Easy customization
- Unit actuation with n.2 or n.3 valves

KS-Type

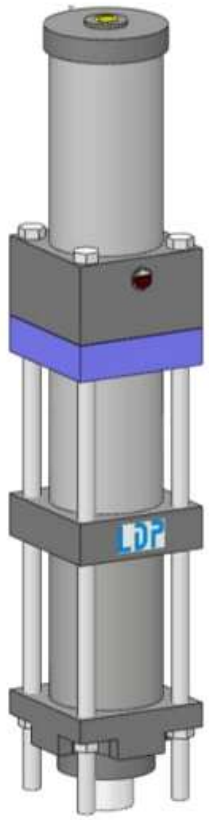
- In line compact version
- Unit attack to tie rod
- Range of 48 kN to 270 kN at 6 bar pressure
- Sub-vertical working position, stem upward ↑
- Suitable for food industry use
- Unit actuation with n.2 valves

E-Type

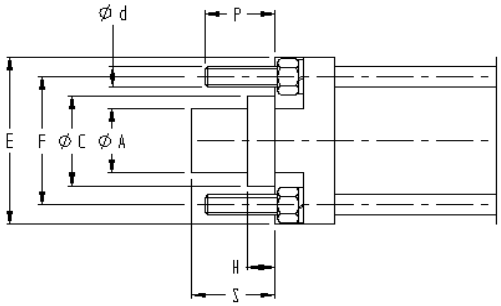
TECHNICAL FEATURES

The E-Type Press Head is a hydropneumatic unit that exploits the incompressibility of liquids in order to generate high thrusts by using compressed air as its power source

- 12 models with approaching stroke
- Range of 7 to 470 kN thrusts at 6 bar pressure
- Max. Operating pressure is 10 bar
- Configurations that enable to deal with any application
- Without external oil tank
- Approaching cylinder with magnetic piston as standard
- Test sheet & user manual attached



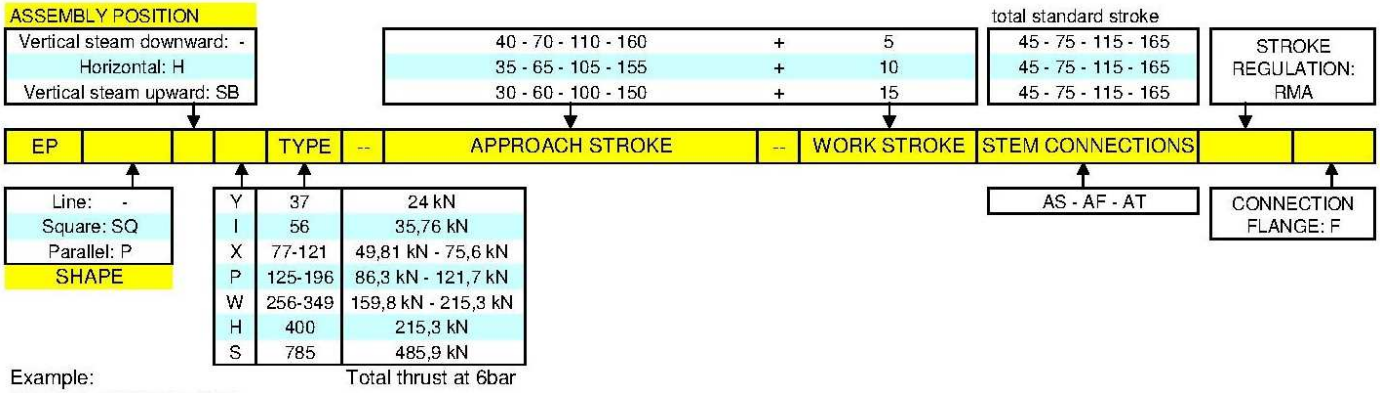
Model	ApproachThrust kN	Return Thrust kN	Work Thrust kN
EPK 12	0,9	0,9	7,1
EPK 21	0,9	0,9	12,7
EPY 37	1,9	1,8	22,0
EPI 56	2,7	2,5	33,0
EPX 77	4,0	3,4	45,8
EPX 121	4,0	3,4	71,5
EPP 125	6,2	5,4	73,9
EPP 196	6,2	5,4	115,5
EPW 256	10,3	9,5	150,0
EPW 349	10,3	9,5	204,9
EPH 400	16,5	15,4	235,3
EPS 785	25,8	24,2	461,8



MOUNTING DIMENSIONS

MODEL	EPK	EPY	EPI	EPX	EPP	EPW	EPH	EPS
A f7	20	30	40	50	60	70	80	100
C f7	40	50	70	90	110	130	130	160
d	M 8	M10	M12	M16	M20	M24	M24	M36
E	70 x 70	80 x 80	100 x 100	130 x 130	150 x 150	180 x 180	220 x 220	280 x 280
F	50 x 50	61 x 61	75 x 75	100 x 100	110 x 110	140 x 140	175 x 175	220 x 220
H	5	12	16	25	25	25	25	35
P	25	30	35	50	58	75	75	110
S	30	40	50	60	60	95	95	140

HOW TO ORDER



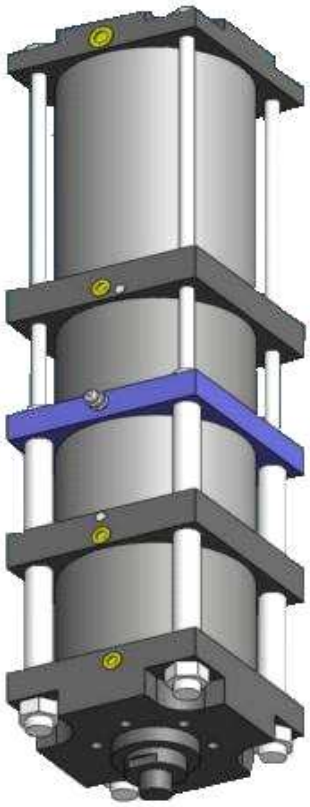
Example:
EPX 121-110-05 AF RMA
Line unit, vertical steam downward, totale force 75,6 kN, approach stroke 110 mm, work stroke 5 mm, stem connection AF, stroke regulation

E-Type TX

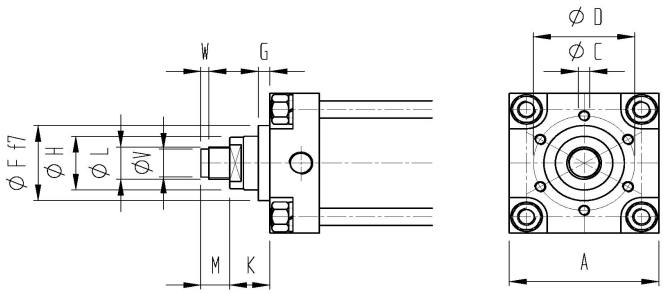
TECHNICAL FEATURES

The E-Type Press Head is a hydropneumatic unit that exploits the incompressibility of liquids in order to generate high thrusts by using compressed air as its power source

- 12 models with approaching stroke
- Range of 7 to 470 kN thrusts at 6 bar pressure
- Max. Operating pressure is 10 bar
- Configurations that enable to deal with any application
- Without external oil tank
- Approaching cylinder with magnetic piston as standard
- Test sheet & user manual attached



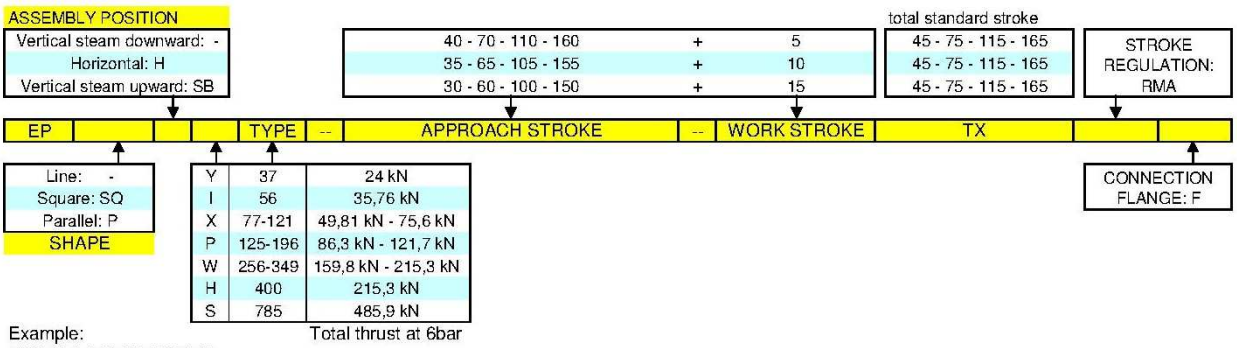
Model	Approach Thrust kN	Return Thrust kN	Work Thrust kN
EPY 37 TX	1,9	1,8	22,0
EPI 56 TX	2,7	2,5	33,0
EPX 77 TX	4,0	3,4	45,8
EPX 121 TX	4,0	3,4	71,5
EPP 125 TX	6,2	5,4	73,9
EPP 196 TX	6,2	5,4	115,5
EPW 256 TX	10,3	9,5	150,0
EPW 349 TX	10,3	9,5	204,9
EPH 400 TX	16,5	15,4	235,3
EPS 785 TX	25,8	24,2	461,8



MOUNTING DIMENSIONS

MODEL	EPY TX	EPI TX	EPX TX	EPP TX	EPW TX	EPH TX	EPS TX
A	80 x 80	100x 100	130x 130	150x 150	180x 180	220x 220	280x 280
C	M8 x 12	M8 x 15	M10 x 16	M16 x 25	M20 x 30	M20 x 30	M20 x 30
D	54	64	88	100	132	132	150
F f7	40	50	70	75	100	100	115
G	10	10	10	15	18	18	25
H f7	30	40	50	60	70	80	100
K	26	28	35	36	47	47	52
L	M16 x1,5	M22 x 2	M30 x 2	M30 x 2	M39 x 2	M39 x 2	M42 x 2
M	15	20	25	25	35	35	40
V	=	18	26	26	=	=	=
W	=	7	7	7	=	=	=

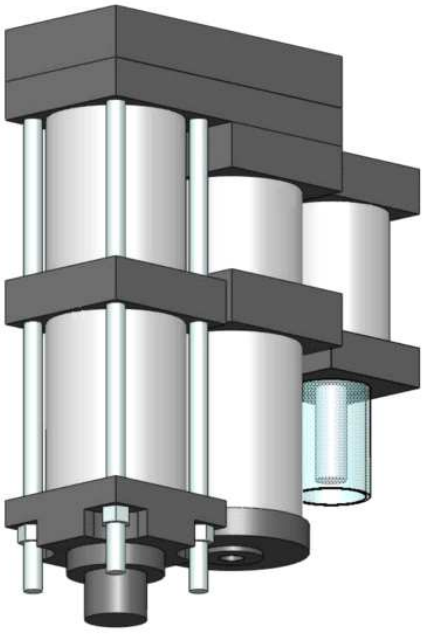
HOW TO ORDER



Example:
EPX 121-110-05 AF RMA
Line unit, vertical steam downward, totale force 75,6 kN, approach stroke 110 mm, work stroke 5 mm, stem connection AF, stroke regulation

Total thrust at 6bar

EP - EPTX Type



TECHNICAL FEATURES

The EP-Type XL Pneumohydraulic Cylinders are hydropneumatic units that exploit the incompressibility of liquids to get high forces, using compressed air as motive fluid

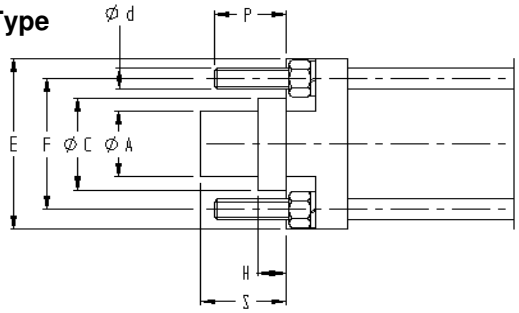
- 10 models with approach strokes
- Available thrust range from 22 kN to 470 kN at 6 bar pressure
- Versions for any conditions of use
- Max operating air pressure is 6 or 10 bar
- Without external tank
- Standard magnetic approach cylinder
- Sheet test, Declaration of Incorporation and Instructions supplied with units

Model	Approach Thrust kN	Return Thrust kN	Work Thrust kN
EPPY-37 /TX	1,9	1,8	22,0
EPPI-56 / TX	2,7	2,5	33,0
EPPX-77 / TX	4,0	3,4	45,8
EPPX-121 / TX	4,0	3,4	71,5
EPPP-125 / TX	6,2	5,4	73,9
EPPP-196 / TX	6,2	5,4	115,5
EPPW-256 / TX	10,3	9,5	150,0
EPPW-349 / TX	10,3	9,5	204,9
EPPH-400 / TX	16,5	15,4	235,3
EPPS-785 / TX	25,8	24,2	461,8

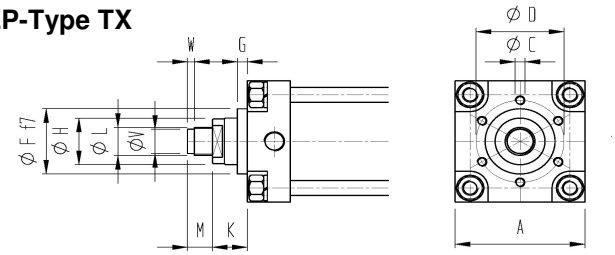
MOUNTING DIMENSIONS

MODEL	EPPY	EPPI	EPPX	EPPP	EPPW	EPPH	EPPS
A f7	30	40	50	60	70	80	100
C f7	50	70	90	110	130	130	160
d	M10	M12	M16	M20	M24	M24	M36
E	80 x 80	100 x 100	130 x 130	150 x 150	180 x 180	220 x 220	280 x 280
F	61 x 61	75 x 75	100 x 100	110 x 110	140 x 140	175 x 175	220 x 220
H	12	16	25	25	25	25	35
P	30	35	50	58	75	75	110
S	40	50	60	60	95	95	140

EP-Type

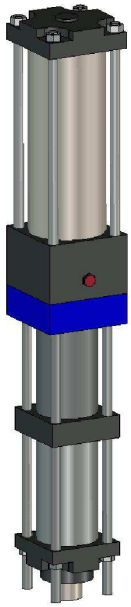


EP-Type TX



MODEL	EPPY TX	EPPI TX	EPPX TX	EPPP TX	EPPW TX	EPPH TX	EPPS TX
A	80 x 80	100x 100	130x 130	150x 150	180x 180	220x 220	280x 280
C	M8 x 12	M8 x 15	M10 x 16	M16 x 25	M20 x 30	M20 x 30	M20 x 30
D	54	64	88	100	132	132	150
F f7	40	50	70	75	100	100	115
G	10	10	10	15	18	18	25
H f7	30	40	50	60	70	80	100
K	26	28	35	36	47	47	52
L	M16 x1,5	M22 x 2	M30 x 2	M30 x 2	M39 x 2	M39 x 2	M42 x 2
M	15	20	25	25	35	35	40
V	=	18	26	26	=	=	=
W	=	7	7	7	=	=	=

E-Type - XL
E-Type TX - XL



TECHNICAL FEATURES

The E-Type XL Pneumohydraulic Cylinders are hydropneumatic units suitable for working stroke greater than 30mm, which exploit the incompressibility of liquids to get high forces, using compressed air as motive fluid

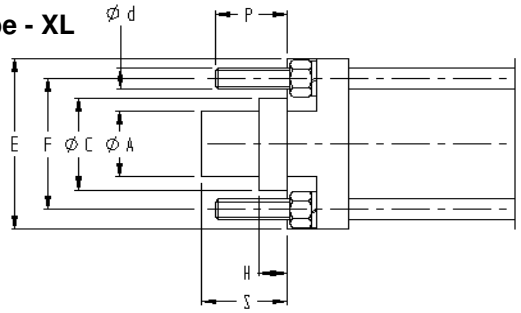
- 7 models with approach and custom work strokes
- Available thrust range from 7 kN to 115 kN at 6 bar pressure
- Version with drive rods or screws
- Versions for any conditions of use
- Max operating air pressure is 6 bar
- Without external tank
- Standard magnetic approach cylinder
- Sheet test, Declaration of Incorporation and Instructions supplied with units

Model	Approach Thrust kN	Return Thrust kN	Work Thrust kN
EPYK 12 / TX	1,9	1,8	7,1
EPY 24 / TX	1,9	1,8	14,1
EPX 50 / TX	4,0	3,4	29,3
EPXP 78 / TX	4,0	3,4	45,7
EPW 125 / TX	10,3	9,5	73,9
EPX2P 155 / TX	4,0	3,4	91,6
EPH 196 / TX	16,5	15,4	115,5

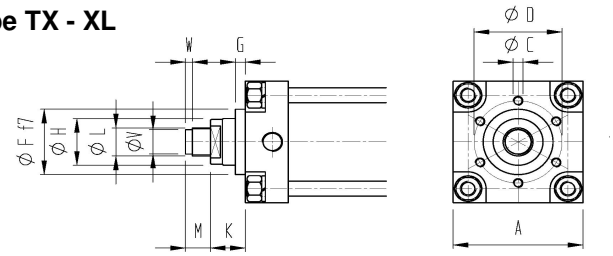
MOUNTING DIMENSIONS

MODEL	EPYK 12	EPY 24	EPX 50	EPXP 78	EPW 125	EPX2P 155	EPH 196
A f7	30	30	50	50	70	50	80
C f7	50	50	90	90	130	90	130
d	M10	M10	M16	M16	M24	M16	M24
E	80 x 80	80 x 80	130 x 130	130 x 130	180 x 180	130 x 130	220 x 220
F	61 x 61	61 x 61	100 x 100	100 x 100	140 x 140	100 x 100	175 x 175
H	12	12	25	25	25	25	25
P	30	30	50	50	75	50	75
S	40	40	60	60	95	60	95

E-Type - XL

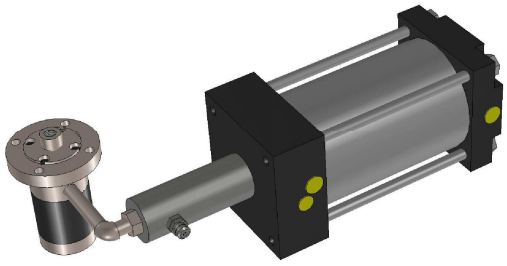


E-Type TX - XL



MODEL	EPYK 12 TX	EPY 24 TX	EPX 50 TX	EPXP 78 TX	EPW 125 TX	EPX2P 155 TX	EPH 196 TX
A	80 x 80	80 x 80	130x 130	130x 130	180x 180	130x 130	220x 220
C	M8 x 12	M8 x 12	M10 x 16	M10 x 16	M20 x 30	M10 x 16	M20 x 30
D	54	54	88	88	132	88	132
F f7	40	40	70	70	100	70	100
G	10	10	10	10	18	10	18
H f7	30	30	50	50	70	50	80
K	26	26	35	35	47	35	47
L	M16 x1,5	M16 x1,5	M30 x 2	M30 x 2	M39 x 2	M30 x 2	M39 x 2
M	15	15	25	25	35	25	35
V	=	=	26	26	=	26	=
W	=	=	7	7	=	7	=

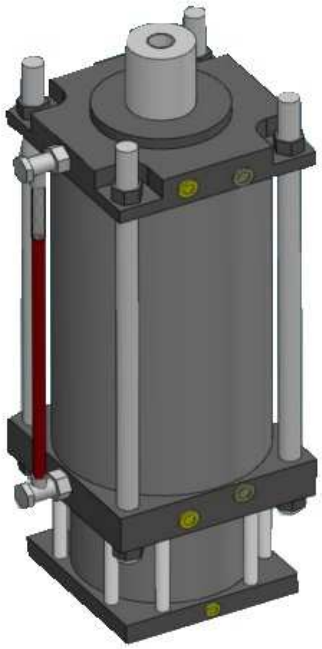
US-Type



TECHNICAL FEATURES

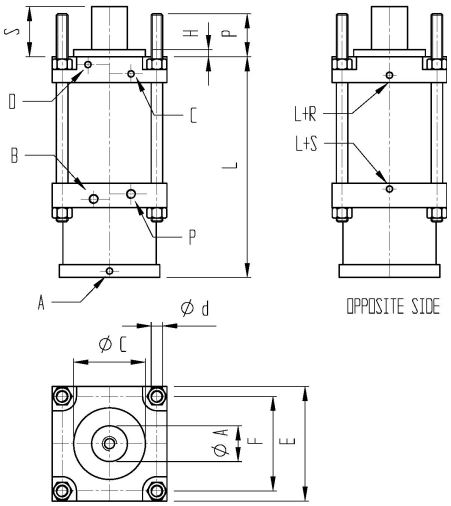
- Air-oil unit separated
- Available thrust range from 5 kN to 300 kN at 6 bar pressure
- Universal working position
- Easy Customization
- Possibility of pull-type cylinder
- Possibility of rod through cylinder
- Possibility of oil-oil cylinder
- Actuation with n.2 or n.3 valves
- Max operating air pressure is 6 bar
- With compensation exchanger
- Sheet test, Declaration of Incorporation and Instructions supplied with units

KS-Type



TECHNICAL FEATURES

- In line compact version
- Available thrust range from 48 kN to 270 kN at 6 bar pressure
- Possibility of use in food industry
- 5 models with approach stroke
- Sub-Vertical working position, stem upware ↑
- Unit attack to tie rod
- Actuation with n.2 valves
- Max operating air pressure is 6 bar
- Without external tank
- Sheet test, Declaration of Incorporation and Instructions supplied with units



DIMENSIONS										CONNECTIONS						
MODEL	THRUST	A	C	d	E	F	H	P	S	“A”	“B”	“C”	“D”	“P”	“R”	“S”
KSX 80	48 kN	50	100	16	160	132	10	60	50	1/8”	1/4”	1/8”	1/8”	1/4”	1/8”	1/8”
KSP 64	38 kN	50	100	16	160	132	10	60	50	1/8”	1/4”	1/8”	1/8”	1/4”	1/8”	1/8”
KSP 125	75 kN	50	100	16	160	132	10	60	50	1/8”	1/4”	1/8”	1/8”	1/4”	1/8”	1/8”
KSP 136	81 kN	50	100	16	160	132	10	60	50	1/8”	1/4”	1/8”	1/8”	1/4”	1/8”	1/8”
KSH 545	270 kN	80	130	24	280	220	10	75	80	3/4”	3/8”	3/8”	3/8”	1/4”	1/8”	1/8”

Accessories

RMA - MECHANICAL FRONT ADJUSTMENT

- Mechanical bottom dead adjustment
- Absolute positioning repetitiveness
- Intrinsic safety for the fact that there are no moving parts
- The force is discharged directly to the unit
- Possibility of access to the adjustment near the support plate
- Possibility of adjusting by acting from all four sides of the unit
- Possibility of locking in position by the two opposite sides
- Standard setting 10mm, more adjustment ranges on reques

RCP - PNEUMATIC STROKE ADJUSTMENT

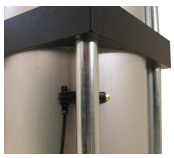
- Mechanical adjustment stroke of the booster cylinder
- Single working stroke indirect regulation
- Access is from the top of the unit

RV - VOLUMETRIC ADJUSTMENT

- Single working stroke indirect regulation
- Intrinsic safety for the fact that there are no moving parts

N - AUTOMATIC WORK CONTROL VERSION

- Unit control as a simple pneumatic cylinder
- Work force intervention anywhere on the approach stroke
- Independent management of the approach and work pressure

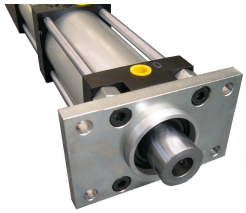


SMTPI - MAGNETIC SENSOR

- Suitable for every unit
- LED indicator
- Cable length L = 5mt
- Protection level IP66

AR - ANTI-ROTATION DEVICE

- It avoids the natural rotation of the rod
- Suitable for connection to the measuring system



AF - FIXING FLANGE

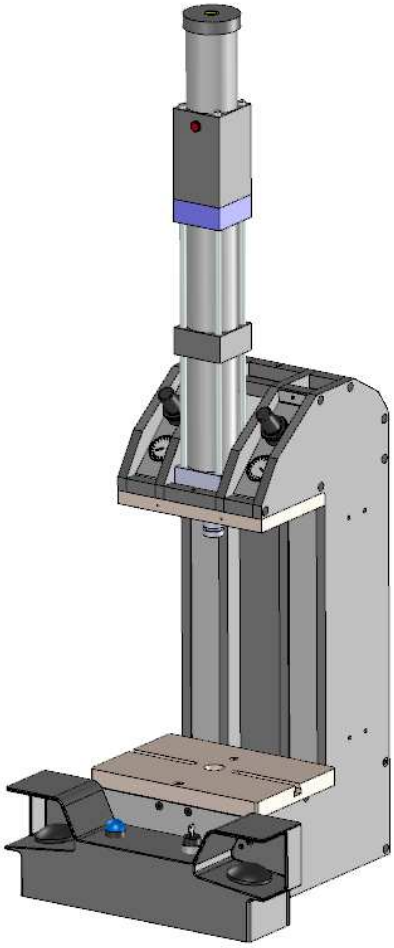
- Simple mounting structure

AP / AC - DIE HOLDER PAD

- Devices holders with bayonet connection
- AP version for guided molds
- AC version with centering

LDP thrust technology

L-Type

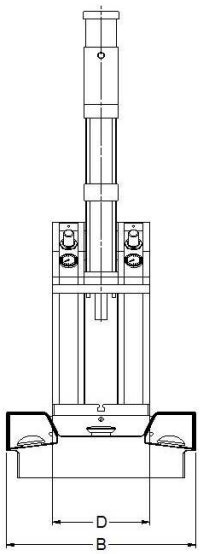


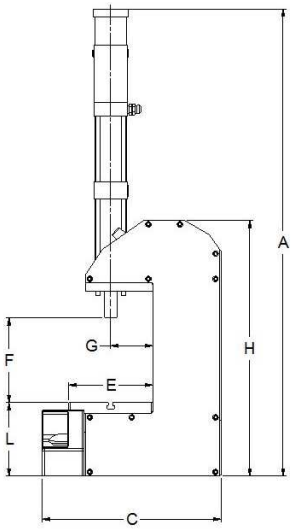
TECHNICAL FEATURES

L-Type Hydropneumatic Presses are particularly machines indicated for all the processes that require a good strength with one relatively small displacement. For the operation of these machines is just sufficient the connection to the compressed air network. Using the E-Type Press Heads the speed and silence of compressed air are concentrated in one machine with hydraulic force.
The standard C structures allow maximum functionality of use: at the customer's request, it's possible to customize the dimensions, thanks to the exclusive construction method.
The standard control system is designed to best meet the needs of most uses, however there are customizable schemes for specific needs

- 5 models with standard approach stroke 100 mm + 15 mm work
- Available thrusts range 9, 16, 24, 33, 50 kN at 6 bar pressure
- Concentricity stem - bolster plate
- Max operating air pressure is 6 bar
- CE Certification

MODEL	Approach Thrust kN	Return Thrust kN	Work Thrust kN
L 09	1,9	1,8	7,1
L 16	1,9	1,8	14,1
L 24	1,9	1,8	22,0
L 33	4,0	3,4	29,3
L 50	4,0	3,4	45,8

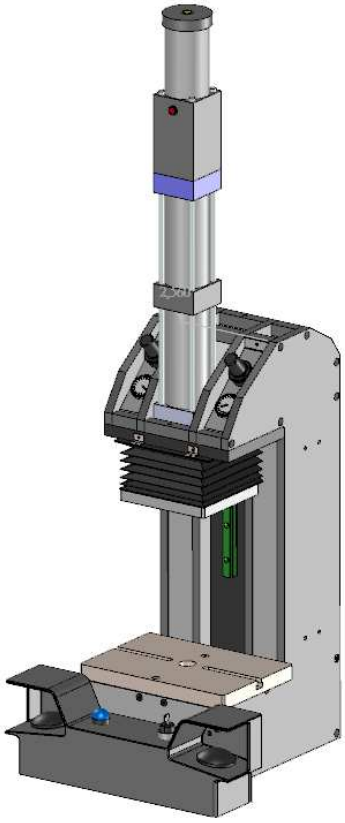




DIMENSIONS

MODEL	Weight Kg	A	B	C	D	E	F	G	H	L
L 09	100	1400	450	465	290	200	350	100	735	175
L 16	120	1400	450	465	290	200	350	100	735	175
L 24	160	1400	450	465	290	200	350	100	735	175
L 33	420	1600	520	680	500	270	435	160	1030	270
L 50	430	1600	520	680	500	270	435	160	1030	270

LM-Type

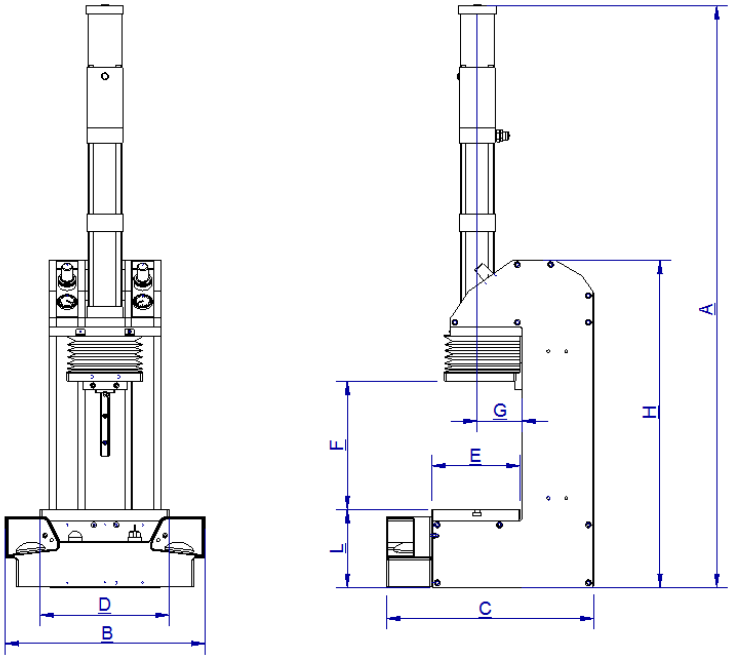


TECHNICAL FEATURES

LM-Type Hydropneumatic Presses are particularly machines indicated for all the processes that require a good strength with one relatively small displacement.
For the operation of these machines is just sufficient the connection to the compressed air network.
Using the E-Type Press Heads the speed and silence of compressed air are concentrated in one machine with hydraulic force.
The standard C structures allow maximum functionality of use:
at the customer's request, it's possible to customize the dimensions, thanks to the exclusive construction method.
The standard control system is designed to best meet the needs of most uses, however there are customizable schemes for specific needs

- 5 models with standard approach stroke 100 mm + 15 mm work
- Available thrusts range 9, 16, 24, 33, 50 kN at 6 bar pressure
- Mobile plate with ball recirculation and anti-rotation guide system
- Concentricity stem - bolster plate
- Max operating air pressure is 6 bar
- CE Certification

MODEL	Approach Thrust kN	Return Thrust kN	Work Thrust kN
LM 09	1,9	1.8	7,1
LM 16	1,9	1,8	14,1
LM 24	1,9	1,8	22,0
LM 33	4,0	3.4	29,3
LM 50	4,0	3,4	45,8



DIMENSIONS

MODEL	Weight	A	B	C	D	E	F	G	H	L
LM 09	110	1400	450	465	290	200	330	100	735	175
LM 16	130	1400	450	465	290	200	330	100	735	175
LM 24	170	1400	450	465	290	200	330	100	735	175
LM 33	430	1600	520	680	500	270	410	160	1030	270
LM 50	440	1600	520	680	500	270	410	160	1030	270

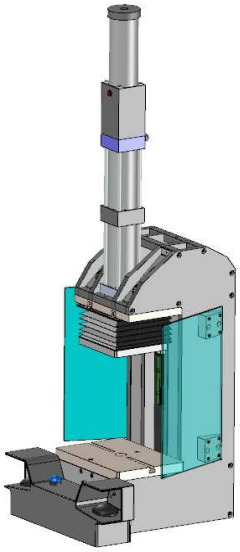
L / LM - Type Optional

RMA - Front Mechanical Adjustment

- Mechanical adjustment of the Lower Dead Point (PMI)
- Absolute repetitiveness of positioning
- Intrinsic safety due to the fact that there are no moving parts
- The force discharges itself directly on the unit
- Possibility of access to regulation near the upper plate
- Possibility of blocking in position
- Standard adjustment 10mm, higher adjustment ranges on request
- Applicable to all L / LM - Type press models

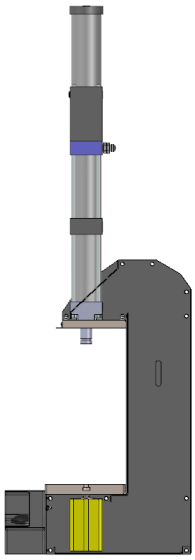
Side protections

- Transparent polycarbonate or aluminium bulkhead
- Applicable to all L / LM - Type press models



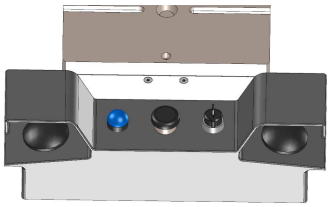
Ejector cylinder

- Placed under the bolster plate
- Single acting cylinder
- Applicable to all L/LM-Type presses



Central button

- To start the air supply system connection
- Monostable

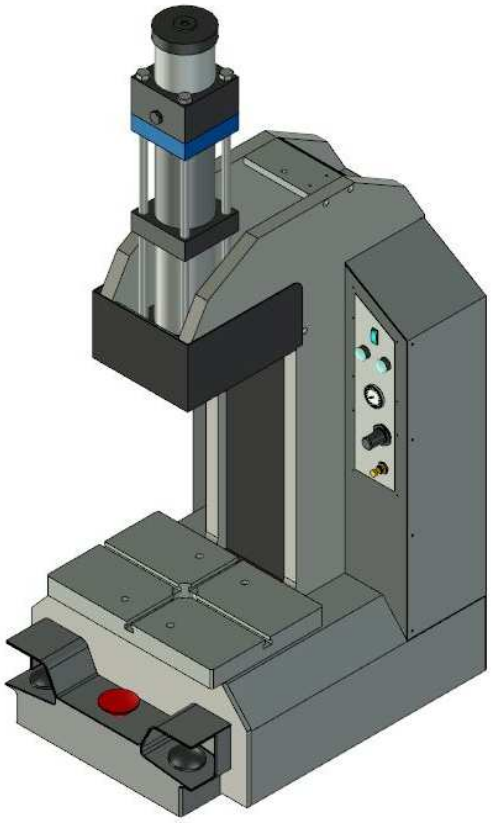


GN-Type

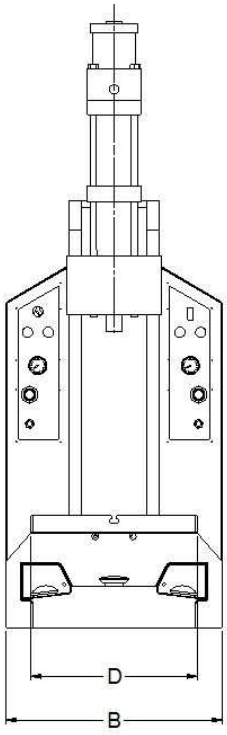
TECHNICAL FEATURES

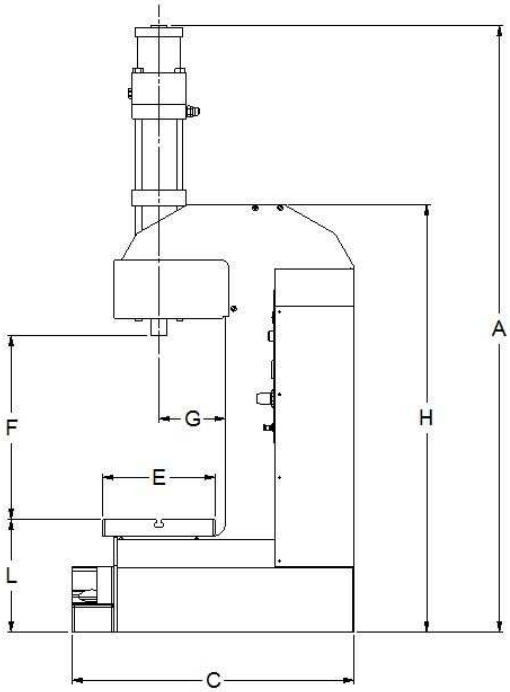
The GN-Type hydropneumatic Presses are particularely suitable for operations where a fair thrust and a relatively short stroke are required

- 6 models with 100 mm standard approach stroke + 15 mm work
- Available thrusts range from 22 to 235 kN at 6 bar pressure
- Optional mechanical adjustment RMA stroke
- Concentricity stem - bolster plate
- Max operating air pressure is 6 bar
- CE certification n° 211 ICIM



MODEL	Approach Thrust kN	Return Thrust kN	Work Thrust kN
GN 02	1,9	1,8	22,0
GN 05	4,0	3,4	45,8
GN 08	6,2	5,4	73,9
GN 12	6,2	5,4	115,5
GN 16	10,3	9,5	150
GN 25	16,5	15,4	235,3

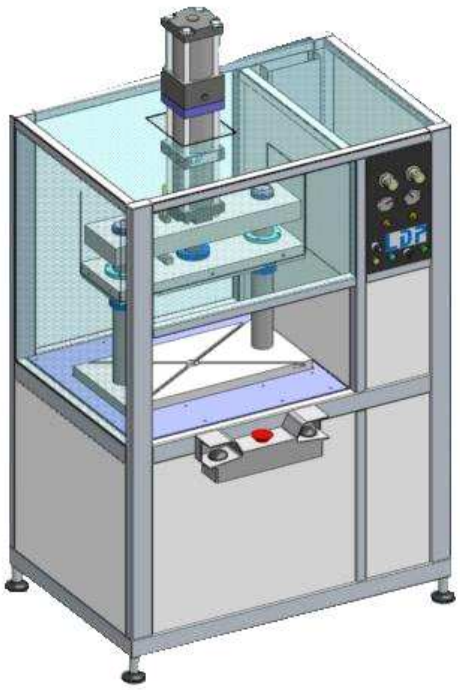




DIMENSIONS

MODEL	A	B	C	D	E	F	G	H	L
GN 02	1350	450	480	300	200	322	125	790	200
GN 05	1570	520	680	400	270	402	160	1028	270
GN 08	1725	590	735	450	300	404	180	1080	290
GN 12	1860	658	770	500	300	404	200	1175	340
GN 16	1954	658	840	500	340	440	200	1300	380
GN 25	2034	658	850	500	340	493	200	1410	405

DP-Type

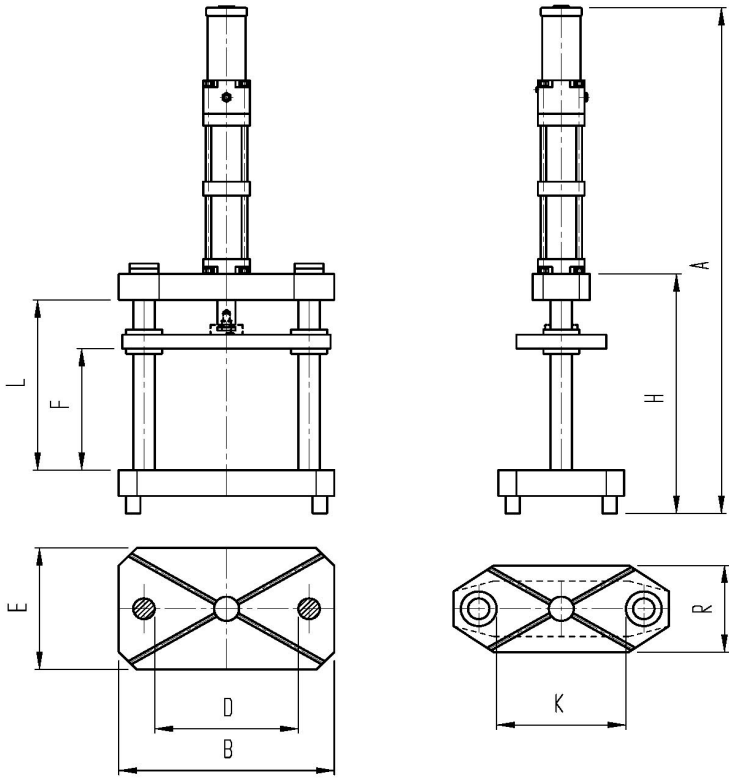


TECHNICAL FEATURES

DP-Type hydropneumatic Presses are particularly suitable machines for all processes that require a discrete force with a relatively small displacement.
They are built with pneumatic or electrical system,with two-hand control and safety light or movable barrier

- 6 models with 100 mm. standard approach stroke + 15 mm. work
- Available thrusts range from 22 to 235 kN at 6 bar pressure
- Optional mechanical adjustment RMA stroke
- Max operating air pressure is 6 bar
- CE Certification

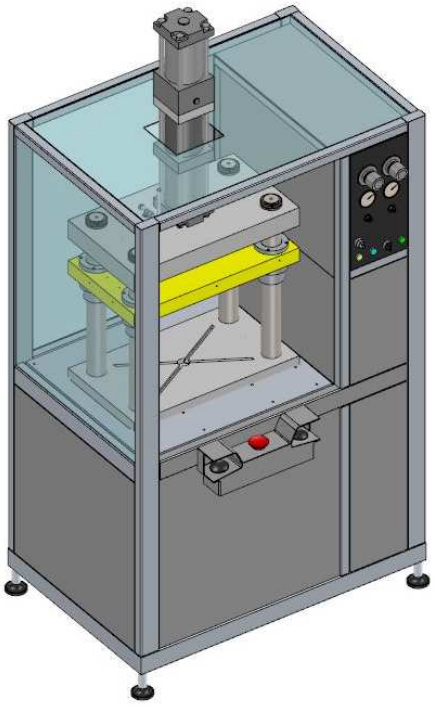
MODEL	Approach Thrust kN	Return Thrust kN	Work Thrust kN
DP 02	1,9	1,8	22,0
DP 05	4,0	3,4	45,8
DP 08	6,2	5,4	73,9
DP 12	6,2	5,4	115,5
DP 16	10,3	9,5	150
DP 25	16,5	15,4	235,3



DIMENSIONS

MODEL	A	B	D	E	F	H	K	L	R
DP 02	1372	500	360	300	350	615	335	455	200
DP 05	1482	600	400	350	380	720	375	520	250
DP 08	1600	600	400	350	380	720	375	520	250
DP 12	1750	725	500	350	400	790	475	550	250
DP 16	1880	725	500	400	400	790	475	550	300
DP 25	1752	725	500	400	400	790	475	550	300

QP-Type

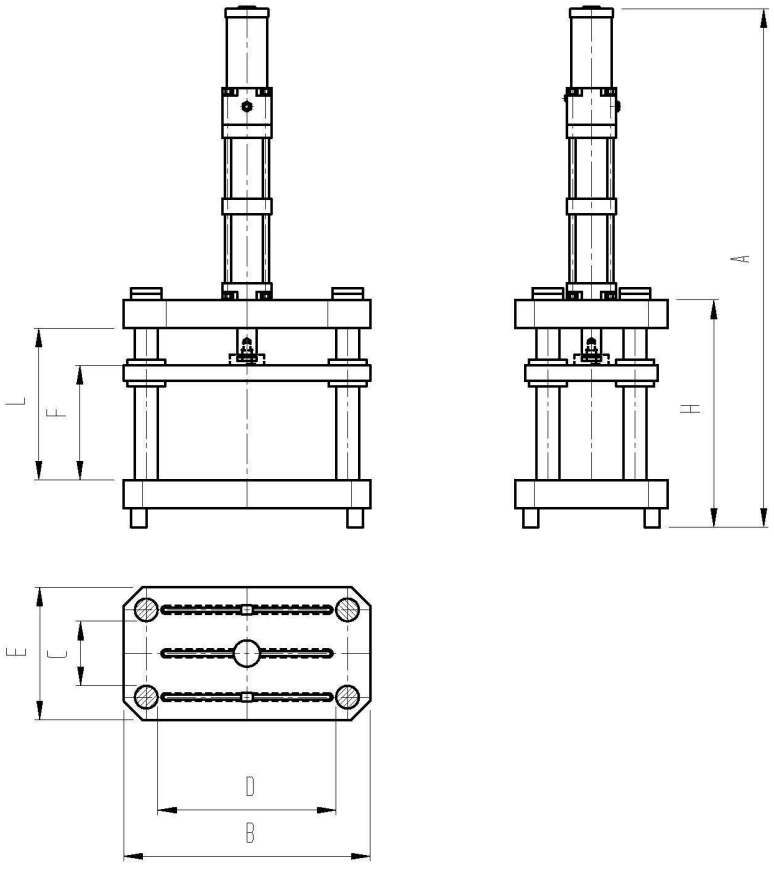


TECHNICAL FEATURES

QP-Type hydropneumatic Presses are particularly suitable machines for all processes that require a discrete force with a relatively small displacement.
They are built with pneumatic or electropneumatic system, with two-hand control and safety light or movable barrier

- 6 models with 100 mm. standard approach stroke + 15 mm. work
- Available thrusts range from 22 to 235 kN at 6 bar pressure
- Optional mechanical adjustment RMA stroke
- Max operating air pressure is 6 bar
- CE Certification

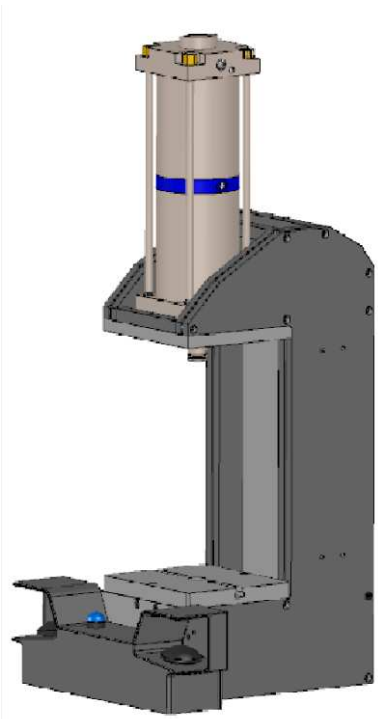
MODEL	Approach Thrust kN	Return Thrust kN	Work Thrust kN
QP 02	1,9	1,8	22,0
QP 05	4,0	3,4	45,8
QP 08	6,2	5,4	73,9
QP 12	6,2	5,4	115,5
QP 16	10,3	9,5	150
QP 25	16,5	15,4	235,3



DIMENSIONS

MODEL	A	B	C	D	E	F	H	L
QP 02	1372	550	210	410	350	350	790	455
QP 05	1482	650	220	470	400	380	1028	520
QP 08	1600	650	180	430	400	380	1080	520
QP 12	1750	750	160	510	400	400	1175	550
QP 16	1880	750	160	510	400	400	1300	550
QP 25	1752	800	260	560	500	400	1410	550

LP-Type

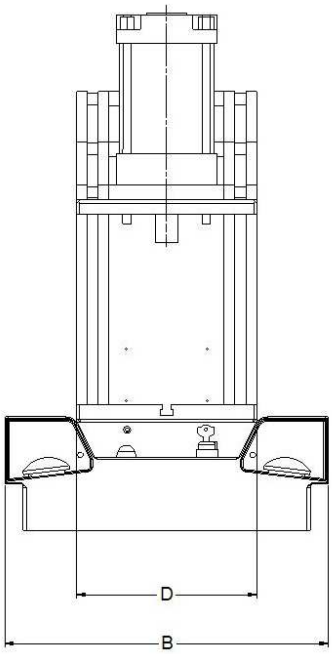


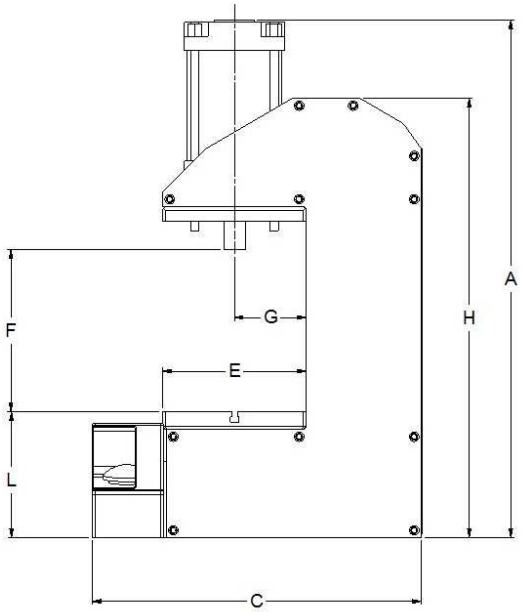
TECHNICAL FEATURES

The LP-Type pneumatic Presses are particularely flexibles, indicated for all assembly works where just pneumatic force is sufficient.
For the operation of these machines is necessary just the connection to the compressed air.
The standard C structures allow the best way of use; at the costumer's request, thanks to the exclusive contruction method, it's possible to obtain customized dimensions.
The bolster plate is provided of T-slots
The standard control system is designed to meet the needs of most applications, however, there are customizable patterns

- 4 models with standard stroke 115 mm
- Available thrusts range 4,4 kN, 6,9 kN, 14,2 kN e 20,8 kN at 6 bar
- Standard fully adjustable stroke for LP4 model
- Optional adjustment stroke for LP7 , LP14 , LP20 models
- Stem concentricity - bolster plate
- Max operating air pressure is 6 bar
- CE certification

MODEL	Return Thrust kN	Work Thrust kN
LP 4	4,2	4,4
LP 7	6,7	6,9
LP 14	6,7	14,2
LP 20	6,7	20,8

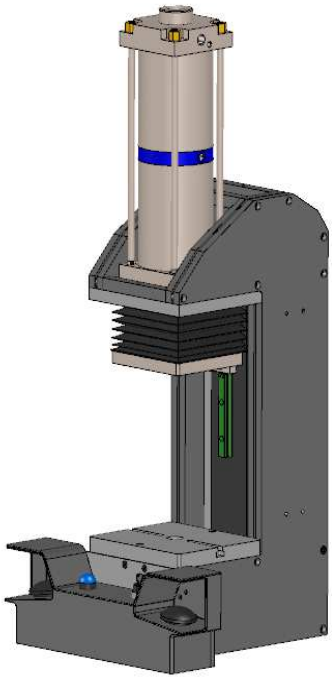




DIMENSIONS

MODEL	Weight kg	A	B	C	D	E	F	G	H	L
LP 04	90	900	450	460	230	200	350	100	735	175
LP 07	120	900	450	460	230	200	350	100	735	175
LP 14	130	1100	450	460	230	200	350	100	735	175
LP 20	170	1100	450	460	230	200	350	100	735	175

LPM-Type

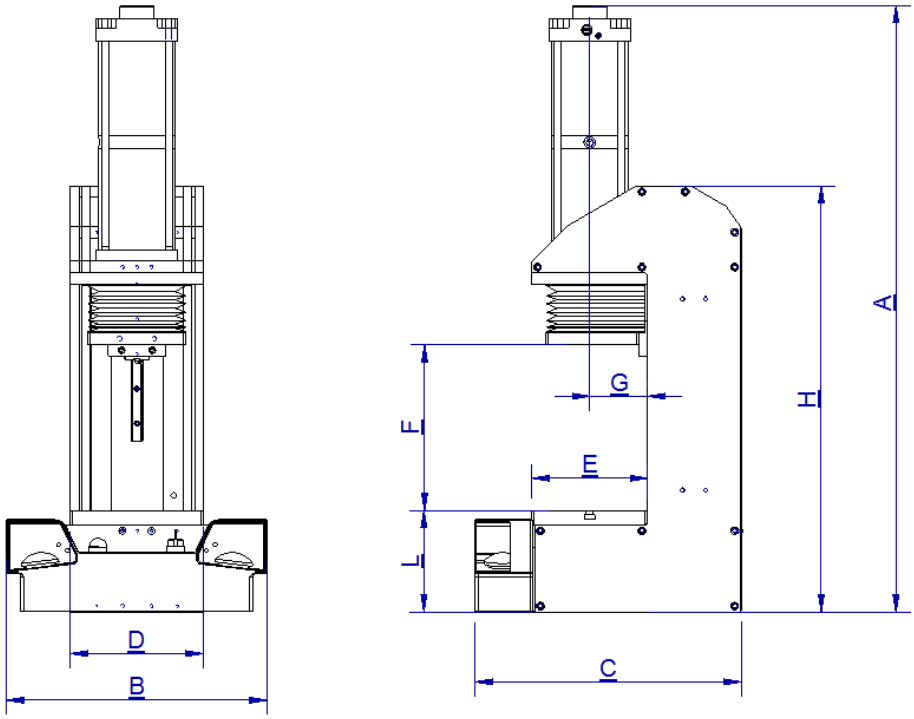


TECHNICAL FEATURES

The LP-Type Pneumatic Presses are an evolution of LP-Type: in this machines it's particularly easy to install a LC system in order to control the thrust during the work.
The mobile plate, connected to the stem and strictly guided, is suitable for all works that need a particular precision.
We highlight that, in order to optimizing the machine set-up, an automatic mold change system is available.
The standard C structures allow the best way of use; at the costumer's request, thanks to the exclusive contruction method, it's possible to obtain customized dimensions.
The standard control system is designed to meet the needs of most applications, however, there are customizable patterns

- 4 models with standard stroke 115 mm
- Standard fully adjustable stroke for LP4 model
- Rapid mold change system available
- Thrust control system available
- Customizable mobile plate supply
- CE certification

MODEL	Return Thrust kN	Work Thrust kN
LPM 04	4,2	4,4
LPM 07	6,7	6,9
LPM 14	6,7	14,2
LPM 20	6,7	20,8



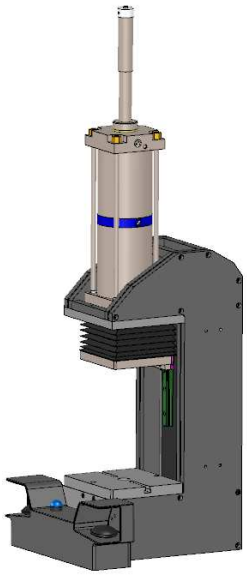
DIMENSIONS

MODEL	Weight kg	A	B	C	D	E	F	G	H	L
LPM 04	100	900	450	460	230	200	330	100	735	175
LPM 07	130	900	450	460	230	200	330	100	735	175
LPM 14	140	1100	450	460	230	200	330	100	735	175
LPM 20	180	1100	450	460	230	200	330	100	735	175

LP / LPM -Type Accessories

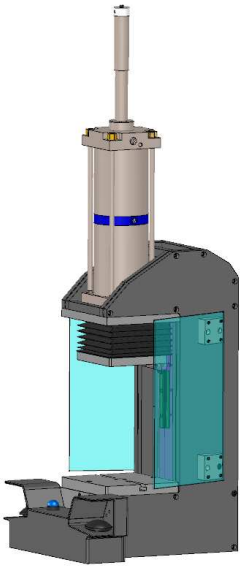
RMP: Version with mechanical adjustment of the stroke

- Mechanical adjustment of the stroke
- Absolute repetitiveness of positioning
- Intrinsic safety due to the fact that there are no moving parts
- The force discharges itself directly on the unit
- Possibility of access to regulation near the upper plate
- Possibility of blocking in position
- Possibility of fully adjustable stroke
- Applicable to all LP / LPM - Type press models



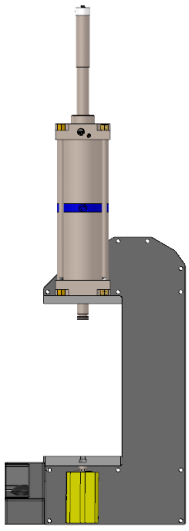
Side protections

- Transparent polycarbonate or aluminium bulkhead
- Applicable to all LP / LPM - Type press models



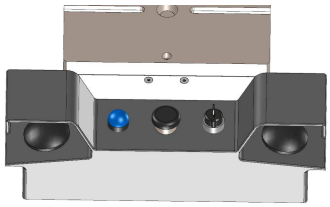
Ejector cylinder

- Placed under the bolster plate
- Single acting cylinder
- Applicable to all LP/LPM-Type presses

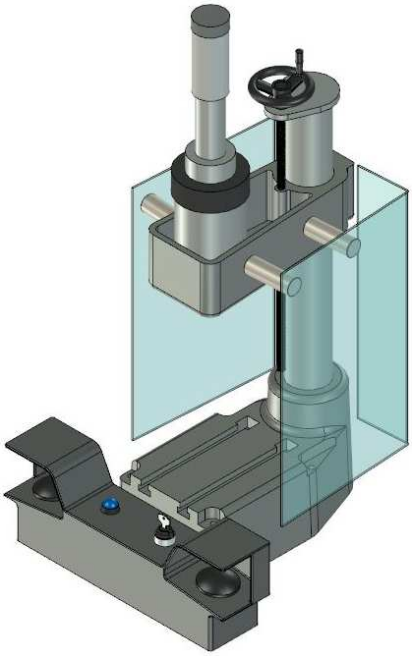


Central button

- To start the air supply system connection
- Monostable



CP-Type

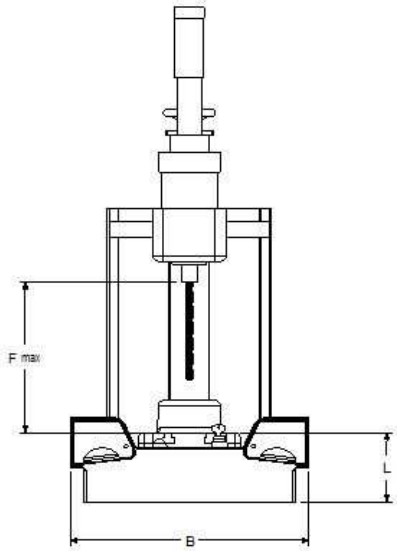


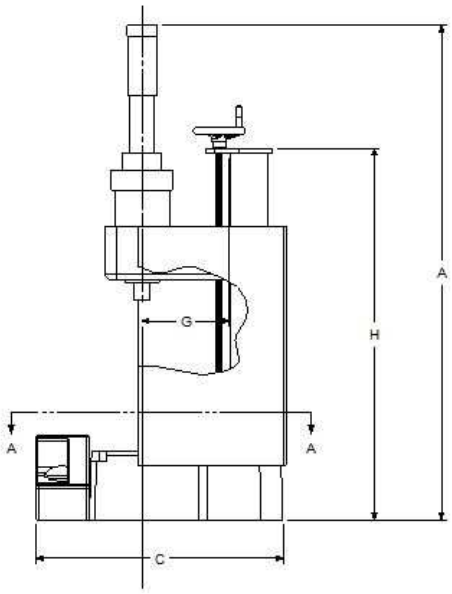
TECHNICAL FEATURES

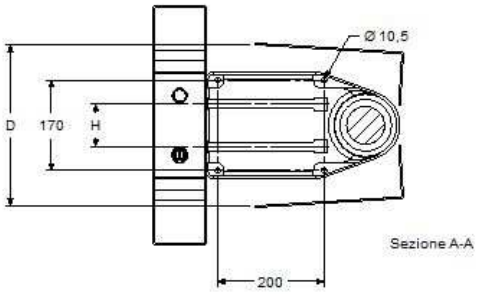
The CP-Type pneumatic Presses are particularely flexibles, indicated for all assembly works where a lean structure is required.
For the operation of these machines is just necessary the connection to the compressed air.
The column structures with adjustable heigh allow the best way of use.
At the costumer's request , thanks to the exclusive contruction method, it's possible to obtain the customized heigh of the column and the stroke of cylinder.
The spheroidal cast iron bolster plate is provided of T-slots
The standard control system is designed to meet the needs of most applications, however, there are customizable patterns

- 2 models with standard stroke 100 mm
- Fully adjustable stroke
- Standard anti rotation system
- Adjustable height position of the cylinder
- CE Certification

MODEL	Return Thrust kN at 6 bar	Work Thrust kN at 6 bar
CP 2	1,7	2,1
CP 4	4,1	4,4







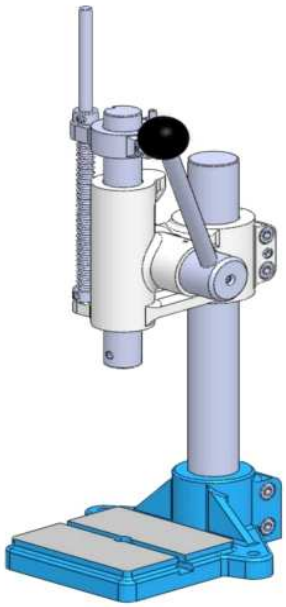
DIMENSIONS

MODEL	Weight kg	A	B	C	D	F	G	H	L	Bolster plate
CP 2	75	1070	450	480	280	415	165	700	130	200×200
CP 4	80	1070	450	480	280	415	165	700	130	200×200

CR-Type

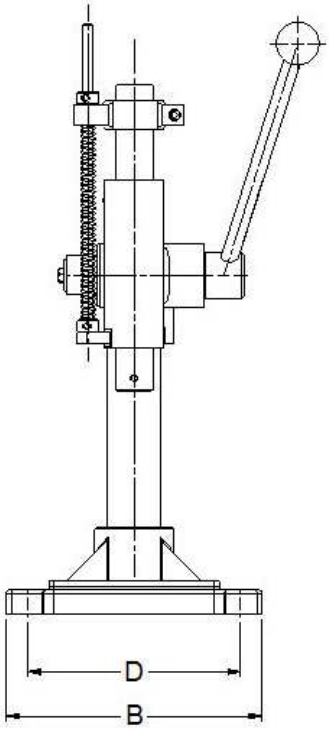
TECHNICAL FEATURES

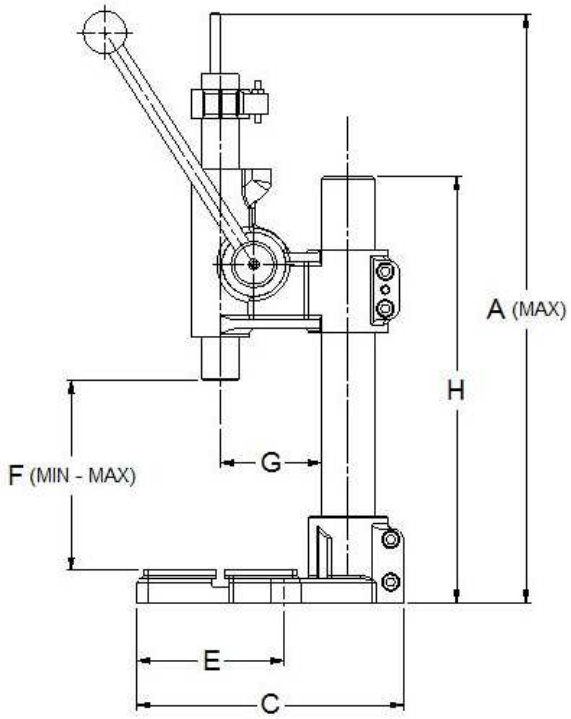
The CR-Type manual Presses are particularely flexibles, indicated for all assembly works where operator force is sufficient.
The column structures with height adjustable allow the best way of use.
At the costumer's request, it's possible to obtain the customized height of the column and the stem stroke .
The bolster plate is provided of T-slots



- 3 models with standard stroke as shown in table
- Available thrusts range 1,9 kN, 3,9 kN and 4,9 kN
- Mechanical adjustment of stroke
- Anti-rotation system
- CE Certification

MODEL	Work Thrust kN	Stroke mm
CR 2	1,9	0 ÷ 50
CR 3	3,9	0 ÷ 80
CR 4	4,9	0 ÷ 100





DIMENSIONS

MODEL	Weight kg	A	B	C	D	E	F	G	H
CR 2	8	470	100	165	60	84	60 ÷ 200	72	327
CR 3	17	600	192	210	165	127	40 ÷ 270	65	380
CR 4	25	650	240	250	200	138	50 ÷ 280	80	400

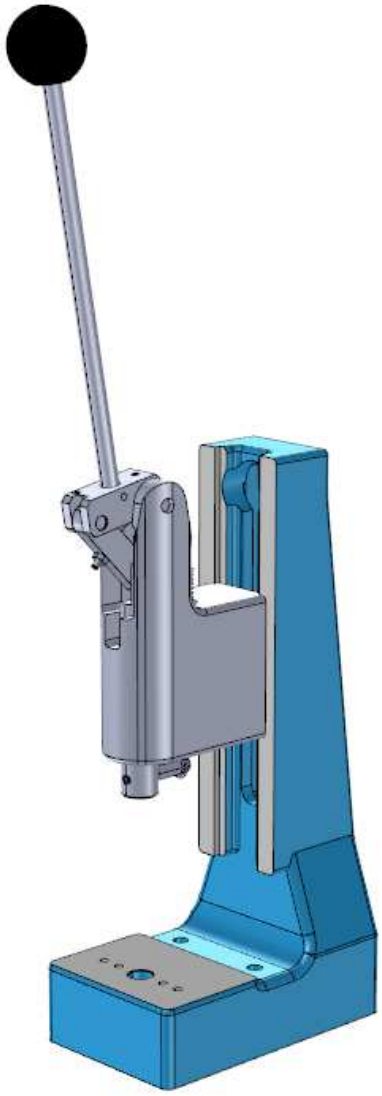
CG-Type

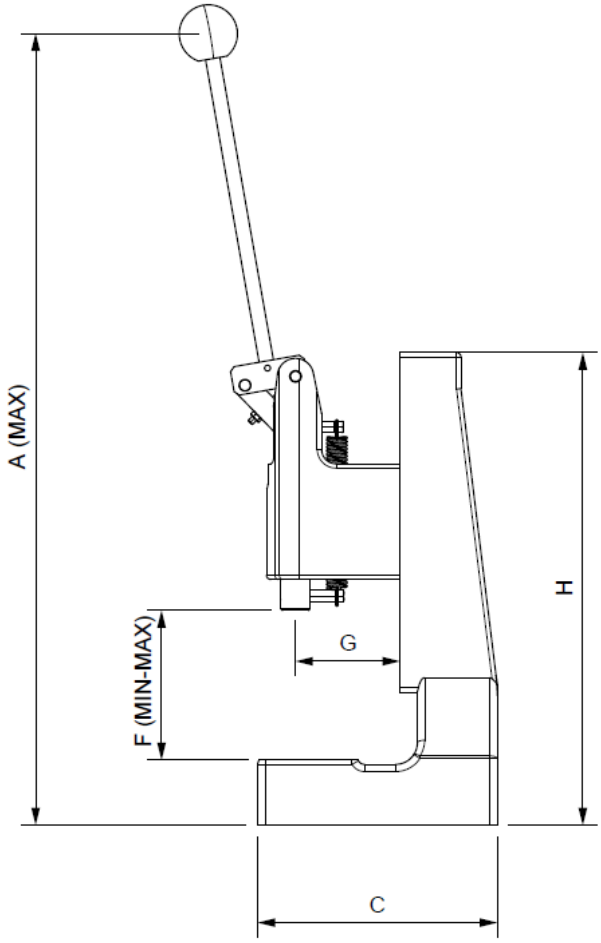
TECHNICAL FEATURES

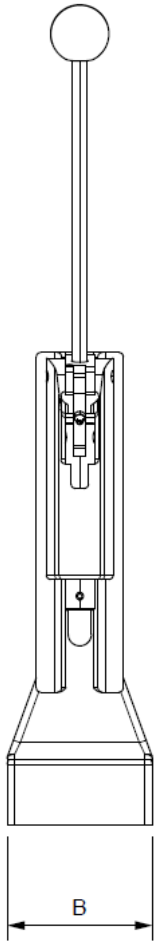
CG-Type Articulated Lever Presses are particularly flexible machines, suitable for all assembly operations.
The height-adjustable structures allow the best way of use: at the customer's request, it's possible to customize the press

- 4 models with standard stroke as shown in table
- Available thrusts range 4,9 kN, 6,8 kN, 14,7 kN and 19,6 kN
- Mechanical adjustment of the stroke
- Anti-rotation system
- CE certification

MODEL	Work Thrust kN	Stroke mm
CG5	4,9	50
CG7	6,8	40
CG15	14,7	30 or 60
CG20	19,6	60



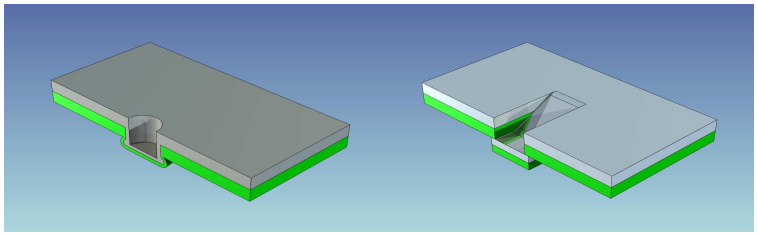


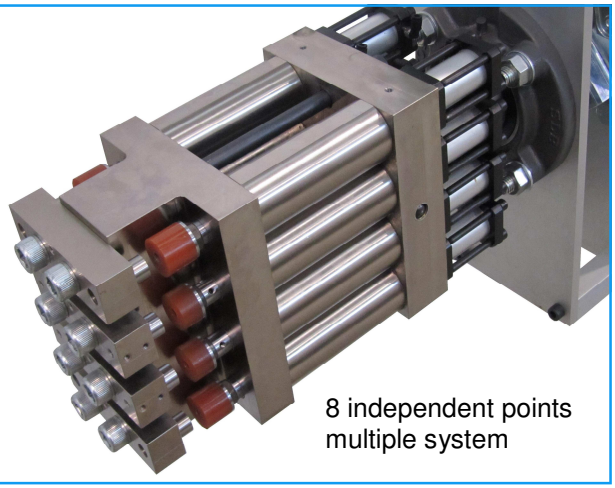


DIMENSIONS

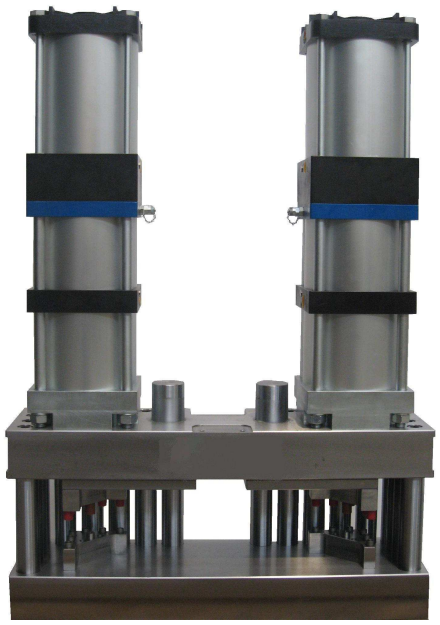
MODEL	Weight kg	A	B	C	F	G	H	Max rotation corner of the lever	Hole centering	Bolster plate
CG5	9	580	100	165	42 ÷ 185	72	327	90°	14 H7	100 x 70
CG7	25	700	240	250	35 ÷ 260	80	400	90°	14 H7	160 x 145
CG15	32	880	200	285	60 ÷ 250	102	497	90°	32 H7	200 x 180
CG20	65	990	220	350	120 ÷ 280	130	650	90°	32 H7	220 x 200

Clinching System





8 independent points multiple system



Automatic machine 2 independent stations multiple clinching

FEATURES

Rapidity of execution of union

- Similar to spot welding
- More rapid than riveting
- More rapid than tightening of screws

Low cost of execution

- Less expensive than other technologies
- Elimination of predrilled
- There is no need of any type of preparation

Noxious fumes elimination

- Cold processing, without fumes production

Ability to join pre-painted or galvanized sheets

(this possibility isn't allowed in spot welding)

Ability to join different materials sheets

- Example: copper+aluminium, steel+galvanized sheet etc

Ability to join inox steel sheets

High performance

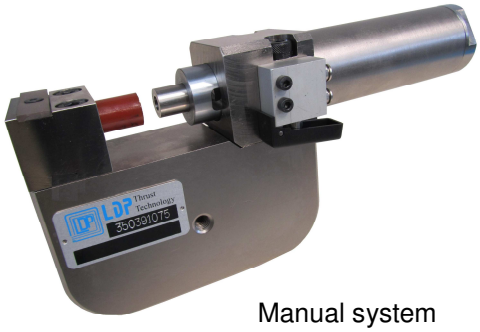
- The speed of execution and the above described give a high economic advantage

Good resistance of the union

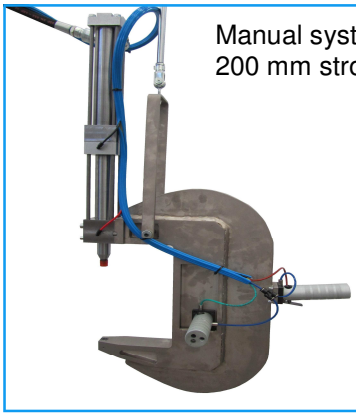
- About 70% in relation of welding

Self-drilling riveting machine

Manual machine adjustable height



Manual system



Manual system 200 mm stroke

System mod.CRA

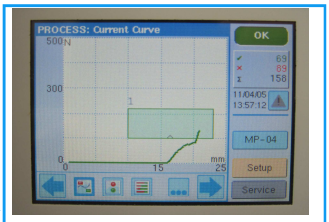
Quality control

FEATURES

All the LDP hydropneumatic presses and each single unit can be supplied with a series of control systems and measuring instruments to satisfy the requirements of quality control during the production phase.
LDP manufactures control systems with the possibility of installing lights and sounds customized for interfacing with the operator.
The most commonly used systems are:

- Thrust—shift control system
- Load cells
- Position transducers
- Manometers
- Pressure transducers

GN-Type press with thrust - shift system



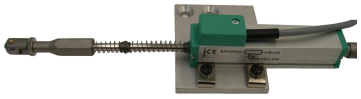
Graphic detail

Thrust reading tool reporting OK - NOK pieces

Sound and visual reporting OK - NOK pieces

Reporting not compliance with 2 programs

GN-Type press with RMA and position transducer



Position transducer

Load cell with reading instrument

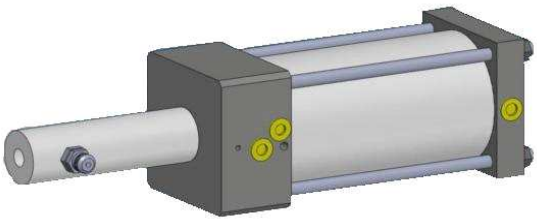
GN-Type press with load cell and reading instrument

Check couplings with a working pressure

Height pressure manometers

Pressure transducer

M-Type



GENERAL FEATURES

The AIR - OIL pressure multipliers are hydropneumatic systems that take advantage of the “principle of the hydraulic press” in order to increase the pressure of a fluid: by means of a difference of section between two rigidly connected pistons raise the pressure of the fluid according to a certain ratio.
LDP multipliers are worked inside using CNC machines in order to ensure the quality.
Every particular (when it’s necessary) is treated superficially in order to ensure a strong resistance against usury and corrosion.
Furthermore, LDP manufactures special multipliers for pressure over 1000 bars, for anthropomorphic robots use or according to the different needs of the customer

- 32 standard models
- Standard models moltiplication ratio of 1÷9 to 1÷100
- Possibility of fixing with compatible accessories in compliance with ISO6431 norm
- Volumetric adjustment optional
- HS version (High Speed) for rapid use optional
- Helds for different types of fluid optional (ex. water, DOT4, etc..)

MODELS AND FEATURES

MODEL	MULTIPLICATION RATIO	6 bar PRESSURE	VOLUME (cc)
MD 62 - 07	62	370	7.5
MD 27 - 16	27	160	16.9
MD 15 - 30	15	90	30.1
MD 09 - 47	9	55	47.1
MJ 64 - 11	64	380	11.7
MJ 32 - 23	32	190	23
MJ 25 - 30	25	150	30.1
MJ 16 - 47	16	90	74.1
MJ 10 - 73	10	60	73
MX 69 - 16	69	410	16.9
MX 51 - 23	51	300	23
MX 39 - 30	39	230	30.1
MX 25 - 47	25	150	47.1
MX 16 - 73	16	90	73
MX 11 - 106	11	60	106

MODEL	MULTIPLICATION RATIO	6 bar PRESSURE	VOLUME (cc)
MP 61 - 30	61	366	30.1
MP 39 - 47	39	234	47.1
MP 25 - 73	25	150	73
MP 17 - 105	17	102	105
MP 12 - 144	12	75	144
MW 100 - 30	100	600	30.1
MW 64 - 47	64	380	47.1
MW 41 - 73	41	240	73
MW 28 - 106	28	170	106
MW 21 - 144	21	125	144
MW 16 - 188	16	96	188
MH 100 - 47	100	600	47.1
MH 64 - 73	64	380	73
MH 44 - 106	44	260	106
MH 32 - 144	32	190	144
MH 25 - 188	25	150	188
MH 16 - 294	16	96	294

COME ORDINARE CORRETTAMENTE:
ORDERING CODE

M				-					
M				-					

	RAPP. MOLTIPLICAZIONE / MULTIPLYING RATIO
D	09 - 15 - 27 - 62
J	10 - 16 - 25 - 32 - 64
X	11 - 16 - 25 - 39 - 51 - 69
P	12 - 17 - 25 - 39 - 61
W	16 - 21 - 28 - 41 - 64 - 100
H	16 - 25 - 32 - 44 - 64 - 100

Modello
Model

	VOLUME / VOLUME
MAGNETE	M

RVP	REG. VOL POSTERIORE *REAR ADJUSTMENT*
RVA	REG. VOL ANTERIORE *FRONT ADJUSTMENT*
HS	VERSIONE ALTA VELOCITA' *HIGT SPEED*

H2O	GUARNIZIONI PER H2O *SEALS FOR H2O*
DT4	GUARNIZIONI PER DOT4 *SAELS FOR DOT4*

Esempio / *Example* :
MD62-07MRVAH2O
Moltiplicatore MD 62-07 , magnetico con regolazione volumetrica anteriore e guarnizioni per acqua
MD62-07MRVAH2O
Booster MD 62-07 , magnetic with front adjustment and seals for water

CAO-Type

TECHNICAL FEATURES

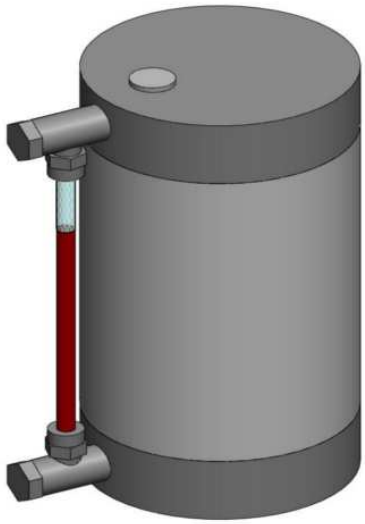
The air - oil cylinders have hydraulic work stroke, that can be leaded by a M-Type multiplier or by an hydraulic control unit, and the pneumatic return stroke.
If requested they can be passing rod (CAOR) or pulling rod (CAOT)

MODEL	BORE Ø mm	Standard Stroke mm	P MAX bar
CAO032/0100	32	100	200
CAO040/0100	40	100	200
CAO050/0100	50	100	200
CAO063/0100	63	100	200
CAO080/0100	80	100	200
CAO100/0100	100	100	200

Air - oil exchanger Tanks

TECHNICAL FEATURES

We manufacture air - oil exchangers, aluminium or painted iron tanks for compressed air on demand



AIR - OIL EXCHANGER ALUMINIUM	BORE Ø mm	VOLUME cc	P MAX bar
65155V1CC50AL	40	50	10
65155V1CC500AL	80	500	10
65155V1CC1000AL	80	1.000	10
65155V1CC1500AL	80	1.500	10

AIR - OIL EXCHANGER PLASTIC	BORE Ø mm	VOLUME cc	P MAX bar
65155CC50PL	40	50	2,5
65155CC500PL	80	500	2,5

AIR TANKS ALUMINIUM	BORE Ø mm	VOLUME LT	P MAX bar
SM1550053AL	155	5	14
SM2063104AL	206	10	14
SM206154AL	206	15	14

AIR TANKS IRON	BORE Ø mm	VOLUME LT	P MAX bar
EU51551023FEBLU	200	5	11
EU51551025FEBLU	200	12	11

UDC-Type

TECHNICAL FEATURES

The UDC - Type Contrast Units are used when it's necessary to contrast a push.
In particular, to avoid oversizing the support piece on automatic assembly lines, it is advisable to apply this type of unit: thus the force exerted by the thrust unit is downloaded on the contrast unit and the chain isn't solicited

MODEL	THRUST 6 bar kN	STROKE mm	PRELOAD STROKE SEALS
UDCTT80-100	48	100	YES
UDCKK25-100	15	100	YES
UDCDD19-100	11	100	YES
UDCDD38-100	22	100	YES
UDC111-100	60	100	NO

BK-Type

TECHNICAL FEATURES

We realize double effect pneumatic locking systems.
The shape of BK-Type locks is compact, designed to have an encumbrance as small as possible.
The body of the locks is made of steel with anti-corrosion treatment.
The pins, that move themselves inside the support compasses are hardened, ground and secured with retaining rings.
On request, it's possible to customize or create locks according to customer specifications

- Closing position 90 ° vertically or horizontally.
- 2 standard versions
- 3 sizes for each version

VERTICAL VERSION

MODEL	OPENING	CLOSING THRUST	WEIGHT
125.91	90°	1,27 kN	0,7 kg
300.91	90°	3,43 kN	1,8 kg
500.91	90°	5,01 kN	3,4 kg

HORIZONTAL VERSION

MODEL	OPENING	CLOSING THRUST	WEIGHT
125.91	90°	0,63 kN	0,7 kg
300.91	90°	1,71 kN	1,8 kg
500.91	90°	2,55 kN	3,4 kg

ED-Type

TECHNICAL FEATURES

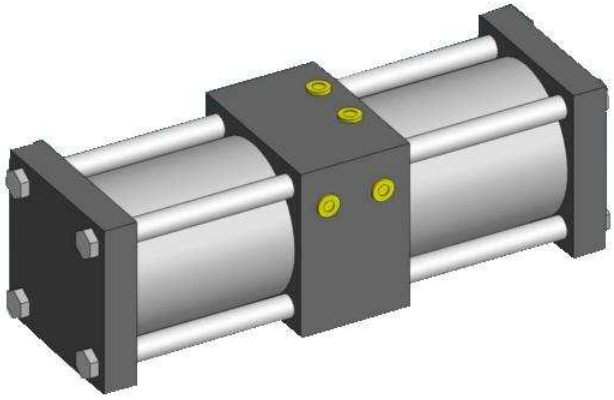
- Mobile unit minimum weight thanks to the perforated rod
- Unit separated from mounting accessories
- Large choice of standard accessories
- Double effect
- Simple rod version, passing rod and passing rod powered from the stems
- Compact construction, no protrusion from the outer diameter of the tube
- Tube made of painted steel or with the possibility of anti corrosion treatments
- With or without decelerator
- Stop noise at stroke end, cushioned by rubber contact
- Possibility of rotating heads in order to dephase the powering connections
- Possibility of positioning the regulation screw of the decelerator on the right or on the left of the powering connection

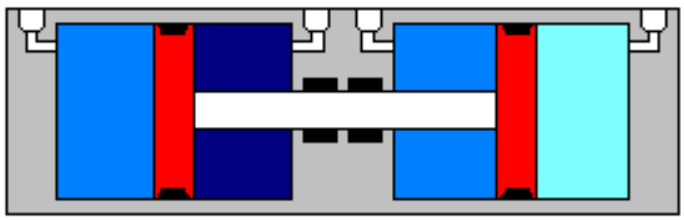
Cilinder diameter	**mm**	**32**	**40**	**50**	**63**	**80**	**100**	**125**
Connections supply	gas	1/8”	1/4”	3/8”	3/8”	1/2”	1/2”	1/2”
Operating pressure	bar	Min. 0,6 - Max. 10						
Max. cinetic energy absorbable by decelerator	kgm	0,1	0,14	0,2	0,6	1,1	2,4	3,5
Operating temperature	°C	Min. –10 - Max. +50						
Stem diameter	mm	12	12					
	mm		16	16				
	mm			20	20	20		
	mm				25	25	25	
	mm					32	32	32
	mm						40	40
	mm							50

MA-Type

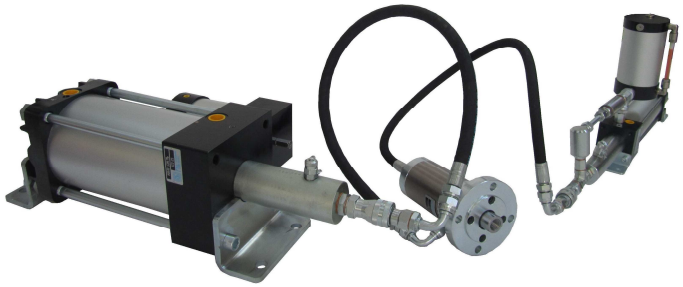
TECHNICAL FEATURES

The principle of operation of the AIR-AIR pressure multipliers is based on the pump effect of a cylinder with four rooms, where alternately adds the force generated by the thrust of two rooms that compress the air in multiplication room.
With a suitable circuitry , normally internal unit itself, the pressure multiplier pumps air in the downstream circuit with repeated cycles until reaching a value that compared to the input pressure is approximately double
All details that require it are superficially treated to ensure a high resitance against usury and corrosion.
LDP provides air - air multipliers according to different customer’s needs



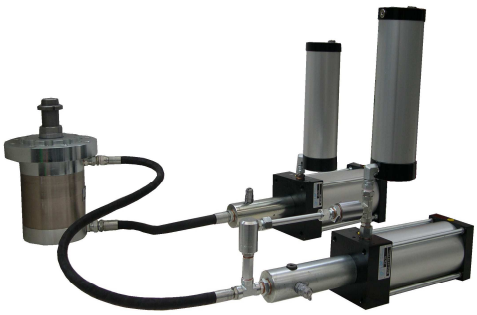


Special units
Applications



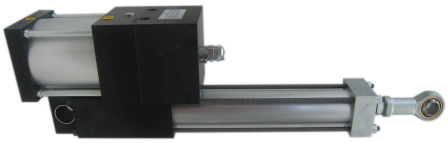
Separated unit composed of oil - oil custom cylinder, low friction for approaching with low pressure, MW and MX multipliers. For construction industry. thrust 20 kN, return thrust 50 kN

Separated unit composed of air - oil custom cylinder and MH multiplier. For construction industry. Thrust 130 kN

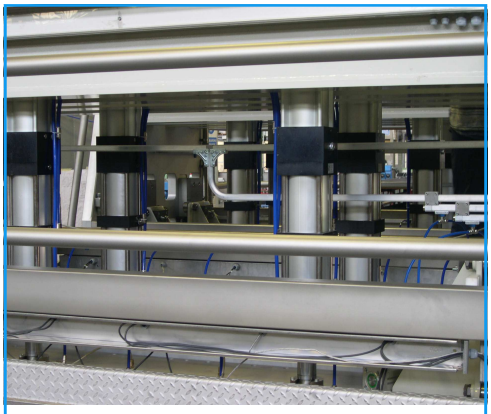


Separated unit composed of oil - oil custom cylinder and n.2 MP multipliers. Thrust 200 kN

Pneumatic cylinder with Positioner. For petrochemical industry



Hydropneumatic unit. Thrust 30 kN. For textile industry



Hydropneumatic units. For alimentar industry. Thrust 80 kN

Air - oil custom cylinder. For militar industry

Set square contrast unit. Thrust 60 kN

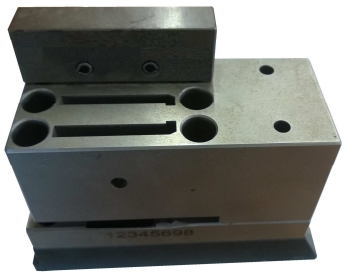
Oil - oil cylinder change tool work center

Tractor air - oil cylinder

Air - water cylinder anti-intrusion

Hydropneumatic unit. Automotive industry. Thrust 50 kN

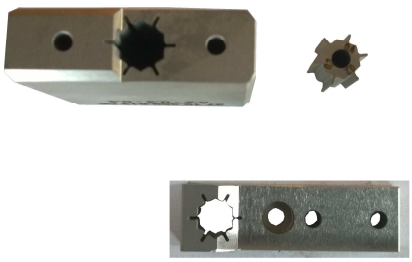
Molds
Custom Equipment



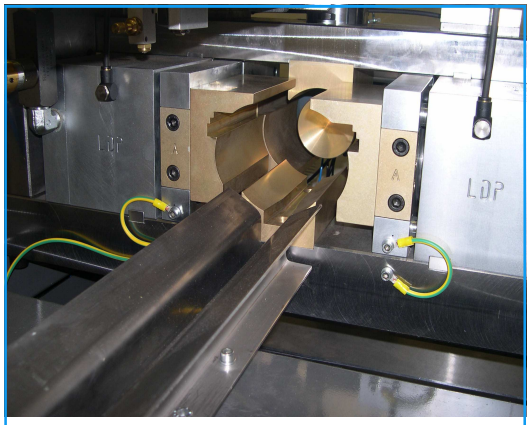
Rectangular drilling mold

Drilling mold

Fitting mold



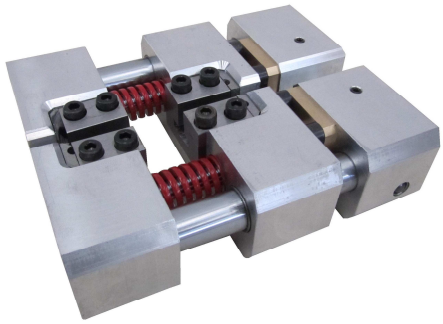
Shaped shearing mold



Shearing mold shaped parts.
ATEX environment

Multiple clinching mold

Shearing mold and e multiple clinching

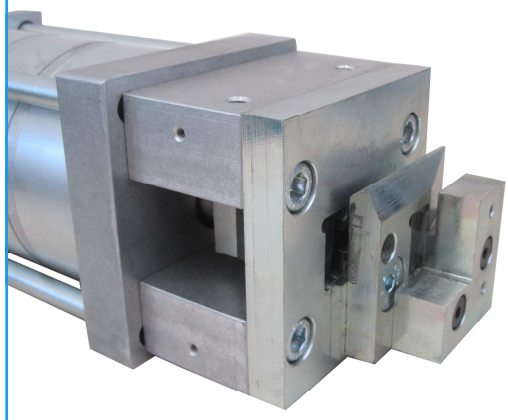


Hydraulic equipment wire cutting

Clinching mold with thrust - shift control system

Pneumatic clamp.
Thrust 3kN

Hydraulic equipment of height compensation for the pressing works



Shearing pneumatic equipment

Derived Machines
Custom Machines

Transport industry. Thrust 1+1

Industry sector.
Thrust 200 kN

Industry sector. Thrust 20 kN

Industry sector.
Thrust 20 kN

Industry sector.
Thrust 50 kN

Industry sector. Thrust 16+16 kN

Industry sector.
Thrust 14 kN

Appliance industry,
Thrust 16 kN

Automotive industry.
Thrust 4 + 4 kN

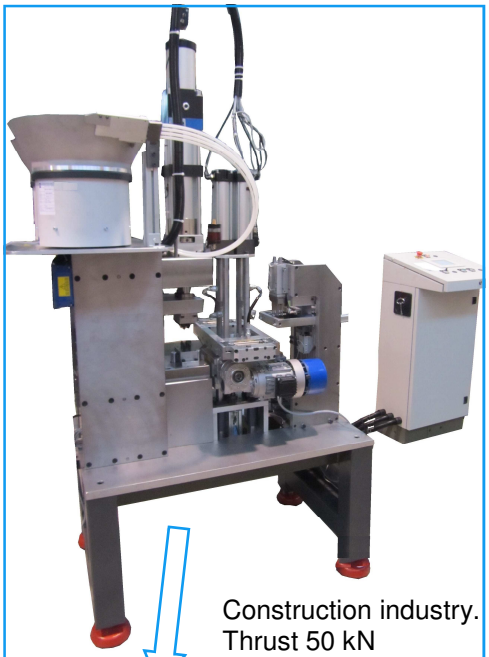
Textile industry.
Thrust 7 kN

Derived Machines
Custom Machines

Militar industry. Thrust 250 kN

Automotive industry. Thrust 160 kN

Automotive industry. Thrust 30 kN

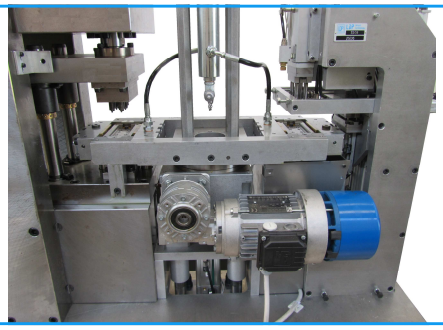


Construction industry.
Thrust 50 kN

Automotive,industry.
Thrust 12 kN

Automotive Industry.
Thrust 14 kN

Transport industry.
Thrust 1 kN



Building industry. Thrust 120 kN

Derived Machines
Custom Machines

Building industry. Thrust 80 + 80 kN

Building industry. Thrust 20 kN

Automotive industry. Thrust 30 kN

Industry sector. Thrust 75 kN

Automotive industry. Thrust 5 and 25 kN

Industry sector.
Thrust 14 kN

Petrochemical industry. Thrust 5 kN stroke 1.600 mm

Industry sector.
Thrust 7kN

Derived Machines
Custom Machines

DP 08 F Press

Press GN02F and Press GN05F

Press GN05 with rotary table

Industry sector, thrust 50 kN

Industry sector, thrust 9 kN

Pharmaceutical sector, thrust 75 kN

Automotive sector, thrust 35 kN

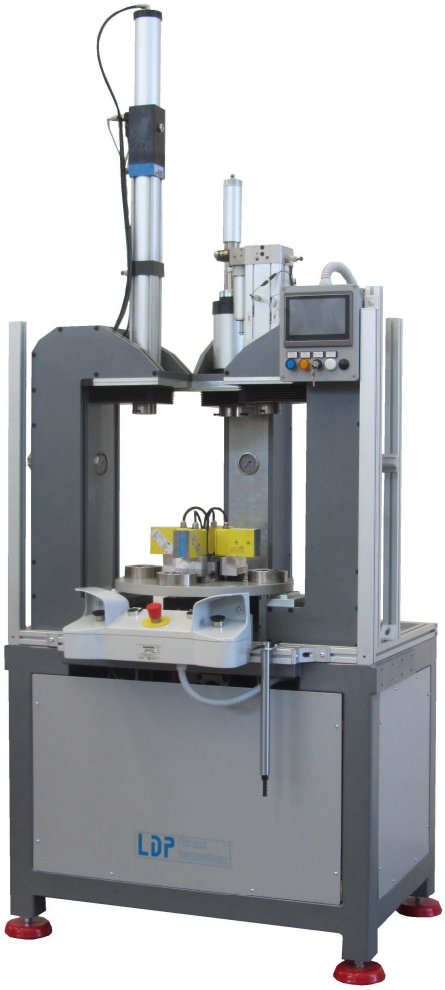
Manual press, thrust 4 kN

Manual press with pneumatic vise

Manual press, thrust 4 kN

Derived Machines
Custom Machines

Automotive sector, thrust 50 + 100 kN



Industry sector, thrust 16 + 4 + 4 kN

Industry sector, thrust 50 kN

Automotive sector

QP 05 E press

Handling
Transport Systems

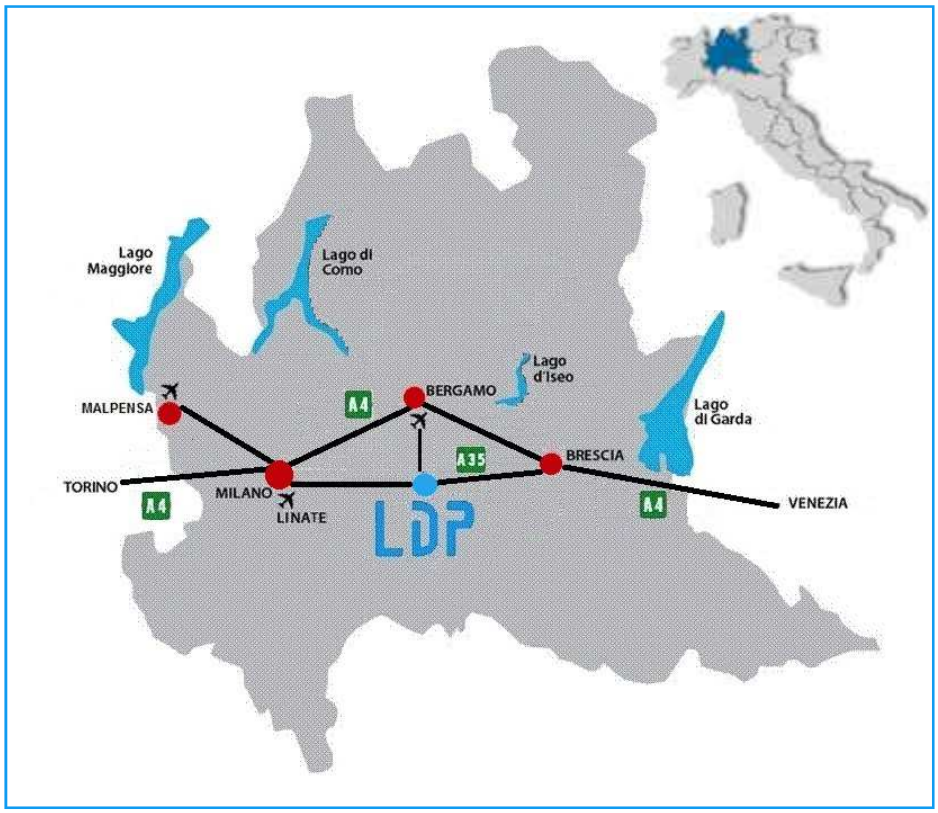
Automatic machine supply

Slide for automatic machine discharge

Supporting pieces for manual loading machine supply

Lift system
2 kN thrust

Safety Guard
Work Bench



PRODUCTION PROGRAM *:*

E-Type, CS-Type, KS-type & Specials Head Presses
Pneumatic presses, Gooseneck & Columns Hydropneumatic Presses, Manual Presses
Special Machines, Clinching Systems, Quality Controls Systems, Locking Systems
Air - Oil Pressure Multipliers, Air - Air Pressure Multipliers
Air - Oil Cylinder, Special Pneumatic Cylinder

LDP thrust technology

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