



## 1. GENERAL & APPLICATION

Pneumatic Cylinder is the element that control the compressed air energy and transform it.

Converting pneumatic energy into mechanical energy, these cylinders consist of a combination of parts such as the front and back cover, cylinder tube, piston rod and sealing.

The CO<sub>2</sub> gas that coming from release station push forward to the piston than rod begins linear extension movement. The rod opens master valve and release CO<sub>2</sub> into the system.

During operation the rod is always forward. If emergency over; pneumatic cylinders inlet should be open and release CO<sub>2</sub> that in the system so that let close the master valves manually.

For example of pneumatic cylinder please see Fig 1.1.



FIGURE 1.1

## 2. INSTALLATION

During installation pneumatic cylinder must fastening as seen as your uniq project drawing which given by ALMAR.

Be sure the pneumatic cylinder valve is not damaged.

End user is responsible for applying all safety precautions.

Before begin to the installation make cylinder to the “+” position as shown as Fig. 2.4.

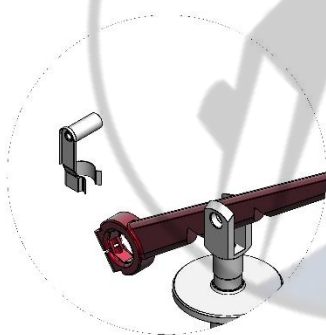


FIGURE 2.1

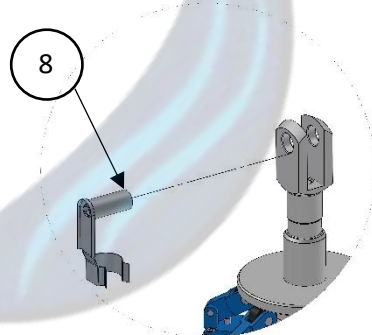


FIGURE 2.2

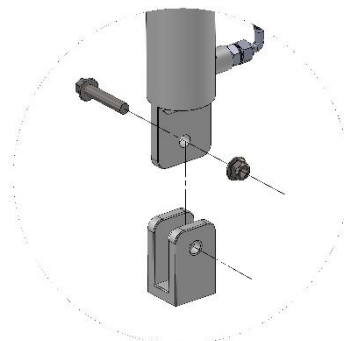


FIGURE 2.3

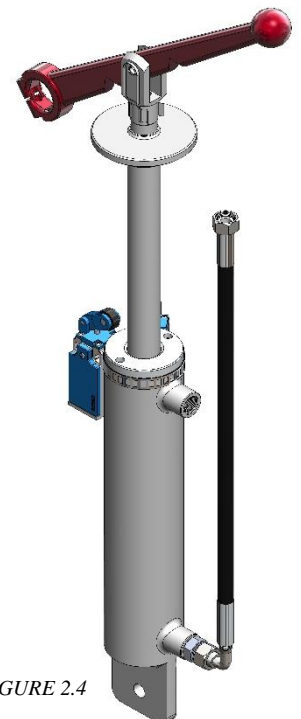


FIGURE 2.4



Connect valve arm to the cylinder as shown as Fig.2.1 use pin for fix valve arm to the cylinder.

While pneumatic cylinder is free position scale dimension for proper foundation dimesions. Weld proper foundation and assamble cylinder as shown as Fig.2.3.

When assamble completed pneumatic cylinder should be circular movable as much as valve arm.

### 3. MECHANICAL PROPERTIES

Inlets and outlets are Female 1/4". For other mechanical details please see table 4.1 below.

AL20-4031	Stroke	200 [mm]	T <sub>MIN</sub> / T <sub>MAX</sub> -20 °C / 100 °C
	Max Operating Pressure	150 [bar]	
	Test Pressure	225 [bar]	
	Medium	CO <sub>2</sub>	

### 4. ACCESSORIES

#### I. CO2 PILOT HOSE WITH 6 MILIMETER ADAPTOR

CO<sub>2</sub> pilot hose comes assembled on pneumatic cylinder. The hose makes connection, between pneumatic cylinder and release station. For mechanical properties and technical drawings please see datasheet of CO<sub>2</sub> Hose (AL20-40024Rev00).



#### II. LIMIT SWITCH 121

The pneumatic piston has assambled 2 limit switches as shown as figure 5.1/5.2. In emergency situations if system activated, one of the switches, switch on the alarm and the other switch off the ventilation.

For more detail please see datasheet of limit switch (AL20-40031Rev00).

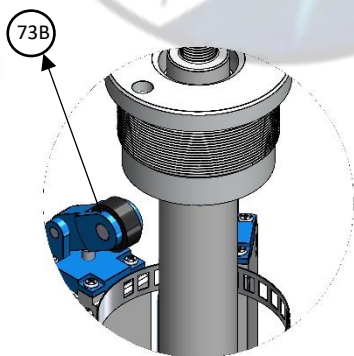


FIGURE 5.1

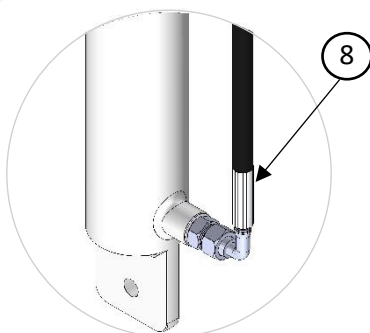
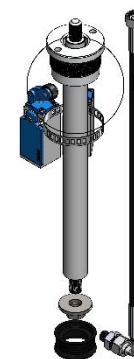
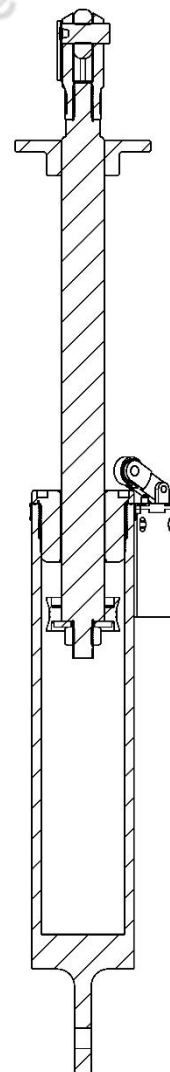
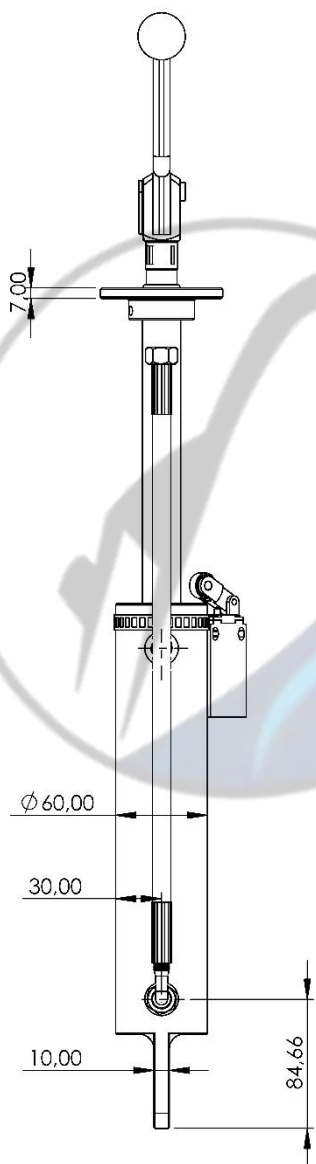
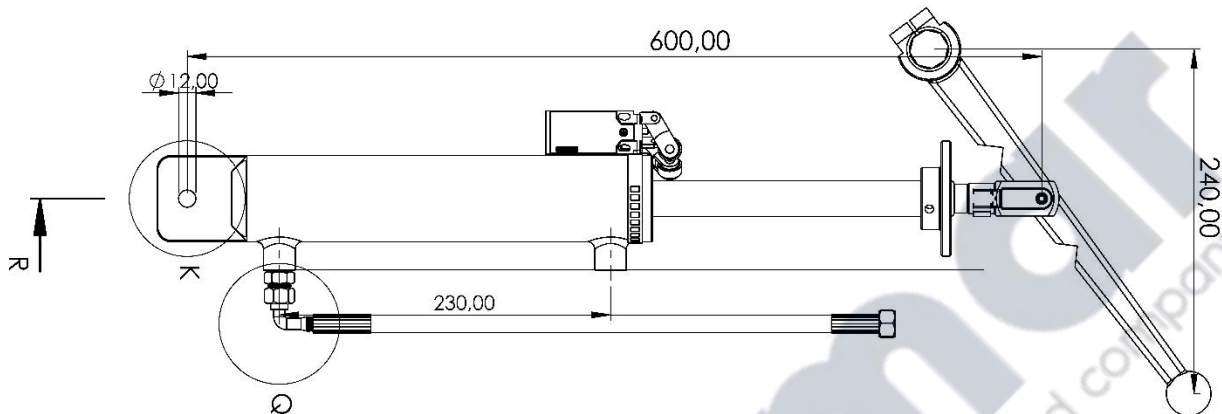


FIGURE 5.2





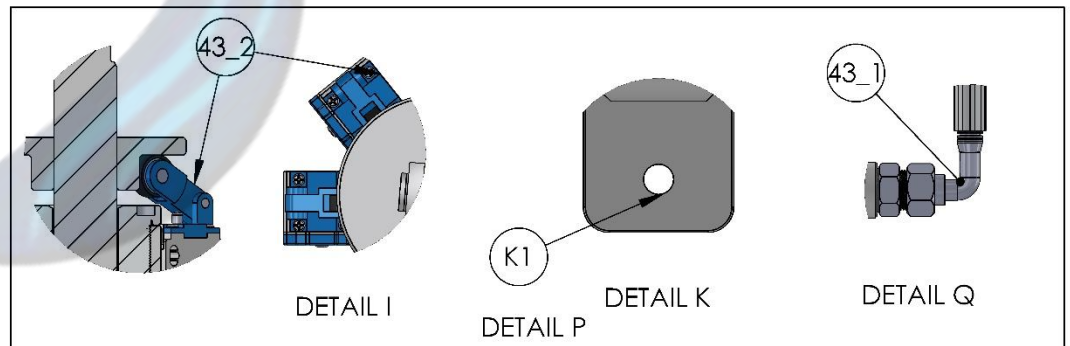
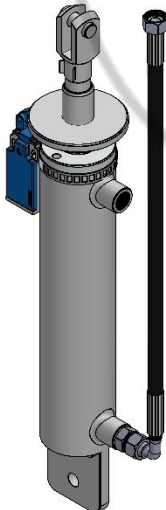
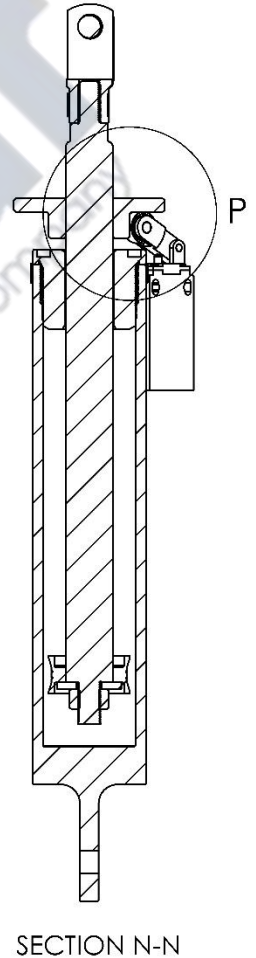
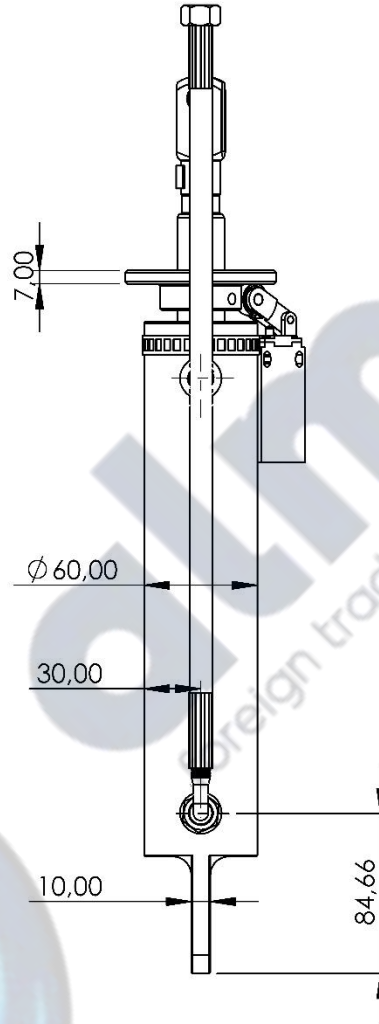
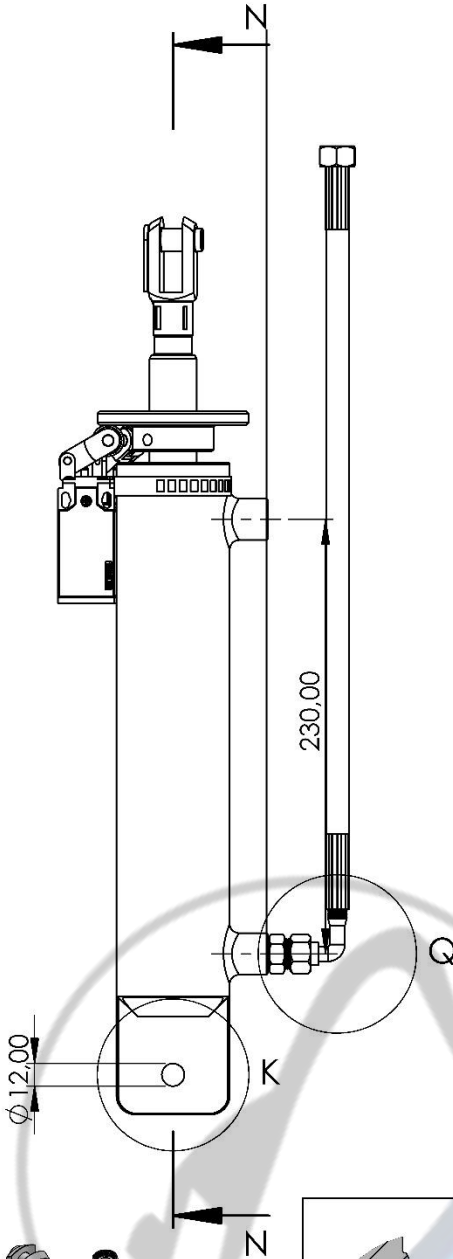
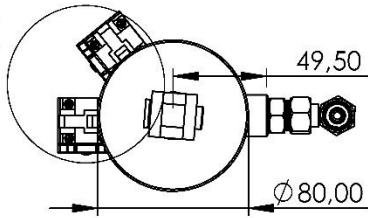
**5. DIMENSIONS & TECHNICAL DRAWINGS**



# PNEUMATIC CYLINDER

**COMMENT:** Pneumatic cylinder comes fastened with 2 limit switches (AL20-40031) as shown as 74B at detail F. Please see Datasheet AL20-40029Rev01 for more information.

**NOTE:** ALL DIMENSIONS ARE GIVEN AS MILLIMETERS



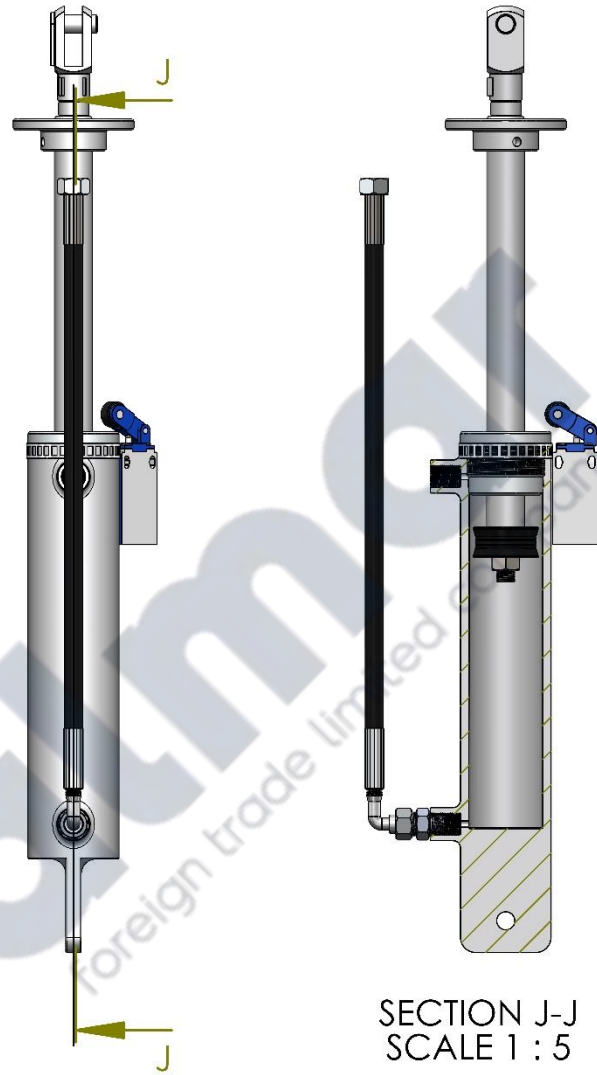
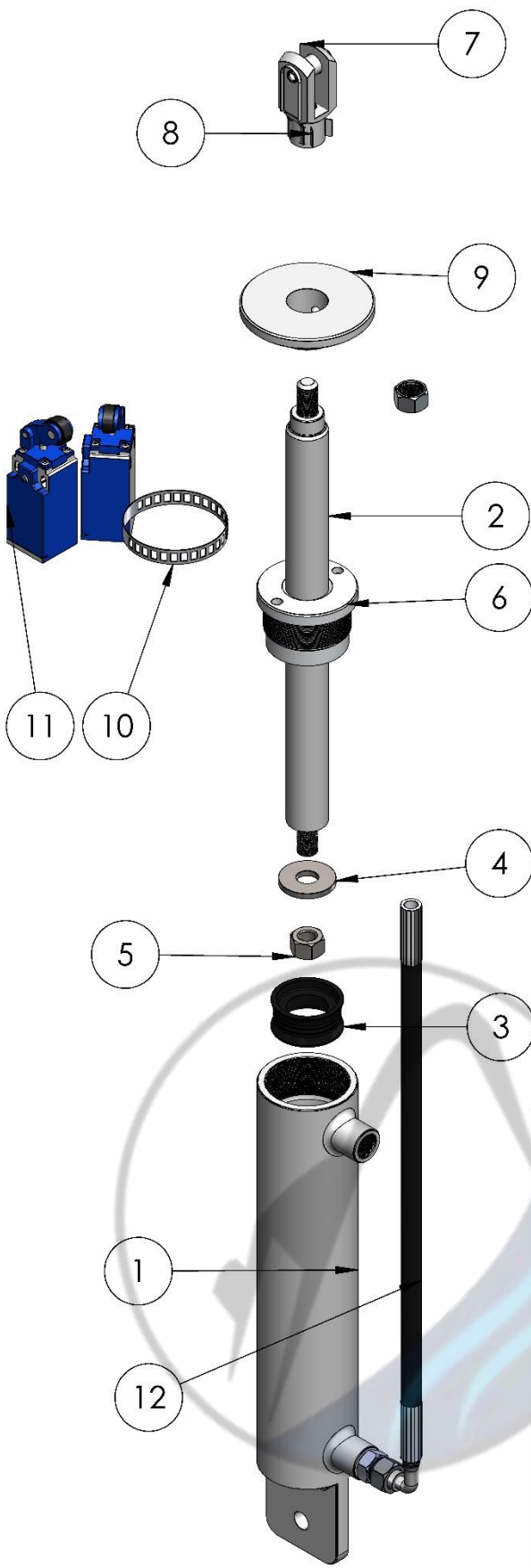
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DESIGNED BY: ALİ ARMAĞAN	CHEKED BY: ÇAĞLAR LATİFOĞLU	APPROVED BY: ERDİNÇ LATİFOĞLU	DATE: 09/09/2020	SCALE:	1:3



PROJECT / PRODUCT: PNEUMATIC CYLINDER

WEIGHT: -	MATERIAL: -	REVISION: Sept20-Rev01	SHEET	1
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# PNEUMATIC CYLINDER



SECTION J-J  
SCALE 1 : 5

PARTS OF AL20-40029

PART NO.	POS. NO.	PROUDUCT NO.	PROUDUCT NAME
1	-	-	CYLINDER BODY
2	-	-	CYLINDER SHAFT
3	-	-	RUBBER
4	-	-	WASHER M12
5	-	-	NUT M12
6	-	-	CYLINDER HEAD
7	-	-	CYLINDER TOOL
8	-	-	TOOL CLAMP
9	-	-	TRIGGER TOOL
10	-	-	SWITCH CLAMP
11	43_2	AL20-40031	LIMIT SWITCH 121
12	43_1	AL20-40024	HOSE

DRAWING NO:	POS. NO. 43	PROUDUCT NO: AL20-40029	DATASHEET: AL20-40029Rev01	PAGE: A4
DESIGNED BY: ALİ ARMAĞAN	CHEKED BY: ÇAĞLAR LATİFOĞLU	APPROVED BY: ERDİNÇ LATİFOĞLU	DATE: 09/09/2020	SCALE: 1:3



PROJECT / PROUDUCT: PNEUMATIC CYLINDER

WEIGHT: -	METARIAL: -	REVISION: Sep20-Rev01	SHEET 2
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