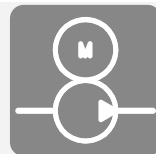


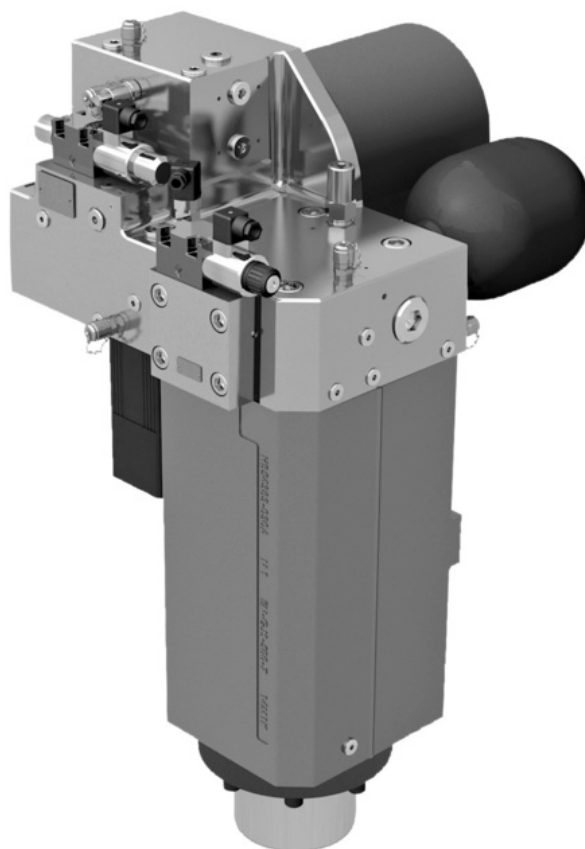
# Control for CNC press brakes type ePrAX<sup>®</sup> max

## Product documentation



max. pressing force per actuator:  
working stroke:

850 kN  
280 mm



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## Overview control for CNC press brakes type ePrAX max

The patented, speed-controlled ePrAX® max is a complete electrohydraulic drive (including cylinder) for press brakes. It is characterized by a simple mechanical and electrical connection.

Speed control takes place separately for each actuator via the ePrAX drive regulator. This drive has been specially optimized for press brakes and offers a particularly high level of safety due to the targeted utilization of the temporarily stored drop energy for the retraction stroke. Dynamics with significant energy savings. This principle allows efficient operation without additional cooling. The required oil volume here is only 10 % compared to conventional drives.

### Features and benefits:

- nominal force per machine: 1,100 - 1,700 kN (with two ePrAX)
- rapid speed: up to 230 mm/s
- working speed: 10 mm/s
- positioning accuracy: 5 µm
- work stroke: 280 mm (standard)
- Each closed drive unit must be fixed with only 9 screws.
- high system rigidity of the closed hydraulic system ensures exact control accuracy
- long maintenance intervals of at least 7,000 hours
- complies with valid accident prevention regulations
- certified with type examination certificate no. 13005

### Intended applications

- press brakes

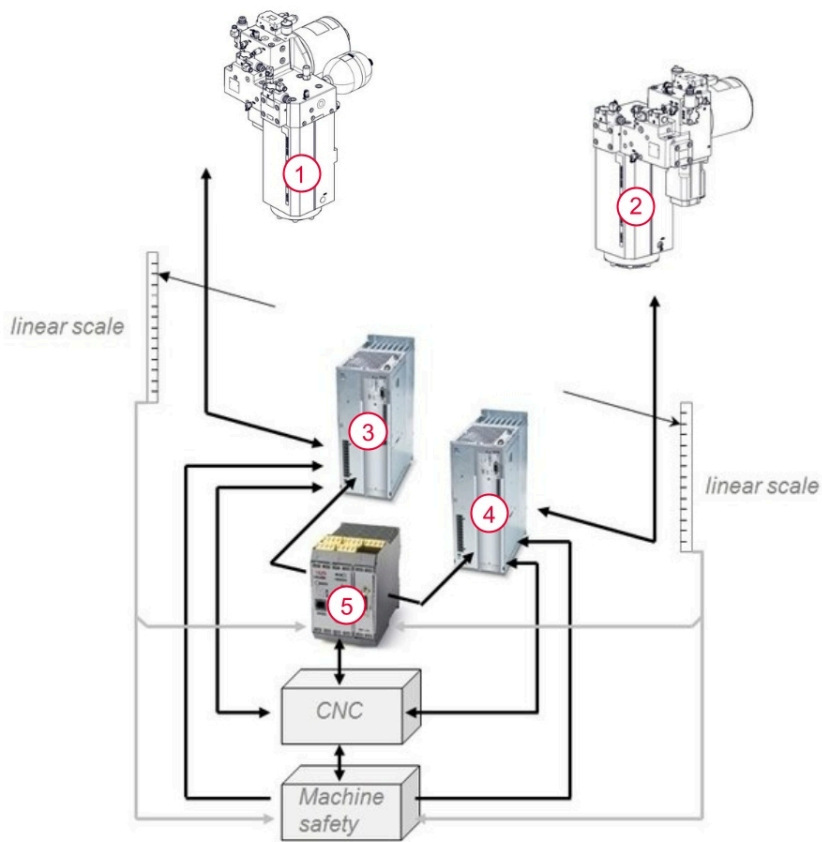
## 2 Available versions

### Type code

| ePrAX® max | 15-055 | - | 28 | - | 1 | - | W | S | 145  |
|------------|--------|---|----|---|---|---|---|---|--|
|            |        |   |    |   |   |   |   |   |  |
|            |        |   |    |   |   |   |   |   | <b>piston rod pressure</b> e. g. 145 bar   |
|            |        |   |    |   |   |   |   |   | <b>safety control</b> 0: without safety control<br>S: with safety control                                |
|            |        |   |    |   |   |   |   |   | <b>controller</b> W wall mounting (standard)   |
|            |        |   |    |   |   |   |   |   | <b>optional</b>  |
|            |        |   |    |   |   |   |   |   | <b>working speed</b> 10 mm/s   |
|            |        |   |    |   |   |   |   |   | <b>stroke</b> 280 mm   |
|            |        |   |    |   |   |   |   |   | <b>size</b> 15-055: pressing force 550 kN per ePrAX® max<br>19-085: pressing force 850 kN per ePrAX® max |

basic version

## 2.1 Structure




|   |                        |   |                           |
|---|------------------------|---|---------------------------|
| 1 | press drive, left      | 4 | drive controller, right   |
| 2 | press drive, right     | 5 | safety control (optional) |
| 3 | drive controller, left |   |                           |

## 3 Parameters

### 3.1 General data

|  |  |
|--|--|
| <b>weight per actuator</b>   | ePrAX® max 15: 420 kg<br>ePrAX® max 19: 600 kg           |
| <b>ambient temperature</b>   | 0 to +40 °C  |
| <b>mounting position</b>   | vertical   |
| <b>corrosion protection</b>  | surface protected by corrosion protection fluid          |
| <b>press force</b>   | ePrAX® max 15: 550 kN<br>ePrAX® max 19: 850 kN           |
| <b>working stroke</b>  | 280 mm   |
| <b>rapid traverse rate</b>   | max. 230 mm/s  |
| <b>working speed</b>   | max. 10 mm/s   |
| <b>permitted weight of pressing bar including tools per actuator</b> | ePrAX® max 15: 600-1100 kg<br>ePrAX® max 19: 900-1200 kg |

 For two-cylinder CNC press brakes according EN 12622 the following is applicable: maximum tilting of the pressing bar must be limited mechanically through machine construction to 15 mm.

### 3.2 Electrical data

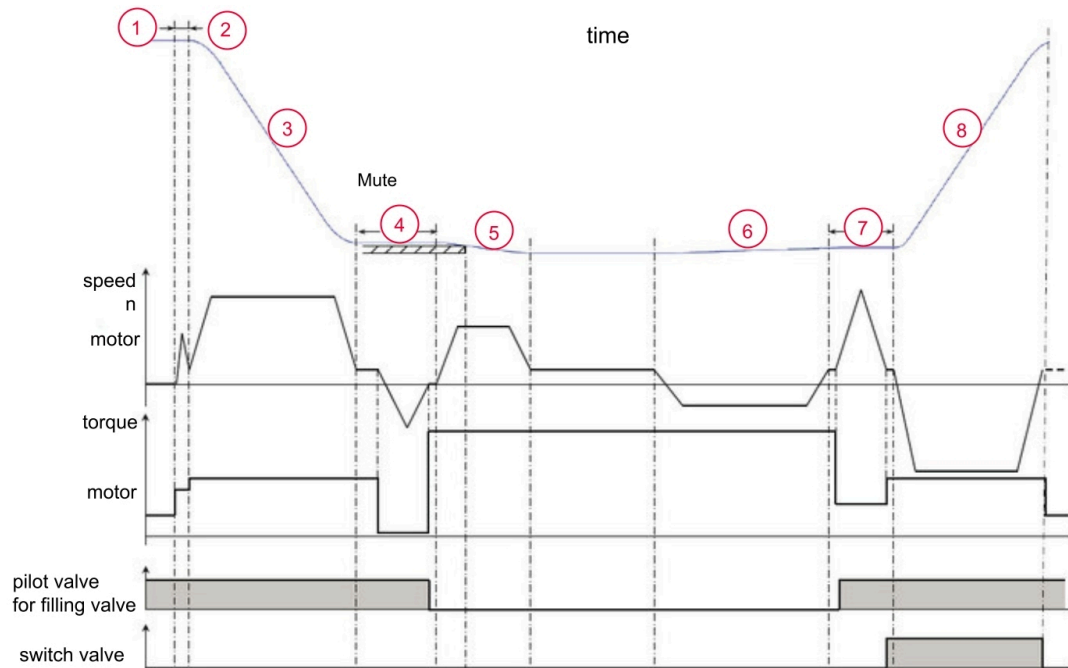
|   |  |
|---|--|
| <b>rated output</b>                         | ePrAX® max 15: 4.45 kW<br>ePrAX® max 19: 6.07 kW                 |
| <b>voltage (controller)</b>                 | ePrAX® max 15: 3x400 V (-15 %)<br>ePrAX® max 19: 3x460 V (+10 %) |
| <b>device connected load (controller)</b>   | ePrAX® max 15: 9.4 kVA<br>ePrAX® max 19: 22.5 kVA                |
| <b>power loss (controller)</b>              | ePrAX® max 15: 187 W<br>ePrAX® max 19: 330 W                     |
| <b>interference immunity</b>                | EMV according DIN 55011 / 61000-6-2                              |
| <b>ingress protection class (DIN 40050)</b> | IP52   |

The measurement\* of energy consumption and sound level for a press brake with ePrAX® max 19 drives compared to a conventional press brake showed the following results:

|                    |   |
|--------------------|---|
| <b>consumption</b> | ePrAX® max 19: 4.5 kWh<br>conventional press control: 10.9 kWh    |
| <b>sound level</b> | ePrAX® max 19: 60.5 db(A)<br>conventional press control: 72 db(A) |

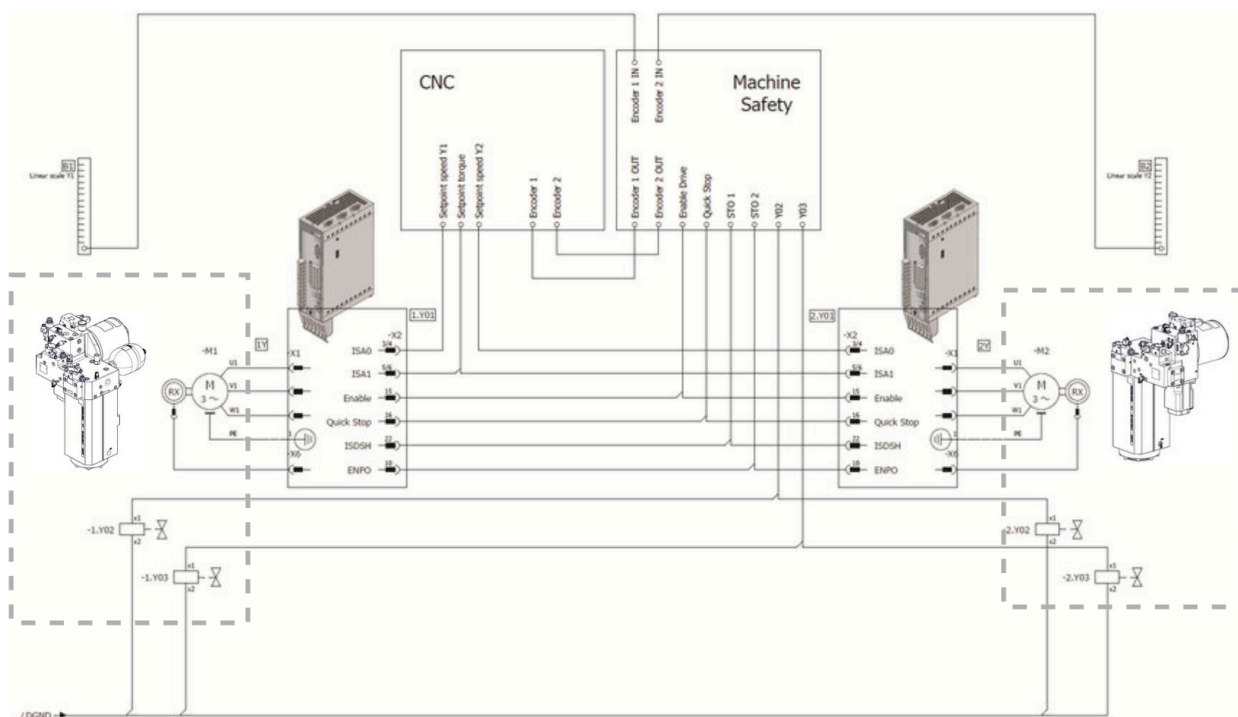
\*with 500 strokes at a press force of 50 t and 0,5 seconds press time

## 4 Functional diagram



- |                   |   |                      |                    |
|-------------------|---|----------------------|--------------------|
| ① top dead center | ③ approach speed  | ⑤ slow closing speed | ⑦ pre-opening      |
| ② pre-closing     | ④ change point for slow speed (switchover point) / Mute | ⑥ decompression      | ⑧ withdrawal speed |

### Electrical functionality

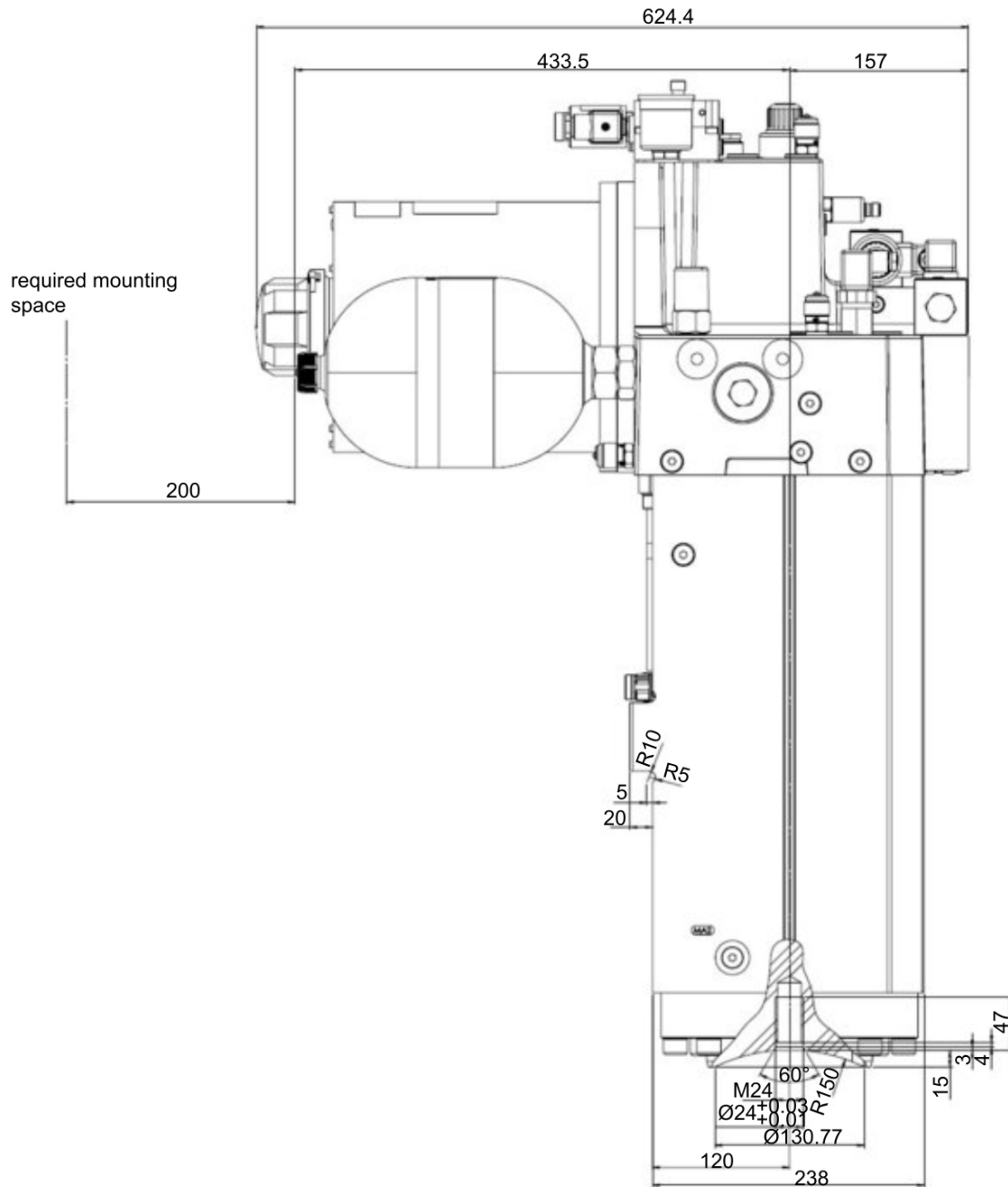


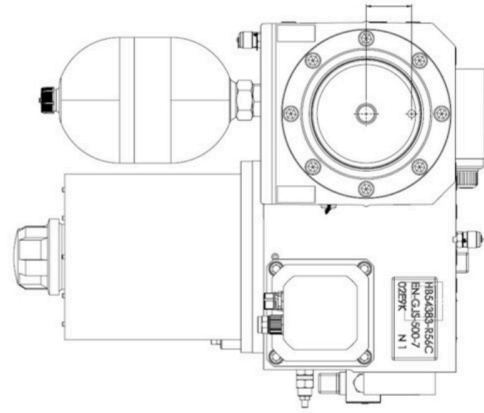
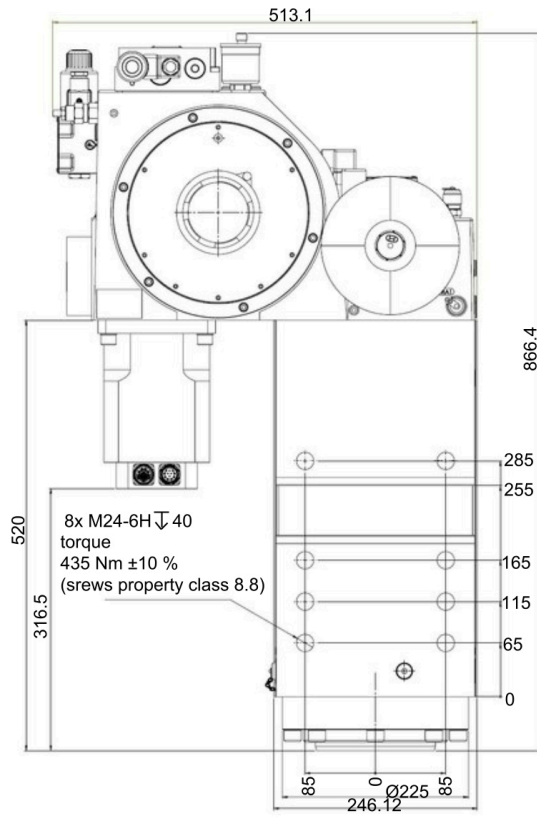
## 5 Dimensions and connections

Dimensions are given in mm.

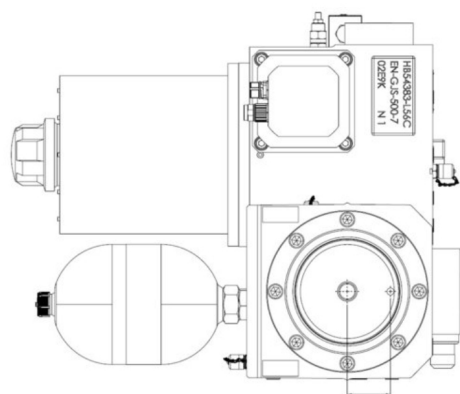
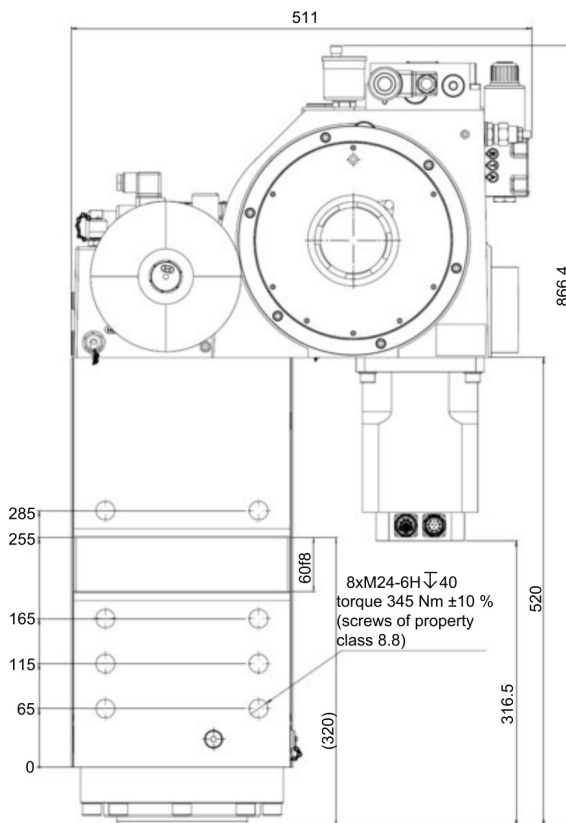
### ePrAX max 15

Installation drawings show right actuator:



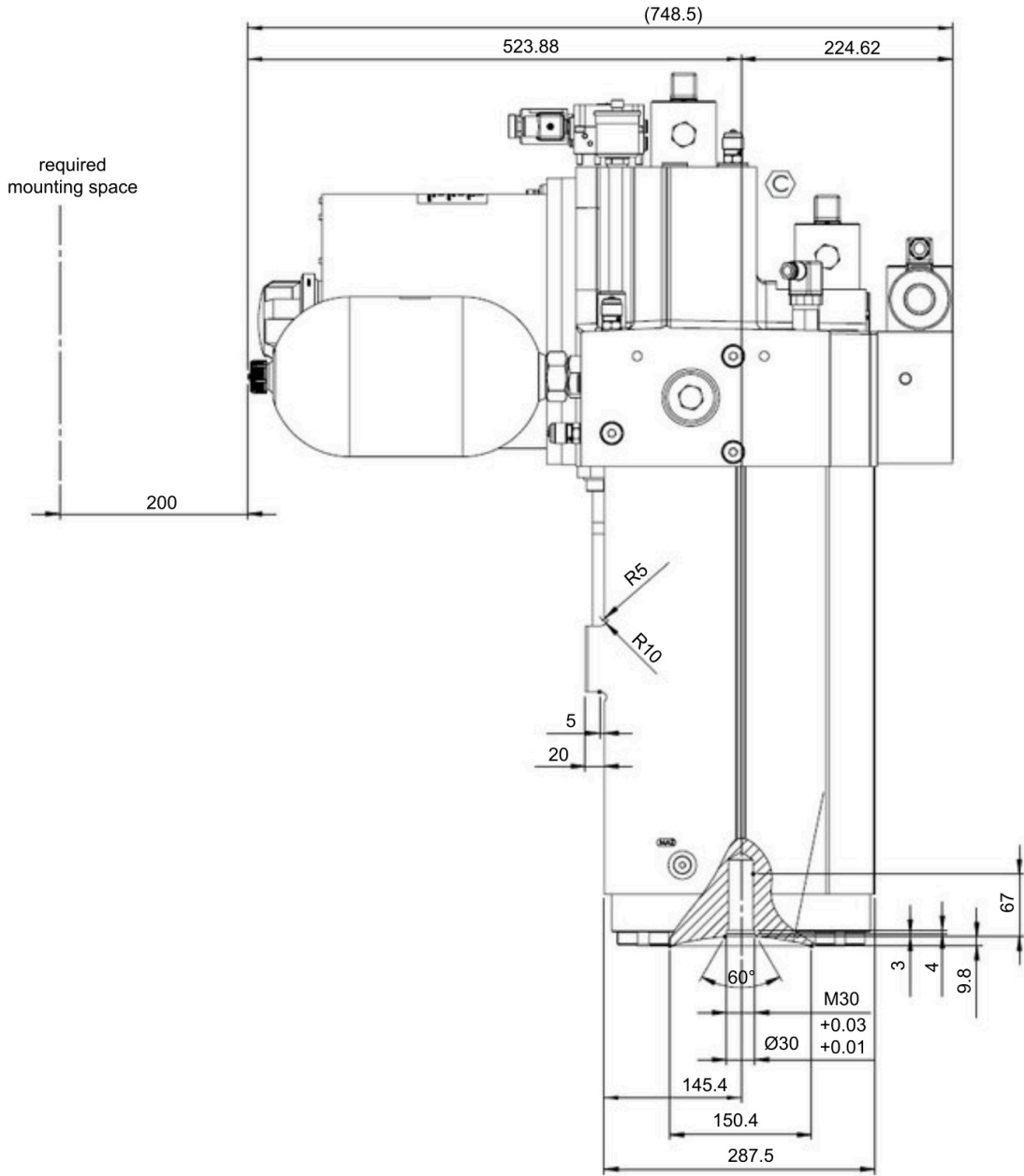


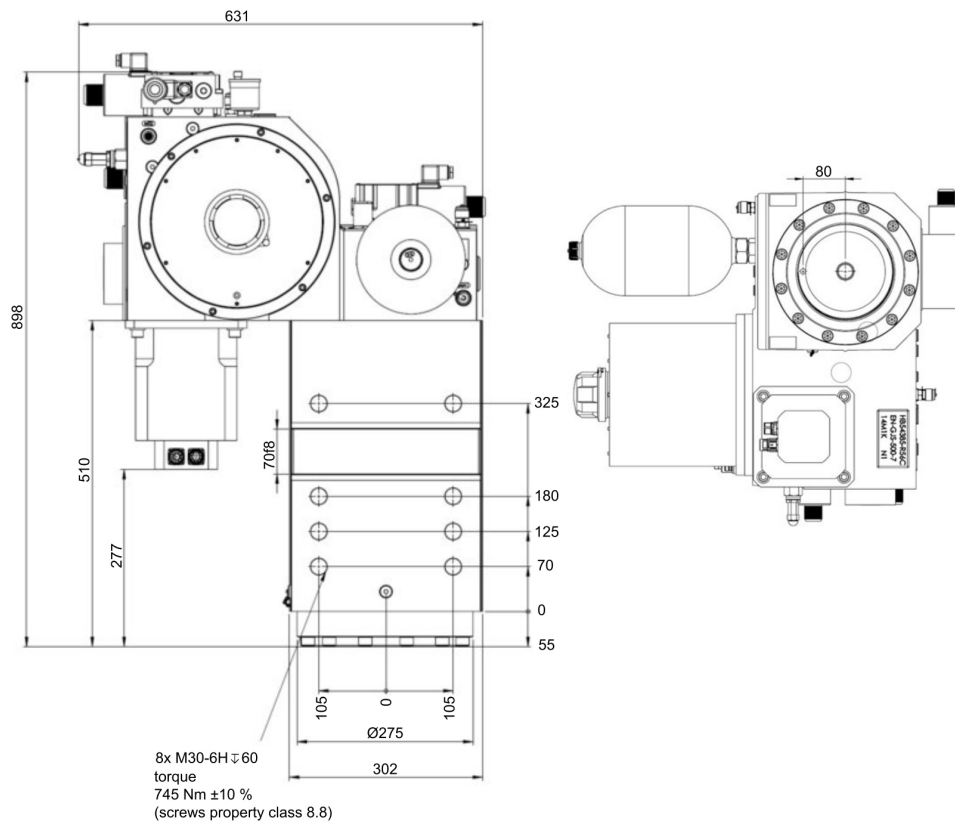
Installation drawings show left actuator:



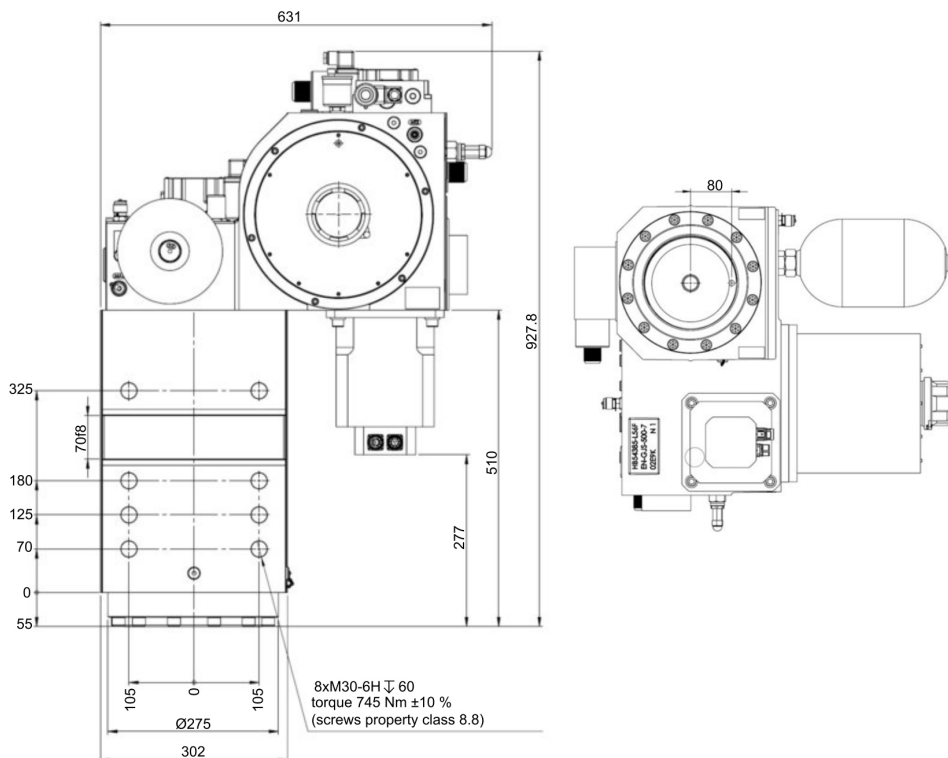
**ePrAX max 19**

Installation drawings show right actuator:





Installation drawings show left actuator:



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