

# MOUNTING INSTRUCTIONS – SHORT VERSION

## FC & FE CYLINDER F.L.A.S.H. SERIES

### Mounting position

Mount the cylinder in the longitudinal centre line of the body. Position the cylinder, looking along this longitudinal centre line, exactly vertical. This is to minimize the risk of side load. The maximum forward fitting angle (FC) depends on the length of the cover (fig.1).

The maximum forward fitting angle of an FE / FEE cylinder is 30°. Check for more detailed information on the cylinder specification sheet.

FC cylinders fitted under an angle rotate with the cover towards the body when tipping. Make sure the cover will not touch the body. FC cylinders fitted straight can be supported by a welding rubber on the tipper body to reduce rattling. FC cylinders fitted under an angle may not be supported in this manner.

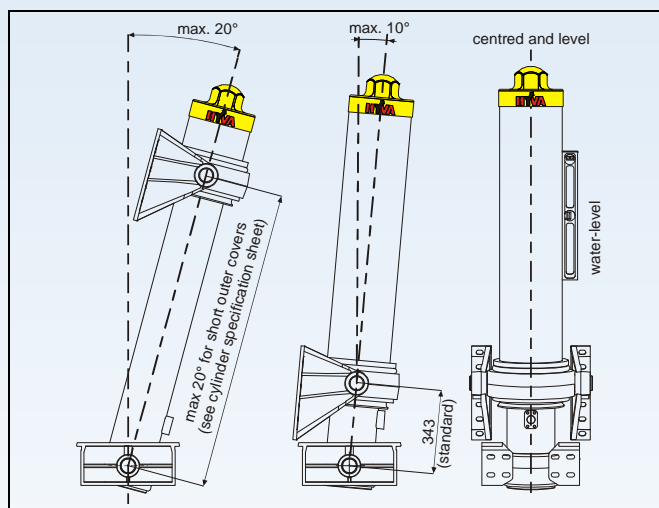


FIGURE 1

### Spherical top eye

FE cylinders with spherical top-eye must be mounted with spacer rings on both sides of the eye to allow 6° of rotation to both sides. Make sure that the eye rotates free from the bracket. Some critical dimensions are:

- The preferred spacer width is 14,5 mm; the minimum spacer width is 12 mm (fig.2)
- The internal bracket width should be 68 mm minimum
- The internal bracket height from centreline pin to top flange should be 65 mm minimum (or 75 for piston 129 and bigger)

See drawing D072013 for more details.

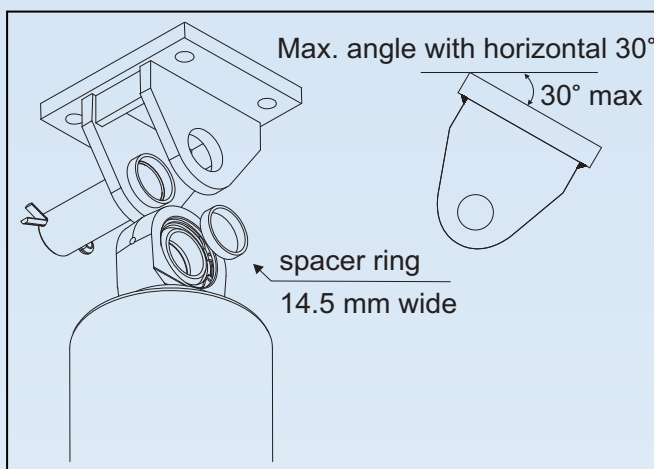


FIGURE 2

### Pull-out and play

All cylinders must be mounted with 15 to 50 mm pull out. The closed length dimension on the specification sheet always includes 20 mm pull-out.

The maximum play between the brackets and the trunnion is 2 mm per side.

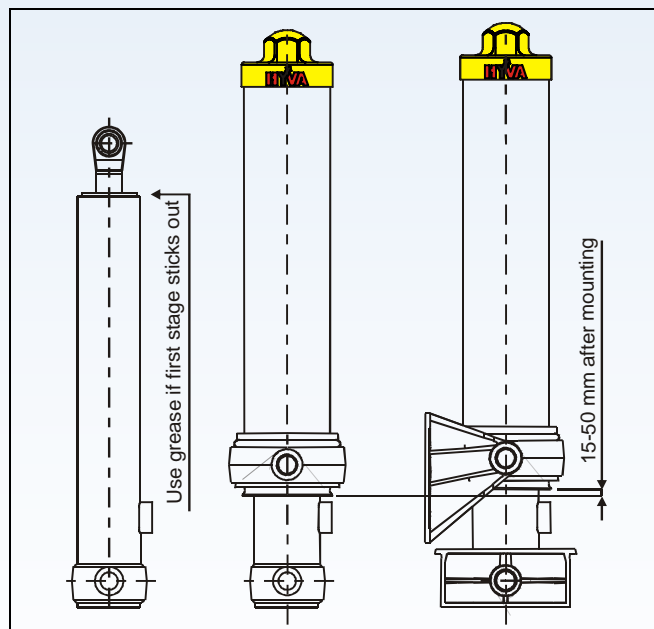


FIGURE 3

For small FE cylinders it is possible that the another stage sticks out instead of the piston. In this case use preservation grease on the tube that is sticking out. The grease must be oil based (not wax based). Use Hyva packset grease, Shell Ensyls or an equivalent.

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### Reinforcements

Always apply a rigid lifting plate or a (reinforced) profile for mounting the lifting brackets. Too much flexibility can result in side load and in the cylinder coming loose from the brackets.

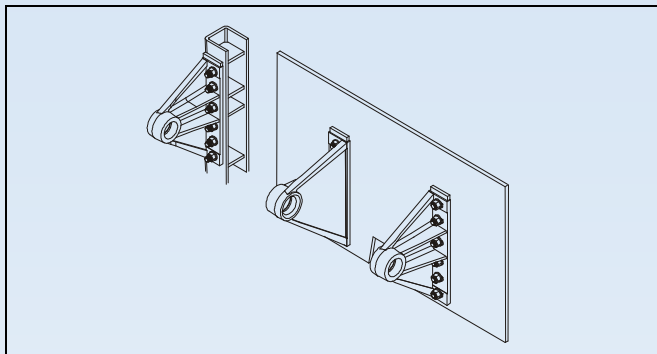
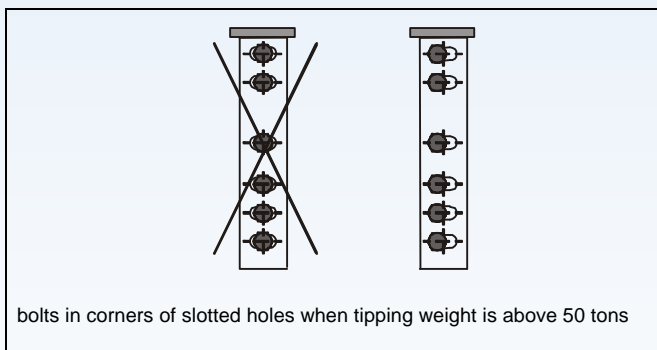


FIGURE 4

### Bolts

Use all bolt holes of the brackets for mounting. Use quality 8.8 bolts with self locking nuts and flat washers.

In case the tipping weight exceeds 50 tons, the bolts should be positioned in the corners of the slotted holes and stoppers should be positioned above the lifting bracket.



bolts in corners of slotted holes when tipping weight is above 50 tons

FIGURE 5

### Recommended torque of bolts

Size	Torque
M12 (brackets)	80 Nm
M16 (brackets)	210 Nm
M48 (top nut outer cover)	600 - 800 Nm

### Brackets

During the tipping cycle, the cylinder rotates in the chassis brackets. Care must be taken that the cylinder runs free from any obstacles underneath these brackets.

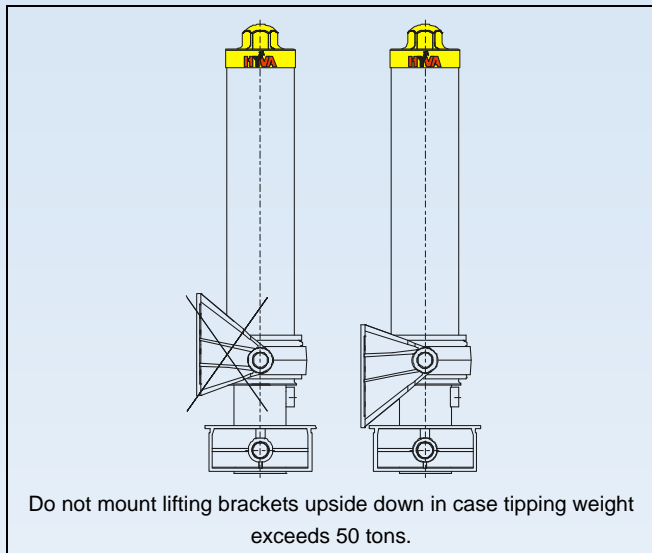


FIGURE 6

**For bracket details see specification sheet 015 BRA01.**

Apply grease on the cylinder pins for corrosion protection and for initial fit. Remove excessive grease.

Greases that protect against corrosion and have negligible influence on the life time of the bearing bush are:

- Hyva packset grease
- Molykote G-4500
- Molykote EM-30L
- Dinitrol Paste

### Yellow Cap

The yellow cap is very useful in protecting the cylinder from moisture and dirt and has a positive effect on the cylinder lifetime.

Make sure the cap is fitted on the cylinder!