

# Operation manual for linear units type S

## 1 General

The equipment should be fitted and operated only by qualified staff. Qualified staff for the purposes of these operating instructions are persons who are familiar with installing, commissioning and operating this product and have the appropriate qualifications for their work.



## 2 Description

S15 - S300 thrust units with fitted electrical multi-turn actuators or variable-speed actuators are mounted on valves where linear motion is required. The thrust unit converts the rotational motion produced by the turn actuator into an axial force. The appropriate unit is selected according to the thrust force and stroke length required.

## 3 Design

Thrust units consist basically of a massive cast housing, a spindle appropriate to the turn actuator fitted, ball bearings and the thrust element. The thrust unit is sealed to prevent the ingress of dust to prevent defects which could occur in dust-laden ambient air.

## 4 Storage

See „Operating instructions for actuators“ Section „TRANSPORT AND STORAGE“

## 5 Exchanging fitted thrust units

**Achtung!!**

**Only dismantle in unpressurised state !**



**Never turn the plug/spindle in the CLOSED direction. The highgrade seals could be damaged by this.**

**There is a travel stop only in the contracted position - exceeding the maximum travel in the extended state will damage the lip seal.!!**

### 5.1 Dismantling

1. Move the plug into  $\approx 10\%$  stroke OPEN position.
2. Remove turn actuator in accordance with manufacturer's instruction.
3. Loosen drive nut on the thrust unit.
4. Loosen lock nuts ( upper and lower ) on the spindle.
5. Move the thrust unit into the CLOSED position with a pin spanner and push it out of the cone.
6. Unscrew the complete thrust unit from the spindle by turning it.

## 5.2 Fitting a new thrust unit

1. Place the plug in the CLOSED position.
2. Extend the valve lift in the thrust unit with a pin spanner ( See model plate for valve lift ).
3. Screw on the complete thrust unit by rotating it onto the valve spindle.

**Only screw on the thrust unit until it is seated properly in the retaining cone.**

**The valve plug must not be pulled out of the seat during this.**

4. Orient the thrust unit, i.e. turn it until the location holes for the are at 45° to the axis of the pipe.
5. Move valve plug to ≈10% stroke OPEN position by turning the pin spanner on the thrust unit.
6. Tighten drive unit.
7. Tighten lock nuts ( upper and lower ) on the spindle.
8. Traverse valve lift with pin spanner as a checking procedure.

**IMPORTANT: It should be easy to traverse the valve stroke ( indicated on the stroke display ).**

9. If necessary, re-adjust the valve spindle by screwing it in or out.
10. Fit turn actuator as per the manufacturer's instructions.

## 6 Commissioning

Increase levels continuously up to operating parameters.

Do not expose the control valve to full operating pressure and temperature suddenly.

The standard commissioning rules for control valves should be observed.

## 7 Simple maintenance

The thrust units are designed to be largely maintenance-free,

Maintenance operation	Maintenance interval for normal use	Maintenance interval in oxygen
Lubrication of thrust unit (Grease nipple)	5 - 12 ccm at least once per year Klüber Wolfracoat C (Temp. -30°C to 1200 °C)	5 - 12 ccm at least once per year Airpress C 40 KP (Temp. -45°C to 160°C)