

1. Function

The clutch/brake combined unit consists of a springapplied safety brake with a pneumatically actuated clutch. The clutch housing (9) with flywheel and brake housing (8) is joined to the body of the machine. The hub (1/20/21) with piston (10/22/23), cylinder (2/24), pin (25/28) and support plate (11) are fastened to the shaft. The pressure springs (12/13) bear onto the support plate and press the piston against the set of plates of the brake. When compressed air is applied to the cylinders through the air feed holes, the brake opens after overcoming the spring pressure. If the pressure rises further, the clutch is engaged. When pressure is removed from the piston, the pressure springs (12/13) push it back to its original position. The clutch disengages and the brake is applied.

2. Replacing the set of plates

2.1 Clutch side

Attention! The clutch is under spring pressure. Remove the clutch housing (9). Replace three screws spaced at 120° by three longer screws (Table 1). Only after doing this, now evenly undo the remaining screws. This releases the pressure of the pressure springs (12/13), and the support plate (11) will lift from the hub (1). Now remove the three longer screws. Take out the set of plates. Starting with an inner plate (15K), insert the new set of plates. Refit the support plate and the clutch housing.

2.2 Brake side

First remove the clutch side as described in 2.1 above.

Attention! The clutch is under spring pressure. Only after the pressure of the pressure springs (12/13) has been released, remove the brake housing (8), the screws (35), and the hub (1) with the piston (10) and the set of plates. Starting with an inner plate (15B), replace the plates by new plates one at a time. Then fit the support (1) with the piston (10), and after this the brake housing (8) and the complete clutch side. Tighten all nuts to the prescribed torque and secure them as instructed.

Important! When using this combined unit in a press, shear or the like, observe the relevant safety regulations.

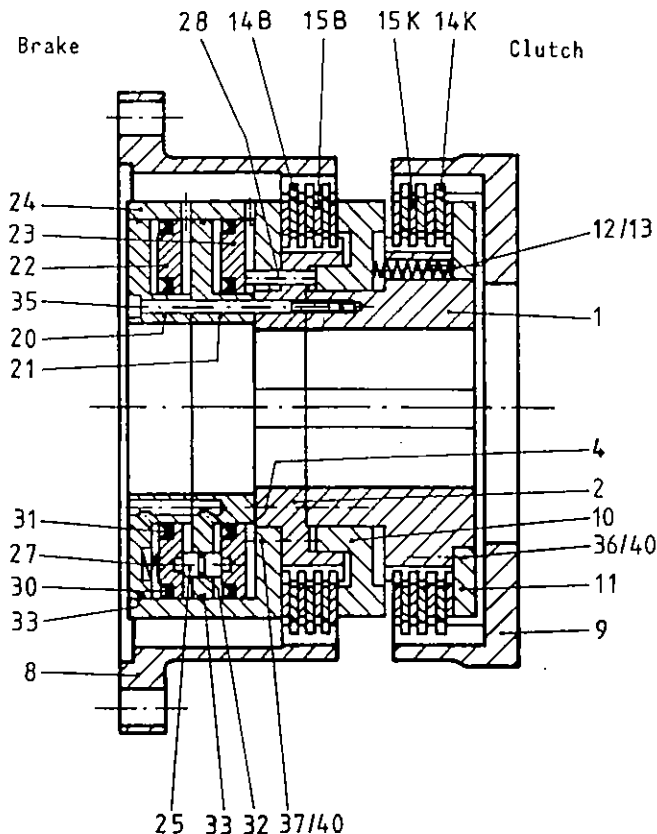
3. Compressed air

Use only filtered compressed air to operate the combined unit.

Operating pressure 5,5 bar

Maximum operating pressure 6 bar

Pressure to release brake 3,5 bar approx.



4. Internal lubrication

For internally lubricating the clutch we recommend oil of viscosity grade ISO VG 68, e.g. Shell Tellus C 68. Hypoid oils or H-LP oils are not suitable, because they alter the coefficient of friction of the plates too much.

5. Faults in fitting and maintenance

If the operating pressure is too low, the clutch will not reach its rated torque. This can cause slip and overheating of the clutch.

6. Spare parts

When ordering spare parts, always quote not only the name and number of the part but also the serial number of the combined unit which is marked on it, or send a sample of the part. To prevent mistakes, please always order spare parts by letter, telex or cable.

Table 1 Individual parts	Size of clutch/brake combined unit			Strength grade of screws	Secured by
	75	80			
1 Clutch hub 2 Cylinder					
3 Cylinder screw		36	72	10.9	Tightening torque plus Loctite 262
4 Cylinder dowel 5 6 7 8 Flange housing 9 Cup housing 10 Piston 11 Support plate 12 Pressure spring 13 Pressure spring 14 Outer plate 15 Inner plate 16 17 18 19 20 Hub 21 Hub 22 Piston 23 Piston 24 Cylinder 25 Pin 26 27 Pressure spring 28 Pin 29 30 U-seal 31 U-seal 32 U-seal 33 Round cord ring 34 35 Screw					
36 Cylinder screw		36	72	10.9	Tighten to torque plus Loctite 262 plus expanding plate
37 Cylinder screw		36	72	10.9	
38 39 40 Expanding plate					
Size of screws used for dismantling (see 2.1)		M8 x50	M10 x60		