



PHILIPP Spherical Head Lifting Clutch

Using Instruction



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USING INSTRUCTION OF PHILIPP SPHERICAL HEAD LIFTING CLUTCH

The **PHILIPP Spherical Head Lifting Clutch** is part of the **PHILIPP Lifting Anchor System** and complies with the „Safety Rules for Transport Anchors and -Systems for Precast Concrete Units“(BGR 106).

On use of **PHILIPP Spherical Head Lifting Clutch** attention must be paid to this using instruction, the installation instructions of **PHILIPP Lifting Anchor System**, as well as the general part.

Table 1: Load Bearing Capacities and Dimensions

Art.-No.	Load Group	a [mm]	b [mm]	c [mm]	e [mm]	f [mm]	g [mm]
80-HKD-013	1.3	47.5	75.0	71.0	45.0	33.0	164.5
80-HKD-025	1.5 - 2.5	64.0	98.0	85.0	55.0	42.0	205.5
80-HKD-050	3.0 - 5.0	70.0	118.0	88.0	66.0	57.0	237.0
80-HKD-100	6.0 - 10.0	95.0	160.0	121.0	117.5	73.0	348.5
80-HKD-200	15.0 - 20.0	118.0	186.0	150.0	155.0	110.0	441.0

1. Materials

The **PHILIPP Spherical Head Lifting Clutch** consists of resistant forged steel. The worked in claws help to lift the anchor head. The coupling section for hook and shackle suits for all areas of application because of the flexible design. The **PHILIPP Spherical Head Lifting Clutch** is galvanized.

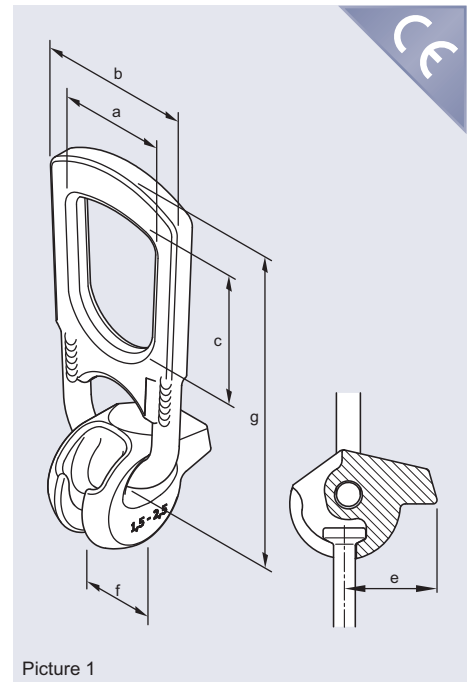
2. Application

The **PHILIPP Spherical Head Lifting Clutch** is used as lifting device within the **PHILIPP Lifting Anchor System**. Coupling on/ off can be made easily with one hand. This lifting device can be applied for axial, diagonal and lateral loadings.

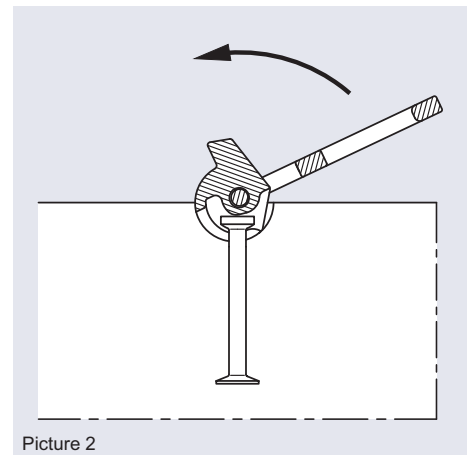
The installation of products from **PHILIPP Spherical Head Transport Anchor System** requires the use of **PHILIPP Recess Formers**. The correct position of the anchor as well as simple and safe coupling is therewith ensured.

2.1 Coupling on

The **PHILIPP Spherical Head Lifting Clutch** is set over the anchor head with its opening showing downwards and through turning the lip coupled on the **PHILIPP Spherical Head Anchor** (Picture 2).



Picture 1



Picture 2

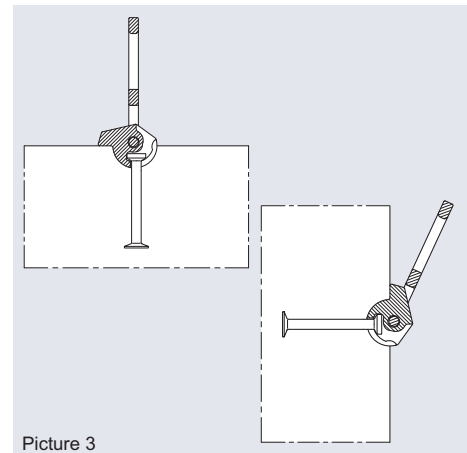
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2.2 Lifting and Turning

The **PHILIPP Spherical Head Lifting Clutch** is constructed in a way that an unintended coupling off (even without tension by a lifting device) is impossible. On lifting, attention must be paid that the lip shows into direction of tension.

The **PHILIPP Spherical Head Lifting Clutch** is suitable for all directions (axial, diagonal and lateral tension).

On turning of units, special attention must be paid on the lip position of the **PHILIPP Spherical Head Lifting Clutch**. It must always show into direction of tension (Picture 3).

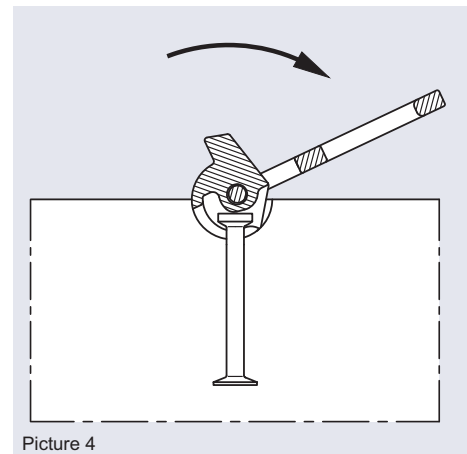


Picture 3

2.3 Coupling Off

Coupling off the **PHILIPP Spherical Head Lifting Clutch** it must be unloaded.

Thereafter the **PHILIPP Spherical Head Lifting Clutch** can be coupled off by turning back the lip (Picture 4).



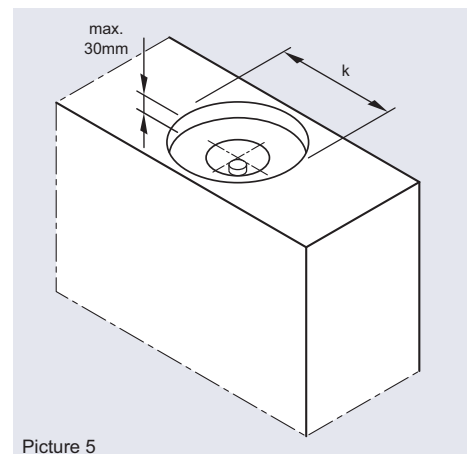
Picture 4

3. Corrosion Protection

The corrosion protection can be increased by installing the **PHILIPP Spherical Head Anchor** in a sunk position. The additional recess former must ensure the functionality of the anchor according to this installation instruction and must have the minimum dimensions of Table 2.

Table 2: Dimensions for Deepened Assembly

Load Group	dia. k [mm]
1.0 - 1.3	110.0
1.5 - 2.5	130.0
3.0 - 5.0	142.0
6.0 - 10.0	255.0
15.0 - 20.0	330.0



Picture 5

4. Safety Advice

The **PHILIPP Spherical Head Lifting Clutch** counts as lifting device and is therefore subject of an annual inspection (BGR 500 Section 2.8). This inspection must be executed by an expert and is the responsibility of the user.

The particular accident prevention regulations must be taken into account in order to extend a higher durability. The right hook size and form should be considered.

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The parts of the **PHILIPP Spherical Head Lifting Clutch** were produced by using a special thermal procedure.



Welding and other strong heating influences are not permitted on **PHILIPP Spherical Head Lifting Clutch**.

If the **PHILIPP Spherical Head Lifting Clutch** is loaded by exceptional forces (e.g. failure) an extraordinary inspection must be carried out by an expert. The inspection should include the below mentioned criterions.

The replacement state of the **PHILIPP Spherical Head Lifting Clutch** is determined according to the German regulation (BGR 500 section 2.8).

5. Replacement State and Inspection Service

Prior inspection the **PHILIPP Spherical Head Lifting Clutch** must be cleaned and the following points have to be considered:

- on plastic deformation replacement state of wear of the **PHILIPP Spherical Head Lifting Clutch** is reached. Those deformations can be: twisted coupling link, pressure through Lifting tackle
- Cracks in sphere and coupling link
- Exceeding or undershooting of the allowed wear measurement the replacement state is reached, too (Table 3 and Picture 6).

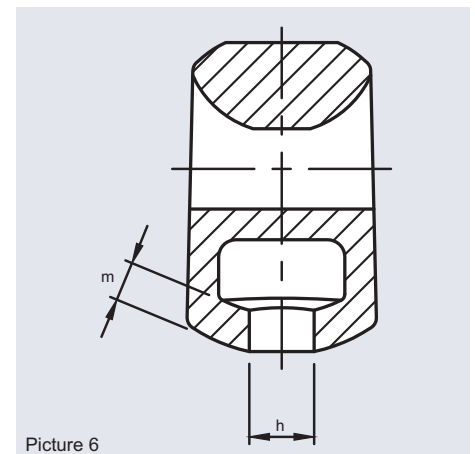


Using damaged load equipment or items which are already in replacement state is inadmissible.

If you wish a **proper and documented** inspection please don't hesitate to contact our **PHILIPP Inspection Service** under the following telephone number: +49 (0) 6021/ 4027-0.

Table 3: Limit Measures for Wear

Load Group	Maximum h [mm]	Minimum m [mm]
1.3	12.0	5.5
1.5 - 2.5	17.0	7.5
3.0 - 5.0	23.5	9.0
6.0 - 10.0	31.5	12.5
15.0 - 20.0	43.5	19.0



Picture 6

6. Marking

The **PHILIPP Spherical Head Lifting Clutch** is marked as follows:

- manufacturer
- year of manufacturing
- load group
- type/ thread size
- CE marking