PHILIPP GROUP

PHILIPP Transport Loop System

Installation Instruction
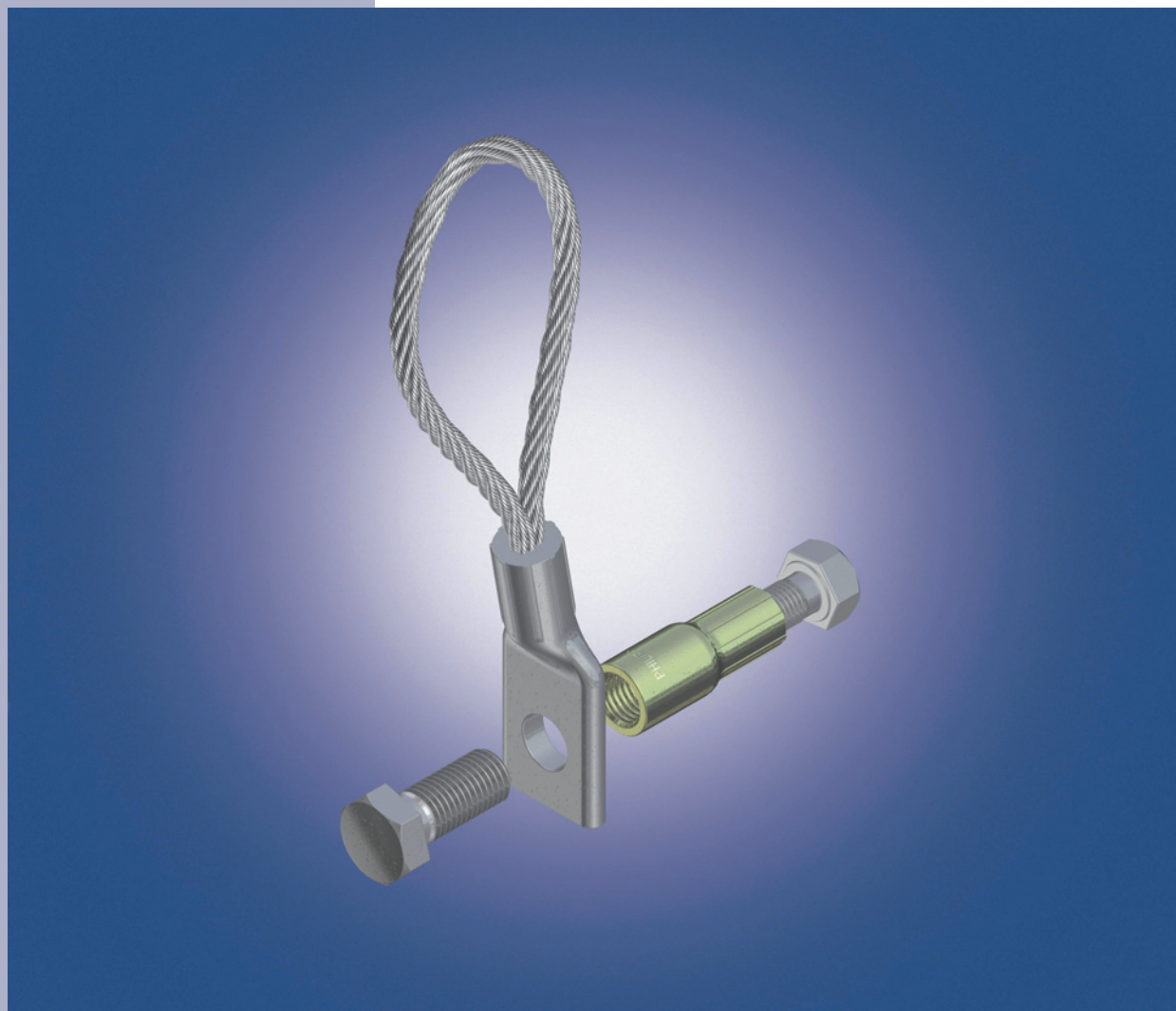
The **PHILIPP Transport Loop System** is part of the **PHILIPP Transport Anchor Systems** and complies with the „Safety Rules for Transport Anchors and -Systems for Precast Concrete Units"(BGR 106). On use of **PHILIPP Transport Loop System** attention must be paid to this installation instruction and the general part. The **PHILIPP Transport Loop System** consists the **PHILIPP Transport Loop Anchors** as well as an accompanying **PHILIPP Lifting Loop** with a machine screw (quality 8.8) as connecting device (Picture 2). The use of **PHILIPP Loop Anchor** is only allowed in combination with the original **PHILIPP Transport Loop**.

The **PHILIPP Transport Loop System** has the advantage that the loop has sufficient distance to the concrete surface. Hence, the surface cannot be destroyed by the lifting device. Another advantage is that a standard load hook can be used to lift the unit.

The **PHILIPP Transport Loop System** is mainly used for transport of septic tanks and manholes as well as shafts, wells and drains. Multiple uses within the transport chain (from production to installation of the unit) are no repeated uses. Repeated use is only allowed if it complies with the German Approval (DIBt, Berlin No. Z-30.3-6).

Table 1: Allowable Load Bearing Capacities and Dimensions (Lifting Loop)

Art.-No.	Type	Load Bearing Capacity F_Z	Dimensions [mm]	
	RD/M	[kN]	dia. d	h
67TPS122000	16	20.0	16.5	280
67TPS154000	24	40.0	24.5	310
67TPS185200	30	52.0	31.0	390

For ascertainment of the right load bearing capacity please follow our general installation instruction and technical advice.

The **PHILIPP Transport Loop System** may only be charged vertically (90°) to the longitudinal axis of the connecting device (= screw). An axial or diagonal loading of the anchor is **inadmissible.**

1. Materials

The **PHILIPP Transport Anchor** consists of a machine screw with a crimped-on insert. The insert is made of special high-precision, galvanized steel according to DIN 50961.

PHILIPP Transport Loop consists of a steel wire rope with a grouted tube (Picture 1) bracket and a borehole. The connecting device between the **PHILIPP Transport Loop** and the belonging **PHILIPP Transport Anchor** is a machine screw DIN 933 (minimum quality 8.8).

2. Safety Advice

As any other lifting equipment and lifting device, the **PHILIPP Transport Loop** is subject of an annual inspection (German regulation BGR 500). This inspection has to be executed by an expert.

The **PHILIPP Transport Loop** must be cleaned prior inspection.

During the inspection of **PHILIPP Transport Loop** attention must be paid to the following points.
- Failure of strand or single wire acc. to BGR 106 Section 5.9
- Kinks or bends on free lengths
- Corrosion scares
- Damage, deformation or strong wear and tear on wire connection end

On use of our **PHILIPP Transport Loop System** attention must be paid that the vertical curve radius of the load hook corresponds at least to the wire diameter of the **PHILIPP Lifting Loop**.

The use of too small, too big or sharp-edged load hooks results in a premature state of wear. Aggressive media like acids and leaches must not have contact with the **PHILIPP Transport Loop System**.
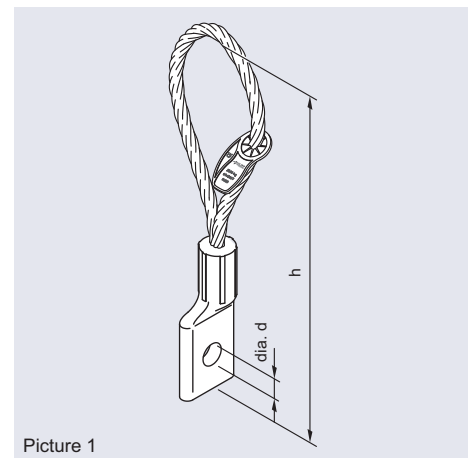
Picture 1
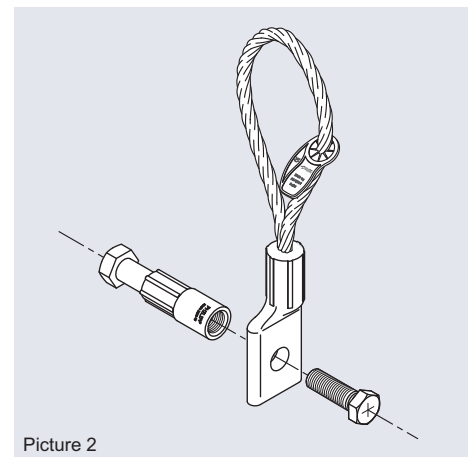
Picture 2

INSTALLATION INSTRUCTION
OF PHILIPP TRANSPORT LOOP SYSTEM

3. Transport Loop Anchor

The **PHILIPP Transport Loop Anchor** is part of the **PHILIPP Transport Loop Systems**. On use of **PHILIPP Transport Loop Anchor** attention must be paid to this installatio instruction and the general part.

The **PHILIPP Transport Loop Anchor** must be installed according to the designations in Table 3. The installation must be flush with the surface. A sunk installation of the **PHILIPP Transport Loop Anchor** (e.g. with our **PHILIPP Nailing Plate**) is not possible. The installation of Type 30 must be installed in a way that the fixed steel bar parts are in the pressure area (at right angles to the tensile force of the anchor) (Picture 4). Before using the threads of the anchors must be checked for cleanness. The screw must be turned in completely and finally pulled tight with a suitable wrench.

Table 2: Load Bearing Capacities and Dimensions
(Transport Anchor (Picture 3+4))

Art.-No.	Type	Load Bearing Capacity F_Z at 25 N/mm^2	Total Length L	Dia. D	B
	RD/M	[kN]	[mm]	[mm]	[mm]
67TPSA16	16	20.0	95	21.0	-
67TPSA24	24	40.0	110	31.0	-
67TPSA30	30	52.0	120	39.5	100

For ascertainment of right load bearing capacity please follow our general installation instruction and technical advices.

4. Reinforcement

On use of **PHILIPP Transport Loop Anchors** the precast units must be provided with minimum reinforcement (Table 3).

⚠ An already existing static-structural reinforcement may be taken into account on requested minimum reinforcement.

Table 3: Reinforcement and Edge Distance (Picture 5)

Type RD/M	Minimum Dia. of Tanks D_A [mm]	d_w [mm]	Mesh Reinforcement (square) [mm²/m]	a_r [mm]
16	1000	120	221 centric	500
24	2000	150	221 centric	1100
30	2000	150	221 centric	1100

Type 16
Type 24

Picture 3

Type 30

Picture 4

Picture 5
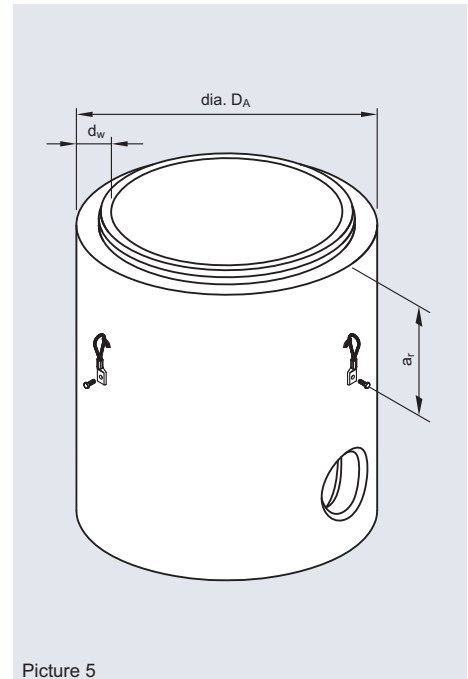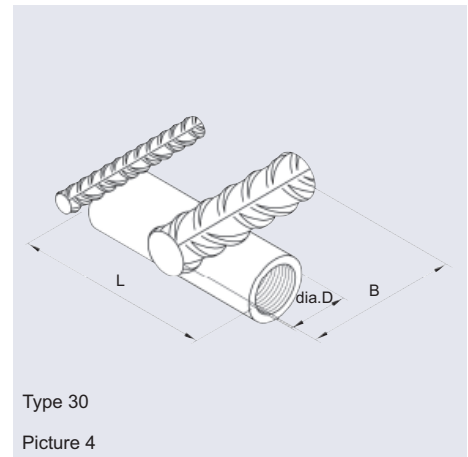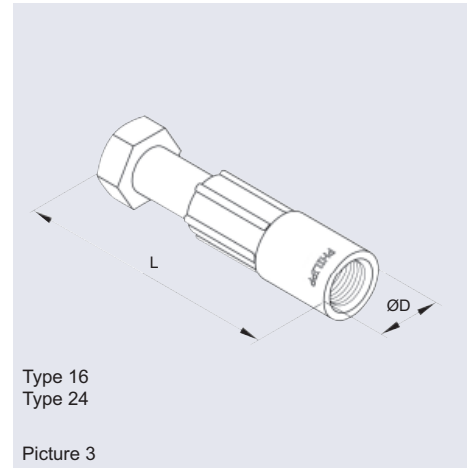
5. Axis Distances, Edge Distances and Unit Thickness

The installation and positioning of **PHILIPP Transport Anchors** in precast concrete units requires for secure load transmission load transmission, minimum dimensions and minimum edge distances (Table 3).

⚠️   Axial and diagonal loading of the anchor is inadmissible.

6. Installation Advice for Container Transport

During the use of the **PHILIPP Transport Loop System** it is suggested to keep a small inclination of the hoisting chain. Basically the suspension gear must have equal strings (Picture 6). Attention must be paid that the load distribution is equal (anchor location and arrangement in the unit). To reduce the pressure an inclination angle of $\beta \leq 30°$ is suggested (Picture 6). In order to avoid damaging at the edge of the container we suggest to use appropriate edge protection.

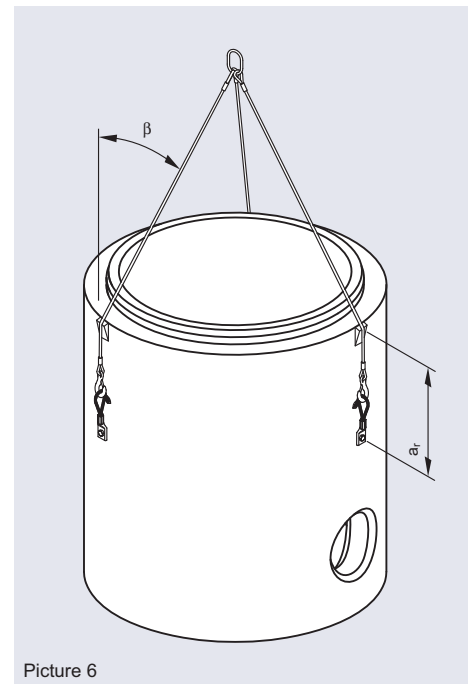The minimum rope/chain length can be calculated as follows.

$$L_{min} \geq \text{dia. } D_A + a_r$$

L_{min} = minimum length
dia. D_A = outer diameter acc.to Pic. 5
a_r = distance to top edge acc.to Pic. 5

If you have special questions please don´t hesitate to contact our technical department - Hotline +49 (0) 6021 / 40 27-318 or technik@philipp-gruppe.de

Picture 6