Please read this user manual carefully, it contains instructions for the correct assembly of the KIT. Please refer to the website www.goblin-helicopter.com for updates and other important information. Thanks.

**Radius Arm Assembly ... x 2**
- Flanged Bearing Ø 3x Ø 7x3mm (HC402-S)
- Radius Arm (H0474-S)
- Spacer (H0134-S)
- Flanged Bearing Ø 3x Ø 7x3mm (HC402-S)

**Center Hub Assembly**
- Pin 4 mm (H0472-S)
- Spacer Arm (H0416-S)
- Flanged Bearing Ø 2.5x Ø 6x2.5mm (HC400-S)
- Radius Arm Assembly
- <Green icon>
- Damper (H0425-S)
- Oring (HC353-S)
- Already Assembled

**Swashplate Assembly**
- Uniball M3 (H0065-S)
- Uniball M3 (H0065-S)
- Swashplate Assembly (H0475-S)

**Main Blade Grip Assembly ... .x2**
- Uniball M3 (H0065-S)
- Uniball M3 (H0065-S)
- Socket Head Cap Screw M2.5x8mm (HC022-S)
- Socket Head Cap Screw M3x12mm (HC062-S)
- Socket Head Cap Screw M2.5x5mm (HC017-S)
- Center Hub (H0473-S)
- Note: Please add thread locker to the M6x10 screws
- Approx. 52.5mm
- Plastic Ball Link (H0066-S)
- Plastic Ball Link (H0066-S)

**Linkage Rod A Assembly ... .x3**
- Linkage Rod A Assembly (to adjust the tracking, turn this linkage.)
- M3x12mm (HC062-S)
- M3x20mm (HC082-S)
- Nut M3 [HC206-S]
- Linkage Rod M2.5x33mm (H0237-S)
- (Initial length for the rods from the swashplate to the Blade Grip.)
- Note: Please add thread locker to the M6x10 screws
- Approx. 62.5mm

**Bag 1**
- Bag 2
- Bag 3
- Bag 6
- Bag 9
- Bag 4
- Bag 5
- Bag 7
- Bag 8

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![Image of the HPS3 Rotor Head](https://via.placeholder.com/150)

**HPS3 Rotor Head**

[H0489-K Goblin 500, H0490-K Goblin 570]

---

**Uniball Radius Arm (H0415-S)**
- Flanged Bearing Ø 2.5x Ø 6x2.5mm (HC400-S)
- Socket Head Cap Screw M2.5x8mm (HC022-S)

**Socket Shouder M4x24mm (HC111-S)**
- Blade Washes (H0265-S)

**Metrix Head Nylon Nut M4 (HC212-S)**

**Approx. 62.5mm**

**Uniball M3**
- M3x12mm (HC062-S)
- M3x20mm (HC082-S)

**Center Hub (H0473-S)**
- Washer Ø 11x Ø 13.8x0.5mm (H0226-S)

**Socket Head Cap Screw M2.5x5mm (HC017-S)**
- Note: Large ID Inside

**H0489M_Rev01**

**Socket Head Cap Screw M3x8mm (HC050-S)**

**Socket Head Cap Screw M3x12mm (HC062-S)**

**Socket Head Cap Screw M3x8mm (HC050-S)**

**Socket Head Cap Screw M3x12mm (HC062-S)**

**Socket Head Cap Screw M2.5x8mm (HC022-S)**

**Socket Head Cap Screw M2.5x5mm (HC017-S)**

**Center Hub (H0473-S)**

**Spindle (H0471-S)**

**Oriing (HC353-S)**

**Already Assembled**

**Greease**
- eg: Microlube GL261

**Socket Head Cap Screw M3x12mm (HC062-S)**

**Socket Head Cap Screw M2.5x5mm (HC017-S)**

**Washer Ø 6x Ø 12x1mm (HC193-S)**

**Nut M3 (HC206-S)**

**Bearing Ø 8x Ø 14x4mm (HC417-S)**

**Thrust Bearing Ø 8x Ø 14x4mm (HC437-S)**

**Socket Head Cap Screw M3x8mm (HC050-S)**

**Linkage Rod M2.5x33mm (H0237-S)**

**Linkage Rod A Assembly ... .x3**

**Approx. 62.5mm**

---

**SAB HELI DIVISION**
ABOUT HPS3

For safety reasons we suggest to not exceed.

2500 rpm Goblin 500
2400 rpm Goblin 570

In the KIT, you will find a bigger tail blades. This size is optimized for to counteract the additional torque in produced by 3rd rotor blade.

RECOMMENDATIONS

These parts should be used only with models SAB Goblin.

- Goblin 500 (recommended blades SAB 3BL465, max 500 mm)
- Goblin 570 (recommended blades SAB 3BL540, max 550 mm)
- 3 blades rotor head requires a much lower cyclic gain on flybarless systems. We recommend that you set your gain at least 30% lower than the gain you normally use on your 2 blade rotor head helicopters. You can start increasing the gain after you complete your first flight. Running too high of a gain can induce a violent oscillation that can potentially cause damage to your helicopter in flight.

- Please follow all the instructions shown in the Goblin main manual. In this manual please read Chapter 2, Important notes
- Use Loctite on all threads.
- Put a small amount of grease inside the hub and the O-Ring.
- Check the spindle for axial play at least after the first few flights and add shims as necessary, slight axial preload is optimal. The blade grips must move freely, but they should not move just under their own weight.
- Firmly tighten the blades before flight.

TIPS:

* To remove the dampeners, you can use a flathead screwdriver through the hole as shown.

* Clock-wise, counter clock-wise thread
* By turning the linkages you can adjust tracking.

SPARE PARTS

<table>
<thead>
<tr>
<th>Blade Grip Arm [H0203-S]</th>
<th>Blade Grip Arm [H0202-S]</th>
</tr>
</thead>
<tbody>
<tr>
<td>- 2 x Blade Grip Arm.</td>
<td>- 2 x Main Blade Grip.</td>
</tr>
<tr>
<td>- 2 x Bearing ( \phi \times 14x4 )mm.</td>
<td>- 4 x Bearing ( \phi \times 8x14x4 )mm.</td>
</tr>
<tr>
<td>- 2 x Washer ( \phi \times 13.8x0.5 )mm.</td>
<td>- 2 x Washer ( \phi \times 10.2x0.5 )mm.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Linkage [H0237-S]</th>
<th>Linkage [H0237-S]</th>
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<tbody>
<tr>
<td>- 2 x Linkages M2.5x33mm.</td>
<td>- 2 x Linkages M2.5x33mm.</td>
</tr>
<tr>
<td>- 4 x Plastic Ball Links.</td>
<td>- 4 x Plastic Ball Links.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Damper Derlin [H0425-S]</th>
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</tr>
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<tbody>
<tr>
<td>- 2 x H0425.</td>
<td>- 2 x H0425.</td>
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<tr>
<td>- 2 x Orings.</td>
<td>- 2 x Orings.</td>
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<tr>
<td>- 4 x Steel Shims ( \phi \times 14x0.2 )mm.</td>
<td>- 4 x Steel Shims ( \phi \times 14x0.2 )mm.</td>
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<thead>
<tr>
<th>Spindle Shaft [H0471-S]</th>
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<tbody>
<tr>
<td>- 2 x Spindle Shaft.</td>
<td>- 2 x Spindle Shaft.</td>
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<tr>
<td>- 2 x Pin 4mm.</td>
<td>- 2 x Pin 4mm.</td>
</tr>
<tr>
<td>- 4 x Socket Head Cap M2x5mm.</td>
<td>- 4 x Socket Head Cap M2x5mm.</td>
</tr>
<tr>
<td>- 2 x Socket Head Cap M6x10mm.</td>
<td>- 2 x Socket Head Cap M6x10mm.</td>
</tr>
<tr>
<td>- 2 x Washer ( \phi \times 10.2x0.5 )mm.</td>
<td>- 2 x Washer ( \phi \times 10.2x0.5 )mm.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Center Hub [H0473-S]</th>
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</thead>
<tbody>
<tr>
<td>- 1 x Center Hub.</td>
<td>- 1 x Center Hub.</td>
</tr>
<tr>
<td>- 1 x Socket Head Cap Screws M3x12mm.</td>
<td>- 1 x Socket Head Cap Screws M3x12mm.</td>
</tr>
<tr>
<td>- 1 x Socket Head Cap Screw Shouldered M3x20mm.</td>
<td>- 1 x Socket Head Cap Screw Shouldered M3x20mm.</td>
</tr>
<tr>
<td>- 1 x Metric Hex Nylon Nut M3.</td>
<td>- 1 x Metric Hex Nylon Nut M3.</td>
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<thead>
<tr>
<th>Radius Arm [H0474-S]</th>
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<tbody>
<tr>
<td>- 2 x Radius Arms.</td>
<td>- 2 x Radius Arms.</td>
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<tr>
<td>- 2 x Spacer Arm</td>
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<tr>
<td>- 1 x Spacer Hex.</td>
<td>- 1 x Spacer Hex.</td>
</tr>
<tr>
<td>- 1 x Uniball Radius Arms.</td>
<td>- 1 x Uniball Radius Arms.</td>
</tr>
<tr>
<td>- 2 x Socket Head Cap Screws M3x12mm.</td>
<td>- 2 x Socket Head Cap Screws M3x12mm.</td>
</tr>
<tr>
<td>- 2 x Socket Head Cap Screws M2.5x8mm.</td>
<td>- 2 x Socket Head Cap Screws M2.5x8mm.</td>
</tr>
<tr>
<td>- 2 x Flanged Bearings ( \phi \times 2.5 \times 6x2.5 )mm.</td>
<td>- 2 x Flanged Bearings ( \phi \times 2.5 \times 6x2.5 )mm.</td>
</tr>
<tr>
<td>- 4 x Flanged Bearings ( \phi \times 7x3 )mm.</td>
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<thead>
<tr>
<th>Swashplate [H0475-S]</th>
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</tr>
</thead>
<tbody>
<tr>
<td>- 1 x Swashplate Assembly.</td>
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</tr>
<tr>
<td>- 1 x Bearings M3x4 0x0.5 H3.</td>
<td>- 6 x Uniballs M3x4 0x0.5 H3.</td>
</tr>
<tr>
<td>- 1 x Uniball M3x4 0x0.5 H18.</td>
<td>- 1 x Uniball M3x4 0x0.5 H18.</td>
</tr>
<tr>
<td>- 7 x Socket Head Cap Screws M2x5mm.</td>
<td>- 7 x Socket Head Cap Screws M2x5mm.</td>
</tr>
<tr>
<td>- 3 x Washer ( \phi \times 2x0.5 )mm.</td>
<td>- 3 x Washer ( \phi \times 2x0.5 )mm.</td>
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