



## Features

- 180° rotate function capable of delivering 8.2Nm @ 80bar (6lbf.ft @ 1160psi)
- Jaw force capacity of 125N @ 80bar (28lbf @ 1160psi)
- Soft rope cutting blades available as standard

## Product Overview

The HLK-21020 manipulator jaw rotate was developed specifically for the HLK-43000 mini-manipulator commonly used on small observation class vehicles or can be retrofitted to any system requiring a jaw rotate function or mechanism.

The rotate function utilises a rack and pinion design offering a limited 180° rotation while the jaw function utilises a double acting actuator. The body and bracket are manufactured of 6082 aluminium with a 50 micron hard anodized surface.

The rotate function can deliver a limited range torque of 8.2Nm @ 80bar (6lbf.ft @ 1160psi) while the jaw mechanism can exert a compressive force of 125N @ 80bar (28lbf @ 1160psi).

Welded into each jaw tine is a pair of circular cutting blades to provide a soft rope cutting capability up to 6mm (1/4") and a cross drilling of 6mm (1/4") is available for the gripping of t-handles or other types of ROV tooling handles.

## Product Specifications

### General

Function	Jaw & Wrist Rotate
Materials	316 Stainless Steel, 6082 Aluminium
Seal Materials	Nitrile/NBR/Buna-N
Product Finish	Hard Anodised
Ports	1/8" BSPP (ISO 1179)
Dimensions	(L) 312mm x (W) 108mm x (D) 75mm (12.3" x 4.3" x 3")
Weight in Air	4.5kg (9.9lb)
Weight in Water	3.4kg (7.5lb)
Wrist Travel (Degree)	180 Degree
Jaw Opening	90mm (3.5")
T-Handle Groove Diameter	10mm (3/8")

### Hydraulic Performances

Max. Working Pressure	80bar (1160psi)
Flow	0.5lpm to 3lpm (0.13gpm to 0.79gpm)
Fluid Type	Mineral: DIN 51524, ISO 11158, ISO 6743-4 Synthetic: Panolin Atlantis, HLP-Synth
Viscosity	16cSt to 220cSt. VG 22-32 Recommended
Fluid Temperature	5-60°C (41-140°F)
Cleanliness Requirements	ISO 4406:19/17/14, NAS 1638:8, AS4059:9A/8B/8C

### Forces

Wrist Torque	8.2Nm @ 80bar (6lbf.ft @ 1160psi)
Jaw Force	125N @ 80bar (28lbf @ 1160psi)
Soft Rope Cut Diameter	6mm (1/4")

### Environmental

Operational Depth	6000msw (19,680ft)
Operating Temperature	5-60°C (41-140°F)
Storage Temperature	0-70°C (32-158°F)
Humidity	0% to 100% Condensing