Mako Offshore



The Rigmaster 5F Manipulator is a heavy-lift grabber arm designed for use with high-performance subsea vehicles. It is particularly suited for rugged operations, providing strength and reliability where precision may be secondary. Its compact and service-friendly design makes it ideal for a wide range of ROVs operating in harsh environments. The manipulator is environmentally friendly, featuring no hydraulic slip-ring, and supports both left- and right-hand operation.

Key Features

- Tough and durable design
- Environmentally friendly (no hydraulic slip-ring)
- Low operational cost
- Compact and service-friendly
- Ambidextrous configuration options
- Suitable for harsh and rough operations

Technical Specifications

Manipulator Arm

Specification	Value
Type	Rigmaster Manipulator 5F
Part Number	ARM-RIG
Materials	Anodized aluminium, stainless steel, titanium
Weight In Air	64 kg
Weight In Water	48 kg
Standard Depth Rating	6,500 msw
Reach	1,372 mm
Lift At Full Extension	181 kg
Maximum Lift (Nominal)	270 kg
Standard Gripper Opening	289 mm
Grip Force (Nominal)	205 Nm
Wrist Rotation (Continuous)	6 – 35 rpm

Actuator Functions

Specification	Value
Base Yaw	Linear, 105°
Shoulder Pitch	Linear, 105°
Boom (Extend/Retract)	Linear, 305 mm
Wrist Pitch	Linear, 120°
Wrist Rotate	Gerotor, 360°
Gripper (Standard)	Linear, 284 mm

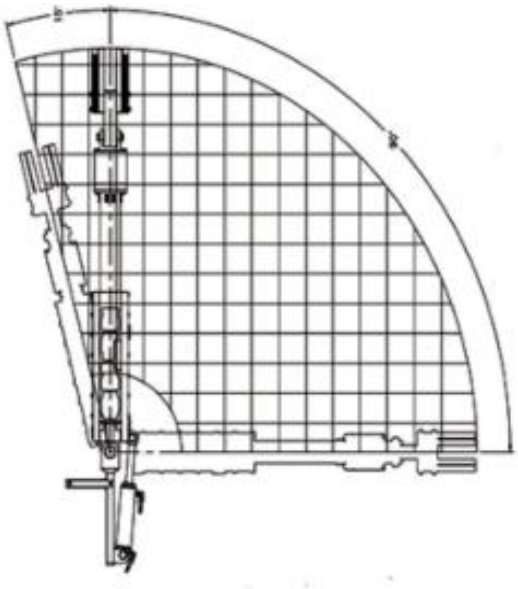
Connections & Hydraulic Requirements

Hydraulic Specifications

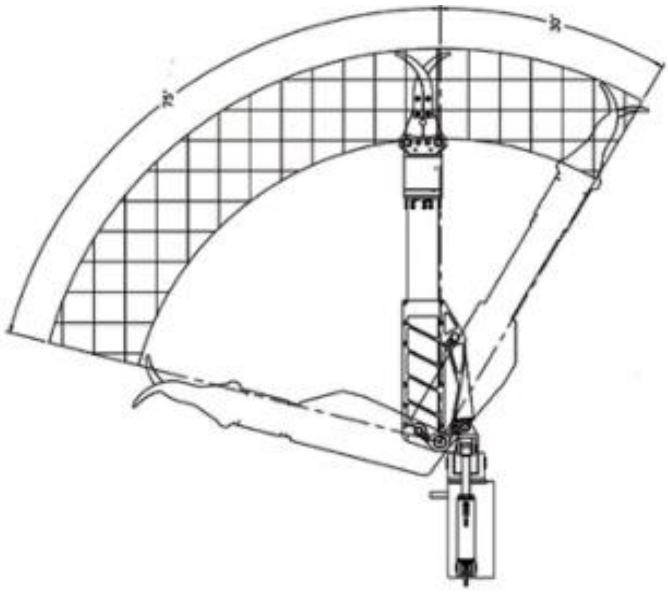
Specification	Value
Fluid Type	Mineral, Glycol, or Synthetic
Viscosity	10–200 cSt
Flow Range	5.7–19 LPM
Max Pressure	207 Bar / 3,000 PSI
Max Fluid Temperature	54°C
Fuild Cleanliness	ISO 4406 14/11
Filtration	10 microns
Hydraulic Connections	JIC 04 Female

Dimensions

Reach: 1,372 mm
Weight: 64 kg (air), 48 kg (water)
Gripper Opening: 289 mm



Range of motion, top view



Range of motion, side view