



Equipment Number

ED 065

OTS Project Number

I/15/5295

Equipment Description

4.5m MBR Powered Quadrant

Manual Volume Number

4

DOCUMENT TITLE

EQUIPMENT SPECIFICATIONS



OCEANTEAM DOCUMENT NUMBER

ED-065-VB-001

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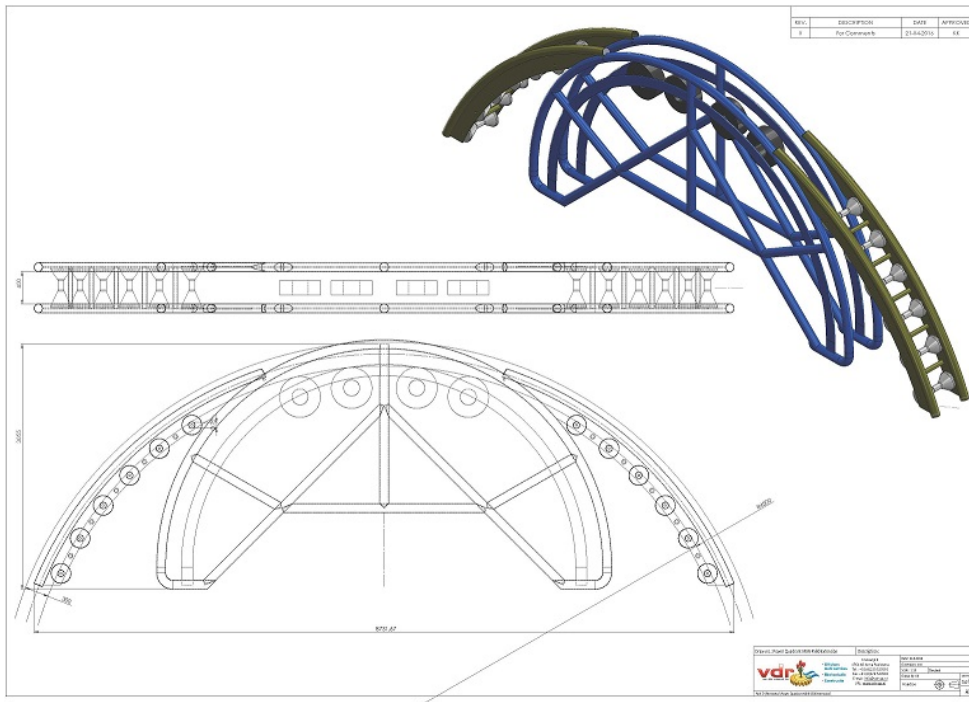
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1. Introduction

1.1 General / Purpose

The Equipment Specification Manual provides information on the general specification of the equipment.



1. Equipment Specifications

1.1 Powered Quadrant

Pull Force	2 Te. In both directions
Max Grip Force – Mechanically adjustable	500kg
Maximum Designed Speed	17 rpm
Minimum Designed Speed	1 rpm
Track Opening	250 mm
Maximum cable diameter	250 mm
Minimum cable diameter	50 mm
Minimum Bend Radius	4500mm
Maximum Operating Pressure	180 bar
Required Flow	140L/min
Drive Wheels - 4 off Hydraulically driven	Solid Rubber material
Grip Wheels - 4 off	Dunlop Pneumatic DR15854T
Grip Wheel Tyre Pressure	6 Bar

1.2 HPU Specification

Prime mover: 55 kW, 4 pole, squirrel cage motor	3ph; 400/460V; 50/60Hz
Full load current	100 Amps
Main pump – Parker PVP100362R2A 10	Variable Volume piston pump
Main pump theoretical displacement	100 cc/rev
Max flow @ 1460rpm (50 Hz)	146 l/min.
Max flow @ 1800 rpm (60 Hz)	180 l/min.
Max operating pressure	180 Bar
HPU Cooler type	Oil/ Air Hydac OKA- EL6
Cooler max. Air consumption	60 M ³ /min

2. Description

2.1 Overview

The Powered Quadrant system can be broken down into three basic packages consisting of the following;

Portal & Quadrant	ED 065 - 1
Hydraulic Power Unit (HPU)	ED 065 - 2
Remote Control Unit (RCU)	ED 065 - 3

2.2 HPU (Hydraulic Power Unit)

The HPU is housed within an enclosed frame, with the electrical control cabinet and hydraulic power system protected from the weather by. The HPU has a variable volume piston pump system for the drive. There is also an Oil/Air cooling fan system, fitted within the enclosed frame.

The basic power pack electrical controls are mounted on the electrical control panel, and are simple start stop push button controls with indicator lamps along with a mains isolator. Mains power is connected to the HPU via 125A 3 phase socket. There is 1 multi-core control 30m long cable, which connects the RCU to the HPU. When electrical power is present, and after the E Stop reset button has been pressed, the HPU motor can be Started/Stopped, at either the HPU, or from the RCU.

The power pack pump is used to control direction, and speed of the quadrant drive motors. The RCU must always be plugged into the HPU so as to have continuity in the E-STOP circuit.

Additionally, an extra E-STOP button and cable is provided if required.

HPU



HPU Hydraulic/Power/Control Connections



HPU Electrical Control Panel



2.3 RCU (Remote Control Unit)

Remote control of the Powered Quadrant is electrically operated from the Remote Control Unit (RCU). The RCU is used as the normal method of controlling the speed & direction of the quadrant.

This RCU provides the remote operator interface to the following HPU & Quadrant control functions.

The HPU can be started/stopped at the RCU, which is fitted with indicator lamps to show that power is available at the HPU, that the Hydraulic pump is running (once the start button is depressed), also a warning lamp to indicate problems that the HPU may have, such as over temperature etc.

An Emergency stop button is also provided to immediately turn off the HPU power, in case of an emergency situation.

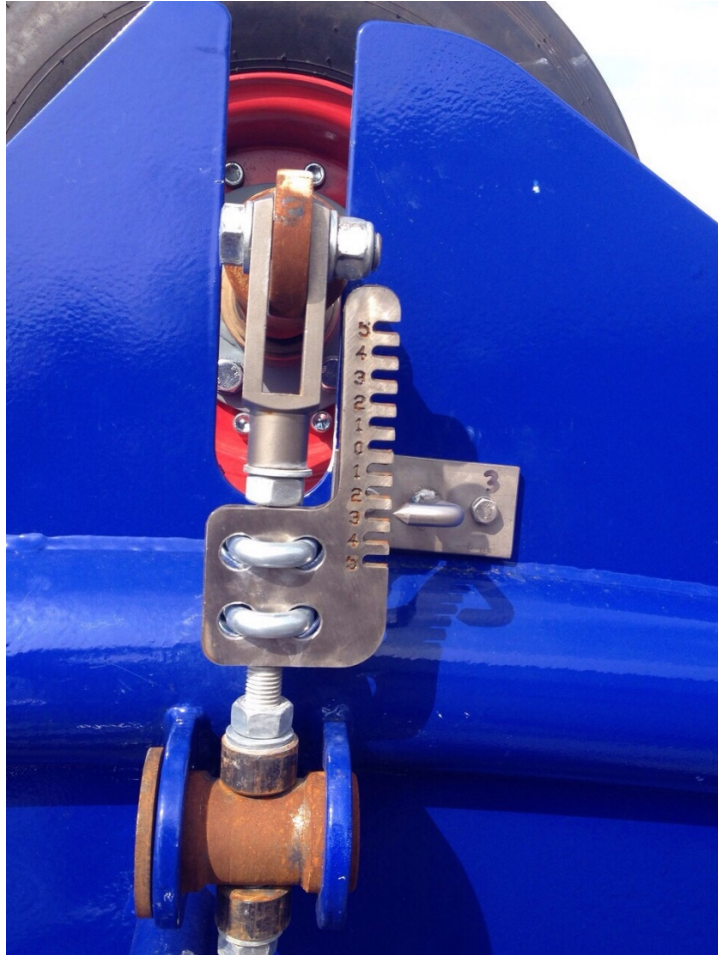
The Joystick lever controls speed and direction, CCW/CW, and has the ability to manually control the speed & direction by moving the lever either side of the centre position, or by slowly rotating the top part of the lever (potentiometer) CCW/CW which, once the required speed is reached, the Joystick will be set at that speed setting without the need to hold the lever. Similarly by rotating the top of the joystick lever CCW/CW the speed can be reduced, or returned to the centre position to stop rotation.

The RCU is a portable sized console; this allows the RCU to be used as a 'Walkabout' control console. The RCU electrical supply is via the supplied control cable, one Harting Type multi-pin connector connect the RCU, via the supplied 25m multi-core cable to the HPU.



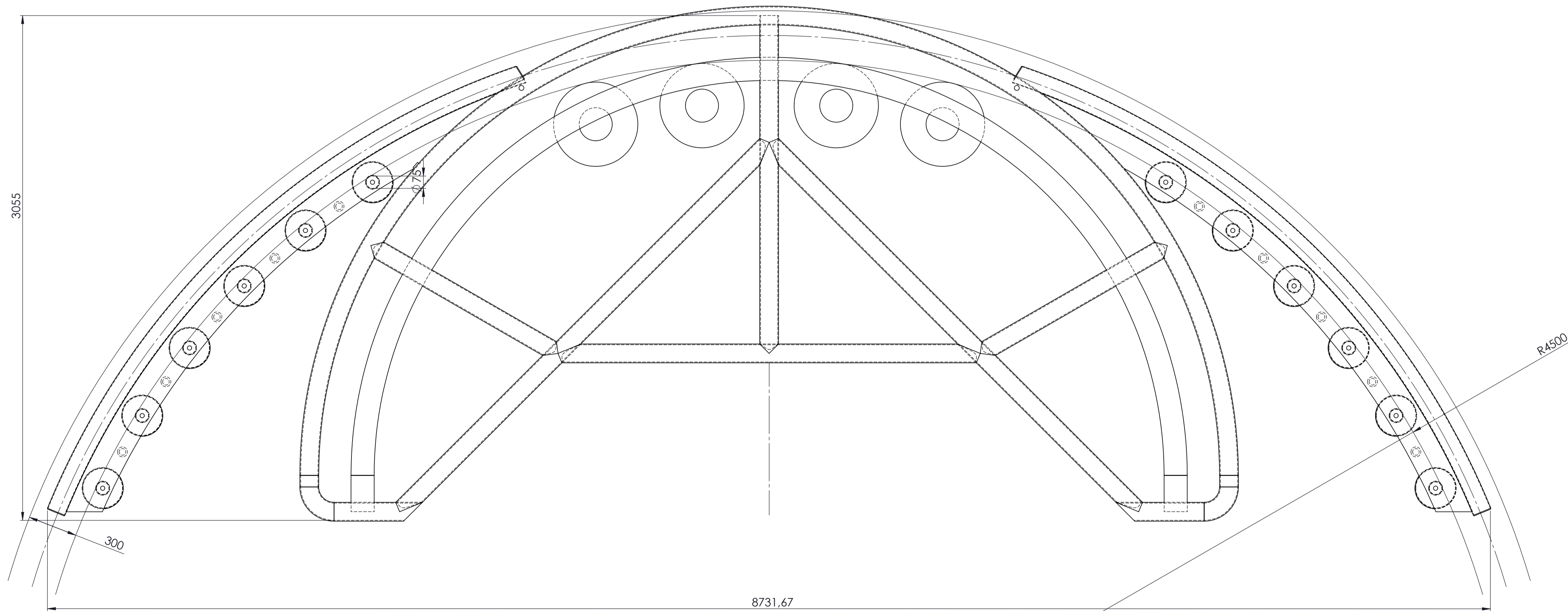
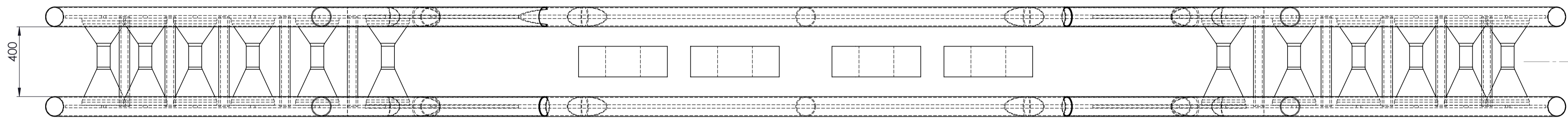
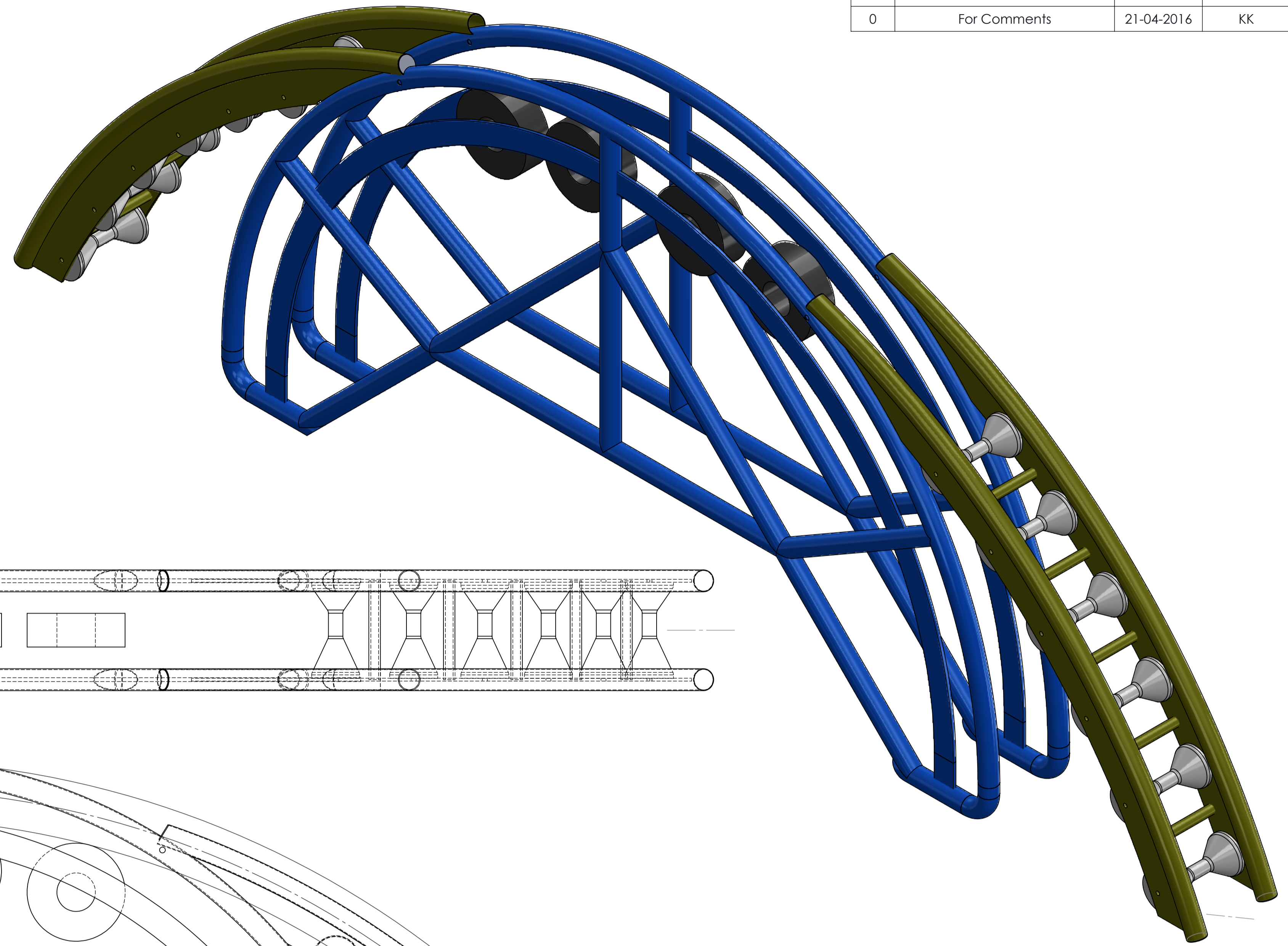
RCU (Remote Control Unit)

2.4 Grip Setting Indicator



3. GA Drawings

REV.	DESCRIPTION	DATE	APPROVED
0	For Comments	21-04-2016	KK



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