



MODEL HRT3SS DYNAMOMETER

PART NUMBER: DYNHRT3SS

(For Marine / Offshore & Mining applications)

Description

The Robway HRT-3SS Dynamometer (also known as Line-rider or Tensiometer) is a load sensor comprising of three (3) matching sheaves within a pair of side plates. This concept of load sensing provides for a wide range of installation opportunities. The HRT Dynamometer can be mounted anywhere over the hoist rope that will not interfere with the hoist operation.

A shear beam type load cell is mounted on the rocker box underneath the centre sheave assembly. When a load is lifted, the tension on the hoist rope causes the centre sheave to exert a downward force onto the beam cell which is proportional to the tension of the rope. This force is then converted into an electrical signal and sent to the RCI Control Unit for processing and converting into hook load weight.

Maximum Rope Diameter and Line-pull Capacity

The HRT-3SS Dynamometer can be fitted with hoist ropes of up to 29mm diameter with maximum single rope line-pull of 14 metric tonnes.

Marinised Frame

The housing assembly or frame is made of high quality Grade-316 stainless steel plate for marine/offshore application. Sheave shafts/pins are also manufactured to Grade-316 stainless steel.

Sheaves

The sheaves are made of high quality zinc-plated, grey passivated round steel bar to Australian Standard AS3679-250 hardened to Rockwell C58-C60, case depth of 0.75 mm, grooved to suit various rope diameters and fitted with two sealed ball bearings.

Beam Cell Specifications

Linearity:	0.03% nominal
Repeatability:	>0.03%
Hysteresis:	<0.03%
Creep:	<0.03%
Zero Balance:	±1%
Output:	3mV/V @ F.S.
Excitation:	4VDC (Up to 15VDC Max.)
Overload:	200% (No Electrical Damage) >400% (Ultimate)
Temperature Effects:	<0.005% / °C (On Zero) <0.005% / °C (On Span)
Compensated Range:	-10 to +70°C
Sealing:	IP68 Fully Encapsulated