



REVA offers RNS Type NEW SERIES of heavy duty energy efficient Electric Wire Rope Hoists confirming to IS:3938:1983 and classified according to FEM/ISO with built in reliability, deriving product strength from making all the key Hoist components IN-HOUSE, optimally engineered and manufactured according to a standard Quality Assurance Plan using the latest in materials and manufacturing techniques.

The product is world class in line with European Manufacturers practices. It is compact and cost effective and has been designed keeping in view the customer needs. Optimum use of electrical energy has been taken into account for achieving speeds with liberal margins for voltage fluctuations, ambient temperature, gear efficiency etc.

#### FRAME

Frame fabricated from Steel plates, having rugged construction, is machined and bolted with special fixtures.

#### GEAR CASES

Gear cases in graded cast iron are duly shot peened, stress relieved

#### GEAR & PINIONS

REVA chose to make all their Gears & Pinions in - house ensuring their quality, compatibility & serviceability. All HELICAL gears & pinions integral with shafts is made from case - hardening low-carbon alloy steels and are HARDENED to 56-60 HRC. High speed Pinions & Gears are PROFILE GROUND running in splash lubrication oil bath to give noiseless movement with max efficiency to save on consumed electricity. Gears & pinions confirm to DIN7/AGMA-12 standard.

#### ROPE DRUM

Drum from seamless steel pipe revolves on heavy duty self-aligning roller bearings. The CNC machined spiral grooves accommodate rope in one layer allowing two full turns of rope on the drum when the hook is at the lowest position. Drum size corresponds to Class IV of IS ensuring lower head rooms and HIGH ROPE LIFE.

#### ROPE GUIDE AND RETAINER

Rope guide leads the rope into spiral grooves in the drum and retains it in the grooves preventing overlapping on or loosening off the drum.

#### WIRE ROPE

Non-Rotating type wire ropes of suitable construction bought from reputed manufactures, made of best plough steel conforming to IS:2266 with factor of safety appropriate to the class of duty is used with every Wire Rope Hoist.

#### HOOK BLOCK

Standard forged trapezoidal section hooks to IS:8610, IS:3815 are used. Hook is carried in steel cross head on thrust ball bearing. The sheaves are supported on ball bearings. Sheave dimension correspond to relevant IS.

#### MOTORS

High Starting torque, crane duty, totally enclosed squirrel cage induction motors in international frame sizes of reputed make are used. Motors confirm to IS:325. All motors used are suitable for 415 ± 10%V, 50 ± 5%Hz, 40% CDF, suitably derated for higher duties, 50° C Amb. temperature. Motors suitable for different voltages and frequencies can be provided.

#### BRAKES

Fall Safe D.C. Disc Brakes is a standard feature for hoisting. The brakes are fitted with Asbestos \_ Free lining. The motor fan fixed on the rear of brakes keep motor and brake cool. The brake has manual release lever in case of emergency or power failure. Cross Travel is provided either with D.C. Disc or A.C. Disc Brakes as an option.

#### MECHANICAL

All Gears, Pinions, Rope Drums, Wheels, Sheaves are manufactured on State of Art CNC Turning Centres giving the benefits of achieving dimensional accuracies, consistency, repeatability and above all perfect profile & contours ( which are otherwise difficult to achieve ) thus leading to higher fatigue life.

#### WHEELS

Closed die forged from medium carbon alloy steels, these wheels are produced on CNC turning centre for accurate bore & tread profile. Two nos. large dia ball bearings are used for better rolling effect and stability.

#### CONTROL

The operation is through Pendant Push Button Station having control voltage of 24V for maximum safety of operator through flush - type hold on push button housed in IP:55 enclosure, Electricals of reputed make such as Siemens, L&T, BCH are used. Individual motors are protected by HRC fuses/MCB's, overload relays, single phasing and wrong sequence preventers as an option.

#### LIMIT SWITCHES

A standard limit switch is used for max. UP and max. down and cross travel motion as a standard feature.

#### OVERLOAD LIMITER

REVA New Series Hoists can be fitted with an overload protection device including a microswitch with single cut-in measures the amount of applied load and the dynamic and inertial effects of load handling. When the set calibration values are exceeded, the load limiter microswitch cuts in and opens the control circuit of the hoisting controls as an option.

#### TROLLEY

Electric Wire Rope hoists can be supplied for fixed mounting with geared trolley for manual operation or electric driven trolleys according to the Customer's requirements.

#### ULTRA LOW HEAD ROOM

Ultra low head room hoists are available for capacities up to 25 tonnes.

#### LOW HEAD ROOM BI - RAIL HOISTS

Trolley are available up to 25 tonnes capacity for use on Double Girder Cranes.

#### OPTIONS:

- VVVF A.C. Drives for stepless speed control.
- Radio Remote Control.
- Creep speed of 1/4th or 1/10th of Main Hoisting speed.
- Disc Brake in Cross - Travel.
- Ultra Low head rooms available.
- Overload limiter
- Trolley suitable for curved path



BI - RAIL HOIST

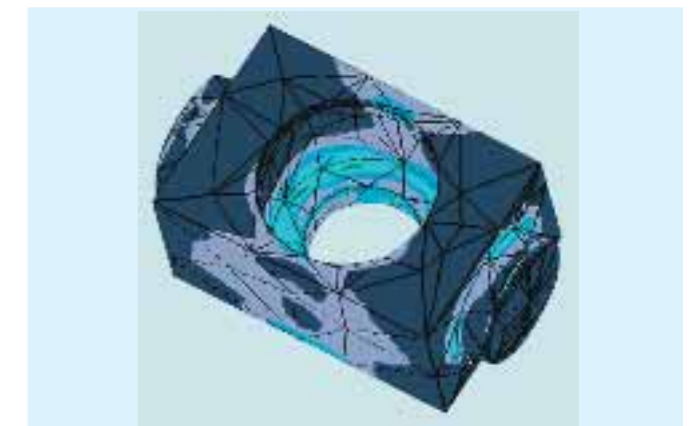


ULTRA LOW HEAD - ROOM HOIST

#### ADVANTAGES

Manufactured in STANDARD MODULES, these Hoists are having following advantages:

- Energy efficient for least electricity consumption. ( You save on electricity every time you use it)
- Compact, Low Head Rooms & low dead weights leading to SAVING on infrastructure due to lower heights & lower head rooms.
- Load Sensing overload limiter in addition to standard limit switch for Max.UP & Max.DN-extreme SAFETY
- All mechanicals manufactured in - house on state of art CNC turning centres assuring QUALITY & CONSISTENCY.
- Very high gearing life - silent running with all BENEFITS of HELICAL GEARING.
- Perfect BALANCING leads to equal load on both flanges of runway beam flange.
- Adjustable Trolley to suit DIFFERENT beam widths.
- EXPERIENCE of over 20 years of Hoist manufacturing & BENCHMARKED with a known European Hoist manufacturer.
- All Hoists are HEAVY DUTY conforming to CI - IV of IS:3938:1983 & designed to FEM/ISO.
- Pro - Engineered on Pro - E for optimisation, safety & reliability.
- Manufactured as per a standard QAP.
- UNMATCHED PRICE - PERFORMANCE RATIO.



STRESS ANALYSIS OF HOOK CROSS - HEAD



MACHINING ON MACHINING CENTRE