

HEAVY DUTY WINCH

Electric Winch

Suitable for Drift, Trunk and
Maingate Conveyors

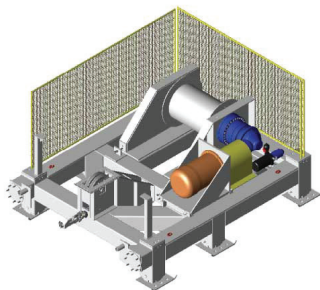
Precise Tension Control

PLC Controlled

Explosion Proof or
Non-Explosion Proof

High Performance Winch

- Up to 100kN Belt Tension
- 300kN Peak Tension
- 0 to 0.6m/s Winch Speed
- Reversible



The HDW winch is an electrical solution providing tension for a conveyor loop take up system.

The HDW winch consists of a variable speed drive and control electronics connected to a motor, gearbox and winch drum. The belt tension is varied by adjusting the excitation of the motor, thereby varying the torque to the winch drum.

The HDW winch provides precise tension control of the conveyor belt, usually adjusting tensions to within 1kN of the setpoint. It also has an excellent dynamic response, with the ability to rapidly accelerate beyond synchronous speed.

The HDW winch is controlled by operating a feedback tension loop. The belt tension is read using direct load cell measurement of winch rope tension. The controller then maintains the setpoint tension, regardless of conveyor influences or supply variations.

The HDW winch adjusts the motor torque in response to this measured belt tension. The winch will operate at very low speeds when only a minor adjustment of torque is required. When a rapid change in tension is required the output shaft accelerates very quickly to beyond synchronous speed due to the inherently low inertia of the winch drive train. In the stalled condition it only needs to excite the motor to create a holding torque thereby consuming very little power. A HDW winch provides superior accuracy and performance over alternative hydraulic or electro-mechanical solutions.

The HDW winch provides controlled operation in both directions, permitting low speed reversal of the winch if a wire rope is required to be changed.

TECHNICAL DETAILS

Mechanical

Continuous Tension	Up to 100kN
Peak Tension	300kN
Winch Speed	0 to 0.6m/s

Electrical

Modes	Manual/Automatic/Reeling
Setpoint	Adjustable from 0 to 100kN
Voltage	415, 690 or 1150V (other voltages available)

Instrumentation can be intrinsically safe

Local control panel is supplied with tension display