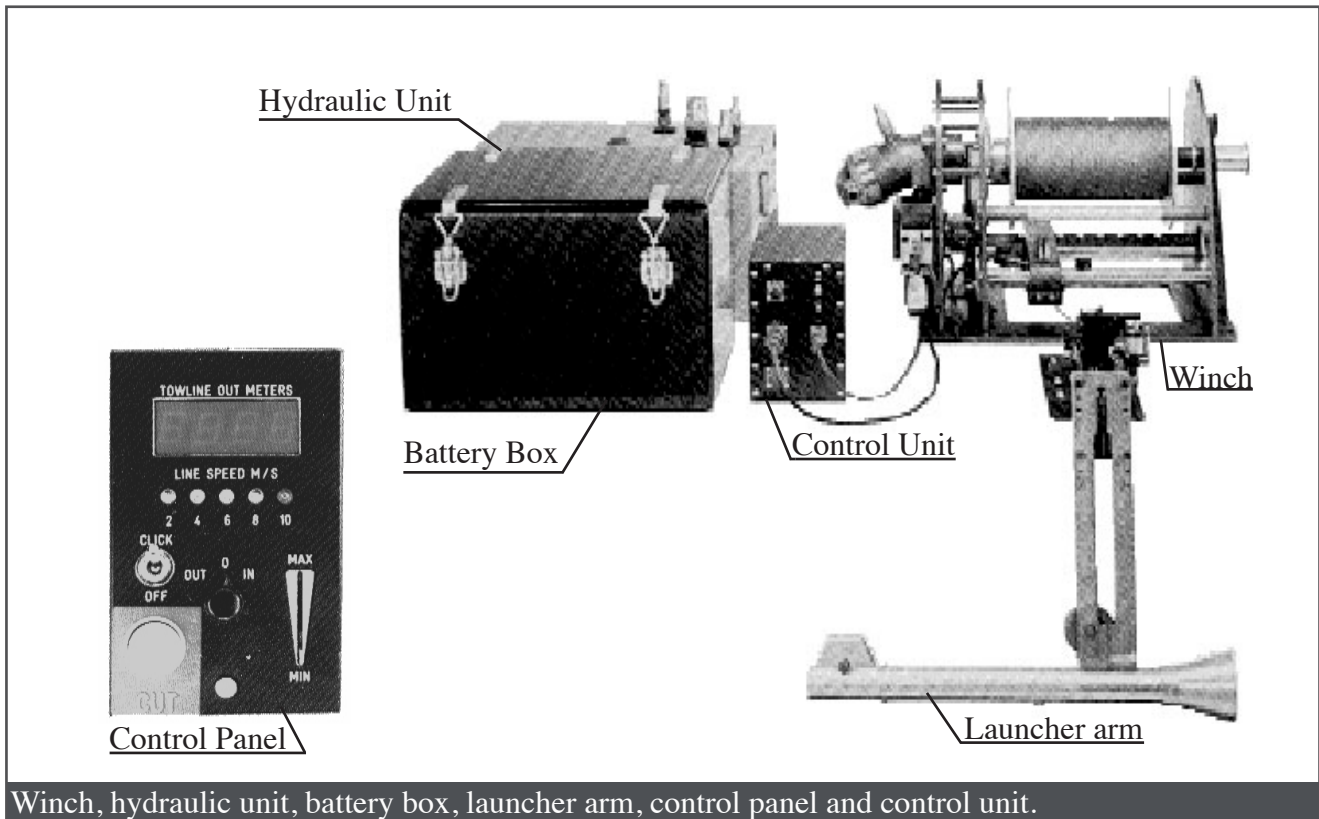


TARGET TOWING WINCH MBV-45



Winch, hydraulic unit, battery box, launcher arm, control panel and control unit.

The MBV 45 electro/hydraulic operated winch is intended for medium duty target towing operations with inboard installation in the towing aircraft.

The winch consists of an hydraulic unit which is powered by a hydraulic pump. The pump is driven from an electric motor. If sufficient electric power is not available in the aircraft the electrical motor is powered from a separate battery pack.

The hydraulic unit contains all the necessary control valves for full control of the complete winch.

Winch operation is controlled from the control panel which sends commands via the control unit to the hydraulic valves. Reel in or out, reel speed and tow line length are displayed on the control panel.

The safety system consists of a safety click and an emergency line cutter operated with an explosive squib.

The advanced control system allows one operator to operate the system with precision and control of the target.

The winch tow line is routed to a launcher arm installed on the aircraft from where the target is launched and retrieved. Air Target also supplies the outboard launcher arm.

The advantageous weight/power ratio of this winch makes installation in a variety of small aircrafts possible.

Certification of winch and launcher installation is the responsibility of the customer or installer.

The winch has been used in a number of aircrafts such as: CESSNA 172, BEECH BARON, PIPER SENECA and NORMAN ISLANDER.

TECHNICAL DATA

HYDRAULICS

Max working pressure	14 MPa (2000 psi)
Safety valve setting	15 MPa (2175 psi)
Required flow rate	9 l/min

ELECTRICAL

Operating voltage	24/28 V DC
Current consumption	60 -140 A (depending on load)

CONTROL SYSTEM

Control method	Electro-hydraulic servo
Controls	Proportional

REEL

Capacity	2500 m with 1.25 mm line
Max reeling in speed	4 m/s

BRAKE

Primary brake	By hydraulic system
Reel lock	Click lock

SAFETY DEVICE

Line cutter	Explosive squib
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DIMENSIONS

Width	610 mm
Depth	330 mm
Height	340 mm
Weight: (incl. launcher and line cutter)	40.5 kg
Weight of electric motor and hydraulic unit	36 kg
Weight of batteries for battery operation	49 kg
Weight of 2500 m 1.25 mm tow line	24.5 kg

HYDRAULIC PUMP

Max pressure	15MPa (2175 psi)
Max flow rate	10 l/min

INSTALLATION

The winch, hydraulics, control unit, and optional batteries and electric motor are normally installed on a custom designed mounting platform in order to facilitate easy installation and removal from the aircraft. The installation of the

launcher may be integrated with the winch or separate, depending on the aircraft used. Installation may in some cases be subject to CAA approval, which is the responsibility of the user or the installer.