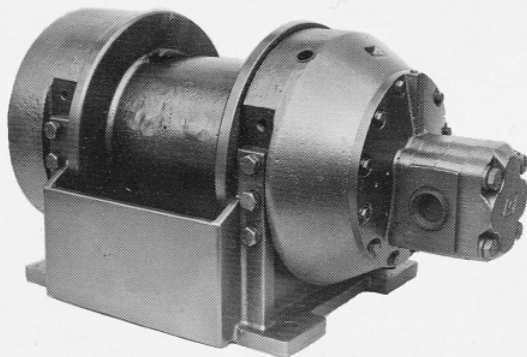


M12

PLANETARY, HYDRAULIC WINCH



**EQUAL SPEED
EQUALS TONNAGE**

pull **MASTER**

THE LOGICAL CHOICE

MODEL M12 PLANETARY, HYDRAULIC WINCH

DESCRIPTION

The **PULLMASTER** Model M12 is a high performance, high efficiency planetary winch, having equal speed in forward and reverse rotation. The automatic, multi-disc type brake of this unit is effective in one direction only and achieves an exceptionally smooth lowering control of the maximum load in a stepless operation. The **PULLMASTER** Model M12 is powered by a hydraulic gear motor and the required reduction ratio of 41:1 is established by two planetary stages. The hydraulic motor drives direct into the planetary reductions. An over-running clutch, installed between the motor drive shaft and the brake assembly, permits free rotation in the "Hoisting" direction without affecting the brake. During "Lowering" operation the over-running clutch locks, causing the brake discs to rotate between a series of divider discs. Dynamic braking is then achieved by modulation of the winch control valve handle. When the control is returned to neutral position the brake applies automatically.

A counter-balance valve is not required for smooth and positive "Down" control of the **PULLMASTER** Model M12 planetary winch.

All moving parts of the **PULLMASTER** Model M12 planetary winch are totally enclosed and run in an oil bath. Anti-friction bearings are used on all turning components, assuring long, trouble free service with a minimum requirement for maintenance.

DRUM SIZES: Wide range of drum sizes is available to provide for larger cable storage capacities.

RATCHET & PAWL: For a positive lock of the cable drum, a ratchet and pawl assembly can be supplied as an integral part of the winch.

DRUM GROOVING: When required, the Model M12 can be supplied with grooved drums.

REDUCTION RATIOS: The performance can be altered by different reduction ratios.

HYDRAULIC MOTORS: Hydraulic piston motors can be adapted for high pressure hydraulic systems.

EXTERNAL BRAKE RELEASE: This option offers the facility of an independent brake release.

M12F - FREE SPOOLING: The **PULLMASTER** Model M12F is basically of identical design and performance as the Model M12. However, this unit features a hydraulically actuated "Free Spool" function intended for operations where the wire rope has to be pulled off the cable drum by hand.

For further optional requirements contact the factory.

PERFORMANCE

- Based on a hydraulic volume of 50 (U.S.) gpm (189 l/min) at 2200 psi (152 bar) hydraulic pressure.
- Drum rpm at max. oil volume = 48 rpm drum torque at max. pressure 50000 lb. in. (5649 Nm).

MODEL NUMBER	BARE DRUM		MEAN DRUM		FULL DRUM	
	LINE PULL	LINE SPEED	LINE PULL	LINE SPEED	LINE PULL	LINE SPEED
M12-3-97-1	12000 lb 53.4 kN	104 fpm 32 m/min	9660 lb 43.0 kN	138 fpm 42 m/min	7319 lb 32.6 kN	172 fpm 52 m/min

- The volumetric requirements for the **PULLMASTER** Model M12 winch are recommended maximums and should not be exceeded. When the **PULLMASTER** Model M12 is installed in an existing hydraulic circuit with a lesser volume and/or pressure, the performance will change accordingly. Recommended control valve: (motor spool) four way spring return to neutral.

- Performance graphs for line pull vs. oil pressure and line speed vs. oil volume are available on request.

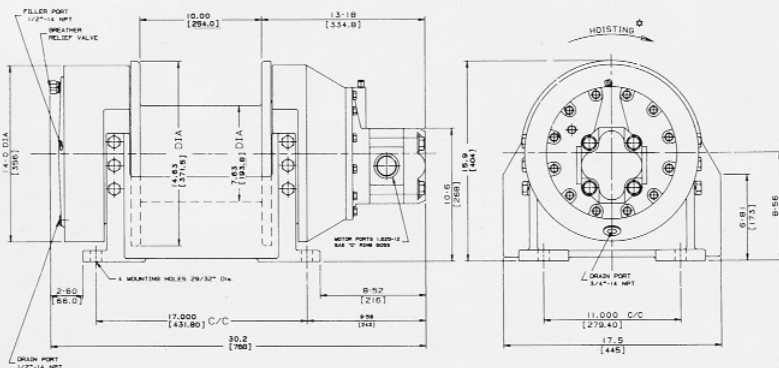
CABLE STORAGE

CABLE STORAGE CAPACITY FOR WIRE ROPE

MODEL NUMBER	DRUM SIZE			WIRE ROPE DIAMETERS								
	BARREL	FLANGE	LENGTH	1/8 in	3/16 in	1/4 in	5/16 in	3/8 in	7/16 in	1/2 in	9/16 in	5/8 in
M12-3-97-1	7-5/8 in 194 mm	14-5/8 in 372 mm	10 in 254 mm	5103 ft 1555 m	2333 ft 711 m	1280 ft 390 m	793 ft 242 m	569 ft 173m	458 ft 140 m	364 ft 111 m	287 ft 87 m	222 ft 68 m

The cable anchor of the **PULLMASTER** Model M12 planetary winch is not designed to hold the rated maximum load. The cable drum requires 3 - 4 wraps of wire rope for security.

DIMENSIONS



PULLMASTER planetary winches are covered by a liberal warranty. Parts and repair service are available from authorized **PULLMASTER** distributors throughout Canada, the United States and most overseas areas.

IMPORTANT:

PULLMASTER planetary winches are neither designed nor intended for installation on equipment used in lifting or moving of personnel.

PULLMASTER planetary winches are available for different lifting capacities and also with "Rapid Reverse" feature providing for reversing speeds faster than forward speed.

DISTRIBUTOR

For more information write to:

PULLMASTER WINCH CORPORATION

ISO 9001 Registered Firm # 96-381

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