



60 SERIES TOW CUTTER

Maximum Capacity: 2,000,000 total denier @ 43mm blade exposure & 51mm cut-length
3,000,000 total denier @ 70mm blade exposure & 51mm cut-length)

Maximum Tow Speed: 375 meters per minute

Motor/Drive:

- Variable speed AC inverter drive mounted on cutter
- 10/15 HP (7.5/11.2 kW), energy efficient, inverter capable motor
- Holding Brake
- Double Reduction Belt driven

Voltage: 460/380 Volts, 3Ph, 60/50Hz

Tow Height: 1,220mm (48") alternate heights available

Process direction: Right to Left **or** Left to Right

Blade Exposure: 43mm/70mm

Controls: Operator console mounted to the 60 Series cutter, operator functions include:

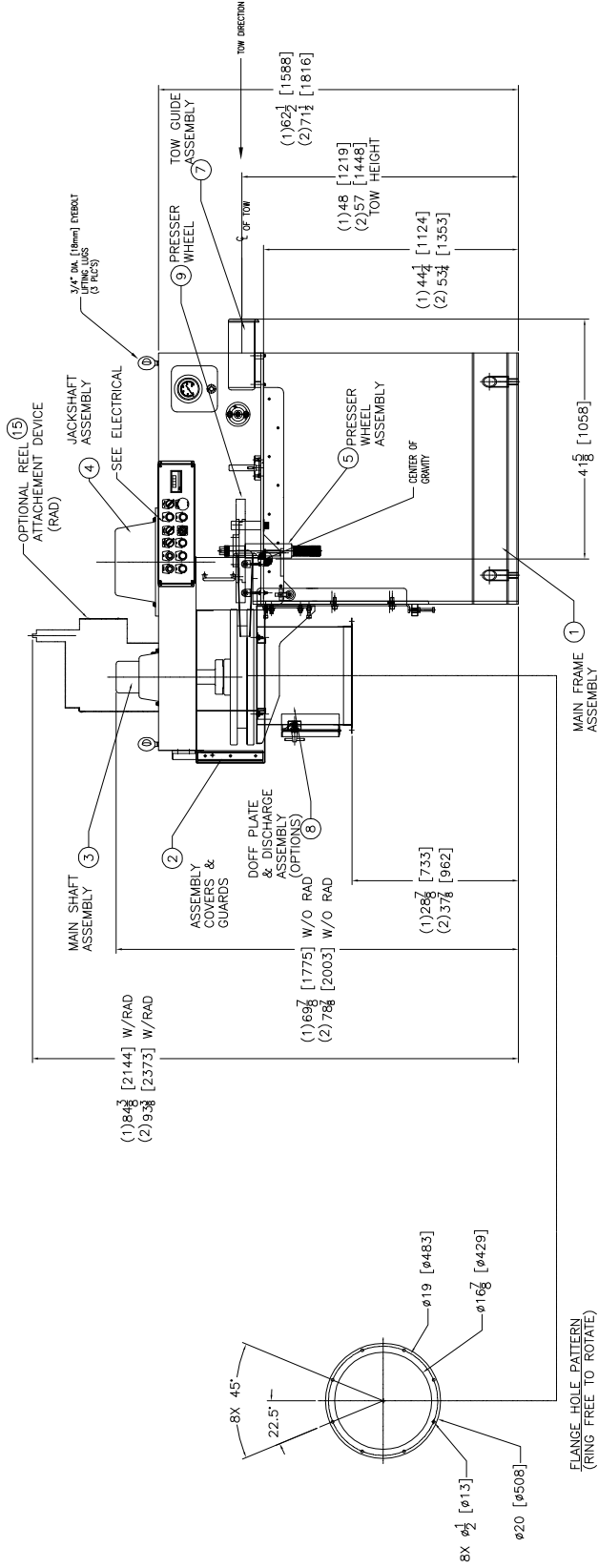
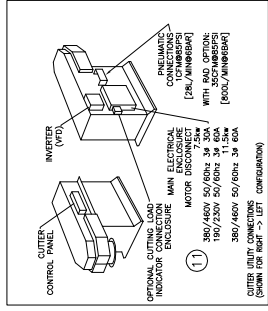
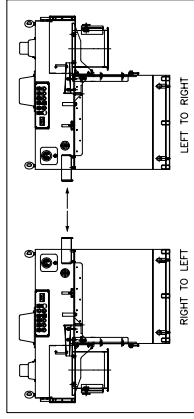
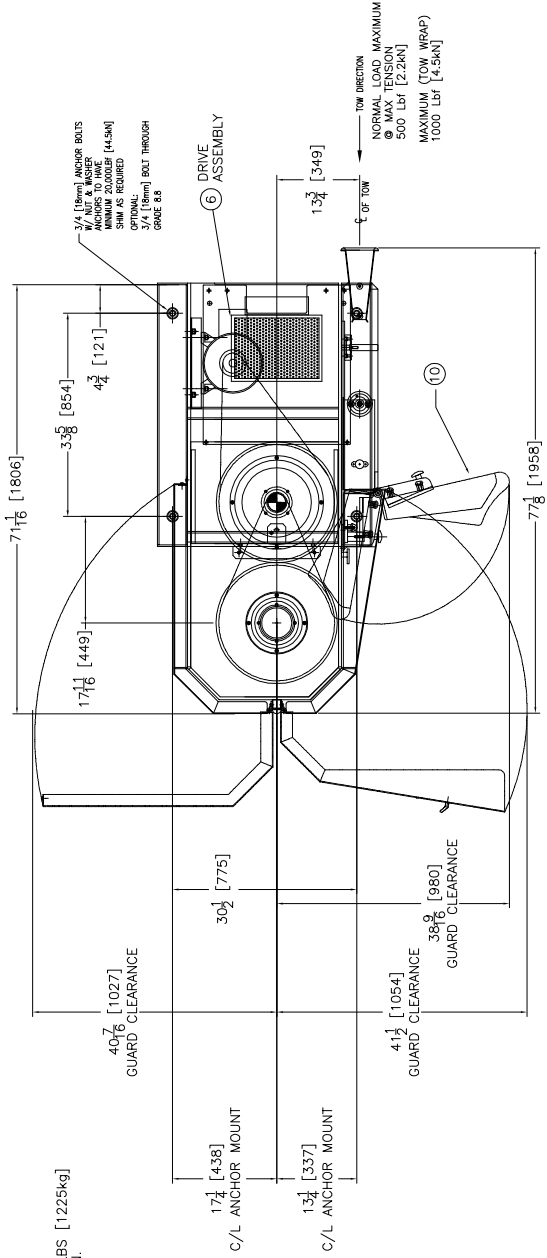
- **Start**- push button
- **Run/Jog** - Selector
- **Stop** - push button
- **% Speed Control** - potentiometer
- **Emergency Stop** - push/pull button
- **Brake** - selector switch
- **Power On** - light
- **Speed** - Digital Speed Meter
- **Presser Wheel** – adjustable regulator and gauge
- **Presser Wheel In** and **Out** – selector switch
- **Reel Up/Down** - selector switch (used only on RAD equipped cutters)
- **RAD Operate** - push button (used only on RAD equipped cutters)
- **Cutting Load Meter** – digital load display/alarms

Special features integrated on the DM&E 60 Series Tow Cutter include:

- 457mm (18") diameter pneumatically operated presser wheel
- Easy access presser wheel adjustment
- Enhanced tow guide system trumpet guide
- Pneumatic Holding Brake
- Monopost design
- Swing-open front reel guard with safety interlock and observation window
- Rear reel guard with observation window
- Stainless discharge duct
- Stainless steel externally adjustable doff plate
- Carbon steel construction with powder coat protective finish

DM&E 60 Series Tow Cutters are supplied completely assembled, ready for customer installation less radial blade cutter reel(s) and blades

NOTES:
 1. TOTAL WEIGHT OF CUTTER 2700 LBS [1225kg]
 2. RIGHT TO LEFT OPERATION SHOWN.



- (1) 48 [1219] TOW HEIGHT
- (2) 57 [1448] TOW HEIGHT
- (1) PNEUMATIC SCHEMATIC
- (2) NOT USED
- (1) ELECTRICAL SCHEMATIC
- (2) TOOL ASSEMBLY
- (1) RAD ASSEMBLY
- (2) ELEC SCHEMATIC F/RAD

RIGHT TO LEFT OPERATION AS SHOWN
 LEFT TO RIGHT IS OPPOSITE

ITEM NO.	DESCRIPTION	QTY	UNIT	REMARKS
1	MAIN FRAME ASSEMBLY	1	ASSEMBLY	
2	ASSEMBLY COVERS & GUARDS	1	ASSEMBLY	
3	MAIN SHAFT ASSEMBLY	1	ASSEMBLY	
4	JACKSHAFT ASSEMBLY	1	ASSEMBLY	
5	PRESSER WHEEL ASSEMBLY	1	ASSEMBLY	
6	DRIVE ASSEMBLY	1	ASSEMBLY	
7	TOW GUIDE ASSEMBLY	1	ASSEMBLY	
8	DOFF PLATE & DISCHARGE ASSEMBLY (OPTIONS)	1	ASSEMBLY	
9	PRESSER WHEEL	1	PART	
10	TOW GUIDE ASSEMBLY	1	ASSEMBLY	
11	JACKSHAFT ASSEMBLY	1	ASSEMBLY	
12	JACKSHAFT ASSEMBLY	1	ASSEMBLY	
13	JACKSHAFT ASSEMBLY	1	ASSEMBLY	
14	JACKSHAFT ASSEMBLY	1	ASSEMBLY	
15	JACKSHAFT ASSEMBLY	1	ASSEMBLY	

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15	JACKSHAFT ASSEMBLY	1	ASSEMBLY	

FLANGE HOLE PATTERN
 (RING FREE TO ROTATE)

DMIRE
 DYNAMIC MOUNTING INVERTER REVERSE ENGINEERING

FORM MANUFACTURING
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Cutting Load Meter (CLM) for Cutters

The DM&E Cutting Load Meter (CLM) monitors cutting forces in specially equipped tow cutters. Cutting load in a radial blade cutter is a combination of two forces. The first is the force required to cut the fiber. Second, additional forces transport the cut staple toward center of the cutter reel for discharge. Total denier, denier per filament, cut length, crimp, material, and the pin shape are only some of the factors that influence each value. The CLM measures and displays these combined forces created during the cutting process.

Blade dulling increases cutting load. Dull blades cause defective cutting, and defective fiber. Blade changes can be coordinated with blade wear by measuring the cutting load with the CLM. Knots or other obstructions can also cause a high load.

A load cell within the modified presser wheel mechanism senses the cutting load. The value is measured constantly and displayed on a digital meter. No tare value is required and the display may be in Newtons or Pounds. Alarm points can be set at the meter and integrated into the cutter stop circuit. An additional alarm set point can initiate a warning light.

In a typical installation the Signal alarm is set at a preliminary load and a Stop alarm is set at a higher setting to stop the cutter. The Signal alarm remains on until reset.

CLM features:

- Digital display of load. Pounds (lbf) or Newtons (N).
- Two alarms may be interfaced with tow cutter operation
- Alarm: One signal light and one NC relay for the stop circuit.
- Each alarm is adjustable from the meter panel.
- 120/220V/24VDC Power options.
- 4-20ma analog output.

Requirements:

- Load cell installation standard on some cutters (others quoted separately)
- 120/220VAC 5A Power source. Installation on new cutters includes power source.

60/90 Series Reel Attachment Device (RAD).

The DM&E Reel Attachment Device (RAD) is a pneumatically driven drawbar with tightening and releasing controls that reduces operator effort and time required for cutter reel exchange.

PURPOSE:

The DM&E **Reel Attachment Device (RAD)** provides the cutter operator with a mechanism to easily and safely attach a 60 Series cutter reel to the mainshaft of a 60 Series Cutter. When used with a DM&E Reel Installation Table or other suitable reel transport apparatus, the RAD will permit a trained cutter operator to exchange cutter reels in less than two minutes.

HOW IT WORKS:

The RAD is an electrically controlled, pneumatically powered apparatus mounted on the cutter directly above the cutter mainshaft. The RAD raises and lowers a drawbar mounted in the center of the mainshaft. A switch limits lower travel of the drawbar. Upper travel is stopped when proper tension is applied to the drawbar. A 0.56 kw pneumatic motor powers drawbar movement. A clutch is integrated into the system to disengage the motor when the RAD is not in operation. Special cutter reel drive hubs are required for use with the RAD.

