



## 40 Series Tow Cutter

**Maximum Capacity:** 750,000 total denier @ 19.0mm blade exposure at 1.00" [25mm] staple length

**Maximum Tow Speed:** 165 meters per minute

**Motor/Drive:** 5HP (3.68kw) Variable Frequency Drive  
Energy efficient, motor mounted on cutter  
Dynamic braking  
Double Reduction Belt driven

**Voltage:** 220/440V, 3Ph, 60Hz or 200/400V, 3Ph, 50Hz

**Controls:** Operator console is mounted to the 40 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
- **Cutting Load Meter** – digital load display/alarms

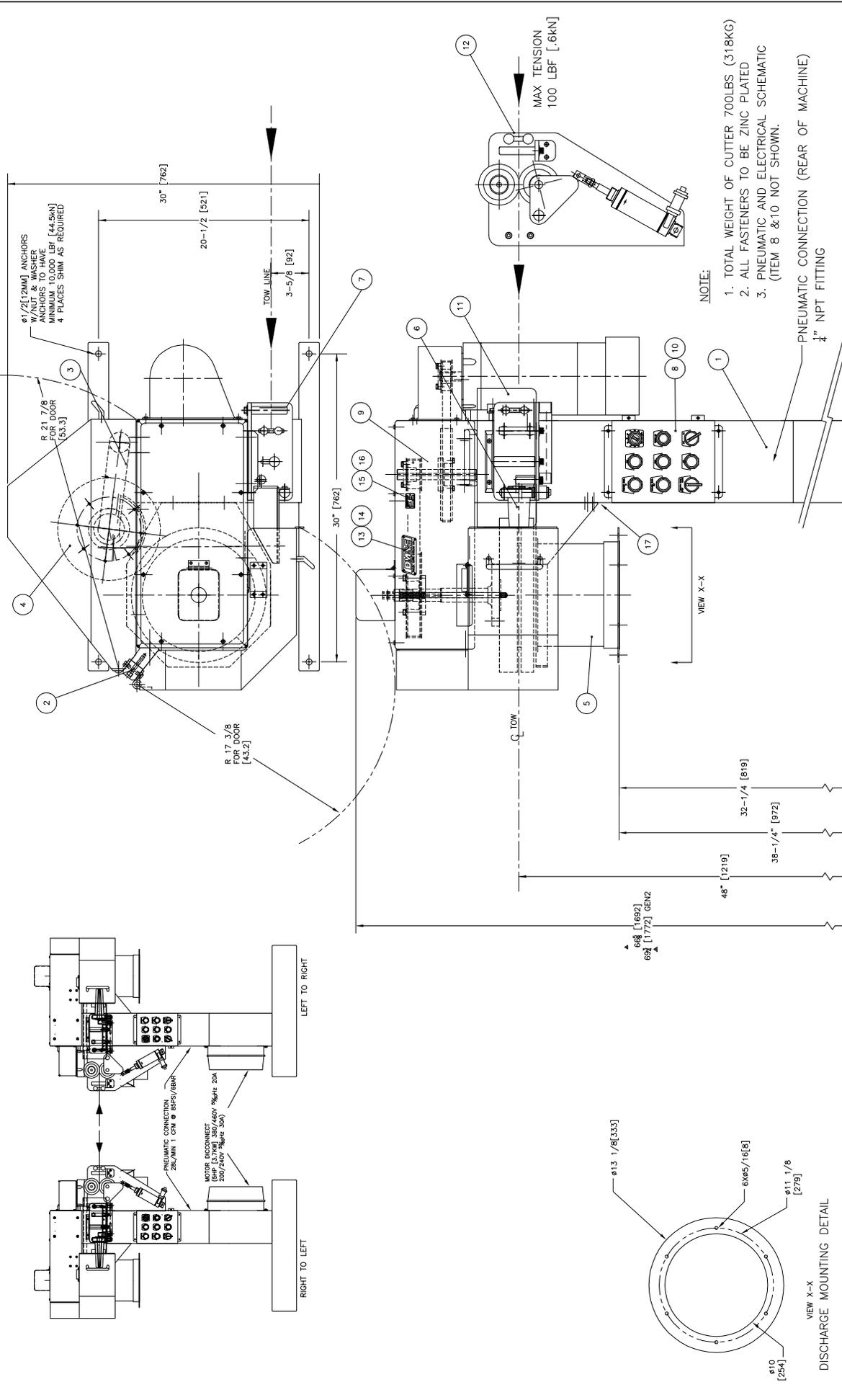
**Tow Height:** 1,220mm (48") alternate heights available

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

**Blade Exposure:** 19.0mm (9.5mm and 12.7mm also available)

**Special features integrated on the 40 Series Tow Cutter include:**

- Integrated Disc Brake for tension control 660N (150 lbf)
- 254mm (10") diameter pneumatically operated presser wheel
- Swing away trumpet guide for precise tow containment
- Drawbar design is incorporated for simplified, single operator Cutter Reel attachment
- Swing-open front guard electronically interlock for safety
- Carbon steel construction with powder coat protective finish
- DM&E Series 40 Series Tow Cutters are supplied completely assembled, ready for customer installation less radial blade cutter reel(s) and blades.



DMRE		DMRE CORPORATION	
TITLE: MAIN ASSEMBLY			
MODEL: 48 CUTTER			
MATERIAL:	DATE:	DESIGN:	CONTR:
REV: 1	REV: 1	REV: 1	REV: 1
PART PREPARED BY: [REDACTED]		DRAWN BY: [REDACTED]	
DRAWING NUMBER: 800-040-D		PAGE: 7	

RIGHT HAND SHOWN  
 LEFT HAND OPPOSITE

NO.	DESCRIPTION	QTY	UNIT	REMARKS
1	DISCHARGE MOUNTING DETAIL	1	ASSEMBLY	
2	DISCHARGE MOUNTING DETAIL	1	ASSEMBLY	
3	DISCHARGE MOUNTING DETAIL	1	ASSEMBLY	
4	DISCHARGE MOUNTING DETAIL	1	ASSEMBLY	
5	DISCHARGE MOUNTING DETAIL	1	ASSEMBLY	
6	DISCHARGE MOUNTING DETAIL	1	ASSEMBLY	
7	DISCHARGE MOUNTING DETAIL	1	ASSEMBLY	
8	DISCHARGE MOUNTING DETAIL	1	ASSEMBLY	
9	DISCHARGE MOUNTING DETAIL	1	ASSEMBLY	
10	DISCHARGE MOUNTING DETAIL	1	ASSEMBLY	
11	DISCHARGE MOUNTING DETAIL	1	ASSEMBLY	
12	DISCHARGE MOUNTING DETAIL	1	ASSEMBLY	
13	DISCHARGE MOUNTING DETAIL	1	ASSEMBLY	
14	DISCHARGE MOUNTING DETAIL	1	ASSEMBLY	
15	DISCHARGE MOUNTING DETAIL	1	ASSEMBLY	
16	DISCHARGE MOUNTING DETAIL	1	ASSEMBLY	
17	DISCHARGE MOUNTING DETAIL	1	ASSEMBLY	

## **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.