



Diagonal Plow



Operating Instructions Part 2

Version: 0
Language: ENG
M3239EUK-11/20

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1 General



NOTE

Before starting work on the Plow or the conveyor, part 1 and 2 of these operating instructions must be read and understood completely

1.1 About these operating instructions

These operating instructions apply solely for cleaners and are intended for those persons who install cleaners, commission them, and monitor their usage.

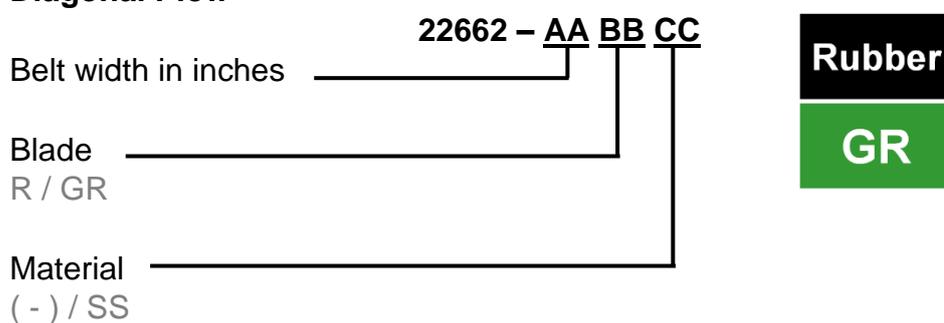
The operating instructions must be kept for the lifetime of the cleaners and must be made available in an orderly condition to all persons entrusted with work with and on the cleaners.

1.2 Accompanying Documents

Part 1 of the operating instructions, which is provided separately, is an integral part of these operating instructions.

1.3 Part number

Diagonal Plow



1.4 Technical Data

The Plow is suitable for the following operating parameters:

	Operating parameter
Belt widths:	500 – 3.000 mm
Pulley diameter:	All common sizes
Belt speed:	Max. 4,6 m/s
Temperature range:	-40 - 150 °C depending on Blade type
Reversing operation:	Designed for reversing operation

2 Installation



NOTE

For a general description of cleaner installation, refer to part 1 of these operating instructions.

2.1 Determining the installation position



NOTE

Locate a suitable position for the Diagonal Plow at the tail end of the conveyor. The discharge end of the Diagonal Plow must be clear of the structure to allow material to exit off the blade.

The conveyor belt must be flat in the area where the Diagonal Plow is to be installed to ensure the wear rate of the blade is even. If required install return idlers to ensure the belt.

The Diagonal Plow should not be placed on top of return idlers. The idlers may change the belt line and cause a portion of the blade to not contact the belt.

Left side is determined by standing at tail pulley and looking toward head pulley.

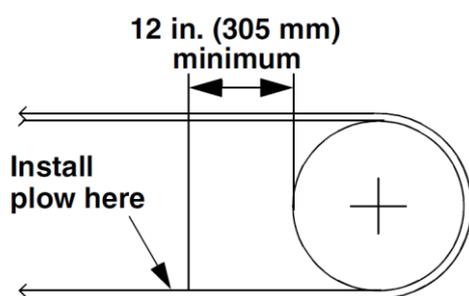


Figure 1 Installation position

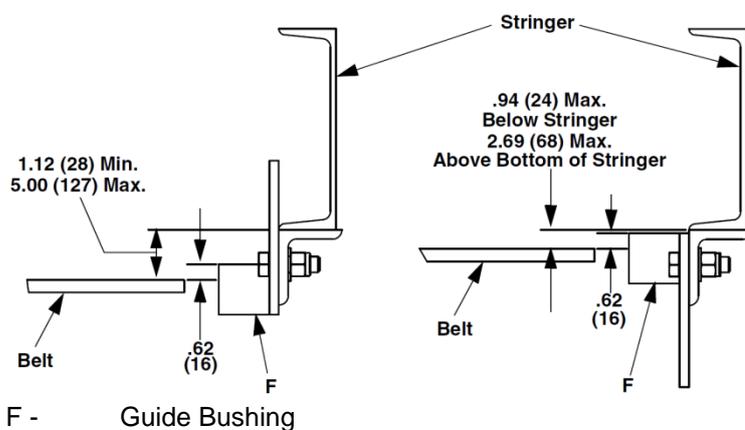
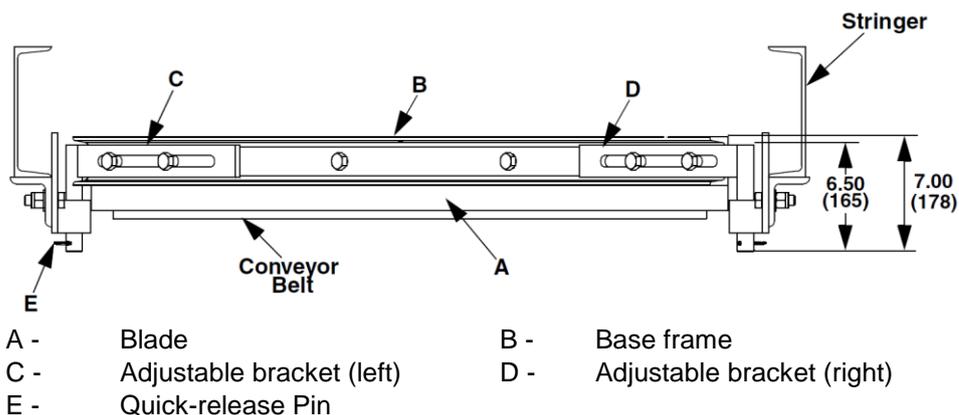
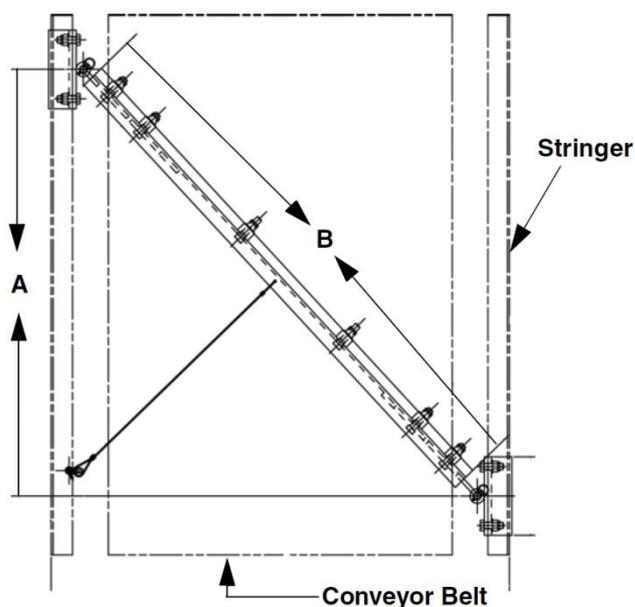


Figure 2 Installation position

2.2 Dimensions



Belt Width in. (mm)	Dimension A	Dimension B
18 (400 - 500)	25.50 (648)	31.00 (787)
24 (500 - 650)	31.50 (800)	39.50 (1003)
30 (650 - 800)	37.50 (953)	48.00 (1219)
36 (800 - 1000)	43.50 (1105)	56.50 (1435)
42 (1000 - 1200)	49.50 (1257)	65.00 (1651)
48 (1200 - 1400)	55.50 (1410)	73.50 (1867)
54 (1400 - 1600)	61.50 (1562)	82.00 (2083)
60 (1600 - 1800)	67.50 (1715)	90.50 (2299)
66 (1600 - 1800)	73.50 (1867)	99.00 (2515)
72 (1800 - 2000)	79.50 (2019)	107.50 (2731)
84 (2000 - 2200)	91.50 (2324)	124.50 (3162)
96 (2200 - 2400)	105.50 (2680)	144.30 (3665)
120 (2600 - 2800)	129.50 (3289)	178.25 (4528)

Table 1 – Dimensions

In inches – (millimetres in brackets)

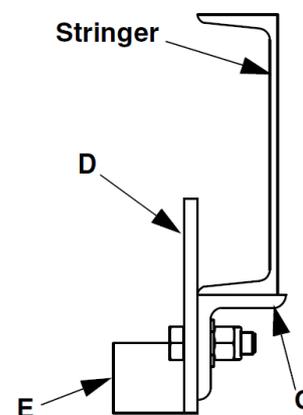
2.3 Installing the Mounting Brackets

Install mounting bracket on left side of belt

1. Mark where you want to locate mounting bracket on left side of belt.
2. Center mounting bracket on mark, and weld to stringer.
3. Install adjustable guide (D) onto mounting bracket with two hex head cap screws, flat washers, and elastic lock nuts.

Locate mounting bracket on right side of belt

4. Starting from center of guide bushing (E) on left end adjustable guide, measure toward tail pulley the distance shown under "Dimension A" in Table 1. Mark location on left side stringer.
5. Mark same location on right side stringer, directly across from mark on left side stringer.



- C. Mounting bracket
- D. Adjustable guide
- E. Guide bushing

Install mounting bracket on right side of belt

6. Loosely connect adjustable guide and right side mounting bracket with two hex head cap screws, flat washers, and elastic lock nuts.
7. Align hole in right side guide bushing with the mark on right side stringer.
8. Weld mounting bracket to right side stringer.
9. See Figure 2. Adjust each guide bracket so top of guide bushing is 5/8 in. (16 mm) above belt surface. (This will allow 1-1/2 in. [38 mm] of blade wear.)
10. Tighten hex head cap screws and elastic lock nuts on mounting brackets

2.4 Installing the Plow onto Mounting Brackets

Reference is made to Figure 2

1. Loosen four hex head cap screws and elastic lock nuts attaching blade (A, Figure 2) and frame (B) to adjustable brackets (C and D).
2. Remove quick-release pins (E) from adjustable brackets.
3. Insert pins on adjustable brackets through right and left side guide bushings (F).
4. Slide frame on adjustable brackets to center blade on belt. When centered, tighten screws and elastic lock nuts to secure blade in place. Make sure blade is resting on belt surface.
5. Install quick-release pins.

2.5 Installing the Restaining Cable (Wire Rope)

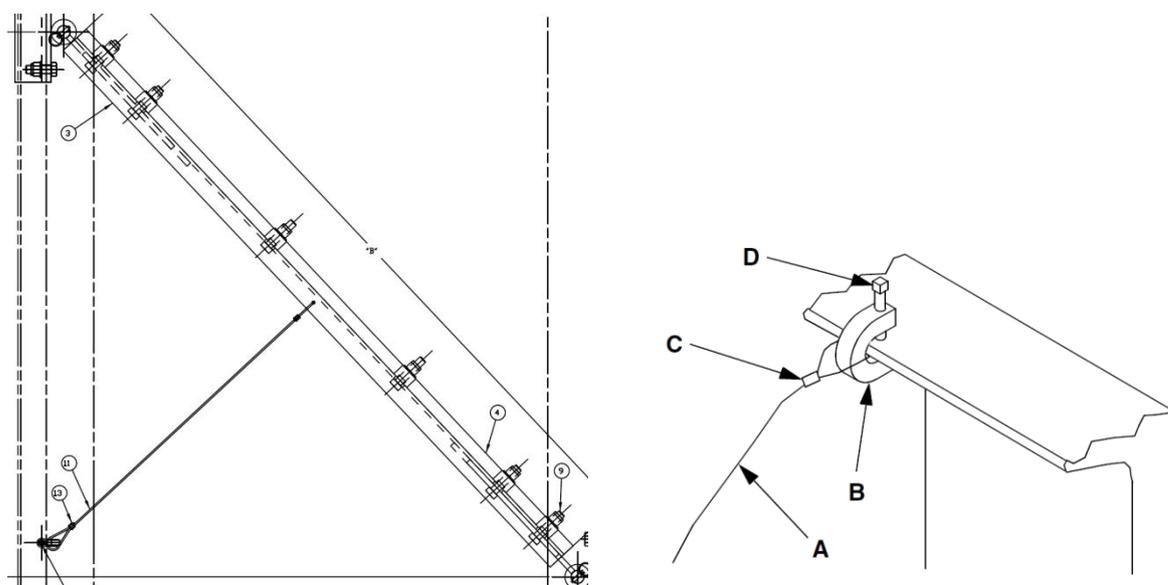


NOTE

The Restaining Cable or “Wire Rope” prevents the Diagonal Plow from being carried into the pulley if the mount brackets should fail.

Failure to install restraining cable could severely damage the Diagonal Plow, pulley, and belt.

Do not install restraining chain on stringers that are between the Diagonal Plow and tail pulley.



A - Restaining cable
C - Cable clip

B - C-clamp hanger
D - Square head set screw

Figure 3 Restaining chain Installation

1. Loop one end of hanger cable (A, Figure 4) through c-clamp hanger (B) and secure with cable clip (C).
2. Apply thread-locking compound to threads of square head set screw (D).
3. Secure c-clamp hanger to same stringer on which mount bracket is installed or to another stringer that is between plow and head pulley.
4. Tighten square head set screw.
5. Loop loose end of hanger cable through hole in frame and secure with cable clip. Leave no more than 2 in. (51 mm) of slack in cable.

2.6 Placing labels

2.6.1 Safety label

The safety label below must be attached to the conveyor system in the immediate vicinity of the Plow:



2.6.2 Other labels

A Sticker showing the address of the Martin Engineering branch and the designation of the product must be attached to the conveyor system in the immediate vicinity of the Plow



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