

EQUIPMENT SPECIFICATIONS

TANDEM MILL

21" & 53" X 56" MESTA 5 STAND TANDEM COLD ROLLING MILL
TDI REFERENCE NUMBER: 63589

MANUFACTURER: Mesta
QUANTITY: 1.00

GENERAL SPECIFICATIONS:

MANUFACTURER: Mesta

ENTRY MATERIAL: Carbon Steel

ENTRY PRODUCT DIMENSIONS:

WIDTH MINIMUM (INCHES): 18 Inches (457.200 mm)
WIDTH MAXIMUM (INCHES): 45 Inches (1,143.000 mm)
THICKNESS MINIMUM (INCHES): 0.060 Inches (1.524 mm)
THICKNESS MAXIMUM (INCHES): 0.135 Inches (3.429 mm)
DIAMETER (INCHES): 30 IDx 68 OD Inches

FINISHED PRODUCT: Coiled

STRIP:

WIDTH MINIMUM (INCHES): 18 Inches (457.200 mm)
WIDTH MAXIMUM (INCHES): 45 Inches (1,143.000 mm)
THICKNESS MINIMUM (INCHES): 0.007 Inches (0.180 mm)
THICKNESS MAXIMUM (INCHES): 0.075 Inches (1.905 mm)
COIL O.D. MAXIMUM (INCHES): 68 Inches (1,727.200 mm)
COIL I.D. MINIMUM (INCHES): 20 Inches (508.000 mm)
COIL I.D. MAXIMUM (INCHES): 20 Inches (508.000 mm)
COIL WEIGHT (LBS.): 36,000 Pounds
COIL WEIGHT (TONS): 18,000 Tons

ANNUAL PRODUCTION (TPY): 500,000 Tpy

ROLLING MILL USE: Cold Reduction

ROLLING MILL DESIGN: Non Reversing

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| COIL PROCESSOR: | |
| APPLICABLE: | <u>Yes</u> |
| MILL STAND 1: | |
| POST SIZE: | |
| THICKNESS (INCHES): | <u>29 Inches (736.600 mm)</u> |
| WIDTH (INCHES): | <u>28.250 Inches (717.550 mm)</u> |
| WINDOW SIZE: | |
| HEIGHT (INCHES): | <u>171 Inches (4,343.400 mm)</u> |
| WIDTH (INCHES): | <u>54 Inches (1,371.600 mm)</u> |
| WORK ROLLS: | |
| ROLL DIAMETER (INCHES): | <u>21 Inches (533.400 mm)</u> |
| ROLL FACE (INCHES): | <u>56 Inches (1,422.400 mm)</u> |
| BEARING TYPE: | <u>Roller</u> |
| BACK UP ROLLS: | |
| ROLL DIAMETER (INCHES): | <u>53 Inches (1,346.200 mm)</u> |
| ROLL FACE (INCHES): | <u>56 Inches (1,422.400 mm)</u> |
| BEARING TYPE: | <u>Morgoil</u> |
| DRIVEN: | <u>Work rolls</u> |
| DRIVE SPINDLE TYPE: | <u>Slipper</u> |
| SHOEPLATE: | |
| SHOE / SOLE PLATE: | <u>Yes</u> |
| SHOEPLATE CENTERS (INCHES): | <u>132 Inches (3,352.800 mm)</u> |
| SCREWDOWN: | |
| EXISTS: | <u>Yes</u> |
| COMPLETE: | <u>Yes</u> |
| SCREWDOWN TYPE: | <u>Electro-Mechanical</u> |
| MOTOR DATA: | |
| QUANTITY: | <u>1</u> |
| HORSEPOWER: | <u>50 HP (37.300 kw)</u> |
| MOTOR MANUFACTURER: | <u>Westinghouse</u> |
| RPM: | <u>550 Rpm</u> |
| VOLTS: | <u>230</u> |
| PINION STAND: | |
| PITCH DIAMETER (INCHES): | <u>20 Inches (508.000 mm)</u> |
| HORSEPOWER: | <u>1,500 HP (1,119.000 kw)</u> |
| INPUT RPM: | <u>70/105 Rpm</u> |
| BEARING TYPE: | <u>Roller</u> |
| REDUCER: | |
| MILL DRIVE TYPE: | <u>Pinion Stand</u> |
| HORSEPOWER: | <u>1,500 HP (1,119.000 kw)</u> |
| INPUT RPM: | <u>70/105 Rpm</u> |
| GEAR RATIO: | <u>1:1</u> |
| BEARING TYPE: | <u>Roller</u> |
| OUTPUT SHAFT CENTERS (INCHES): | <u>20 Inches (508.000 mm)</u> |
| MAIN MILL MOTOR: | |
| QUANTITY: | <u>1</u> |
| HORSEPOWER: | <u>1,500 HP (1,119.000 kw)</u> |

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| MOTOR MANUFACTURER: | Westinghouse |
| RPM: | 70/105 Rpm |
| VOLTS: | 575 |
| CURRENT: | DC |
| MILL STAND 2: | |
| POST SIZE: | |
| THICKNESS (INCHES): | 29 Inches (736.600 mm) |
| WIDTH (INCHES): | 28.250 Inches (717.550 mm) |
| WINDOW SIZE: | |
| HEIGHT (INCHES): | 171 Inches (4,343.400 mm) |
| WIDTH (INCHES): | 54 Inches (1,371.600 mm) |
| WORK ROLLS: | |
| ROLL DIAMETER (INCHES): | 21 Inches (533.400 mm) |
| ROLL FACE (INCHES): | 56 Inches (1,422.400 mm) |
| BEARING TYPE: | Roller |
| BACK UP ROLLS: | |
| ROLL DIAMETER (INCHES): | 53 Inches (1,346.200 mm) |
| ROLL FACE (INCHES): | 56 Inches (1,422.400 mm) |
| BEARING TYPE: | Morgoil |
| DRIVEN: | Work rolls |
| DRIVE SPINDLE TYPE: | Slipper |
| SHOEPLATE: | |
| SHOE / SOLE PLATE: | Yes |
| SHOEPLATE CENTERS (INCHES): | 132 Inches (3,352.800 mm) |
| SCREWDOWN: | |
| EXISTS: | Yes |
| COMPLETE: | Yes |
| SCREWDOWN TYPE: | Electro-Mechanical |
| MOTOR DATA: | |
| QUANTITY: | 1 |
| HORSEPOWER: | 50 HP (37.300 kw) |
| MOTOR MANUFACTURER: | Westinghouse |
| RPM: | 550 Rpm |
| VOLTS: | 230 |
| PINION STAND: | |
| PITCH DIAMETER (INCHES): | 20 Inches (508.000 mm) |
| HORSEPOWER: | 2,500 HP (1,865.000 kw) |
| INPUT RPM: | 125/250 Rpm |
| BEARING TYPE: | Roller |
| REDUCER: | |
| MILL DRIVE TYPE: | Pinion Stand |
| HORSEPOWER: | 2,500 HP (1,865.000 kw) |
| INPUT RPM: | 125/250 Rpm |
| GEAR RATIO: | 1:1 |
| BEARING TYPE: | Roller |
| OUTPUT SHAFT CENTERS (INCHES): | 20 Inches (508.000 mm) |
| MAIN MILL MOTOR: | |

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|--------------------------------|-----------------------------------|
| QUANTITY: | <u>1</u> |
| HORSEPOWER: | 2,500 HP (1,865.000 kw) |
| RPM: | <u>125/250 Rpm</u> |
| MILL STAND 3: | |
| POST SIZE: | |
| THICKNESS (INCHES): | 29 Inches (736.600 mm) |
| WIDTH (INCHES): | <u>28.250 Inches</u> (717.550 mm) |
| WINDOW SIZE: | |
| HEIGHT (INCHES): | <u>171 Inches</u> (4,343.400 mm) |
| WIDTH (INCHES): | 54 Inches (1,371.600 mm) |
| WORK ROLLS: | |
| ROLL DIAMETER (INCHES): | 21 Inches (533.400 mm) |
| ROLL FACE (INCHES): | 56 Inches (1,422.400 mm) |
| BEARING TYPE: | <u>Roller</u> |
| BACK UP ROLLS: | |
| ROLL DIAMETER (INCHES): | 53 Inches (1,346.200 mm) |
| ROLL FACE (INCHES): | 56 Inches (1,422.400 mm) |
| BEARING TYPE: | Oil Film |
| DRIVEN: | <u>Work rolls</u> |
| DRIVE SPINDLE TYPE: | Geared |
| SHOEPLATE: | |
| SHOE / SOLE PLATE: | Yes |
| SHOEPLATE CENTERS (INCHES): | <u>132 Inches</u> (3,352.800 mm) |
| SCREWDOWN: | |
| EXISTS: | Yes |
| SCREWDOWN TYPE: | Electro-Mechanical |
| MOTOR DATA: | |
| QUANTITY: | <u>1</u> |
| HORSEPOWER: | 50 HP (37.300 kw) |
| MOTOR MANUFACTURER: | Westinghouse |
| RPM: | 550 Rpm |
| VOLTS: | 230 |
| PINION STAND: | |
| PITCH DIAMETER (INCHES): | 20 Inches (508.000 mm) |
| HORSEPOWER: | 2,500 HP (1,865.000 kw) |
| INPUT RPM: | <u>175/400 Rpm</u> |
| BEARING TYPE: | Roller |
| REDUCER: | |
| MILL DRIVE TYPE: | Pinion Stand |
| HORSEPOWER: | 2,500 HP (1,865.000 kw) |
| INPUT RPM: | <u>175/400 Rpm</u> |
| GEAR RATIO: | 1:1 |
| BEARING TYPE: | Roller |
| OUTPUT SHAFT CENTERS (INCHES): | 20 Inches (508.000 mm) |
| MAIN MILL MOTOR: | |
| QUANTITY: | <u>1</u> |
| HORSEPOWER: | 2,500 HP (1,865.000 kw) |

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| MOTOR MANUFACTURER: | Westinghouse |
| RPM: | 175/400 Rpm |
| VOLTS: | 575 |
| CURRENT: | DC |
| MILL STAND 4: | |
| POST SIZE: | |
| THICKNESS (INCHES): | 29 Inches (736.600 mm) |
| WIDTH (INCHES): | 28.250 Inches (717.550 mm) |
| WINDOW SIZE: | |
| HEIGHT (INCHES): | 171 Inches (4,343.400 mm) |
| WIDTH (INCHES): | 54 Inches (1,371.600 mm) |
| WORK ROLLS: | |
| ROLL DIAMETER (INCHES): | 21 Inches (533.400 mm) |
| ROLL FACE (INCHES): | 56 Inches (1,422.400 mm) |
| BEARING TYPE: | Roller |
| BACK UP ROLLS: | |
| ROLL DIAMETER (INCHES): | 53 Inches (1,346.200 mm) |
| ROLL FACE (INCHES): | 56 Inches (1,422.400 mm) |
| BEARING TYPE: | Morgoil |
| DRIVEN: | Work rolls |
| DRIVE SPINDLE TYPE: | Geared |
| SHOEPLATE: | |
| SHOE / SOLE PLATE: | Yes |
| SCREWDOWN: | |
| EXISTS: | Yes |
| COMPLETE: | Yes |
| SCREWDOWN TYPE: | Electro-Mechanical |
| MOTOR DATA: | |
| QUANTITY: | 1 |
| HORSEPOWER: | 50 HP (37.300 kw) |
| MOTOR MANUFACTURER: | Westinghouse |
| RPM: | 550 Rpm |
| VOLTS: | 230 |
| PINION STAND: | |
| PITCH DIAMETER (INCHES): | 20 Inches (508.000 mm) |
| HORSEPOWER: | 2-1250 (double arm) HP |
| INPUT RPM: | 225/525 Rpm |
| BEARING TYPE: | Roller |
| REDUCER: | |
| MILL DRIVE TYPE: | Pinion Stand |
| HORSEPOWER: | 2-1250 (double arm) HP |
| INPUT RPM: | 225/525 Rpm |
| GEAR RATIO: | 1:1 |
| BEARING TYPE: | Roller |
| OUTPUT SHAFT CENTERS (INCHES): | 20 Inches (508.000 mm) |
| MAIN MILL MOTOR: | |
| QUANTITY: | 1 |

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| HORSEPOWER: | 2-1250 (double arm) HP |
| MOTOR MANUFACTURER: | Westinghouse |
| RPM: | 225/525 Rpm |
| VOLTS: | 575 |
| CURRENT: | DC |
| MILL STAND 5: | |
| POST SIZE: | |
| THICKNESS (INCHES): | 29 Inches (736.600 mm) |
| WIDTH (INCHES): | 28.250 Inches (717.550 mm) |
| WINDOW SIZE: | |
| HEIGHT (INCHES): | 171 Inches (4,343.400 mm) |
| WIDTH (INCHES): | 54 Inches (1,371.600 mm) |
| WORK ROLLS: | |
| ROLL DIAMETER (INCHES): | 21 Inches (533.400 mm) |
| ROLL FACE (INCHES): | 56 Inches (1,422.400 mm) |
| BEARING TYPE: | Roller |
| BACK UP ROLLS: | |
| ROLL DIAMETER (INCHES): | 53 Inches (1,346.200 mm) |
| ROLL FACE (INCHES): | 56 Inches (1,422.400 mm) |
| BEARING TYPE: | Morgoil |
| DRIVEN: | Work rolls |
| DRIVE SPINDLE TYPE: | Geared |
| SHOEPLATE: | |
| SHOE / SOLE PLATE: | Yes |
| SCREWDOWN: | |
| EXISTS: | Yes |
| COMPLETE: | Yes |
| SCREWDOWN TYPE: | Electro-Mechanical |
| MOTOR DATA: | |
| QUANTITY: | 1 |
| HORSEPOWER: | 50 HP (37.300 kw) |
| MOTOR MANUFACTURER: | Westinghouse |
| RPM: | 550 Rpm |
| VOLTS: | 230 |
| LINE SPEED (FPM): | 3,400 Fpm (1,036.320 mpm) |
| PINION STAND: | |
| PITCH DIAMETER (INCHES): | 20 Inches (508.000 mm) |
| HORSEPOWER: | 2-1500 (double arm) HP |
| INPUT RPM: | 250/625 Rpm |
| BEARING TYPE: | Roller |
| REDUCER: | |
| MILL DRIVE TYPE: | Pinion Stand |
| HORSEPOWER: | 2-1500 (double arm) HP |
| INPUT RPM: | 250/625 Rpm |
| GEAR RATIO: | 1:1 |
| BEARING TYPE: | Roller |
| OUTPUT SHAFT CENTERS (INCHES): | 20 Inches (508.000 mm) |

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| MAIN MILL MOTOR: | |
| QUANTITY: | <u>1</u> |
| HORSEPOWER: | 2-1500 (double arm) HP |
| MOTOR MANUFACTURER: | <u>Westinghouse</u> |
| RPM: | 250/625 Rpm |
| VOLTS: | 575 |
| CURRENT: | DC |
| EXIT TENSION REEL: | |
| QUANTITY: | <u>1</u> |
| TYPE: | Mandrel |
| MANDREL DIMENSIONS: | |
| DIAMETER (INCHES): | 20 Inches (508.000 mm) |
| FACE (INCHES): | 54 Inches (1,371.600 mm) |
| CAPACITY (TONS): | <u>18 Tons (16.329 mt)</u> |
| DRIVE TYPE: | Electro Mechanical |
| OUTBOARD BEARING SUPPORT: | |
| APPLICABLE: | No |
| BELT WRAPPER: | |
| APPLICABLE: | <u>Yes</u> |
| COMMENTS: | <u>Stands 3,4 & 5 upgraded to gear type drive spindles, spare screwdown screws and 1 set of screwdown gears available, 1 full set of drive spindles, No Roll Change, 1 PortaBar for work rolls, 1 PortaBar for back up rolls, Complete with 10 B/U Rolls and 26 work Rolls, 1 set spare B/U chocks with bearings, 30 spare W/R chocks, X-ray feedback to screws, X-ray exit side of stands 1 & 5 Accuray 7000 source gauges, Morgoil Bearing oil tank and pumps, Roll coolant tank and pumps.</u> |

