Gantry Style

PLATE GRINDING MACHINES

Built to Your Specifications to Meet Your Requirements

PDS

Pittsburgh Design Services, Inc

Basic Design Information

Gantry and Grinder Head Carrier Unit

- Gantry structure consists of a heavy duty double leg structural frame which support a double beam track system for the grinder carrier.
- Gantry Truck Axles are of the rotating design with spherical roller bearings and are sized for CMAA Class D Service minimum. Axle construction is alloy steel. Wheels are double flange straight tread, machined from alloy steel and heat treated, designed to run on 60 lb. ASCE table rail.

Grinding Table

- Table Dimensions: 31'-6" wide max. x 200' long max.
- Customer provided 9" reinforced concrete slab under table area.
- Grinder table is constructed of steel and concrete grid layout with the table top elevation at 12 inches above the floor to allow for encoder set-up, cooling fluid drainage and anchorage to floor slab.
- Drain troughs are 9" wide, run along both sides and drain into recycling tank at end or side of table in floor.
- Gantry runs on side beams with ASCE rails mounted on top.
- Grinding lay down surface elevation is at top of table side beams and concrete.
- Grinding direction runs parallel to table side beams.
- 2-Heavy duty embedded rails running the length of the table are provided to clamp product to the table.

Coolant Spray System

- Coolant is applied toward point of grinder belt contact with plate material to provide a wet grind. Coolant is applied on head pulley to clean the belt. PDS system provides hosing to supply coolant at contact points as well as sump pump to reclaim used coolant from sump.

System Controls & Automation

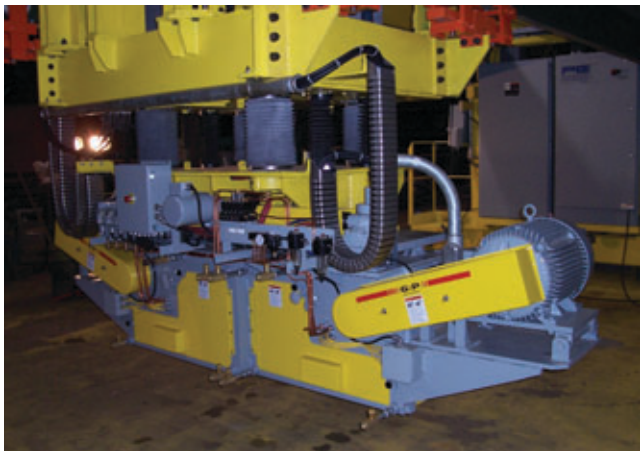
- An onboard PLC is supplied to provide automatic indexing of the grinder head carriage and reversing of bridge travel as soon as grinding pass is complete. The grinding operator sets position of the grinding head at the beginning of a "run" and enters in parameters to control the gantry speed, belt speed and grinding pressure. Vertical height adjustment, length and width parameters are set manually by the operator using a 2 corner point set-up.
- Unit will also work in reverse sequence.
- Gantry position location is through rack and pinion encoder set-up running along the table length.

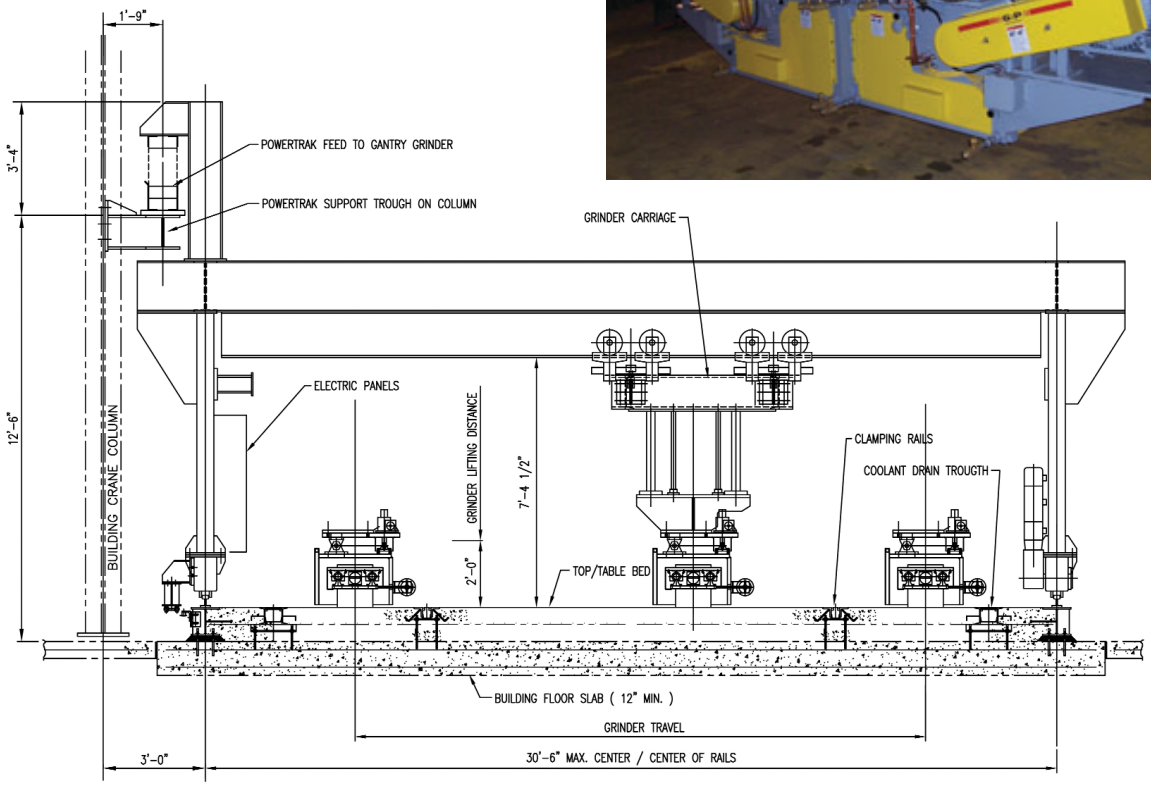
Note: 200 Amp Main power, 460/60/3 AC Voltage, disconnect shall be provided by customer.

Basic Grinding Specifications

G&P Special Plate Grinding Head

- Grinding capabilities:
  - 20,000 sq. ft./ month
  - Carbon Steel, Thickness: 3/8" - 16"
  - SS and Nickel Alloys, Thickness: 1/8" - 6"
  - Titanium Zirconium, Thickness: 1/8" - 6"
  - Also capable of processing other alloys





- Capable of grinding material up to 270" wide without repositioning material
- Capable of rapid abrasive belt changes with only minor adjustments required after change
- Capable of rapid contact wheel changes with only minor adjustments required after change
- Capable of achieving uniform surface finish, machine has sufficient structural stability to prevent chatter or other grinding/surface finish defects
- Belt speed adjustable from 2000 sq. ft./ min. to 6000 sq. ft./ min.
- Grinder head contact pressure adjustable from 300 – 500 psi
- Machine equipped with simple, reliable, touch screen controls
- Equipment achieves an average run time rate of 120 sq. ft./ hr. and provides a 125 Ra surface finish or better.

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