

Tel: 0086-13524020929Conwww.monicamachinery.diytrade.comwww.monicamachinery.diytrade.comEmail/MSN: lixiaohua monica@hotmail.com

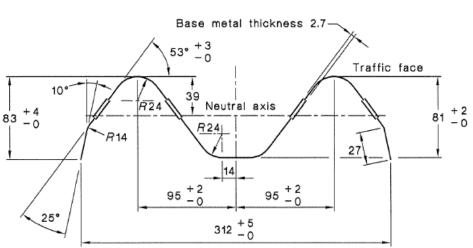
Contact Person: Ms.Monica Lee <u>www.formingmachine.diytrade.com</u> om Skype: monica198614

### **Gearbox W-Beam Guardrail Forming Machine**

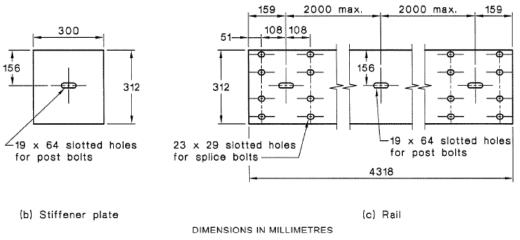
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#### A). Drawing for reference

AS/NZS 3845:1999



#### (a) Section profile





#### **B) Work Flowing**

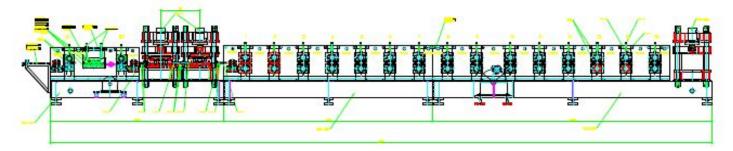
Hydraulic Decoiler --- Feeding Guide --- Levelling Device -- Punching --- Feeding Guide --- Main Roll Forming --- Cut-To-Length --- Run out table



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#### **C) Main Parts**

$\diamond$	Hydraulic Decoiler1 Unite
$\diamond$	Leveling and Feeding Guide 1 Unite
$\diamond$	Punching Device 1 Unite
$\diamond$	Roll Forming M/C 1 Unite
$\diamond$	Hydraulic Cutting 1 Unite
$\diamond$	Hydraulic Station 1 Unite
$\diamond$	PLC Contol System 1 Unite
$\diamond$	Runout Table 1 Unite
$\diamond$	Spare Coupling 1 Unite

#### **D) Summary**

This guardrail forming machine mainly consists of decoiler, guide equipment, levelling system, hydraulic station, punching, roll forming system, cutting system, runout table.

- ♦ Material Thickness: 2-4mm
- ♦ Covered Width: 312mm
- ♦ Forming Station: 13 excluding the feeding rollers and leveling rollers
- ♦ Working Speed: 10-12m/min
- ♦ Main Power: 30KW
- ♦ Leveling Power: 2.2KW
- ♦ Hydraulic Power: 15KW
- ♦ Dimension of Machine: 11500MM X 2000 MMX1600MM (LXWXH)
- ♦ Gross Weight of Machine: about 18 Ton
- ♦ Voltage: 415V, 3 Phase 50Hz

### E) Technical Data

#### 1). Decoiler

- ♦ Decoiler Type: Active uncoiling, hydraulic to expand
- ♦ Weight Capacity Of Decoiler: 5Ton



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#### ♦ Width of Steel Coil: 400-600mm

- ♦ Inner I.D: Ø 500-800MM
- ♦ Outer I.D: ⊄ 1500-1800mm
- ♦ Material of main shaft: 40Cr
- ♦ Moter power of decoiler: 3KW
- ♦ Uncoiling Speed: 0-15m/min
- ♦ Hydraulic System Pressure: 6Mpa

#### 2). Levelling and Feeding Device

- ✤ Function: It is used torelease the head of coil and feed into the punching machine, making the coil straight and flat after decoiling.
- Structure: It includes one pair of dynamic horizontal rollers (levelling rollers) and two pairs of dynamic vertical rollers (pinch rollers). The pinch rollers can rise and fall accordingly, so as to adjust the leveling clearance and leveling dip angle. Five-roller leveling, screw mandrel adjusting, and frequency conversion speed-regulating make it work.
- ♦ Leveling thickness:2-4mm
- ♦ Leveling roller material: 40Cr
- ♦ Leveling roller hardness: HRC45-50
- ♦ Maximum linear velocity:10m/min
- ♦ Power of motor: 2.2KW

#### 3). Punching Device

- $\diamond$  Function: It is used to punch the holes for connection and installation.
- Structure: hydraulic Drive, with two moulds to punch the hole exactly
- ♦ Technial Data:
- ♦ Punching Thickness: 2-4mm
- ♦ Material of punching dies:Cr12
- ♦ Punching Type: Hydraulic Punching
- ♦ Hydraulic Power: 11KW

#### 4). Main Roll Forming System

- $\diamond$  Function: It is used to roll form the guardrails.
- Structure: To use independent stand structure (raft structure) for high accurate roll forming and stable roll forming.
- ♦ Roller Stations: 13
- ♦ Principal Axis Material: High grade 45#
- ♦ Principal Axis Diameter: Ø 90mm
- ♦ Material of Roller: GCr15 Steel with quenched treatment, HRC60-62
- ♦ Slide Block: Cast (HT200)



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- ♦ Transporting Type: Gimbal GearBox drive Transmission
- Power of main machine: 30KW, Transducer speed governor. ZQ450, Between the transmission gear box uses 1 inch double chain drive; Connects with the rotary drive shaft between rollers, rotary drive shaft; Uses 1.5 inch double chain drives with the speed reducer
- Gimbal Type: Including Driving Frame, 13 Branchs Gimbal transmission shaft, 13 unites one-in-two-out Reducer, 13 Unites Sprocket wheel Coupling, 13 pairs joint Flangs.
- ♦ Material Of Chain: High Grade 45#, Heated and quenched HRC 45-50
- ♦ Machine Frame stand: Welded structural steel
- ♦ upper and downside rollers adjusted by springs and strokes, can produce

less than 4mm different thickness panel by the flexible of springs

 $\diamond$  The frame of machine is " $\pm$ " type steel, milling by big gantry milling

machine, keep the levelness and hardness of machine.

- ♦ Main shaft adopted fine 45# steel after treatment, assure the combination property.
- Roller adopted GCr15, processed by CNC machine and surface coating with chrome, assure the precision of size and hardness.
- Machine driving by gear reducer, transmits to downside roller and shaft, then transmits to gear box, using gimbals and gear box driving other rollers by a driving gimbal.

#### 5). Cutting Device

- ♦ Material Of Blade: C r 12
- ♦ Heat Treatment of Cutting Blade: HRC 50-60
- ♦ Type of Cutting: Hydraulic cutting
- ♦ Cutting Length: adjustable
- ♦ Cutting Tolerance:+/-2mm
- ♦ Cutting system is composing by cutting device and hydraulic device.
- Cutting action has two types, one is manual cutting, and one is auto action, auto cutting use for the mass production of fixed length, manual cutting for inspection.
- When product reach the approved length, main machine stop, block place drop, block off steel, touch bottom limit switch, carry on arise immediately, reach upper limit switch, work over, main machine begin to turn. That to be a action.



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#### 6). Hydraulic Station

- ✤ Function: It is used to drive the decoiler, the punching devide and the cutting device.
- Structure: The main control component adopts the famous chinese brand, and the oil tank is made in china as well.

#### 7). Electrical System

- ♦ Function: It is used to control the whole line manually and automatically.
- Structure: It includes the electricity cabinet, main control board, adapter assembly and actuator.
- ♦ Electrical Control: Japanese Brand PLC, Encoder Frequency Control System with touch screen
- Size of PLC Control Board: 700mm(L)x1000mm(H)x300mm(W)
- ♦ Main components of electrical such as PLC program controller adopt Panasonic Brand, others adopt well-known brands at home and abroad.
- Electrical system can consort the action for all parts of the machine and offer touch screen, let user could set all kinds of parameters advanced for need, such as plate length, quantity, number of the batch, correct errors and so on.

#### 8). Simple Runout Table

- ♦ Function: It is used to collect the products after cutting.
- ♦ Support type; Nonpower support table
- ♦ Impassive rollers
- ♦ Welded by angle steel

#### F). Payment Term and condition

#### ♦ Price: FOB Shanghai

- ♦ Payment Term: 30 T/T in advacne, 70% T/T before shipment
- ♦ Delivery Time: Within 50-65 Days after receipt of the down payment
- ♦ Warranty: 1 year and life-long maintaince
- Installation and debugging: We will send professional engineer to make installation and sebugging, Buyer pay our engineer each one 50 usd/day, and provide accommodation and the round-trip ticket fee.
- ♦ Transporting: 1x40ft & 1x20ft containers

#### G) Similar Machine pictures for reference:



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