

Isolation of Safety Critical Functions  
on our Machines and Equipment are  
Engineered in Accordance with the  
Relevant Standards



HAZARD ANALYSIS + SAFETY FUNCTION + RISK  
ASSESSMENT = SAFETY INTEGRITY.

THINK SAFE, WORK SAFE - BE SAFE

YOU CAN DEPEND ON OUR RISK BASED  
APPROACH TO ACHIEVE HIGHER LEVELS OF  
SAFETY.

ABN: 81 113 707 092

## Uncoiler Straightener Servo Feeder

### Xtra Heavy Duty 3 in 1

### USF-XHD series

The USF-XHD unit processes material up to 8mm thick and combines the three functions of uncoiling, straightening and feeding of coil on a single platform. The key benefit is a drastic reduction in space used on your factory floor, but with no compromise in processing speed, reliability and overall performance, giving you a competitive edge.

The system is mounted on a single platform, which maximises rigidity during feeding. The combined straightener/feeder unit eliminates the need for an excessive slack loop area or loop pit. The "Spacer Saver" unit can save up to 3 metres for a similar conventional line.

The USF-XHD series have been designed and built for precision coil feeding into metal stamping presses. A hydraulic motor drives the mandrel. A closed loop digital servo drive and motor drives the straightener feeder unit.



Series	USF-XHD series							
Coil Width (mm)	100 ~ 400	100 ~ 500	100 ~ 600	100 ~ 800	100 ~ 1000	100 ~ 1300	100 ~ 1600	100 ~ 1800
Coil Thickness (mm)	1.0 ~ 8.0			1.0 ~ 8.0				
Coil I.D. (mm)	ø508			ø508				
Coil O.D. (mm)	ø1500			ø1500				
Coil Weight (kg)	5000			7000				
Coil Expansion Range	480-520			480-520				
Mandrel Expansion	Hydraulic Operation			Hydraulic Operation				
Feeding roll (pcs)	2			2				
Straightening Roll (pcs)	Upper 4 / Lower 4			Upper 4 / Lower 4				
Pinch Roll (pcs)	2			2				
Feed Speed (M/min)	20			20				
Air Pilot Release	Yes			Yes				
Air Pressure (kg/cm <sup>2</sup> )	5			5				
Feeding Motor	AC Servo			AC Servo				
Uncoiler Motor	Hydraulic Motor			Hydraulic Motor				
Motor Drive	Air Disc Brake			Air Disc Brake				
Mandrel Brake	Hydraulic Cylinder			Hydraulic Cylinder				
Hold Down Wheel	Hydraulic Motor			Hydraulic Motor				

All specifications, dimensions and design characteristics shown are subject to change without notice.

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# Uncoiler Straightener Servo Feeder

## Xtra Heavy Duty 3 in 1

### **USF-XHD series**

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Coil Width (mm)	100 ~ 400	100 ~500	100 ~ 600	100 ~ 800	100 ~ 1000	100 ~ 1300	100 ~ 1600	100 ~ 1800
Hold Up Arm	Hydraulic Cylinder			Hydraulic Cylinder				
Entrance Edge Guide Roll	2 Sets			2 Sets				
Debender Roll	Hydraulic Cylinder			Hydraulic Cylinder				
Exit Edge Guide Roll	1 Set			1 Set				
Dual Upper Coil Guide (2pcs)	Hydraulic Operation			Hydraulic Operation				
Dual Lower Coil Guide (2pcs)	Hydraulic Operation			Hydraulic Operation				
Loop Control	Photo Sensor			Photo Sensor				

#### **Feeder & Straightener Features:**

- » AC Servo drive-digital control.
- » Complete "hands-free" threading operation.
- » Dual roll material entrance guides.
- » Motorised 3 roll catenary support with full sideplates.
- » Pivoting type feeder-straightening head for pilot operations.
- » 8 straightening rollers for optimum straightening performance.
- » Full width upper and lower feed rollers.
- » Upper straightener roll height scales and indicators.
- » Remote jog handset for material feeding when setting up.
- » Provides accurate and smooth feeding to the Press.
- » Single roll exit guides.
- » Cluster gear driven straightening rollers.
- » The rollers are manufactured from high rigidity SUJ2 material, stress relieved, heat-treated for deep hardness.
- » All rollers are hard-chrome plated for maximum wear resistance.
- » Over-rated specifications and generous roll diameters.

#### **Uncoiler Features:**

- » Remote handset for coil loading and feeding.
- » AC variable speed drive-digital control.
- » Single four-segment mandrel with hydraulic adjustment controlled by hand valve or pushbutton.
- » Mandrel pads designed to provide maximum surface contact to ensure minimal distortion and marking of sensitive and light gauge materials.
- » Upper and Lower side rollers ensure coil stability during uncoiling.
- » Heavy-duty back plate.
- » Air disc calliper mandrel brake provides proper tension on the coil strip. An air pressure regulator allows the operator to fine-tune the tension for various coil weights.
- » Hydraulic operated coil hold down snubber arm and support arm.

#### **Overall Features:**

- » Centralised controls for Uncoiler and Feeder provide operators with a single point of control.
- » Heavy-duty platform with  $\pm 100$ mm of height adjustment.
- » Mitsubishi PLC Controller Interface.
- » Compact design saves floor space.
- » Manufactured with heavy-duty structural steels to provide a rigid design and structure that enhances reliability.
- » Sensor beam loop control.
- » End of material run out device.
- » Quality Japanese bearings are used throughout.
- » All gears are quenched and precision assembled.



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