

**CUTTING, POSITIONING & WELDING EQUIPMENT**

**KOIKE ARONSON RANSOME**



**WIND TOWER  
CONSTRUCTION**

**The Most Complete Line in the Industry**



# CUTTING

## Mastergraph Extreme

Koike Aronson has created a new world standard in thermal cutting machines. The Mastergraph Extreme utilizes the latest technologies to provide unmatched speed, accuracy, versatility and durability in a thermal cutting machine. Designed to satisfy the world's most demanding customer requirements, the Mastergraph Extreme has been engineered to provide the power needed for today and the flexibility for tomorrow. Steel Service Centers, Heavy Fabricators, Tank Manufacturers, Shipbuilders and General Fabricators are just a few of the Mastergraph Extreme target customers.

Koike Aronson's time proven construction techniques have been enhanced with a host of new features and technologies. High torque and high resolution have been engineered into this design to accommodate new plasma cutting technologies. The Mastergraph Extreme is equipped to handle your job requirements and is flexible enough for adaptation to future process requirements. The future of thermal cutting is here today, and Koike Aronson is ready to show it to you!



## 3D-LT

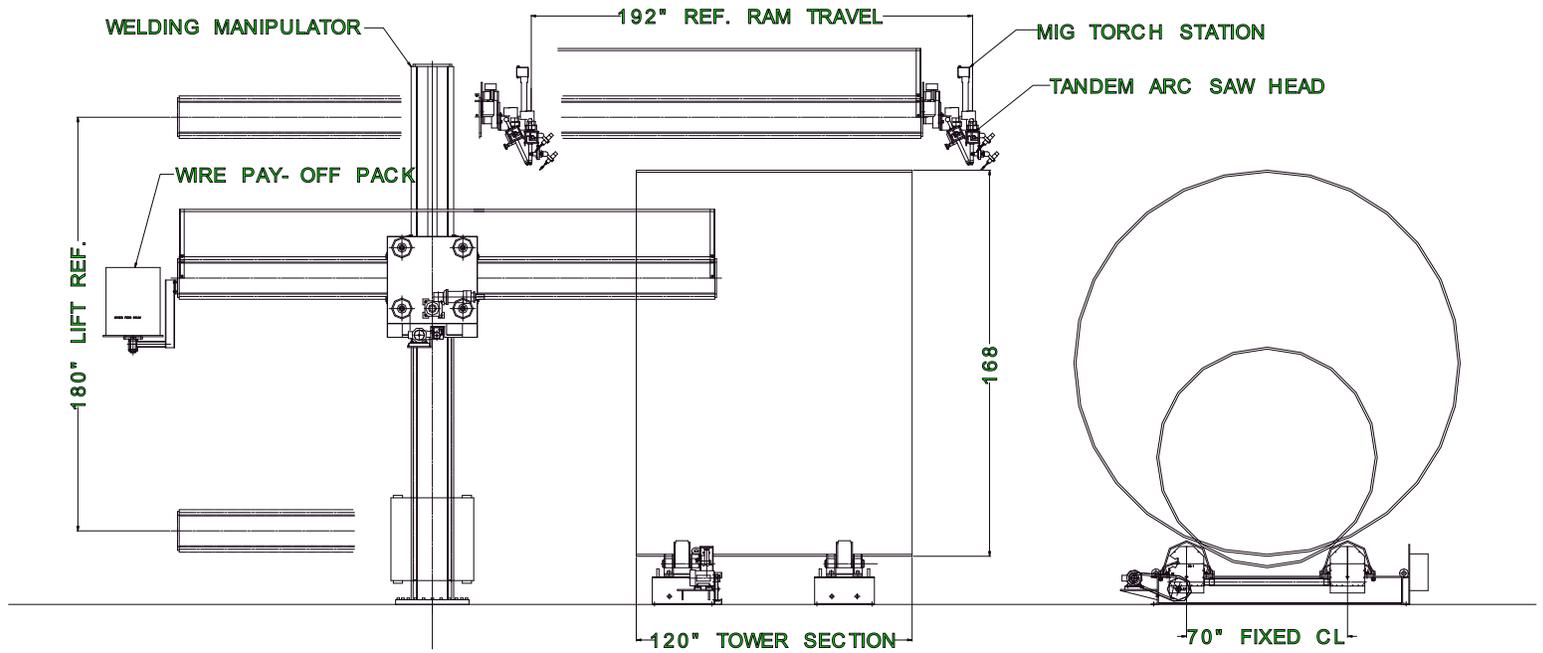
### Plasma Bevel Cutting Attachment



The 3D-LT bevel head offers fully automatic plasma beveling in a simplified design. The “patent pending” 3D-LT bevel head uses a unique drive system and sensor ring design to provide unlimited head rotation, without electrical slip rings, while providing remote mounting of servo motors and sensor components. This design provides tilt and rotation movements about the plasma focal point, with two axis transformations, to provide more intuitive movements and a theoretical reductions in bevel angle error.

# WELDING STATION EXAMPLE

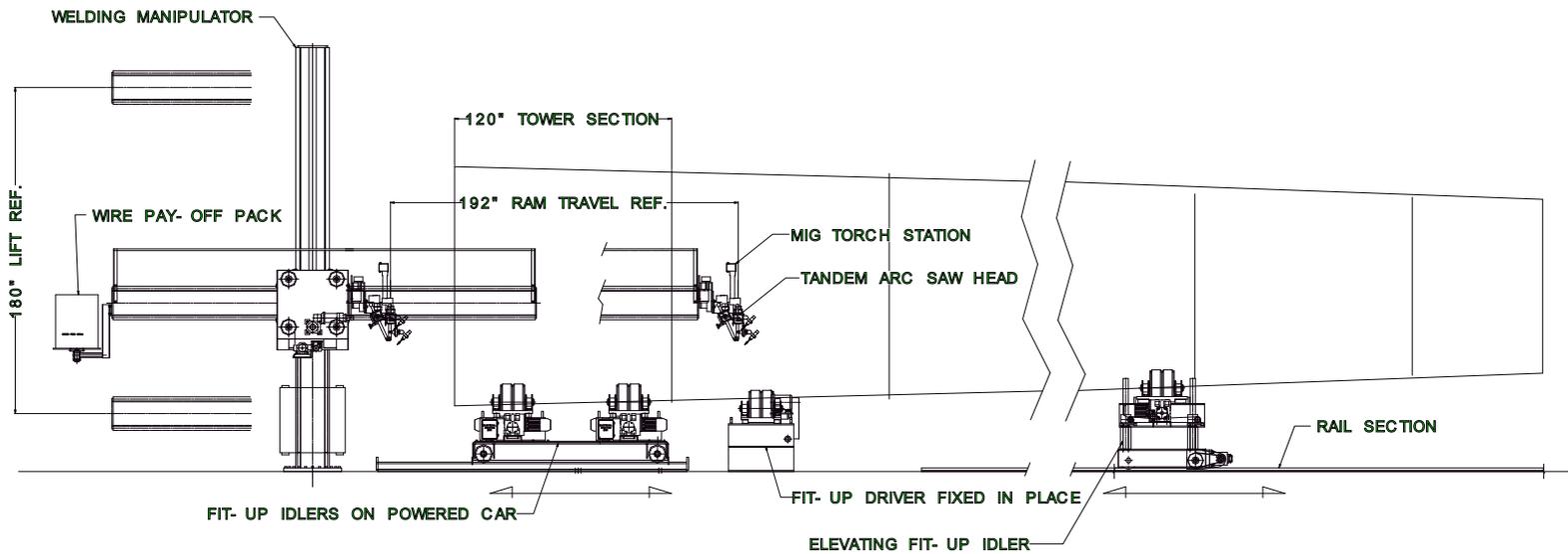
## STATION # 1 SECTION LONG SEAM WELDING



**Station #1** includes a welding manipulator and rolls for welding both internal and external long seams on tower sections of varying lengths and diameters. The manipulator can be equipped with a MIG station on a powered lifter for the root pass, and a tandem head SAW station for final welding. A selectable powered seam tracker can guide both process down the weld seam. (2) 600 lb. drums mounted on the opposite end of the boom provide wire for the SAW process, and (1) 60 lb. spool mounted near head for MIG Process.

# WELDING STATION EXAMPLE

## STATION # 2 CIRCUMFERENTIAL INTERNAL FIT-UP

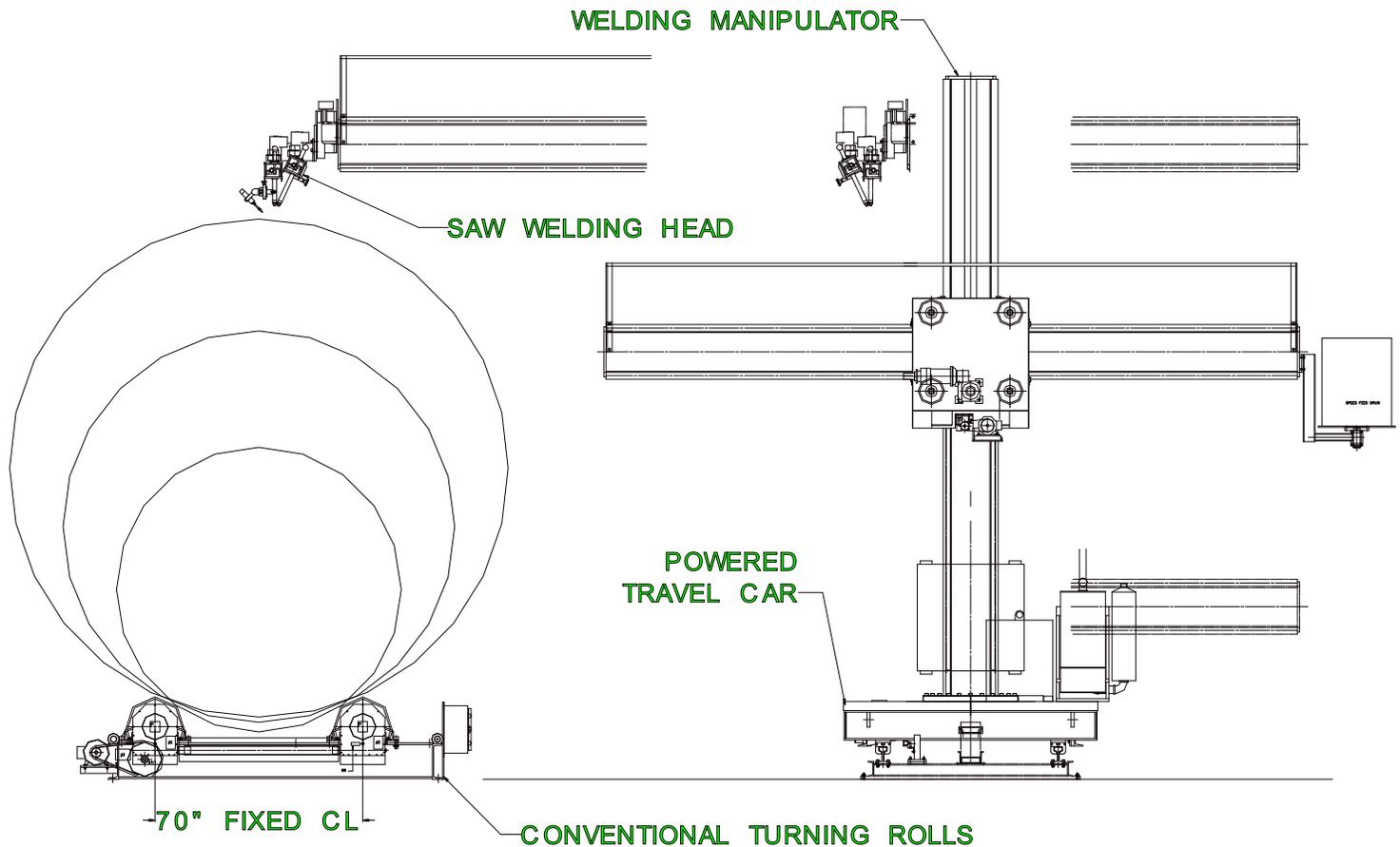


**Station #2** includes a welding manipulator and fit-up rolls for fitting and welding internal circumferential seams on tower sections of varying lengths and diameters. The manipulator can reach through the end section to first joint to perform the weld. The manipulator can be equipped with a MIG station on a powered lifter for the root pass, and a tandem head SAW station for final welding. A selectable powered seam tracker can guide both process down the weld seam. (2) 600 lb. drums mounted on the opposite end of the boom provide wire for the SAW process, and (1) 60 lb. spool mounted near head for MIG Process.

The rolls will consist of (1) fixed location fit-up drive roll, (2) fit-up idlers mounted to a powered car for longitudinal motion and (1) fixed center distance power elevating idler mounted on a car for varying lengths. All fit-up rolls have independent wheel motion, infinitely adjustable wheel centerlines for fit-up.

# WELDING STATION EXAMPLE

## STATION # 3 CIRCUMFERENTIAL EXTERNAL WELD-OUT



**Station #3** includes a welding manipulator mounted on a travel car and conventional turning rolls for welding external circumferential seams on towers of varying lengths and diameters. The towers will be fitted together and only require final exterior circumferential welds in this station. The manipulator can be equipped with a tandem head SAW station for final welding. A powered seam tracker can guide the torch down the weld seam. (2) 600 lb. drums mounted on the opposite end of the boom provide wire for the SAW process.

# MANIPULATORS

**Welding Manipulators** are available with lift and reach lengths up to 30' and can be customized for specific applications like simple straight line, to circumferential welding. The ram ends can be outfitted with small I.D. single or multiple arc welding heads for long seam and circumferential welding procedures. We have custom designs that can handle extra heavy, and extra long reach applications. All manipulators come standard as pedestal mount, with the option of manual mast rotation, powered rotation, self standing bases, and manual or powered travel cars. Complete welding packages can be Koike supplied and Koike mounted, customer supplied and Koike mounted, or customer supplied.



# TR Series

## Self Aligning Turning Rolls SA-Rolls



Self-aligning turning rolls adjust wheel centerline setting automatically when the vessel is lowered into place. No couplings to change, no pins to remove or replace. "SA-Rolls" provide constant centerline capabilities making setup and alignment quick and easy. The self-aligning rollers, which maintain a constant centerline, can rotate work pieces with diameters as small as 12" and as large as 16' without adjustment or change of drive shafts. SA-Rolls are available in 15 ton to 180 ton capacity sets. Rolls are powered with AC variable frequency drives and motors providing a large range of rotation speeds. Hand-held operator pendants are standard, with optional foot switch controls available.

The automatically infinitely adjustable centerline settings provide easy alignment for tapered vessels, while the added surface area of four (4) wheels per unit provide additional support for thin walled vessels

**Capacities from 15 to 180 ton**



**KOIKE ARONSON, INC. / RANSOME**

## Features

- Rubber Tires
- Self-aligning, no adjustment required
- 12" to 16' Diameter range
- Ideal for tapered work-pieces
- 50:1 Variable speed drives
- Thin walled vessels



Standard hand pendant provided with all models



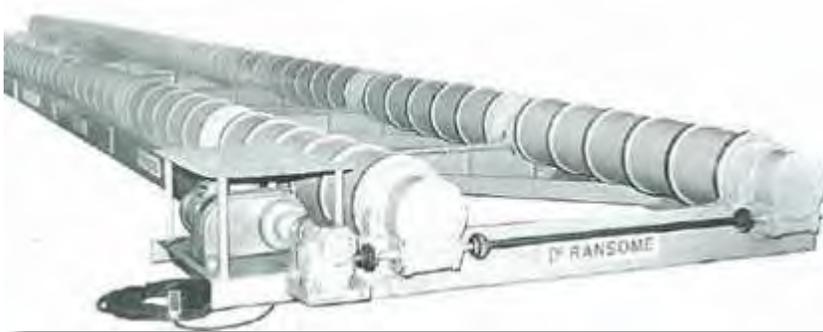
Optional foot switch controls available

# TR Series

## Alignment Fit-up Rolls



Used to fit up and tack shell courses to one another so as to result in a uniform diameter vessel. Available with different length roll sections that couple and uncouple to allow full or partial drive down the line. With proper fit up of the sections to one another, mechanized welding is easily applied for maximum speed and profit.



Optional stand-off rings separate the shell tangent from the rollers so wedges and other alignment tools can be used.

**Capacities from 60,000 to 400,000 pounds**



**KOIKE ARONSON, INC. / RANSOME**

## Features

- Machined steel rollers
- Expandable in 10' increments
- Wide diameter range capability
- Low voltage hand control pendants
- 50:1 AC Variable speed drives



Standard hand pendant provided with all models



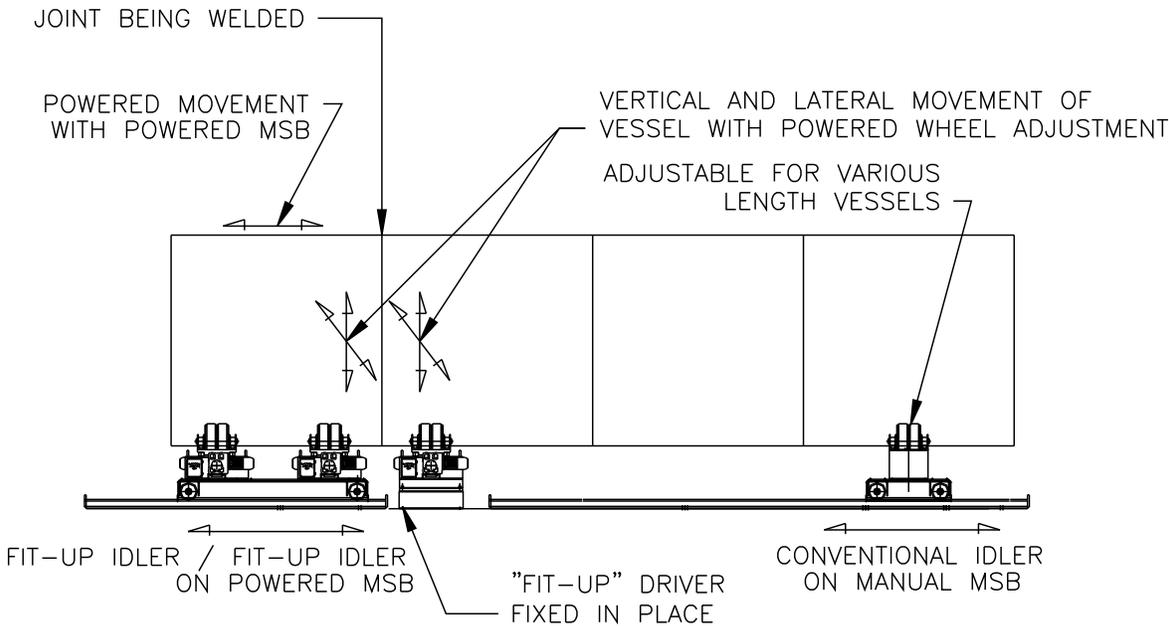
Each bed and roller assembly is joined to the other using splice plates at either side of the frame and couplings between the roller bearings. This permits the flexibility of using the equipment as a total 40 foot surface unit, or spread out in 10 foot multiples where longer tank or stack sections are to be fitted or tacked.

## Powered Fit-up Rolls

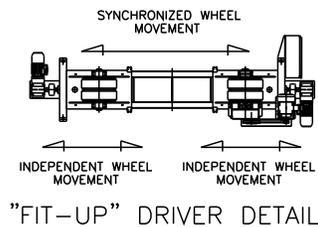
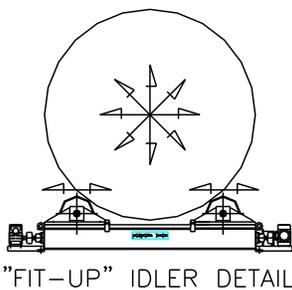
Models from 30 to 1,200 Ton



Koike Aronson Ransome's Powered Fit-up station provides a easy economical way to fit up long vessels with multiple sections. With Individual powered adjustment for each wheel, under load, the sections can be moved left, right, up or down to be aligned to the next section. The addition of a manual or powered car allows the section to then be butted to the next for tacking. Once tacked, a powered drive roll sized to rotate the entire vessel is used for final weld-out.



Rubber and steel wheeled models available



# TR Series

## Paint and Blast Booth Rolls



Paint and blast booth applications require equipment that will not only withstand severe environments but also provide a safe working environment. With potentially explosive fumes and airborne particles special provisions must be made to insure endurance and safety.

Koike Aronson paint booth turning rolls can be air driven or explosion proof motors can be used providing a user safe atmosphere, with the high rotation speeds needed for painting and blasting operations.

Special steel wheel designs are available to support and capture stand-off rings providing support without obstructing the vessel surface, as well as standard urethane type tires.

Extra machine guarding and seals provide additional protection from direct contaminate exposure paint and blast booth surroundings can create.

**Air driven or explosion proof motors can be used providing a user safe environment, with increased speeds**

**Capacities from 10 to 600 Ton**

### Features

- Remotely mounted electricals with explosion proof motors
- Air driven models Available
- High rotation speeds
- Guarded components for severe environments
- Special engineered wheels for stand-off rings
- Optional manual or Powered MSB cars



# CUTTING, POSITIONING & WELDING EQUIPMENT



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