

Jay Industries Metals Group EQUIPMENT LIST

METAL STAMPING PRESS DEPARTMENT

<u>Press Number</u>	<u>Tonnage</u>	<u>Bolster L x W</u>	<u>Maximum Shut Height</u>	<u>Stroke</u>
	800 ton	196" x 64"	50"	16"
1	600 ton	144" x 60"	28" - 40"	18"
2	600 ton	144" x 60"	28" - 40"	18"
	500 ton	128" x 48"	16" - 28"	12"
2A	400 ton	108" x 54"	16" - 28"	10"
3	300 ton	96" x 54"	23"	10"
4	200 ton	72" x 42"	22.5"	12"
5	110 ton	42" x 27"	8.5"	8"
8	56 ton	61" x 20"	12"	3.5"
10	225 ton	94" x 33.5"	24" - 30"	16"
11	100 ton			
12	125 ton	25" x 28"	18.5"	6"
15	135 ton	47.5" x 34.25"	14.75"	6"
17	250 ton	60" x 48"	8" - 15.875"	9"
21	110 ton	39" x 30"	24"	8"

ADDITIONAL PRODUCTION EQUIPMENT

TUBE BEND EQUIPMENT:

- (1) Chiyoda SP40 CNC Tube Bender (fully autoated feed/removal system)
- (1) Crippa right hand rotation 1-1/4" diameter capacity pine rotary bending machine
- (1) Crippa left hand rotation 1-1/4" diameter capacity pine rotary bending machine
- (1) Crippa right hand rotation 3.0" diameter capacity pine rotary bending machine
- (1) Nico bending machine with up to 1-1/4" diameter capability
- (2) Imax bending and fabrication tube transfer
- (1) Tube reducer machine
- (3) Dieco automatic benders with current tube diameter capabilities of 5/8 inch to 2 inch
- (1) Bendall automatic bender with 10mm diameter
- (1) Dieco tube insert machine with 1 inch diameter capacity
- (1) Dieco automatic tube pierce machine with 1-2 inch capacity

WELDING EQUIPMENT:

Robotic MIG Weld Equipment

- (18) Complete cells consisting of one (1) revolving trunion and two (2) six-axes Motoman robots with combined reach of 110" radius
- (2) Complete cell consisting of one (1) revolving trunion and two (2) six-axes Motoman robots with a combined reach of 100" radius
- (1) Complete 1/2 cells consisting of one (1) revolving trunion positioner and one (1) six-axes Motoman robot with a right-to-left reach of 55" radius
- (13) Complete 1/2 cells consisting of two (2) shuttle transfer stations and one (1) six-axes Motoman robot with a right-to-left reach of 52" radius
- (1) Complete 1/2 cells consisting of two (2) shuttle transfer stations and one (2) six-axes Motoman robot with a right-to-left reach of 52" radius
- (2) K3 complete cell consisting of one (1) index table and two (2) six-axes Motoman robots
- (2) XRC AW6000 RMS-500 complete cell consisting of one (1) revolving table and one (1) six-axes Motoman robot
- (1) ERC K35 complete cell consisting of one (1) revolving table and two (2) six-axes Motoman robots
- (3) XRC 6300 RM2 - 750 TX complete cell consisting of one (1) revolving table with (3) six-axes Motoman robots in each cell
- (2) MRC SK120 material handling
- (1) MRC SK45 material handling
- (1) ERC K10 material handling
- (1) XRC SK16X material handling
- (12) Complete cells consisting of one (1) revolving table and two (2) six-axes Motoman robots with combined reach of 110" radius
- (9) Complete cells consisting of two (2) shuttle transfer stations and one (1) six-axes Motoman robots with a right-to-left reach of 52" radius
- (1) Complete cell consisting of two (2) revolving table and one (2) UP 165 six-axes Motoman robot with spot welding capabilities
- (1) MRC K3 complete cell consisting of one (1) flip table and one (1) six-axes Motoman robot
- (1) MRC K3 training robot only
- (1) XRC SK16X material handling
- (1) MRC SK120 material handling
- (1) MRC SK16 material handling
- (1) MRC K60A material handling

Manual MIG Weld Machines:

- (2) Units 200 AMP
- (31) Units 300 AMP
- (2) Units 250 AMP
- (3) Units 350 AMP
- (2) Units 450 AMP
- (2) Units 500 AMP
- (1) 110 MIG welder
- (2) Heli arc (tig) 250 AMP
- (11) 300 AMP
- (1) Fabstar 300 AMP
- (1) Lincoln stick welder 250 AMP
- (1) Miller plasma cutter 300 AMP

Spotweld Equipment:

- (2) Machines, 75 KVA
- (3) Machines, 30 KVA
- (1) Machine, 15 KVA
- (2) Machines, 75 KVA
- (2) J.T. SNOW 4-point spot welder with 2 points stationary and 2 points CNC X.Y fully programmable
- J.T. SNOW spot welder w/7 point for spot welding tires
- Orbitform 4-head spin riveter w/a 4-station carousel table

Spot Welding Equipment:

<u>Brand</u>	<u>TYPE</u>	<u>NO. OF POINTS</u>	<u>Size</u>	<u>Quantity</u>
Dengensha	Single Point	1	97	1
Imax	Turn Table	2	120	3
Imax	Turn Table	5	150	1
Precision	Single Point	1	50	1
Tomson	Single Point	1	50	1
Federal	Single Point	1	75	1
Spot Weld, Inc.	Single Point	1	100	1
Imax	Turn Table	4	150	1
United Welder	Single Point	1	75	1
Imax Machines	Multiple Point	4	150	2
Chowel	Single Point	1	150	3
Dengensha	Single Point	1	80	2
Imax	Multiple Point	4	150	1

TOOL ROOM EQUIPMENT

- * (3) Bridgeport milling machine, 9" x 42" table w/power feed and an Acu-rite five (5) digital readout
- * HendeY horizontal lathe, 14" x 30" with collet set, three (3) jaws chuck and four (4) jaws chuck
- * DoAll metalmaster ban saw, with 16" depth of cut, blade welder and feed attachment
- * Edlund two (2) spindle vertical drill press, with automatic tapping head and power feed
- * Cincinnati Bickford vertical radial arm drill press, 18" x 24" table
- * Horizontal spindle surface grinder, model #BRH 20 A 8" x 24" magnetic chuck
- * (3) Reid horizontal spindle surface grinder, model #11 D with 6" x 18" magnetic chuck
- * Cincinnati pedestal grinder, 1 H.P. with 10" wheels and stand
- * Milwaukee bench grinder, 1/2 H.P. with 8" wheels
- * Electro-matic demagnetizer, model #A 1-5
- * Herman granite surface plate, 24" x 36"
- * American shaper 24" Stroke 20" crossfeed
- * Yale electric hoist, 2 ton
- * Coffing manual hoist, 3 ton
- * Moore Jig A Bore with a 19.50" x 10.50" table
- * South Bend lathe with a 16" swing and (3) jaw and (4) jaw
- * Jet belt and disc sander 6" belt and 6" disc
- * Okamoto manual surface grinder with a 6" x 12" magnetic chuck
- * Kalamazoo cut off saw 10" disc
- * Hass CNC milling center 10.50" x 48" table
- * Mitsubishi FX20 wire machine
- * Rockwell hardness tester
- * KR Wilson arbor press, 50 ton
- * Coffing electric hoist, 2 ton
- * Trinco sandblast cabinet 48" x 24" x 24"
- * Krone 20 metric ton hoist
- * Lucifer heat-treat furnace 12" x 12" x 27"
- * KH Huppert heat-treat furnace 7.50" x 13" x 28"
- * Okamoto auto grinder with a 16" x 32" magnetic chuck
- * D & H 10 ton electric hoist
- * Cincinnati horizontal mill with a 44.50" x 20" table
- * Cincinnati vertical mill with a 52.50" x 12" table
- * Sunnen honing machine
- * CM 10 ton manual hoist
- * Cincinnati Bickford radial-arm drill press with a 15" x 6' x 4'
- * Mattison grinder
- * Milltronics MB-25 CNC mill 50" x -25"y - 25"z
- * Bridgeport series #1 vertical milling machine 9" x 36" with power feed x,y,z and Mitutoyo digital readout
- * Southbend tornado horizontal lathe 16" x 72" with collet set, 3 jaw chuck, 4 jaw chuck, Newall digital readout
- * Bridgeport series #2 special vertical milling machine 11" x 58" with power feed x,y,z and Mitutoyo digital readout

TOOL ROOM EQUIPMENT continued

- * Colchester clausing horizontal lathe 14" x 160" with 3 jaw chuck and 4 jaw chuck
- * Wellsaw horizontal bandsaw 10" x 16"
- * Doall vertical bandsaw with 16" depth of cut, blade welder, power feed
- * Reid horizontal surface grinder 6" x 18" magnetic chuck
- * Thompson horizontal spindle surface grinder 8" x 25" magnetic chuck
- * Baldor bench grinder 5 H.P. with 6" wheels
- * Baldor bench grinder 1/3 H.P. with 6" wheels
- * Miller syncrowave 250 welder stick / tig
- * Cleereman drill press 28" x 44" table, 16" height
- * Modigs radial arm drill press 17-1/2" x 17-1/2" table
- * (1) Miller 110 mig welder
- ~ Selfeeder Newtric Reamer and Rivetor
- ~ Victors Hydraulic Unit
- ~ Armstrong Industrial Band Saw
- ~ Rockwell drill press
- ~ Miller Welder (60 series #106)
- ~ Hobart Welder (#107)
- ~ Selfeeder Newtric Rivetor
- ~ Miller Hand Welder #101
- ~ Miller Hand Welder #55
- ~ Miller Hand Welder #52
- ~ Miller Hand Welder #56
- ~ Miller Hand Welder #25
- ~ Miller Hand Welder #57
- ~ Miller Hand Welder #15

FAB SHOP

- * (2) Bridgeport mill series 1 with a DRC digital read out
- * Heim 40 ton 8' break press
- * Logan 6" lathe
- * Chicago 15 ton 4' break press

QUALITY ASSURANCE EQUIPMENT

- * Zeiss CMM with a 28" x 28" x 20" bed
- * Zeiss CMM with a 60" x 80" x 36" bed
- * Zeiss CMM with a 48" x 80" x 36" bed
- * Portable CMM (pharaoh arm) with a range of 9'
- * Tensile comparison machine Tinius Olsen with testing software
- * Weld pull machine (10,000 lbs.)
- * Macroetching Pax-it software capabilities and Olympus microscope camera
- * (1) Inerpac that has 10,000 (PSI) for weld destruction
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- * Federal CMM with a bed size of 48" x 60" x 24"
- * Electronic paint thickness gage
- * Garner impact tester
- * Zeiss CMM with a bed size of 40" x 60" x 36" (fully programmable)
- * Zeiss CMM with a bed size of 48" x 80" x 36" (fully programmable)
- * (1) Inerpac that has 10,000 (PSI) for weld destruction
- * Weld Pull Machine (10,000 lbs.)
- * Macroetching Pax-it software capabilities and Olympus microscope camera

Jay Plastics Metallization Lines

- Line #1: DynaMet 4V by Leybold Systems, revised in 2007 with UV stable top coat for interior and exterior applications.
 - * Chamber size = 32" x 15.5" x 8.5"
- Line #2: DynaMet 4V by Leybold Systems, conveyor system upgraded in 2008.
 - * Chamber size = 32" x 15.5" x 8.5"
- Line #3: PylonMet by Leybold Systems, Installed in 2002
 - * Chamber Size = 22" Dia. x 40" Length
- Line #4: PylonMet by Leybold Systems, Installed in 2003, post metallization shuttle paint booth added in 2007.
 - * Chamber Size = 22" Dia x 40" Length
- Line #5: DynaMet 4V by Leybold Systems, Installed in 2005, with upgraded temperature controls in 2009.
 - * Chamber Size = 32" x 15.5" x 8.5"

12/8/09

Jay Plastic Machine List

28. #2, 200 T. Hydraulic, Engel '10'

1. #3, 400 T. Hydraulic/Toggle, HPM '86'
2. #4, 300 T. Hydraulic, HPM '85'
3. #5, 400 T. Hydraulic, HPM '85' *R
4. #6, 150 T. Hydraulic, Engel '99' *R
5. #7, 300 T. Hydraulic, HPM '97' *R
6. #8, 300 T. Hydraulic, Engel '99' *R
7. #9, 200 T. Hydraulic/Toggle, Engel '97' *R
8. #10, 300 T. Hydraulic, HPM '84'
9. #11, 220 T. Hydraulic, HPM '95'
10. #12, 300 T. Hydraulic, HPM '86'
11. #14, 660 T. Hydraulic, Engel '01' *R
12. #15, 660 T. Hydraulic, Engel '99' *R
13. #16, 400 T. Hydraulic, HPM '96' *R
14. #17, 1000 T. Hydraulic, Engel '03' *R
15. #18, 720 T. Hydraulic, Engel '06' *R
16. #19, 500 T. Hydraulic, HPM '80' *R
17. #20, 600 T. Hydraulic/Toggle, Engel '92' *R
18. #21, 600 T. Hydraulic/Toggle, Engel '05' *R
19. #22, 600 T. Hydraulic/Toggle, Engel '93' *R
20. #23, 600 T. Hydraulic/Toggle, Engel '94' *R
21. #24, 670 T. Hydraulic, Engel '02' *R
22. #25, 670 T. Hydraulic, Engel '03' *R
23. #26, 650 T. Hydraulic, Huskey '04' *R
24. #27, 400 T. Hydraulic BMC, Engel '03' *R
25. #28, 400 T. Hydraulic BMC, Engel '07' *R
26. #29, 440 T. Hydraulic BMC, Engel '07' *R
27. #30, 440 T. Hydraulic BMC, Engel '08' *R