Fancort Solutions

Board Handling

Electronic Assembly

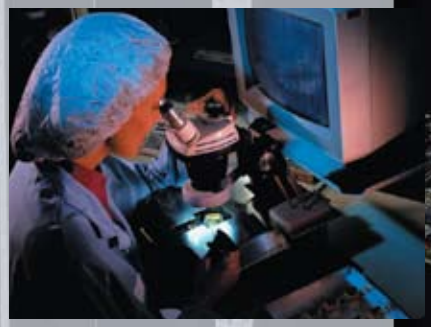
Production Assembly

In electronic assembly, Fancort helps you do it

faster!

better!

...and more economically!



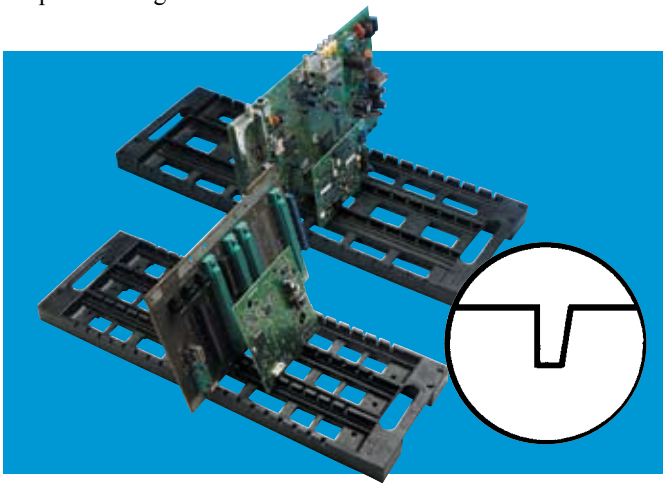
In this fast-paced world of electronics, short product cycles remain a constant fact of life, and change remains a continuous challenge. As new or improved products evolve, new assembly techniques and equipment are called for. Responding to this need has defined Fancort Industries' role as a preferred supplier to PCB assemblers worldwide. Since our founding in 1972, Fancort value-priced racks, fixtures and production accessories have appeared in plants worldwide accommodating processed boards securely and safely. These pages showcase our core off-the-shelf products -- all of which are available in numerous sizes and configurations. Use this brochure as a handy ordering guide when accessing **sales@fancort.com**. We also offer custom capabilities.

To discuss your needs, call 1.888.FANCORT (888.326.2678).

- ***Adjustable Racks, Pages 4 - 6***
- ***ESD Handling Trays, Page 7***
- ***Bench-top Assembly Fixtures, Pages 8 - 9***
- ***Production Accessories, Pages 10 - 11.***

Universal Racks

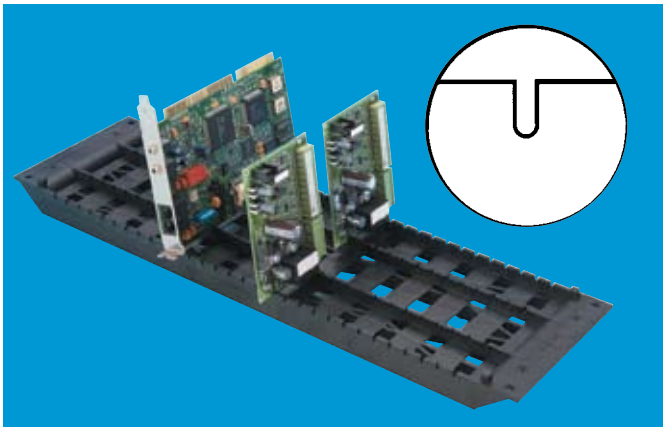
Economical racks with ESD protection that require no adjustment for handling clinched, soldered or bare boards of almost any size. These universal racks are each slightly different in size, slot shape and design and some are available in a choice of materials to meet a wide variety of handling applications. Standard Rack-Alls are molded in tough, reinforced, conductive material that meets Mil Spec #B-81705-B for static discharge.



Model RA-20 and RA-24 Rack-All

- Our largest universal rack available in two sizes
- 20 slots with easy to load angle, measures .125” W x .325” D
- Rugged construction with heavy reinforcing ribs
- Open carrying handles and drainage holes
- Stackable when not in use
- Tolerates 185°F

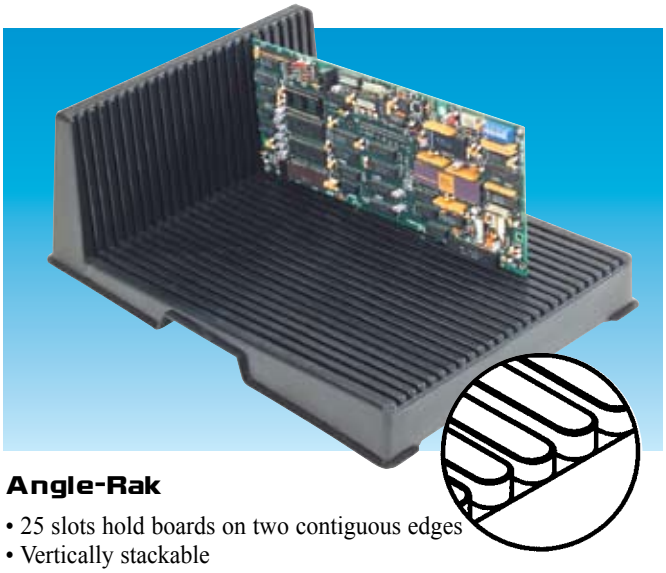
	RA-20CP	RA-24CP
Dim	7” x 20”	8.5” x 23”
Pitch	.750”	1”



RA-18 Rack-All

- Our least expensive rack in five different materials
- Measures 5.5” x 18” with carrying handles
- 25 slots with parallel sides measures .125” x .300"D on a .625” pitch

Description	Model No.
Standard conductive, 185°F	RA-18C
High temp conductive, 275°F	RA-18CT
Very high temp, non-ESD, 300°F	RA-18HT
Clean room material	RA-18CL
Green for lead free assemblies	RA-18SDG
30 narrow, shallow slots, .075” x .150” on .500” pitch	RA-18C/SMT



Angle-Rak

- 25 slots hold boards on two contiguous edges
- Vertically stackable
- Drainage holes for use in degreasing

Description	PCBH-C	PCBH-2L-C
Slot size/pitch	.125” W x .200” D on .375” pitch	.100” W x .187” D on .400” pitch
Dimensions	10” x 8” x 4”	14” x 10” x 5”

RA-14 Rack-All

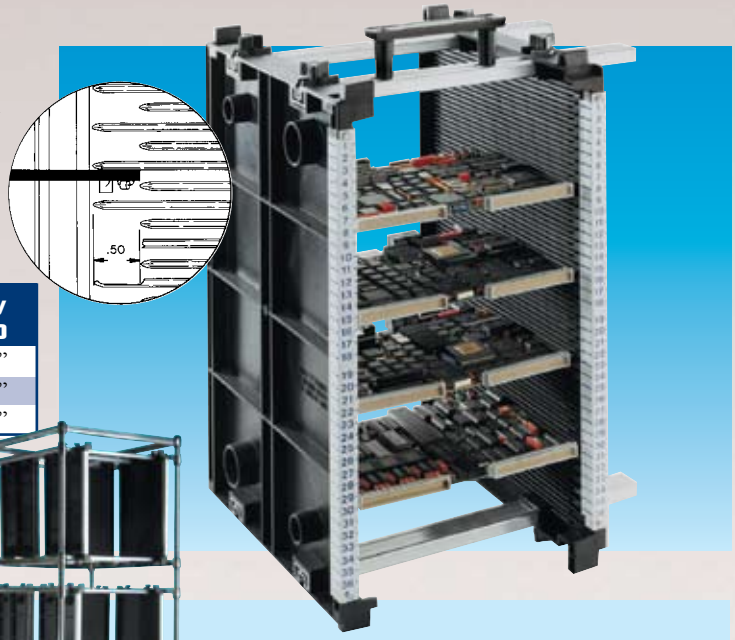
- Our largest slot measuring .180” W x .333” D on a .500” pitch
- Molded in phenolic to tolerate 350°F, acids, solvents and alkalines
- Undercut ends for carrying and drainage holes
- Measures 6” x 14” and weighs 1.7 lbs.
- Conductive (RA-14C) or nonconductive (RA-14)

Adjustable Racks

Fancort Karry-Alls are adjustable racks that hold boards securely on two opposite sides for maximum protection during transport and storage, either horizontally or vertically. Three different models of Karry-Alls are featured, each with a different injection molded card guide to handle small, medium, large, very large and hard-to-hold boards. All the card guides are molded in tough, reinforced conductive material that meets Mil Spec #B-81705-B for static discharge. The standard Karry-Alls can tolerate solvents and temperatures to 185°F. They are very easy to set up with rigid tubular aluminum extrusions and non-rotating nuts with large conductive plastic thumbscrews that lock into the extrusions.

Model 80 - For Medium to Large Boards

- 75 numbered slots measure .110" W x .155" D on a .210" pitch
- Easy board insertion with offset ribs
- Steel stiffeners and molded ribbing prevent flexing
- Standard card guides are 12.5" deep; optional 18" or 24" guides for very large boards; P/N 80-18-18
- Optional carrying handle P/N KAH-2 as illustrated

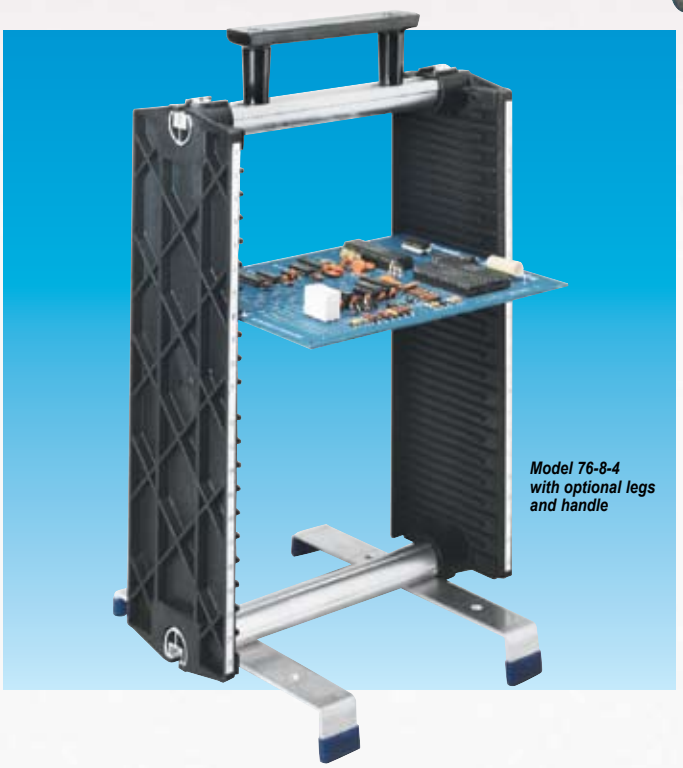


Model	Overall Dimensions			Board Capacity	
	L	W	D	W	D
80-12-2	18.75"	14"	12.5"	12"	12"
80-18-2	18.75"	20"	12.5"	18"	12"
80-24-2	18.75"	26"	12.5"	24"	12"

Model 80 Transport Cart

- Holds up to six Model 80-18-2 racks in a small footprint
- Easy to load and unload with wide slide assembly
- Five inch polyurethane swivel and brake casters

- ESD safe with four grounding collet sets and drag chain
- Measures 23" W x 27" D x 72" H
- Model No. 89-18-6 comes with six racks
- Cart only Model No. 89-6



Model 76-8-4 with optional legs and handle

Model 76 - For Small to Medium Boards

- 39 numbered slots measure .135" W x .135" D on a .260" pitch
- Easy board insertion with offset ribs
- Standard card guides are 4" deep; optional 8" deep guides
- Optional leg brackets for horizontal storage of 4" deep model only; P/N KAL-1;
- Optional carrying handle, P/N KAH-2

Model	Overall Dimensions			Board Capacity	
	L	W	D	W	D
76-8-4CP	13.25"	9"	4"	8"	6"
76-8-8CP	13.25"	9"	8"	8"	10"
76-14-4CP	13.25"	15"	4"	14"	6"
76-14-8CP	13.25"	15"	8"	14"	10"
76-20-4CP	13.25"	21"	4"	20"	6"
76-20-8CP	13.25"	21"	8"	20"	10"
77-4CP card guide	13.25" x 4"				
77-8CP card guide	13.25" x 8"				

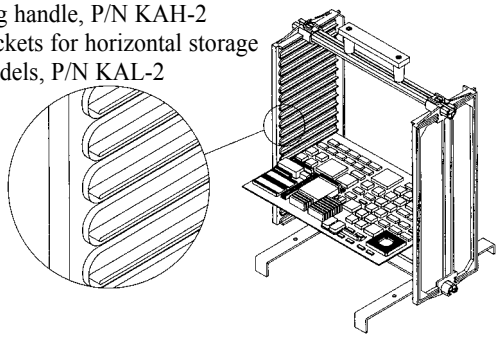
Model 76-20-4 with four additional card guides

Model 76-8-4 with standard thumb screws

Adjustable Racks

Model 79 - For Medium Boards and Boards with Hard to Hold Edges

- 18 unique double slots measure .125" W x .125" D inside a .600" W x .200" D slot for boards with components on the edge
- Standard card guides are 5.5" deep; optional 11" deep guides
- Model 79-20B-5 or 79-20B-11 fits standard 17" x 21" tote box
- Optional carrying handle, P/N KAH-2
- Optional leg brackets for horizontal storage of 5.5" deep models, P/N KAL-2



Model 79-14-11 with optional carrying handle

Model 79-14-5 with standard thumb screws

Model Number	Overall Dimensions			Board Capacity	
	L	W	D	W	D
79-8-5CP	15.25"	9"	5.5"	8"	8"
79-14-5CP	15.25"	15"	5.5"	14"	8"
79-14-11CP	15.25"	15"	11"	14"	15"
79-20-5CP	15.25"	21"	5.5"	20"	8"
79-20-11CP	15.25"	21"	11"	20"	15"
79-5CP card guide 15.25" x 5.5"					
79-11CP card guide 15.25" x 11"					

Magazine Racks for in-line automation with manual adjusting card guide

- Compatible with many assembly lines
- Rugged construction with steel reinforcing ribs and corner posts
- 50 slots* measure 3mm deep x 7mm high; first slot starts at 35mm from base
- Molded in rugged ABS with surface resistivity of 10 ohm/cm
- Tolerates temperatures to 60°C***. Optional models available. See below.
- Reversible models, NTC-092B, for top and bottom side assembly
- Load from either side with removable end stop
- Cut-out carrying handles in top panel; stackable

Description	NTC-092*	NTC-094	NTC-095	NTC-096	NTC-097**
Width (mm)	318	370	380	400	318
Depth(mm)	355	352	480	460	355
Length(mm)	570.5	570.5	575	575	570.5
Min. PCB (mm)	50	98	74	64	50
Max PCB (mm)	258	308	318	334	258
Depth (mm)	330	330	450	430	330

* Optional models are available that can tolerate 150°C. Contact the factory.
** Rib is 5mm x 5mm and tolerates 80°C

Adjustable Racks

Magazine Racks for in-line automation with gear adjusting card guide

- Fast and simple gear adjusting card guide to maintain parallelism and ensure accurate setup
- Aluminum top and bottom
- Zero flexing of card guides with steel reinforcing supports and molded ribs
- Standard ABS model (N) tolerates 60ºC, plus optional models to 120ºC (M) and 200ºC (H)
- Surface resistivity of 10-4 to 10-6 ohm/cm
- Removable end stop
- Carrying handles on top and bottom

Model No.	B0103GN	B0105GPN	B0106GN	B0108GN	B0109GN
Top/Bottom**	M	P	M	M	M
Width (mm)	320	320	400	460	530
Length (mm)	355	355	460	535	535
Height (mm)	563	563	563	570	570
Min PCB Measure (mm)	50W	50W	100W	50W	120W
Max PCB Measure (mm)	250W	250W	330W	390W	460W
PCB Capacity	50	50	50	50	50
Weight (kg)	5.6	4.1	7.6	10.5	12.7

**M = Metal, P = Plastic
Higher temperature model numbers: 120ºC is 'M'; 200ºC is 'H'; e.g. B0103 GM is 120ºC model

ESD Handling Trays

Store and ship components and assemblies in these economical, rugged, stackable trays molded in .085" thick ESD safe plastic with surface resistivity below 10/6 ohm-cm and temperature tolerance to 60C. Four styles of trays some with several sizes.

Model #	Outside Dimension	Inside Dimension
MS-Q11.1	8 3/4" x 6 1/2" x 1 1/2"	8 1/2" x 6 1/8" x 1 1/4" with slots
MS-Q11.1D	Divider only for MS-Q11.1	on a 5/16" pitch
MS-Q11.2	12 3/8" x 8 3/4" x 1 5/8"	11 3/4" x 8 3/8" x 1 3/8"
MS-Q11.3	14 3/4" x 12 1/4" x 1 1/8"	14 1/8 x 11 1/2" x 7/8"
MS-Q11.4	17 5/8" x 11 1/2" x 2. 3/4"	17" x 11" x 2 3/8"
MS-Q11.5	17" x 13" x 2 3/4"	16 3/8" x 12 1/2" x 2 1/4"
MS-Q11.6	22" x 14 5/8" x 3"	20 3/4" x 13 1/2" x 2 3/4"
MS-Q11.8T	19 3/4" x 19 3/4" x 1 3/8"	19 3/16" x 19 3/16" x 1 3/16"

MS-Q11.1

MS-Q11.1 Shown with optional divider

MS-Q14

Model #	Outside Dimension	Inside Dimension
MS-Q14.1	14" x 13 5/8" x 1 3/8"	13 3/4 x 13 1/4" x 1 1/4"
	Ten cells measuring: 6 3/4" x 2 1/2" x 1 1/8"	
MS-Q14.2	12 5/8" x 11 3/4" x 1"	12 1/4" x 11 3/8" x 3/4"
	Ten cells measuring: 5 5/8" x 2 3/8" x 15/16"	
MS-Q14.3	12 5/8" x 11 3/8" x 1 3/4"	12 1/4" x 11 3/8" x 1 1/2"
	Ten cells measuring: 5 5/8" x 2 3/8" x 15/16"	

Model #	Outside Dimension	Inside Dimension
MS-Q13	13 5/8" x 4 15/16" x 2"	11 5/8" x 4 3/8" x 1 7/8"
Four slots for dividers to create cavities 2-7/8" or 3-3/4" in length; optional dividers P/N MS-Q13 D		

MS-Q13

Shown with four optional dividers

MS-Q12

Model #	Outside Dimension	Inside Dimension
MS-Q12	18 3/8" x 12 1/2" x 1 5/8"	16 1/2" x 11 1/2" x 1 3/16"
Removable grid creates 70 cells measuring 1 1/2" x 1 1/2"; Grid Part number MS-Q12G if purchased separately		

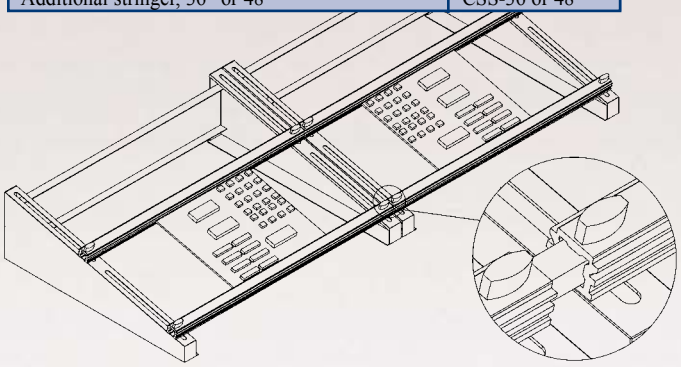
Bench-top Assembly Fixtures

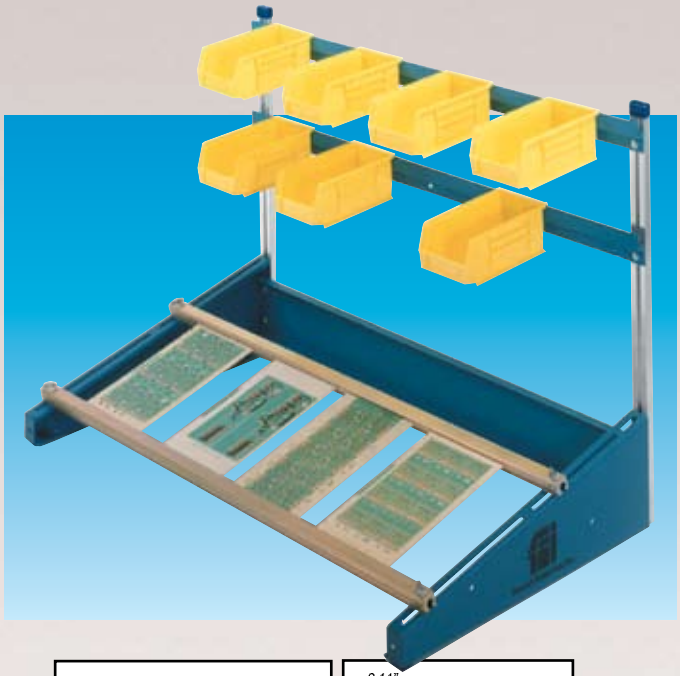
Fancort has a wide variety of fixtures for circuit board hand assembly, rework and inspection that range from slide-lines for progressive assembly to stand-alone fixtures in a variety of configurations and sizes to meet almost any assembly requirement for small and large boards. The new Jerry-Rig universal work holder can be used for board assembly as well as mechanical assemblies and other difficult holding applications.

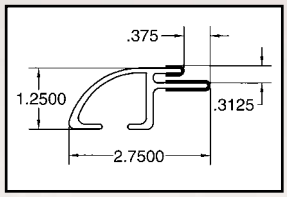
Combo-Slide for progressive hand assembly

- Adjustable capacity to hold 18” boards on a 20 degree working angle
- Stations connect together at end panels and rails
- Rugged construction of 1/16” steel with an attractive blue enamel finish
- Very sturdy design for stability
- Two styles of rails, one for PCBs, one for fixtures
- Optional parts rack with two stringers

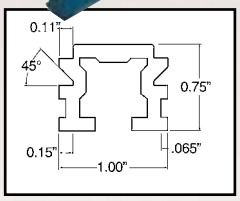
Description	Part No.
36” or 48” Combo-Slide with two PCB rails	CS-36 or 48
36” or 48” Combo-slide with two fixture slide rails	CSFR-16 or 48
PCB slide rail, 36” or 48”	CSR-36 or 48
Fixture slide rail, 36” or 48”	CSFR-16 or 48
36” or 48” parts bin rack with two stringers 24” high, no bins	CSB-36 or 48
Additional stringer, 36” or 48”	CSS-36 or 48



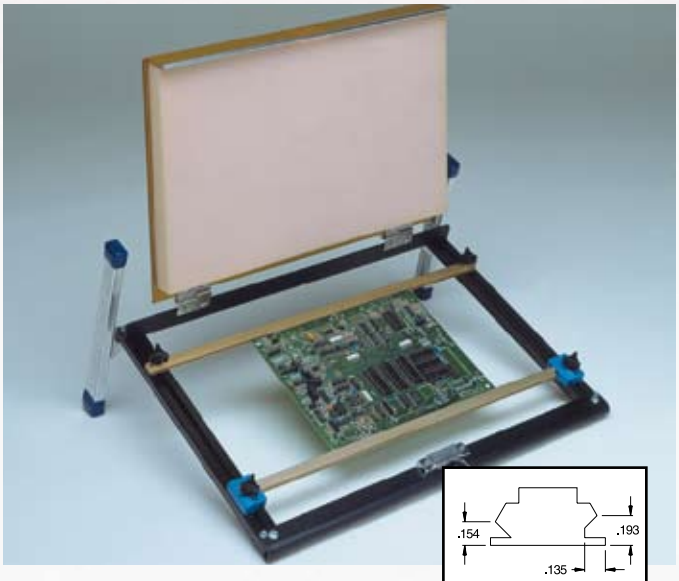




Fixture Slide Rail



PCB Rail



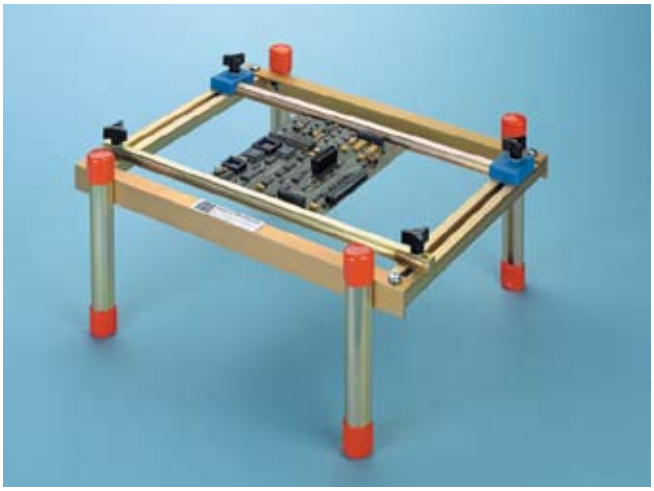
Double-sided rails, one spring-loaded, one standard hold boards up to .150” thick

Low Profile Flip-Rak for hand assembly, rework and inspection.

- Double-sided rails, one spring-loaded, one standard hold boards up to .150” thick
- Removable cover with easy locking latch
- Anti-static foam 1 3/8” thick, holds components in place with cover closed
- Three sizes are available

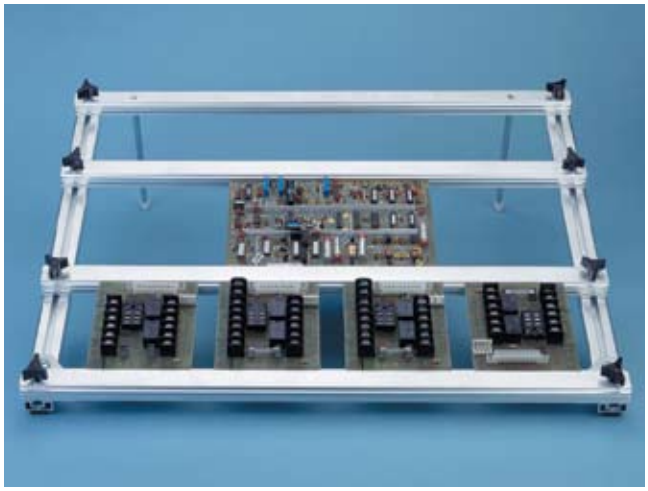
Part No.	One Board Max. Capacity	Two Boards Max. Capacity
FRLP-9	8.5” x 17”	3.5” x 17”
FRLP-12	11.75” x 18.88”	5.25” x 18.88”
FRLP-17	17.5” x 21”	8” X 21”
Accessories:		
FRR-9,12,17	Standard rail	
FRR-9SL,12SL,17SL	Spring-loaded rail	
FRAF-9,12,17	Anti-Static foam	

Bench-top Assembly Fixtures



Mini-Flip for horizontal rework and inspection

- Maintain boards horizontally to 6.5” high with four adjustable legs
- One spring-loaded rail and one standard rail hold boards up to .150” thick
- Two standard sizes: MF-8 holds boards to 8” x 12”; MF-12 holds boards to 12” x 16”
- Custom sizes are available



MFM-24 low cost fixture for hand assembly only

- One fixed rail and three adjustable rails; same profile as Combo-Slide rail
- Hold up to three rows of boards
- Comfortable 20 degree working angle; lightweight and portable
- Measures 24” long x 16” wide
- Rubber-tipped legs on back and bumpers on the front to prevent slipping
- Part number MFM-24; additional rail P/N MFMR-24

Jerry-Rig universal work positioner

- Ergonomic design enables 360° rotation in all directions
- Clamps to a workbench for vertical or horizontal positioning or optional table legs
- Large, quick locking handle to set comfortable working position
- Three styles of fixtures fit the Jerry-Rig:
  1. PCB holder with capacity of 9" x 12" x.125”
  2. Two jaw vise with 9” opening
  3. Peg vise for odd-shaped assemblies which opens to 8” with pegs that screw into plates with 30 holes on a ½” grid

Description	Part No.
Jerry-Rig with table clamp and PCB holder	JR-UV1
Jerry-Rig with table legs and PCB holder	JR-UV2
Jerry-Rig with table clamp and two jaw vise	JR-JV1
Jerry-Rig with table legs and two jaw vise	JR-JV2
Jerry-Rig with table clamp and peg vise	JR-PV1
Jerry-Rig with table legs and peg vise	JR-PV2

Peg Vise with Table Legs

PCB Holder with Table Legs

Two-Jaw Vise with Table Clamp

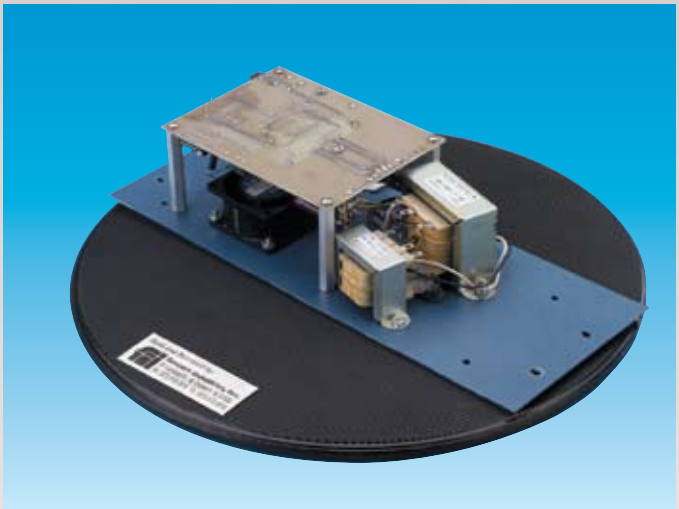
Production Accessories

Fancort production accessories range from a unique ESD turntable to meet the stringent ergonomic needs of today's production environment to stainless PCB cleaning baskets in virtually any size and the most versatile lead reformer for DIPS to facilitate faster component insertion.

ESD Turntable for ergonomic assembly

- Work on heavy, awkward assemblies without struggling
- Complete ESD protection with surface resistivity of 5 x 10e6
- Hold up to 200 lbs
- Rubberized conductive surface and plastic base

Model Number	Dimensions
D300	12" dia. X .500" high
D380	15" dia. X .500" high
D500	20" dia. X .600" high



DLS - DIP Lead Reformer

- Reform leads on .300" and .600" DIPs
- Optional inserts for .750" and .900" DIPs
- Roller bearings with adjustment from 0 to .060"
- Fabricated in hardcoat anodized aluminum
- ESD safe with snap for grounding strap
- Measures 5" x 3" x 1.5"; weighs 1 lb.
- P/N DLS-360; Inserts DLS-750 and DLS-900
- For other size DIPs such as .750" or .900" wide, order an insert that fits on the tool. P/N DLS-750 and DLS-900-0

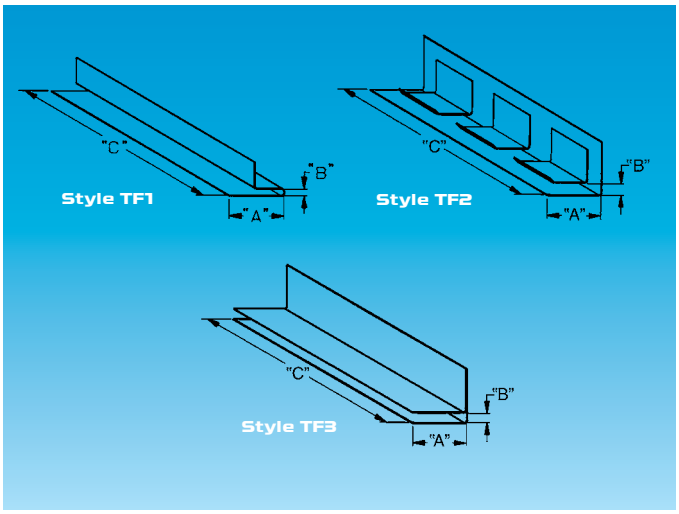
PCB Cleaning Baskets

- Manufactured in 330 stainless steel wire mesh with 1/2" grid; optional grid patterns available
- Welded with 3/16" stainless supports
- Sizes from 12" x 12" x 1" to 18" x 18" x 3"; 5 pc. Minimum
- Hinged cover with quick release latch
- Optional dividers and fold-down handles

Production Accessories

Heavy duty nibbler for removing tabs on boards up to .125 thick.

- A2 tool steel knives for thousands of cuts
- Pneumatically operated with safety foot switch
- Four magnetic, moveable posts to support the board
- Cut round boards with a minimum radius of 3.5mm with custom knife
- Scrap chute and collection bin
- Measures 4" x 4" x 7.5"
- Machine with footswitch P/N is NTR-2;
- Part number for knife is NTR-2K-X. X is the knife thickness and should be .005" thinner than your routed slot.



Finger Masks and Stiffeners

Snap-on titanium strips for use as board stiffeners or gold finger masks come in three styles and sizes for every circuit board. To determine the correct part number, specify the style and provide the following information:

A = Depth of PCB finger
B = PCB thickness
C = PCB length

Order example for TF1 style: A = .062 board with 7/16" deep gold fingers, 4" in length would have the following part number: TF1-716/062/4.

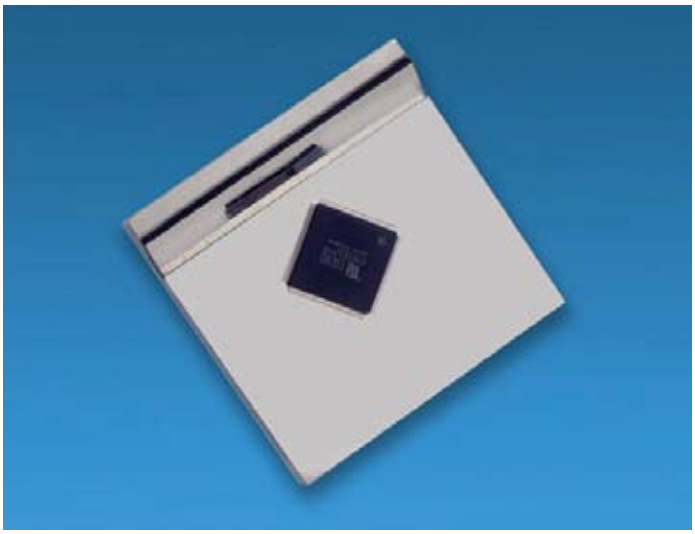
Style TF1 One piece of formed titanium is the lowest cost style

Style TF2 Welded clip style for edges that might have interfering components

Style TF3 Two piece welded is for heavier or very wide boards

Coplanarity Mirror

A precision tool used to visually inspect leads on each side of a surface mounted device for coplanarity. The optically perfect mirror is angled on the tool so the operator can easily perform this inspection procedure. Small and compact with steel base and measuring 4" x 4". Part number is CI-1.

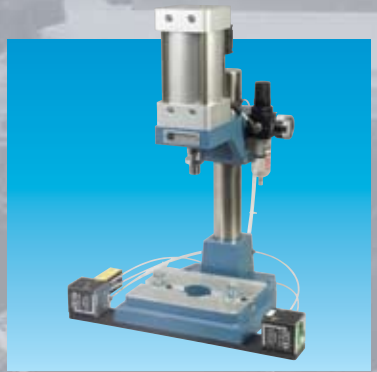


Other Fancort Production-Enhancing Solutions:

PCB Depaneling

Robotic Soldering

Hot Bar Soldering



Pneumatic Presses

Robotic Screw Fastening

Programmable Servo Press

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Electronic Production Solutions

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