ARAVALI ENGINEERS

AN ISO - 9001 : 2000 COMPANY

Since 1987

About Us

Aravali Engineers was incepted in 1987, by our proprietor, Mr. Kuldeep Garg. Since then we have been designing, manufacturing and commissioning material handling equipments. Through this period we have been at the helm of many material handling projects spread across various sectors and industries. The combined experience of these projects alongwith our deligent team of employees and customer support have made us a company on which you can count upon for any and every material handling and storage equipment need.

Our Endeavor

Since the inception, our endeavor has been to revolutionalize the way in which material handling is done in industries thereby saving precious time and labour. Moving ahead with this philosophy, we realized the potential of the pipe and joint system in improving the productivity and lowering the expenditure for any organization. We thoroughly studied the intricacies of this system, with special focus on the quality aspects of this system. After contacting a number of global suppliers and seeing their products we

chose a handful of suppliers with high quality and cost competitive products.

Our Suppliers

We have international suppliers who are leaders in their respective markets. Backed by modern infrastructure, dedicated production teams and latest research and design facilities, their products are of high quality. We are tied with our suppliers with a common goal of continuous improvement, implementation of latest technology, persistance in honesty and striving for perfection.

Our Products

All our products - goblin pipes, NICO pipes, joints, roller placons (roller tracks) and plastic pallets are made from high quality materials and are totally reusable. We have been continuously doing extensive infield testing of all our products for the last 3 years, with very good results. You have our assurance for the quality of our products.

Pipe & Joint System

Pipe joint is system is a smart, dynamic and flexible modular assembly system consisting of plastic coated steel pipes and metal joints. The system is so flexible that it can be made into various types of racks, trolleys, workstations, gravity flow racks & even light duty machine structures. The wide variety of available joints make the system flexible to be quickly moulded into any shaped bends making the system suitable for a variety of lean systems. Some common examples where this system can be used are:

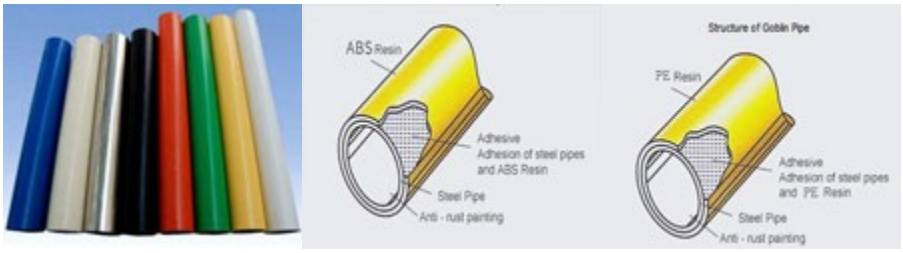
- Workstations
- Packing tables
- Fitting stations
- Assembly stations
- Production lines
- Carts & trolleys
- Flow racks
- Storage Racks
- Roller conveyors
- Cell feed systems
- FIFO picking systems
- DIY stores
- Kitting systems for parts
- Notice boards, sign holders, safety signs

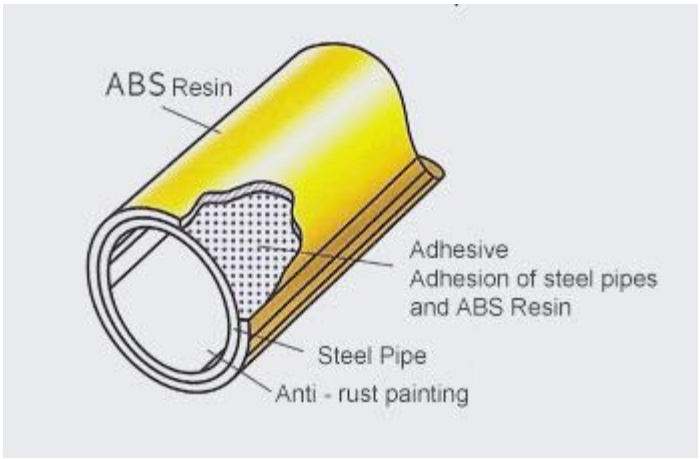
This system can find use in numerous applications, all it requires is a little imagination !!!

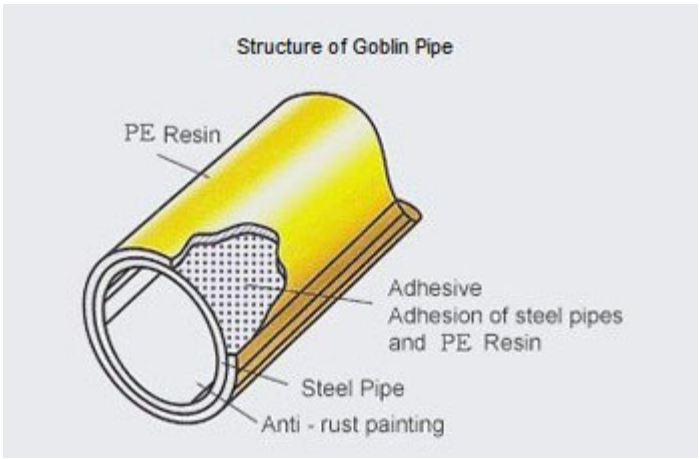
System Components

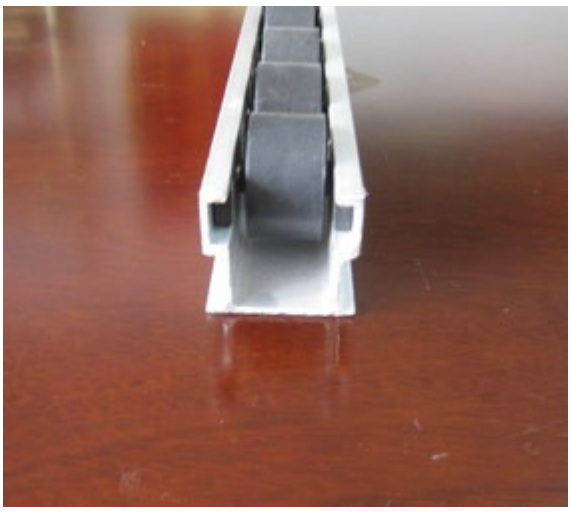
Goblin Pipe

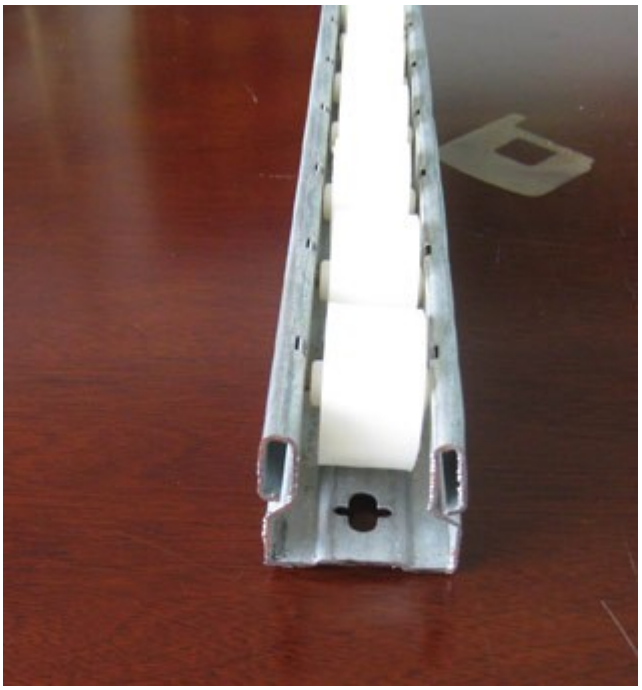
The pipes of the system have a diameter of 28 mm. The pipe is made by a steel pipe with an internal anti-rust coating and an external bonding of ABS/PE. An option of anti - static black external coating is also available.


ABS Resin
Adhesive
Adhesion of steel pipes
and ABS Resin
Steel Pipe
Anti - rust painting
Structure of Goblin Pipe
PE Resin
Adhesive
Adhesion of steel pipes
and PE Resin
Steel Pipe
Anti - rust painting


ABS Resin
Adhesive
Adhesion of steel pipes
and ABS Resin
Steel Pipe
Anti - rust painting


Structure of Goblin Pipe
PE Resin
Adhesive
Adhesion of steel pipes
and PE Resin
Steel Pipe
Anti - rust painting





The external coating creates a beautiful finish, optimizes the strength of the steel pipe, increases the clamping force of the joints and protects the products from contamination. The resin used for coating has excellent durability, impact resistance and is light weight.

The standard thickness for general applications range from 0.8 mm to 1.2 mm. For heavy duty applications, thickness of 2 mm is also available.

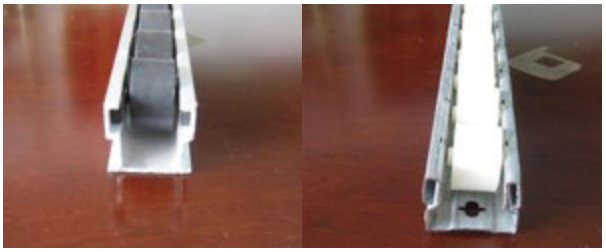
NICO Pipe

In places with frequent spillage of solvent, cutting oil and other greasy materials chemical reactions with the resin coating of goblin pipe is a threat. Under such conditions it is advisable to use NICO pipe. The NICO pipe is made by treatment of Nitrogen, Carbon & oxygen with the external surface of the steel pipe giving a brightly finished surface.

Joints

A wide variety of ideas and shapes can be realised with the help of the range of joints. The joints connect the pipes and are available in configurations: angled, parallel & hinged. With very little effort pipes can be clamped with these joints using only a simple allen key. The joints are available in finishes of black and nickel coating.

Roller tracks/ Roller Placons



Our roller placons are formed from galvanised steel frame, so as to resist twisting and provide a solid axis for efficient material flow. The rollers are durable and well suited for different loading conditions.

Benefits

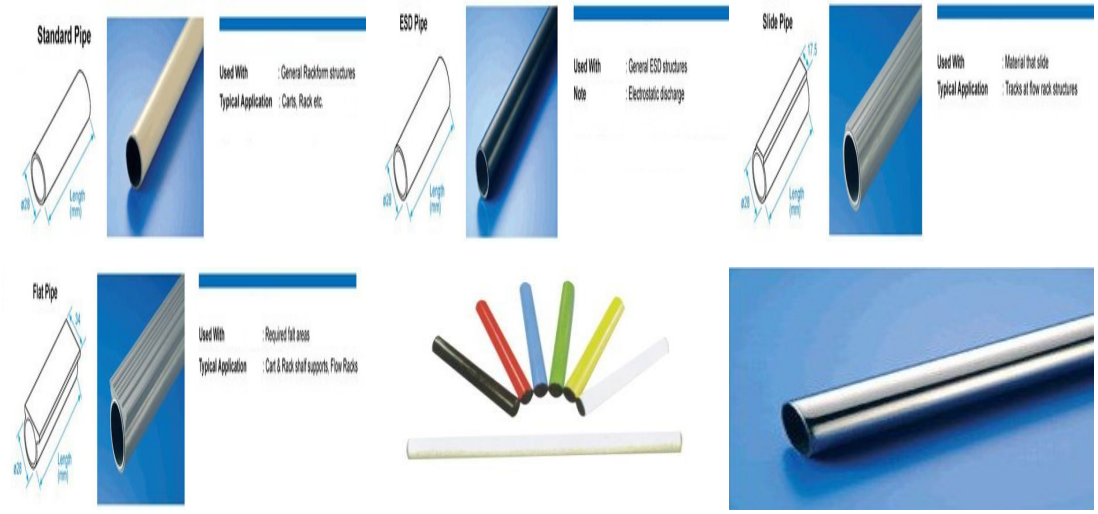
Characteristics of Plastic Pallets

- Light weight and easy to handle
- Recyclable
- Cost - effective
- Impervious to acids, fats, solvents and odors
- Resistant to moisture, insects & fungi
- Can withstand deep freezing & steam cleaning
- Allow for easy handling with forklifts or pallet jacks
- Available in a variety of colours
- Strong and durable
- In addition to bags, cartons and industrial hardware our pallets are suitable for food, fresh produce, meat, fish, beverages & chemicals

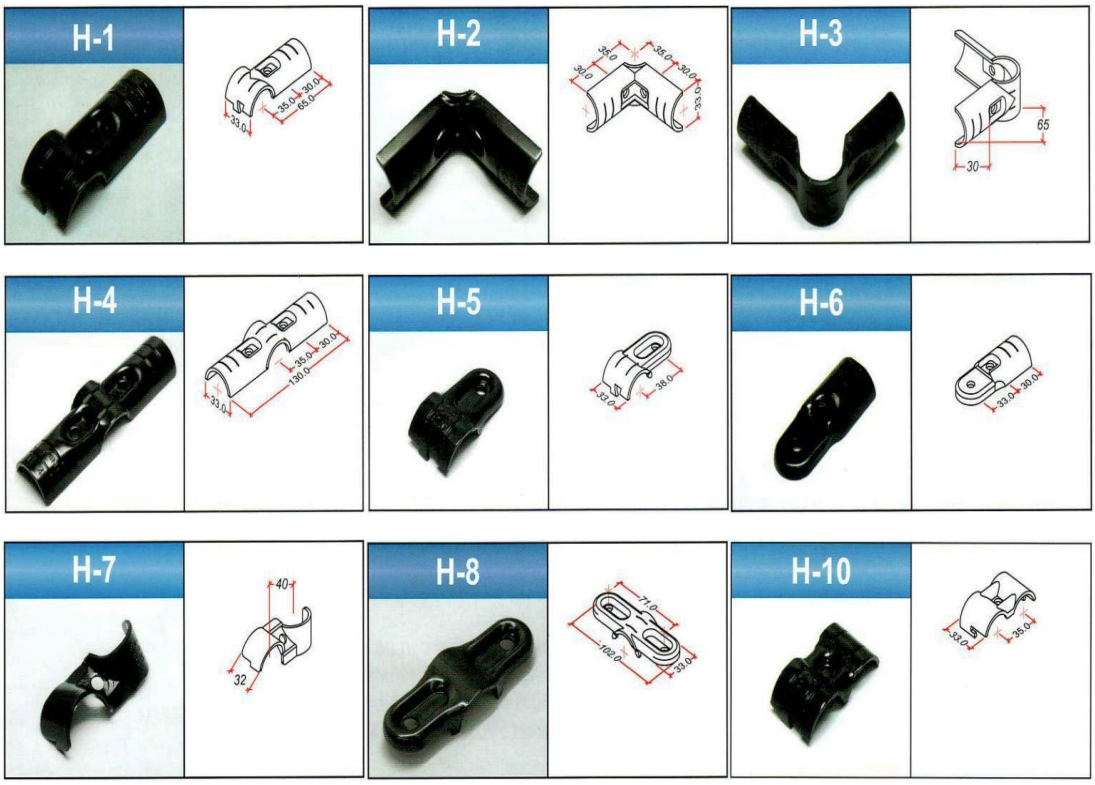
Benefits over wooden pallets

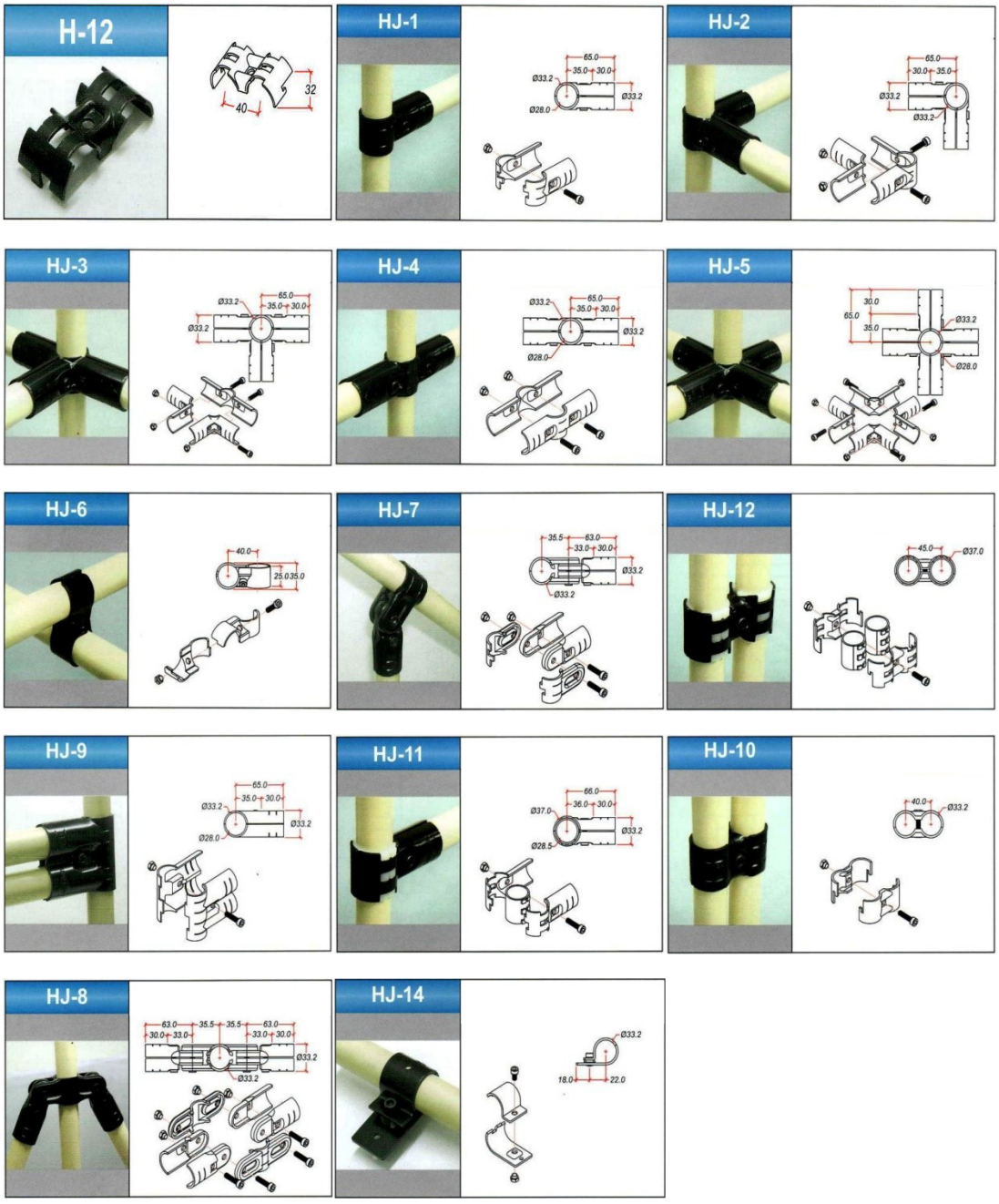
- Reusable
  Wooden pallets have a limited life interms of number of reuse cycles after which they usually break or deform.
- Non - toxic, Hygenic & Easy to clean
  Plastic pallets are easily sanitised by steam cleaning and pressure washing making them hygenic. Wooden pallets on the other hand cannot be sanitised and might have to be disposed because of hygeine concerns, especially in pharma and food industry.
- Impervious to most fluids
  Plastic pallets are immune to moisture, fats, acids, solvents and other chemicals.
- Pest free
  Wooden pallets always have a possibility of getting infested with different kinds of pests whereas plastic pallets are completely pest resistant.
- Cost effective
  Plastic pallets have longer reuseability cycles and a longer life as compared to wooden pallets. They prove to be more cost effective per trip than wooden pallets.
- No recurring costs
  Plastic pallets are free of any nails or splinters and don't have any consequent repairing costs.
- Saves trees
  According to estimates every 30 plastic pallets used instead of wooden pallets save approximately one tree.

Pipes



Joints - Black Metal Joints





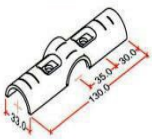
Ni Coated Joints

H-1 Ni

H-2 Ni

H-3 Ni

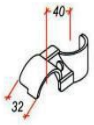
H-4 Ni



H-5 Ni

H-6 Ni

H-7 Ni

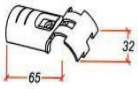


H-10 Ni

H-12 Ni

H-9 Ni

H-11 Ni



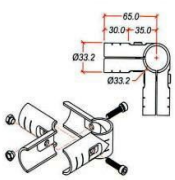
H-8 Ni

H-14B Ni

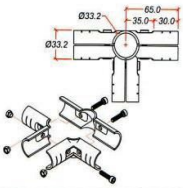
H-14A Ni

H-90° Ni

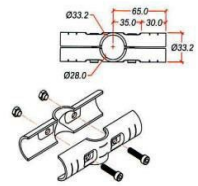
HJ-2 Ni

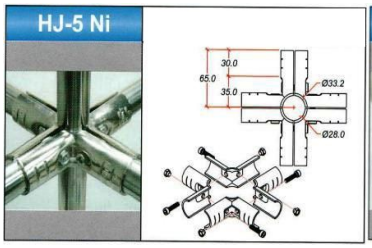


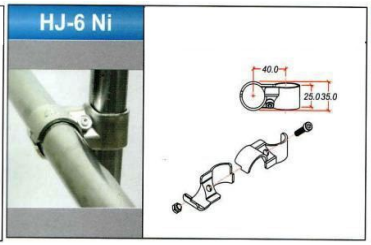
HJ-3 Ni

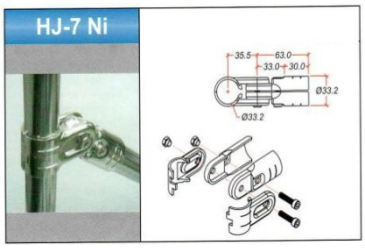


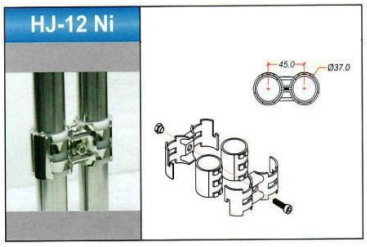
HJ-4 Ni

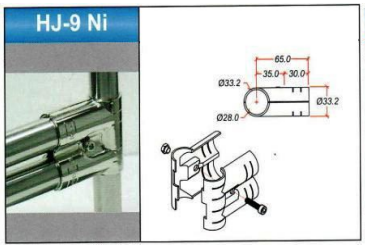


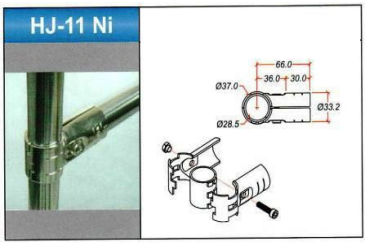


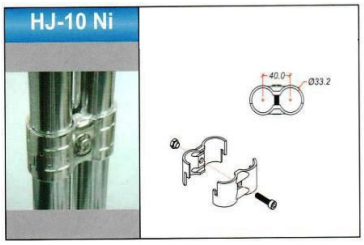


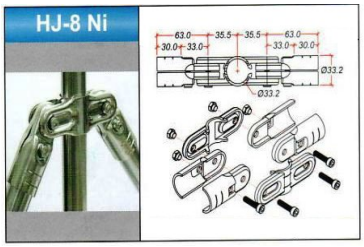


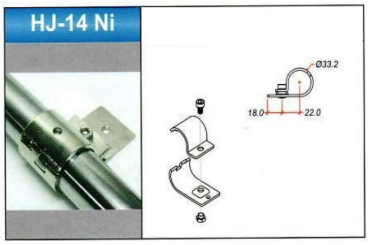


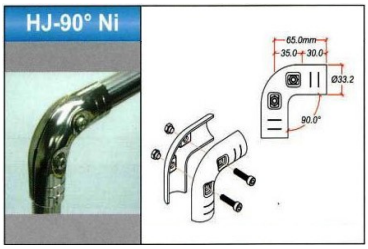




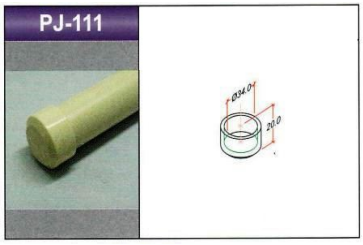


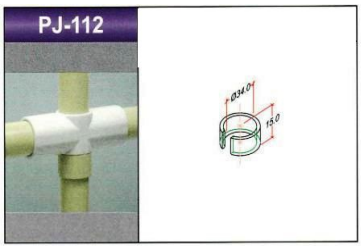


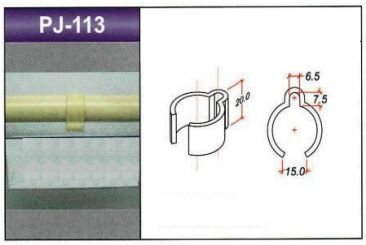


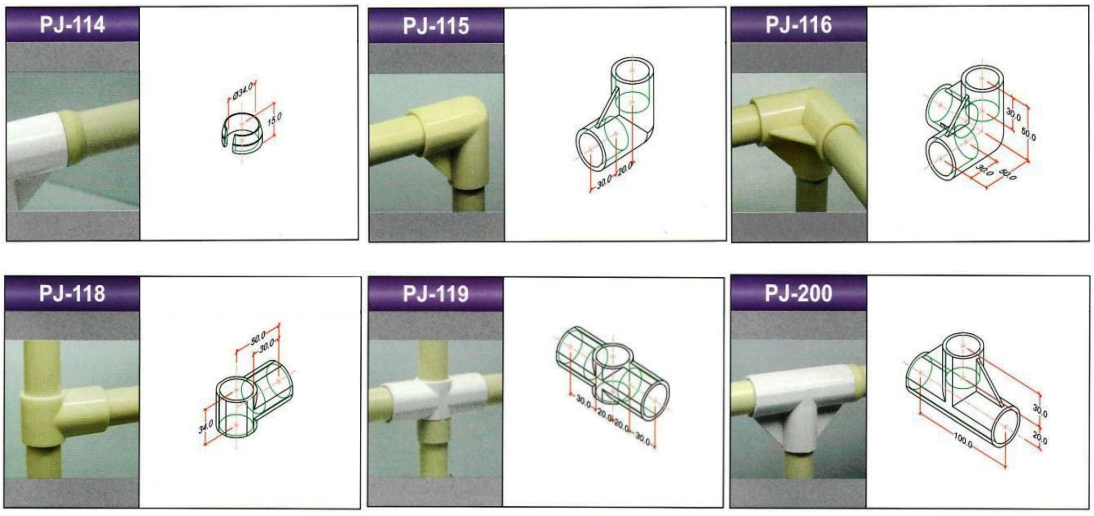


Plastic Joints



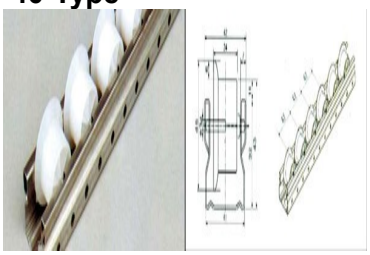




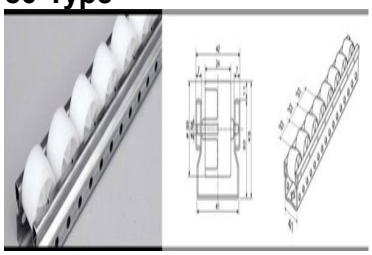


Roller tracks

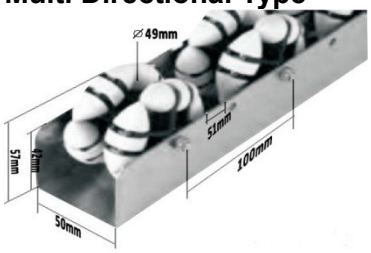
40-Type



80-Type

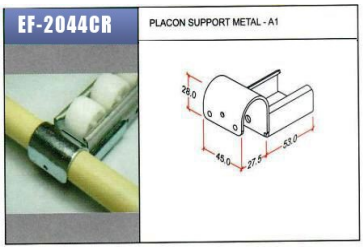


Multi Directional Type

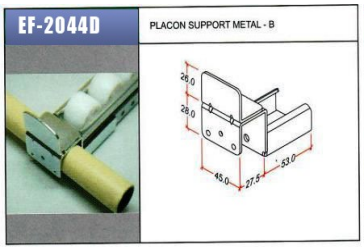


Roller Track End Supports

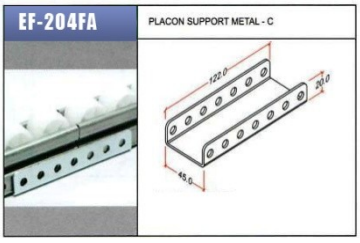
EF-2044CR PLACON SUPPORT METAL - A1



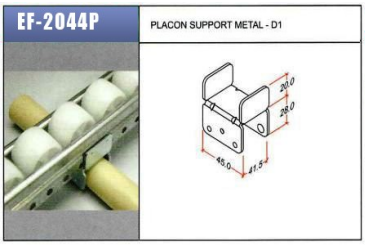
EF-2044D PLACON SUPPORT METAL - B



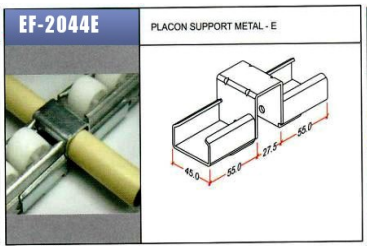
EF-204FA PLACON SUPPORT METAL - C



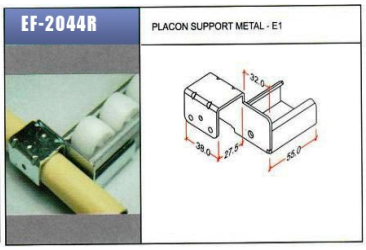
EF-2044P PLACON SUPPORT METAL - D1



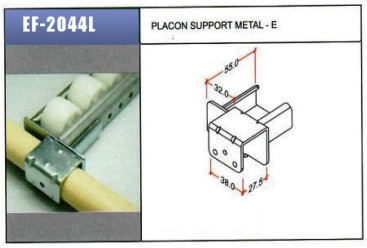
EF-2044E PLACON SUPPORT METAL - E



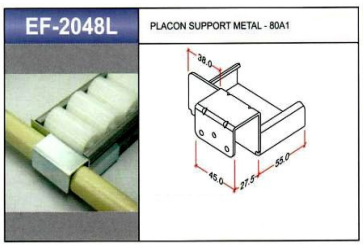
EF-2044R PLACON SUPPORT METAL - E1



EF-2044L PLACON SUPPORT METAL - E

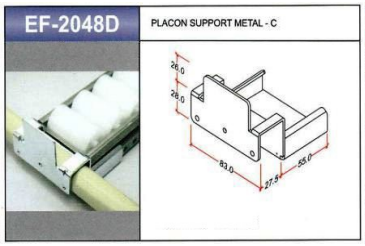


EF-2048L PLACON SUPPORT METAL - 80A1

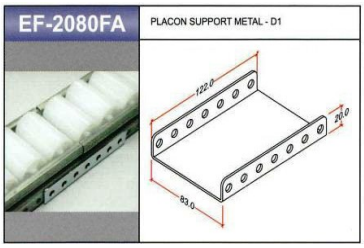


EF-2048CR PLACON SUPPORT METAL - 80B

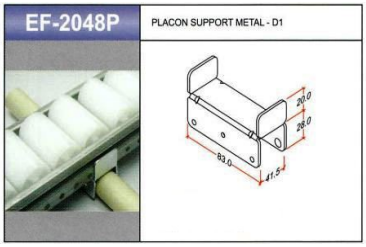
EF-2048D PLACON SUPPORT METAL - C



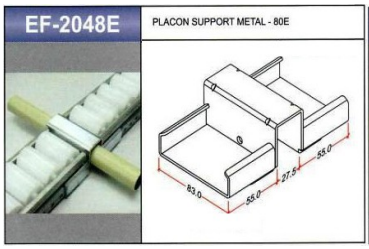
EF-2080FA PLACON SUPPORT METAL - D1



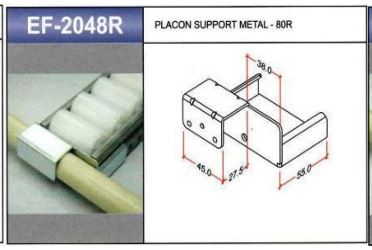
EF-2048P PLACON SUPPORT METAL - D1



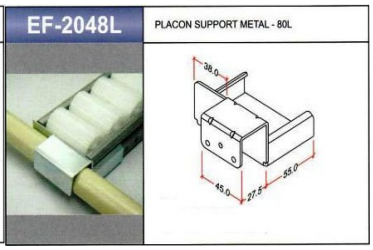
EF-2048E PLACON SUPPORT METAL - 80E



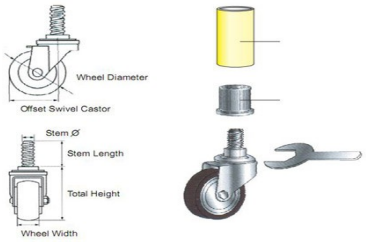
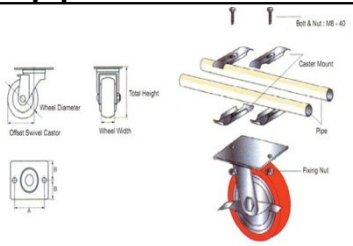
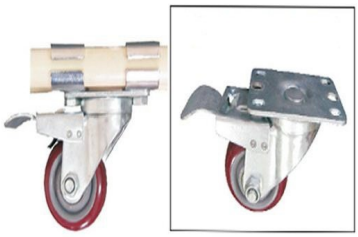
EF-2048R PLACON SUPPORT METAL - 80R



EF-2048L PLACON SUPPORT METAL - 80L



Castors

Stem Castor	Stem Castor fix det	Stem Castor w brake
		
Top plate castor	**Top plate castor fix det**	**Top plate castor w brake**
		

Accessories

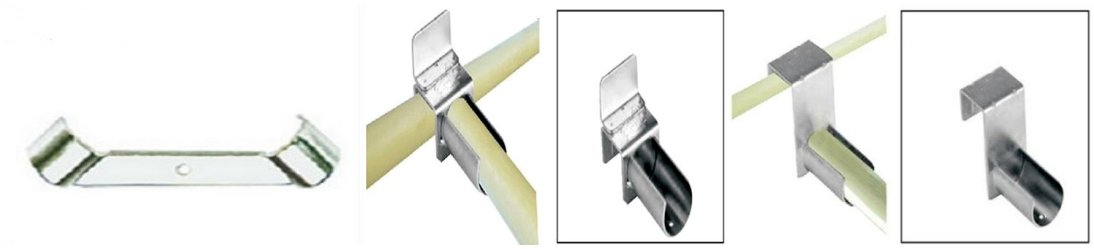
The pipe and joint system is based on the philosophy of I design, I build, I use. The system is easy to design and assemble. The system can be used for a wide variety of applications, a few of these applications are shown here. There are endless possibilities for the use of this system, all it takes is a little imagination.

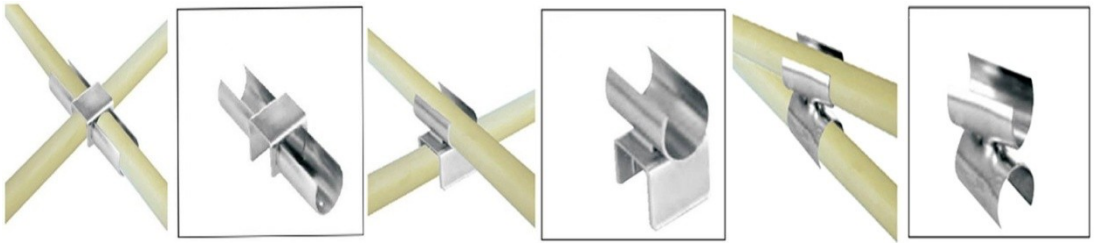
Typical Applications:

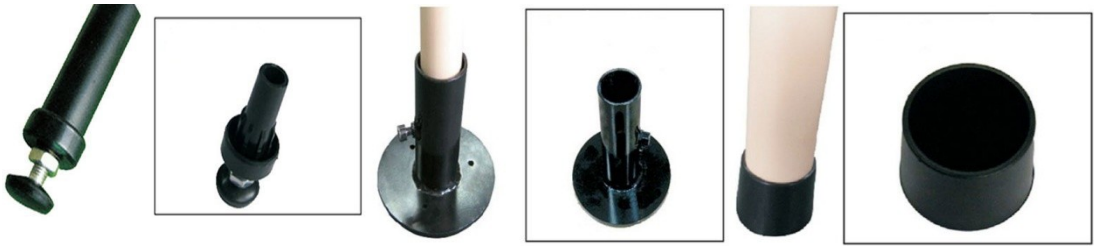
Workstations - for general assembly, automotive and electronic component manufacturing, work benches, checking & inspection tables and packing tables.

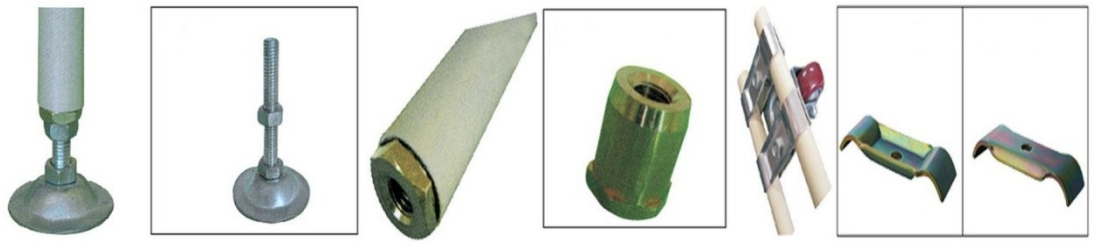
Flow racks - static and mobile flow racks, FIFO systems, Picking systems & industrial racks.

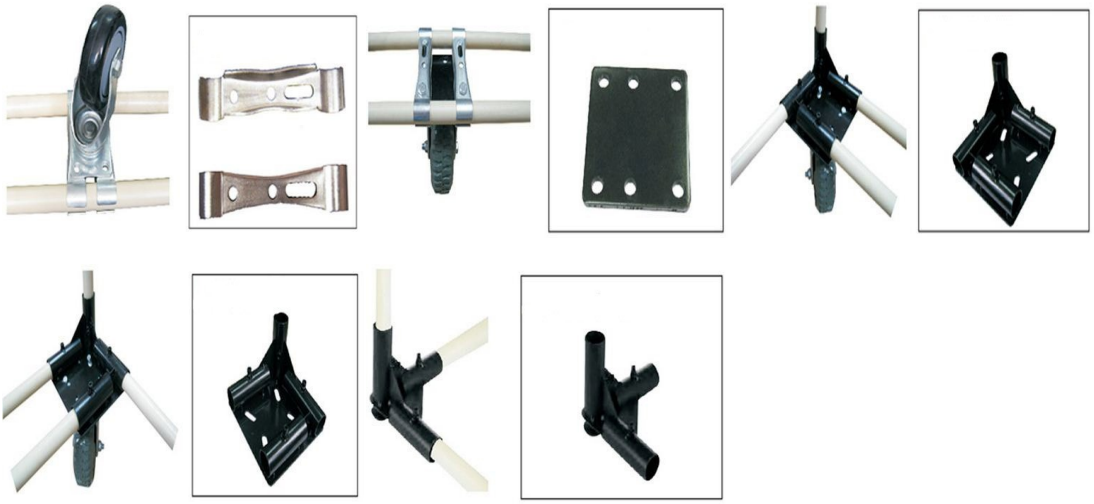
Trolleys - picking trolleys, transport carts, tool trolleys & warehouse trolleys.











Benefits of Pipe & Joint system

The pipe joint system is a smart, dynamic and flexible system which can be suited for numerous applications. It can be into various types of racks, trolleys, production cell tables and flow racks. Our pipe joint system has the following advantages.

Easy to handle components: made of light weight materials.
Simple assembly without requiring any special tools or skills.
Fully flexible and versatile system.
Simple to disassemble - high reusability of the system.
Completely maintenance free system.
Any mistakes committed during assembly can be easily corrected.
No welding is required which makes the system easy to assemble and safe to use.
Clean and durable with elegant finish

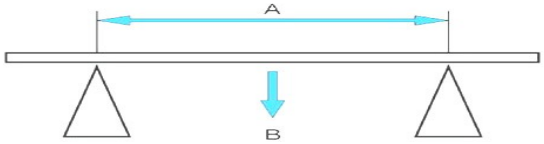
Application

Design

Designing assemblies from the pipe joint system is a very simple affair. Some useful data is provided here to help you in your designs.

Pipe selection

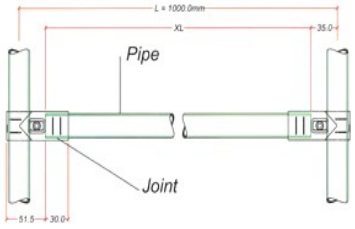
Pipe thickness selection



A	500mm		750mm		1000mm	
B	5mm	10mm	10mm	20mm	20mm	40mm
ABS 0.7 mm	200 kg	290 kg	145 kg	180 kg	120 kg	160 kg
ABS 1.0 mm	230 kg	310 kg	160 kg	230 kg	140 kg	180 kg
ABS 2.0 mm	490 kg	540 kg	320 kg	450 kg	280 kg	350 kg
Powder coating 0.8 mm	290 kg	340 kg	175 kg	225 kg	90 kg	110 kg
Powder coating 1.2 mm	400 kg	520 kg	250 kg	330 kg	200 kg	230 kg
Stainless steel 0.7 mm	200 kg	240 kg	130 kg	175 kg	85 kg	110 kg
Stainless steel 1.2 mm	370 kg	490 kg	225 kg	310 kg	180 kg	210 kg

leave out specifications of powder coating pipe
Mention Stainless steel pipe as NICO pipe

Pipe length calculation



PIPE DETERMINATION (CASE 1)

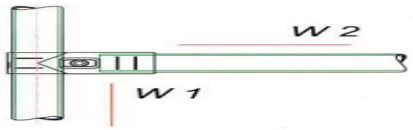
500	CENTER TO CENTER PIPE
- 70	EMPTY AREA (35MM X 2)
430	ACTUAL PIPE TO BE CUT

PIPE DETERMINATION (CASE 2)

250	BOTTOM TO CENTER PIPE
- 20	HEIGHT OF ADJUSTABLE FOOT CAP
+17.5	BALANCE OF THE JOINT
247.5	ACTUAL PIPE TO BE CUT

The Ø28 metal joint had been constructed as aboves drawing with design of inserting 30mm only into metal joint

Joint selection



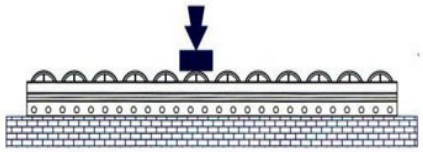
ø28	W1	W2
HJ-1	120KGS	80KGS
HJ-2	75KGS	80KGS
HJ-3	75KGS	80KGS
HJ-4	80KGS	80KGS
HJ-5	80KGS	80KGS
HJ-6	50KGS	50KGS
HJ-7	120KGS	80KGS

Data for roller placons

PERMISSIBLE LOAD FOR PLACON WHEEL

Test Condition :

i. Test Speed : 5mm / min
ii. Temperature : 23°C

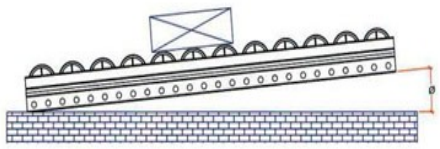


MODEL	LOAD
EF-2045 - C	150 Kg
EF-2045 - F	150 Kg
EF-2046 - C	150 Kg
EF-2046 - F	150 Kg
EF-2046 - ESD	150 Kg
EF-2046 - G	150 Kg
EF-2047 - F	450 Kg
EF-2048 - F	450 Kg
EF-2049 - F	450 Kg

GRADIENT DETERMINATION FOR PLACON

Test Condition :

i. Box Weight : 0.75 Kg
ii. Temperature : 23°C



MODEL	Ø
EF-2045 - C	1.70°
EF-2045 - F	1.70°
EF-2046 - C	1.70°
EF-2046 - F	1.70°
EF-2046 - ESD	1.70°
EF-2046 - G	1.50°
EF-2047 - F	1.40°
EF-2048 - F	1.40°
EF-2049 - F	1.40°