

Accessories for Factory Frames

RoHS

| Part Number | Material | Surface Treatment |
|-------------|---------------|--------------------|
| FFS101 | SPCC | Trivalent Chromate |
| FFS102 | SPCC | Trivalent Chromate |
| FFS103 | Polyethylene | - |
| FFS107 | Polypropylene | - |

Saddles with One Fixing
FFS101 (Set of 4)

Saddles with Two Fixings
FFS102 (Set of 4)

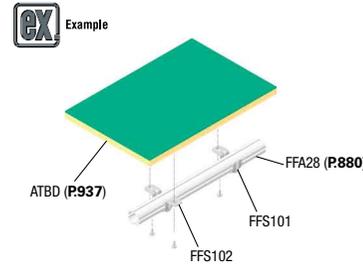
Inner Cap
FFS103 (Set of 4)(Applicable Frame: FFA28)

Panel Holder
FFS107

| Part Number | Mass (g/pc.) | Pcs. per Pkg. | Unit Price |
|-------------|--------------|---------------|------------|
| FFS101 | 19 | 4 | |
| FFS102 | 24 | 4 | |
| FFS103 | 4 | 4 | |
| FFS107 | 8 | 1 | |

Please note the quantity when ordering per package.

Ordering Example
Part Number: FFS101



RoHS

| Part Number | Material | Surface Treatment |
|-------------|----------|-------------------|
| FFS104 | SUS304 | - |
| FFS105 | A6063 | Clear Anodize |
| FFS106 | SS400 | Chrome Plating |

Conductive Plate
FFS104 (Set of 50)

Clamp for Factory Frame
FFS105

Ring Slider
FFS106 (Set of 10)

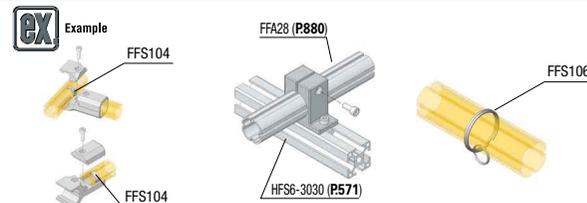
By inserting in between the frame tube and the joint, it scrapes the anodized surface to gain electrical continuity. (See the App. Examples below.)

Accessory: Hex Socket Head Cap Screw M5-22 x 1 pc.

| Part Number | Mass (g/pc.) | Pcs. per Pkg. | Unit Price |
|-------------|--------------|---------------|------------|
| FFS104 | 1 | 50 | |
| FFS105 | 70 | 1 | |
| FFS106 | 14 | 10 | |

Please note the quantity when ordering per package.

Ordering Example
Part Number: FFS104



RoHS

| Part Number | Material | Surface Treatment |
|-------------|--|--------------------|
| FFS201 | SPCC | - |
| FFS202-12 | Leveling Mount: SS400 Equivalent Insert Nut: S45C | Trivalent Chromate |
| FFS203-8 | Main Body: Polyethylene Nut: SS400 | Trivalent Chromate |

Pipe Stands
FFS201

Adjusting Bolt Set
FFS202-12 (Applicable Frame: FFA28)

Insert Nut M8
FFS203-8 (Applicable Frame: FFA28)

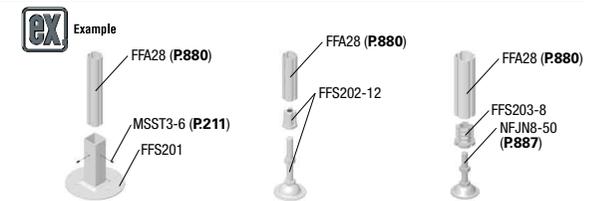
Screw is not included.

| Part Number | Mass (g) | Unit Price |
|-------------|----------|------------|
| FFS201 | 320 | |
| FFS202-12 | 264 | |
| FFS203-8 | 15 | |

Ordering Example
Part Number: FFS202-12

Alterations
Part Number - (SET)
FFS201 - SET
Applicable to FFS201 only.

| Alteration | Code | Spec. |
|------------|------|--|
| Set Screw | SET | 2 set screws (M3-6) come with FFS201 as a set. |



RoHS

| Part Number | Material | Surface Treatment |
|-------------|-----------------|-------------------|
| FFS203-12 | S45C | - |
| FFS204 | Polychloroprene | - |
| FFS205 | ADC12 | - |

Insert Nut M12
FFS203-12 (Applicable Frame: FFA28)

Rubber Foot
FFS204 (Applicable Frame: FFA28)

Clamp for Factory Frame
FFS205

Accessory: Hex Socket Head Cap Screw M5-20 x 1 pc., M5 Nut x 1 pc.

| Part Number | Mass (g) | Unit Price |
|-------------|----------|------------|
| FFS203-12 | 80 | |
| FFS204 | 18 | |
| FFS205 | 80 | |

Ordering Example
Part Number: FFS203-12



Pipe Frames / Curved Pipe Frames

■ Pipe Frames

Standard
PFS (L Configurable)
PFSKS (Base Material, 5 pcs./pack)

Antistatic
PFST (L Configurable)
PFSTKS (Base Material, 5 pcs./pack)

| Type | Steel Pipe Frame | | Plastic Coating |
|--------------|------------------------|--|------------------------|
| | Material | Surface Treatment | Material |
| PFS, PFSKS | SPCC (Thickness 0.7mm) | Hot Zinc Plating + Non-Chromate Antirust Treatment | AAS Coating |
| PFST, PFSTKS | | | Conductive ABS Coating |

■ L Configurable

| Part Number Type | No. | Color | L 1mm Increment | Mass kg/m | Unit Price /m 1 ~ 100 pc(s). |
|-------------------|-----|----------------|-----------------|-----------|------------------------------|
| PFS (Standard) | 28 | W (White) | 60~3000 | 0.53 | |
| | | V (Ivory) | | | |
| | | S (Dark Gray) | | | |
| | | Y (Yellow) | | | |
| PFST (Antistatic) | | B (Black) | | | |
| | | TV (Ivory) | | | |
| | | TS (Blue Gray) | | | |

■ 4020mm Base Material, 5 pcs./set

| Part Number Type | No. | Color | L Length (mm) | Mass kg | Unit Price 1 - 19 set(s) | Volume Discount Rate 20 ~ 60 sets |
|---------------------|-----|----------------|-------------------|---------|--------------------------|-----------------------------------|
| PFSKS (Standard) | 28 | W (White) | 4020 (5 pcs./set) | 10.6 | | |
| | | V (Ivory) | | | | |
| | | S (Dark Gray) | | | | |
| | | Y (Yellow) | | | | |
| PFSTKS (Antistatic) | | B (Black) | | | | |
| | | TV (Ivory) | | | | |
| | | TS (Blue Gray) | | | | |

⚠ ±5mm tolerance for base material with length 4020mm.

Ordering Example
Part Number - **Color** - **L**
PFS28 - **W** - **1250**
PFSKS28 - **S**

■ Surface Resistivity of Antistatic Type

| Type | No. | Color | Surface Resistivity |
|------|-----|----------|------------------------------------|
| PFST | 28 | B | 10 ⁷ ~10 ⁹ Ω |
| | | TV TS | 10 ⁷ ~10 ⁹ Ω |

■ Curved Pipe Frames

PFSMG (Standard)

| Type | Material |
|-------|--|
| PFSMG | Hot Zinc Plating Steel Pipe Frame SPCC Thickness 0.7mm Plastic Coating AAS, ABS Coating Thickness 1.0mm |

| Part Number Type | No. | Color | A 1mm Increment | Unit Price 1 ~ 100 pc(s). | | | | | | | |
|------------------|-----|---|-----------------|---------------------------|---------|---------|---------|---------|---------|---------|----------|
| | | | | B 1mm Increment | | | | | | | |
| | | | | 200~300 | 301~400 | 401~500 | 501~600 | 601~700 | 701~800 | 801~900 | 901~1000 |
| PFSMG | 28 | W (White) V (Ivory) S (Dark Gray) | 200~300 | | | | | | | | |
| | | | 301~400 | | | | | | | | |
| | | | 401~500 | | | | | | | | |
| | | | 501~600 | | | | | | | | |
| | | | 601~700 | | | | | | | | |
| | | | 701~800 | | | | | | | | |
| 801~900 | | | | | | | | | | | |
| 901~1000 | | | | | | | | | | | |

Ordering Example
Part Number - **Color** - **A** - **B**
PFSMG28 - **W** - **A300** - **B800**

Aluminum Pipe Frames

■ Aluminum Pipe Frames

Standard
PFAS (L Configurable)
PFASKS (Base Material, 5 pcs./pack)

Reinforced
PFAUS (L Configurable)
PFAUKS (Base Material, 5 pcs./pack)

| Type | Material |
|--------------|------------|
| PFAS PFASKS | A6061SS-T6 |
| PFAUS PFAUKS | A6N01SS-T5 |

⚠ The aluminum frames cannot be used with the plastic joints.

■ L Configurable

| Part Number Type | No. | Surface Treatment | L 1mm Increment | Mass kg/m | Sectional Area mm ² | Cross Sectional Moment of Inertia mm ⁴ | | Unit Price 1 ~ 5 pc(s). | | | |
|------------------|-----|---------------------------------|-----------------|-----------|--------------------------------|---|-----------------------|-------------------------|---------|---------------|---------|
| | | | | | | l _x | l _y | Less than 300mm | | 300mm or more | |
| | | | | | | | | No Treatment | Anodize | No Treatment | Anodize |
| PFAS | 28 | N (No Treatment) A (Anodize) | 60~4000 | 0.372 | 137.8 | 1.151x10 ⁴ | 1.151x10 ⁴ | | | | |
| PFAUS | | | | 0.786 | 285 | 1.655x10 ⁴ | 1.655x10 ⁴ | | | | |

■ 4020mm Base Material, 5 pcs./set

| Part Number Type | No. | Surface Treatment | L Length (mm) | Mass kg/pc. | Unit Price 5 pcs./set | |
|------------------|-----|---------------------------------|---------------|-------------|----------------------------|-----------------------|
| | | | | | No Treatment 1 ~ 20 set(s) | Anodize 1 ~ 20 set(s) |
| PFASKS | 28 | N (No Treatment) A (Anodize) | 4020 | 1.50 | | |
| PFAUKS | | | (5 pcs./set) | 3.15 | | |

⚠ ±5mm tolerance for base material with length 4020mm.

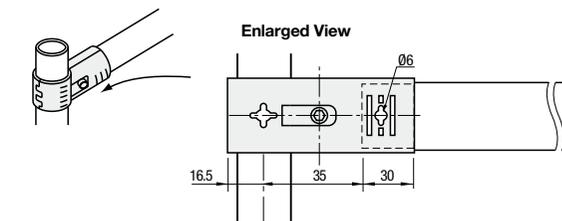
Ordering Example
Part Number - **Surface Treatment** - **L**
PFAS28 - **N** - **1250**
PFASKS28 - **A**

When L is less than 300
 The table indicates unit prices regardless of its length.
 When L is 300 or more
 Price is calculated as follows:
 Unit Price/m x Specified Full Length = Sales Price



Alterations
Part Number - **Surface Treatment** - **L** - **(Alteration Code)**
PFAUS28 - **N** - **800** - **LTP**

| Alteration Code | Tapping | | |
|-----------------|---|-----|-----|
| | LTP | RTP | TPW |
| Spec. | Available for PFAUS only Tapping to the Ø6.7 hole LTP : Tapping on the Left End Face RTP : Tapping on the Right End Face TPW : Tapping on Both Ends | | |



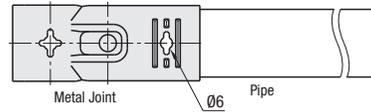
For cutters for pipe frames and aluminum pipe frames, see P911 (This cutter can not cut reinforced aluminum pipe frames.)

Metal Joint Selection

Metal Joint

■ Metal Joint

(1) A screw hole has been provided to allow the metal joint to be firmly connected to a pipe frame.

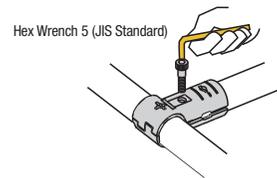


(2) Material and coating are selectable according to the purpose of use.

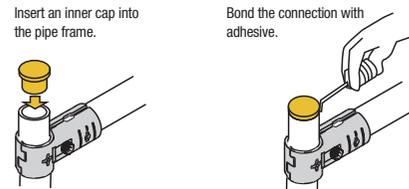
| Part Number | Material | Plating |
|-------------|----------|------------------------------------|
| PBLSN, PBLN | SAPH | Cathodic Electrodeposition Coating |
| PBLSNC | | Nickel Plating |
| PBLSNS | SUS304 | - |

■ How to Use Metal Joints

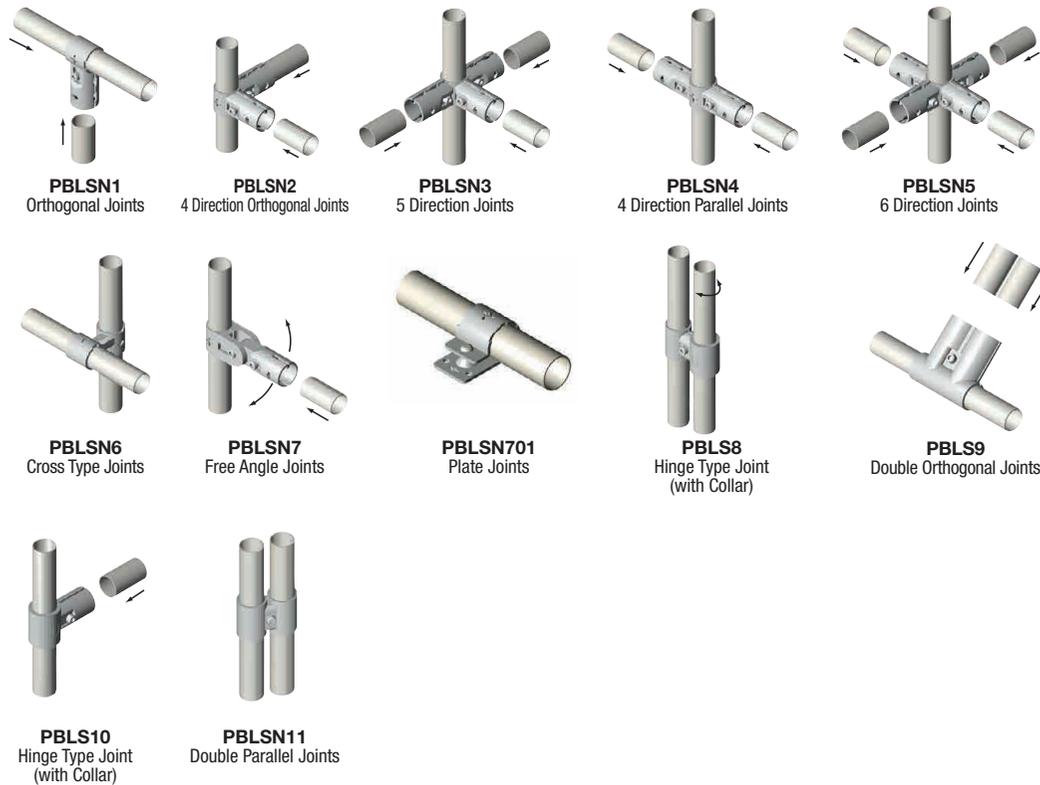
(1) Use a hex wrench 5 (JIS standard) for tightening.



(2) When using metal joints, install an inner cap (PJ503) on the end of the pipe frame with adhesive. (No inner cap is required for aluminum pipe frames.)



■ Metal Joint Connecting Configurations



RoHS

| Type | Material | Plate Thickness | Surface Treatment |
|--------|----------|-----------------|------------------------------------|
| PBLSN | SAPH | 2.6mm | Cathodic Electrodeposition Coating |
| PBLSNC | | | Nickel Plating |
| PBLSNS | SUS304 | - | - |

| Part Number | Mass (g) | Components (except Bracket) | | Unit Price | |
|--|----------|-----------------------------|-----|---------------|--------|
| | | Screw | Nut | PBLSN, PBLSNC | PBLSNS |
| PBLSN (Cathodic Electrodeposition Coating) | 160 | 1 | 1 | | |
| PBLSNC (Nickel Plating) | 250 | 2 | 2 | | |
| PBLSNS (Stainless Steel) | 250 | 3 | 3 | | |
| PBLSN (Cathodic Electrodeposition Coating) | 400 | 2 | 2 | | |
| PBLSN (Cathodic Electrodeposition Coating) | 150 | 4 | 4 | | |
| PBLSN (Cathodic Electrodeposition Coating) | 150 | 1 | 1 | | |

RoHS

| Type | Material | Plate Thickness | Surface Treatment |
|-------|----------|-----------------|------------------------------------|
| PBLSN | SAPH | 2.6mm | Cathodic Electrodeposition Coating |
| PBLSN | | | Cathodic Electrodeposition Coating |

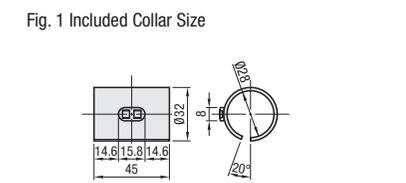
⚠ No nut. The main body is tapped. ⚠ A nut is welded to the main body.

| Part Number | Mass (g) | Components (except Bracket) | | | Unit Price | |
|--|----------|-----------------------------|-----|--------|-----------------|--------|
| | | Screw | Nut | Others | PBLSN, PBLN | PBLSNS |
| PBLSN (Cathodic Electrodeposition Coating) | 260 | M6-25 | 2 | 2 | | |
| PBLSN (Cathodic Electrodeposition Coating) | 80 | M6-10 | 1 | 0 | | |
| PBLSN (Cathodic Electrodeposition Coating) | 200 | | | 0 | Included Collar | |
| PBLSN (Cathodic Electrodeposition Coating) | 289 | M6-25 | 1 | 0 | | |
| PBLSN (Cathodic Electrodeposition Coating) | 186 | | | 1 | Included Collar | |
| PBLSN (Cathodic Electrodeposition Coating) | 165 | | | | | |

* No nuts included for PBLSN8 and PBLSN9 since there is a tap on the metal bracket.

Ordering Example: **PBLSN1**

⚠ Use of PBLSN8 and PBLSN10: insert the frame through the included collar, slide the frame and the metal joint, then rotate it.



Material: Polyethylene (White)

Wheel Conveyor Assembly / Connecting Parts / Wheel Conveyors

Note that, for some of the types shown here, order might be unable to be received by the MISUMI Indonesia, and/or India offices.

Skid Conveyor Rails / Connecting Parts / Lifting Table Units

Wheel Conveyor Assembly

RoHS

L Standard

PFSSPH (Standard) PFSUPH (Wide Pitch)
PFSPPH (Narrow Pitch)

Wheel Qty. Configurable

PFSSPHF (Standard) PFSUPHF (Wide Pitch)
PFSPPHF (Narrow Pitch)

Standard Narrow Pitch Wide Pitch

| Part Number | Material | Surface Treatment |
|-------------|--|--------------------------------|
| PFSSPH | Edge: SPCC Wheel: Polyacetal Shaft: Polyacetal | Non-chrome Hot Dip Galvanizing |
| PFSPPH | Edge: SPHC Wheel: Polypropylene | Non-chrome Hot Dip Galvanizing |

L Standard

| Part Number | Nominal Length | Actual Length L (mm) | A | H | E | P | D | ℓ1 | Wheel Qty. | Mass (kg) | Allowable Load (per Wheel) | Connecting Parts | Unit Price 1-49 pc(s) | Volume Discount Rate 50-100 |
|-----------------------|----------------|----------------------|------|------|-----|----|----|----|------------|-----------|----------------------------|------------------|-----------------------|-----------------------------|
| PFSSPH (Standard) | 2000 | 1992 | 40 | 30 | 6.5 | 27 | 25 | 24 | 73 | 2.12 | 5kg | JBS50□ | 3,200 | 3,040 |
| | 2400 | 2397 | | | | | | | 88 | 2.56 | | | 3,800 | 3,610 |
| | 3000 | 2991 | | | | | | | 110 | 3.20 | | | 4,750 | 4,510 |
| PFSPPH (Narrow Pitch) | 2000 | 2000 | | | | | | | 99 | 2.50 | 7kg | JBS50□A | 4,750 | 4,510 |
| | 2500 | 2500 | 40.1 | 31.6 | 4 | 20 | 18 | 10 | 124 | 3.13 | | | 5,900 | 5,600 |
| | 3000 | 3000 | | | | | | | 149 | 3.75 | | | 7,100 | 6,740 |
| PFSUPH (Wide Pitch) | 2000 | 2000 | | | | | | | 39 | 2.36 | 10kg | | 3,900 | 3,700 |
| | 2500 | 2500 | 40.1 | 31.6 | 4 | 50 | 36 | 25 | 49 | 2.95 | | | 4,900 | 4,650 |
| | 3000 | 3000 | | | | | | | 59 | 3.54 | | | 5,900 | 5,600 |

Ordering Example: Part Number - L - N
PFSSPH - 2400 - 50

Wheel Qty. Configurable

| Part Number | Number of Wheels N | A | H | E | P | D | ℓ2 | Mass (kg/m) | Allowable Load (per Wheel) | Connecting Parts | Unit Price 1-5 pc(s) | Volume Discount Rate Wheel 1 pc. Cutting Charge |
|-------------|--------------------|------|------|-----|----|----|------|-------------|----------------------------|------------------|----------------------|---|
| PFSSPHF | 5-110 | 40 | 30 | 6.5 | 27 | 25 | 13.5 | 1.1 | 5kg | JBS50□ | | |
| PFSPPHF | 5-149 | 40.1 | 31.6 | 4 | 20 | 18 | 10 | 1.25 | 7kg | JBS50□A | | |
| PFSUPHF | 5-59 | 40.1 | 31.6 | 4 | 50 | 36 | 25 | 1.18 | 10kg | | | |

For orders larger than indicated quantity, please check with WOS.

Connecting Parts

Material: SPCC
Surface Treatment: Trivalent Chromate

| Part Number | Mass (g) | Unit Price 1-49 pc(s) | Volume Discount Rate 50-100 |
|----------------|----------|-----------------------|-----------------------------|
| JBS501 JBS501A | 180 | | |
| JBS504 JBS504A | 146 | | |
| JBS505 JBS505A | 168 | | |
| JBS506 JBS506A | 192 | | |
| JBS507 JBS507A | 184 | | |
| JBS508 JBS508A | 164 | | |

Ordering Example: Part Number - Color - L
JBS501 - F - 1250

Front Support Middle Support Bottom Support Bottom Support 2-Way Drop* 2-Way Front Support*

Material: SPCC
Surface Treatment: Trivalent Chromate

*The 2-Way Type can be mounted onto a pipe in between linear wheel assemblies as shown right.

Ordering Example: Part Number - Color - L
JBS501 - F - 1250

Wheel Conveyors

L Standard
FFSSPH (Economy Type) FFSPPH (Narrow Pitch)

Wheel Qty. Configurable
FFSSPHF (Economy Type) FFSPPHF (Narrow Pitch)

Material: SPCC
Surface Treatment: Trivalent Chromate

| Part Number | Nominal Length | A | H | E | P | D | ℓ1 | Wheel Qty. | Mass (kg) | Allowable Load (per Wheel) | Unit Price 1-49 pc(s) | Volume Discount Rate 50-100 |
|-----------------------|----------------|----|----|---|----|----|----|------------|-----------|----------------------------|-----------------------|-----------------------------|
| FFSSPH (Economy Type) | 1000 | 40 | 32 | 5 | 50 | 35 | 25 | 20 | 1.84 | 10kg | | |
| | 1500 | | | | | | | 30 | 2.76 | | | |
| | 3000 | | | | | | | 60 | 5.52 | | | |
| FFSPPH (Narrow Pitch) | 1000 | 40 | 32 | 5 | 15 | 13 | 10 | 67 | 6.39 | 7kg | | |
| | 1500 | | | | | | | 100 | 9.42 | | | |
| | 3000 | | | | | | | 200 | 18.6 | | | |

Ordering Example: Part Number - L - N
FFSSPH - 3000 - 10

L Standard

| Part Number | Nominal Length | A | H | E | P | D | ℓ1 | Wheel Qty. | Mass (kg) | Allowable Load (per Wheel) | Unit Price 1-49 pc(s) | Volume Discount Rate 50-100 |
|-----------------------|----------------|----|----|---|----|----|----|------------|-----------|----------------------------|-----------------------|-----------------------------|
| FFSSPH (Economy Type) | 1000 | 40 | 32 | 5 | 50 | 35 | 25 | 20 | 1.84 | 10kg | | |
| | 1500 | | | | | | | 30 | 2.76 | | | |
| | 3000 | | | | | | | 60 | 5.52 | | | |
| FFSPPH (Narrow Pitch) | 1000 | 40 | 32 | 5 | 15 | 13 | 10 | 67 | 6.39 | 7kg | | |
| | 1500 | | | | | | | 100 | 9.42 | | | |
| | 3000 | | | | | | | 200 | 18.6 | | | |

Wheel Qty. Configurable

| Part Number | Number of Wheels N | Mass (kg/m) | Allowable Load (per Wheel) | Connecting Parts | Unit Price 1-100 pc(s) | Volume Discount Rate Wheel 1 pc. Cutting Charge |
|-------------|--------------------|-------------|----------------------------|------------------|------------------------|---|
| FFSSPHF | 5-110 | 1.84 | 10kg | JBS50□A | | |
| FFSPPHF | 5-110 | 6.39 | 7kg | JBS50□A | | |

Ordering Example: Part Number - L - N
FFSSPH - 3000 - 10

Skid Conveyor Rails

Material: SPCC
Surface Treatment: Trivalent Chromate

L Configurable

| Part Number | Color | L (mm) | Mass (kg/m) | Unit Price / m 1-100 pc(s) |
|-------------|------------|----------|-------------|----------------------------|
| PFSL | 28 (Ivory) | 150-3000 | 0.53 | |

Ordering Example: Part Number - Color - L
PFSL28 - F - 1250

Connecting Parts for Skid Conveyor Rails

2-Way Front Support JBS511

2-Way Type Head JBS512

2-Way Drop JBS513

Material: SPCC
Surface Treatment: Trivalent Chromate

| Part Number | Mass (g) | Unit Price 1-49 pc(s) | Volume Discount Rate 50-100 |
|-------------|----------|-----------------------|-----------------------------|
| JBS511 | 120 | | |
| JBS512 | 168 | | |
| JBS513 | 158 | | |

Ordering Example: Part Number - Color - L
JBS511 - F - 1250

Skid Conveyor Rails

Chutes can be configured more economically with skid conveyor rails than wheel conveyor units. Skid conveyor rails are rails with grooves on surface. Plastic containers slide on skid conveyor rails easily.

Lifting Table Units

PFJB802 (Main Body - Standard Type)

PFJB802H (Dedicated Handle)

PFJB803 (Main Body - Panel Detachable Type)

PFJB803H (Dedicated Handle)

PFJB305 (Dedicated Saddle)

Material: SPCC
Surface Treatment: Trivalent Chromate

| Part Number | Static Load (kg) | Dynamic Load (kg) | Mass | Unit Price 1-19 pc(s) | Volume Discount Rate 20-100 |
|---|------------------|-------------------|--------|-----------------------|-----------------------------|
| PFJB802 (Main Body - Standard) | 100 | 80 | 12.5kg | | |
| PFJB803 (Main Body - Panel Detachable Type) | 60 | 50 | 10.3kg | | |
| PFJB802H (Handle) | - | - | 444g | | |
| PFJB305 (Saddle) | - | - | 53g | | |

Ordering Example: Part Number - Color - L
PFJB802 - F - 1250

Lifting Table Units

Enlarged View of Circled Part PFJB305

Usable when adjusting rack height of working platform.

Fixed Type PHCHK

Swivel Type PHCH PHCHS (with Stopper)

***PHCHK100 PHCH100 PHCHS100**

Mounting hole dimensions F and G vary according to slotted holes.

The following parts are included with Fixed and Swivel Types.
M8x40 Hex Bolt x2
Spring Washer x2
M8 Nut x2

| Type | Main Body | Wheel | Bearing |
|-------|--|--------------------|------------------|
| | M Material S Surface Treatment | M Material | |
| PHCHK | SPHC | Trivalent Chromate | Synthetic Rubber |
| PHCH | | | Provided |
| PHCHS | | | |

| Rotation | Part Number Type | D | P | M | B | H | A | C | F (F ₁) | d | E | G (G ₁) | Color | Allowable Load N (kgf) | | Mass kg (Stopper) | | Unit Price | |
|----------|---------------------------|-----|----|---|-----|-----|-----|-----|---------------------|------|------|---------------------|-------|------------------------|----------|-------------------|--------------|------------|---|
| | | | | | | | | | | | | | | Not Provided | Provided | No Stopper | With Stopper | | |
| Fixed | PHCHK | 100 | 75 | 8 | 32 | 130 | 110 | 70 | 90(80) | 10.5 | - | 50(45) | Black | 1177 | {120} | 0.83 | - | - | - |
| | | 130 | 38 | | 177 | 138 | 90 | 100 | 11 | - | 1765 | {180} | | 1.6 | - | - | | | |
| | | 150 | 42 | | 198 | 138 | 90 | 100 | 11 | - | 1961 | {200} | | 1.9 | - | - | | | |
| Swivel | PHCH PHCHS (with Stopper) | 100 | 75 | 8 | 32 | 130 | 90 | 90 | 71(68) | 10.5 | 30 | 71(68) | Black | 1177 | {120} | 1.06 | 1.16 | - | - |
| | | 130 | 38 | | 177 | 120 | 105 | 90 | 11 | 40 | 1765 | {180} | | 2.0 | 2.16 | - | - | | |
| | | 150 | 42 | | 198 | 120 | 105 | 90 | 11 | 45 | 1961 | {200} | | 2.34 | 2.54 | - | - | | |

RoHS

No Stopper

With Stopper

Frame Insert Type PHCHF PHCHF5 (with Stopper)

* Tighten with a wrench for pipe inserts (PFSP).

| Type | Main Body | Wheel | Bearing |
|--------|--|--------------------|------------|
| | M Material S Surface Treatment | M Material | |
| PHCHF | SPHC | Trivalent Chromate | See below. |
| PHCHF5 | | | Provided |

| Part Number Type | Wheel Material Component / Color | D | d ₁ | B | H | J | E | Wrench Width mm | Mass kg | Unit Price | | | | | |
|-----------------------|--------------------------------------|-----|----------------|-----|----|----|----|-----------------|---------|----------------------|-----------|--------------|-----------------------|--------------|----------------|
| | | | | | | | | | | R (Synthetic Rubber) | N (Nylon) | U (Urethane) | T (Conductive Rubber) | M (MC Nylon) | C (Iron: FC20) |
| PHCHF | 50 R (Synthetic Rubber, Black)*1 | 50 | 24 | 20 | 70 | 36 | 22 | 14 | 0.18 | | | | | | |
| | 75 N (Nylon, White)2 | 75 | 24 | 100 | 38 | 28 | 28 | 21 | 0.49 | | | | | | |
| | 100 M (MC Nylon, Navy-blue)*2,3 | 100 | 24 | 132 | 60 | 31 | 21 | 0.66 | | | | | | | |
| PHCHF5 (with Stopper) | 50 U (Urethane, Brown)4 | 50 | 24 | 20 | 70 | 36 | 22 | 14 | 0.18 | | | | | | |
| | 75 T (Conductive Rubber, Black)5 | 75 | 24 | 100 | 38 | 28 | 28 | 21 | 0.49 | | | | | | |
| | 100 C (Iron: FC20 Bright Chromate)*6 | 100 | 24 | 132 | 60 | 31 | 21 | 0.66 | | | | | | | |

*1: The color of synthetic rubber D75 is gray. *2: Only 50 and 75 are available for D.

| D | Allowable Load N (kgf) | | | | | |
|-----|------------------------|-----------|--------------|-----------------------|--------------|----------------|
| | R (Synthetic Rubber) | N (Nylon) | U (Urethane) | T (Conductive Rubber) | M (MC Nylon) | C (Iron: FC20) |
| 50 | 343{35} | 392{40} | 392{40} | 343{35} | 392{40} | 392{40} |
| 75 | 588{60} | 784{80} | 686{70} | 588{60} | 784{80} | 784{80} |
| 100 | 588{60} | 588{60} | 588{60} | 490{50} | - | - |

Plastic Joint Insert Type PHCHPJ

***JBS009 Use a wrench JBS009 on P904.**

| Type | Main Body | Wheel | Bearing |
|--------|--|--------------------|------------------|
| | M Material S Surface Treatment | M Material | |
| PHCHPJ | SPHC | Trivalent Chromate | Synthetic Rubber |
| | | | Provided |

| To be Inserted | Part Number Type | D | d ₁ | B | H | J | E | Wrench Width mm | Color | Allowable Load N (kgf) | Mass kg | Unit Price |
|----------------|------------------|----|----------------|----|----|----|----|-----------------|-------|------------------------|---------|------------|
| Plastic* Joint | PHCHPJ | 50 | 28 | 20 | 67 | 28 | 22 | 17 | Black | 343 {35} | 0.19 | |

Wrenches for Frame Insert PFSP14 PFSP21

Material SPCC

| Part Number Type | Applicable Caster No. | Mass (g) | Unit Price |
|------------------|-----------------------|----------|------------|
| PFSP | 14 | 50 | 18 |
| | 21 | 75, 100 | 58 |

Plates with Caster for Plastic Joints JBS001

Plate with Caster A for Metal Joints JBS005

JBS002 JBS006

| Part Number | Mass (g) | Unit Price |
|-------------|----------|------------|
| JBS001 | 90 | |
| JBS002 | 80 | |
| JBS005 | 90 | |
| JBS006 | 80 | |

Caster Base A JBS003

Caster Wrench 17/19 JBS009

Caster Base BR JBS004R

| Part Number | Mass (g) | Unit Price |
|-------------|----------|------------|
| JBS003 | 380 | |
| JBS004R | 390 | |
| JBS004L | 890 | |
| JBS009 | 110 | |

| Part Number | Mass (g) | Unit Price |
|-------------|----------|------------|
| JBS003 | 380 | |
| JBS004R | 390 | |
| JBS004L | 890 | |
| JBS009 | 110 | |



How to Mount Casters for Pipe Frames

App. Example of Swivel Type Caster (PHCH, PHCHS)

App. Example of Fixed Caster (PHCHK)

When using Metal Joint

When using Plastic Joint

Calculation of Caster Height

How to Calculate

H = 33.5mm + H

How to Calculate

H = 36.5mm + H

| Components | Quantity | Unit Price |
|--------------------------------------|----------|------------|
| Swivel Type Caster | 1 pc. | |
| Plate with Caster A (JBS001) | 2 pcs. | |
| Plate with Caster B (JBS002) | 2 pcs. | |
| Mounting Bolt, Spring Washer and Nut | 2 Sets | |
| Fixed Type Caster | 1 pc. | |
| Plate with Caster A (JBS005) | 2 pcs. | |
| Plate with Caster B (JBS006) | 2 pcs. | |
| Mounting Bolt, Spring Washer and Nut | 2 Sets | |

Note that, for some of the types shown here, order might be unable to be received by the MISUMI Indonesia, and/or India offices.

Stainless Steel Pipe Frames / Joints / Accessory Parts

Stainless Steel Pipe Frames

PFSUS (L Configurable)

Seam (Butt Weld*)

*The height of welding bead is shorter than 0.1mm.

Material SUS430

L Configurable

| Part Number | L 1mm Increment | Mass kg/m | Unit Price Less Than 300mm 1 ~ 50 pc(s). | Unit Price/m 300mm or More 1 ~ 50 pc(s). |
|-------------|-----------------|-----------|--|--|
| PFSUS | 28 | 60~2400 | 0.62 | |

For orders larger than indicated quantity, please check with WOS.

Ordering Example: Part Number - L
PFSUS28 - 1250

When L is less than 300, the unit price is as indicated in the table, regardless of its length.

When L is 300 or more, total prices are calculated as follows:
Unit Price/m x Specified Full Length = Sales Price

Accessory Parts for Stainless Steel Pipe Frame

Due to the different sizes of Stainless Steel Pipe Frames from the Resin Coated and Extruded Aluminum Pipe Frames, the pipe insertion type accessories cannot be used. For Metal Joints, Casters, Adjusting Bolt Set, Insert Nuts and Inner Caps, use the following parts.

Caster

FFS301 **FFS301S** (with Stopper)

*Tighten with a wrench for pipe inserts (PFSP21). (P903)

When mounting on Stainless Steel Pipe Frames, use in combination with Insert Nuts (SPFINS12).

| Type | Main Body | Wheel | Body Bearing |
|---------|----------------------------|------------------|--------------|
| | Material Surface Treatment | Material | |
| FFS301 | SPHC Trivalent Chromate | Synthetic Rubber | Provided |
| FFS301S | SPHC Trivalent Chromate | Synthetic Rubber | Provided |

| Part Number Type | Wheel Material Component | | M | B | F | H | J | E | Wrench Flat Width mm | Mass kg | Allowable Load N | Unit Price |
|------------------------|--------------------------|-------|----|----|------|----|----|----|----------------------|---------|------------------|------------|
| | D | Color | | | | | | | | | | |
| FFS301 | 50 | Black | 12 | 20 | 17.5 | 68 | 35 | 22 | 19 | 165 | 300 | |
| | 75 | Gray | | | | | | | | | | |
| FFS301S (with Stopper) | 50 | Black | 12 | 20 | 30.9 | 68 | 35 | 22 | 19 | 190 | 300 | |
| | 75 | Gray | | | | | | | | | | |

Adjusting Bolt Set

JBS410S

*Insert Nut SPFINS12 and a Leveling Mount NFJN12-100 are included as a set.

| Part Number | Adjusting Bolts | Insert Nut |
|-------------|-------------------------------------|-----------------|
| | Material Surface Treatment | Material |
| JBS410S | SS400 Equivalent Trivalent Chromate | Stainless Steel |

| Part Number | Mass (g) | Unit Price |
|-------------|----------|------------|
| JBS410S | 269 | |

Insert Nut

SPFINS12

Tapered part from tip to head (1.2°) allows insertion into the I.D. of pipe frames.

Material Stainless Steel

| Part Number Type | M | Mass (g) | Unit Price |
|------------------|----|----------|------------|
| SPFINS | 12 | 85 | |

Ordering Example: Part Number - Wheel Material
FFS301-75 - R
FFS301S-50 - R
JBS410S
SPFINS12

RoHS

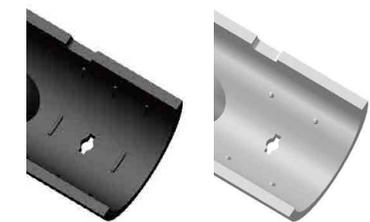
| Part Number | Material | Plate Thickness | Surface Treatment |
|-------------|----------|-----------------|--------------------|
| PBLSS | SAPH | 2.6mm | Trivalent Chromate |

PBLSS1 **PBLSS2** **PBLSS3** **PBLSS4** **PBLSS5** **PBLSS6** **PBLSS7**

| Part Number Type | No. | Mass (g) | Included Screw | | Unit Price |
|------------------|-----|----------|----------------|----------|------------|
| | | | Size | Quantity | |
| PBLSS | 1 | 160 | M6-25 | 1 | |
| | 2 | 250 | | 2 | |
| | 3 | 325 | | 3 | |
| | 4 | 250 | | 2 | |
| | 5 | 400 | | 4 | |
| | 6 | 150 | | 1 | |
| | 7 | 260 | | 2 | |

Ordering Example: Part Number PBLSS1

Features of Joints for Stainless Steel Pipe Frame
The spurs that contact the pipe frames have been revised with improved geometry, and the retention force has been improved for use with stainless steel pipe frames. (For details: see P.889)



Please note that the spurs may be crushed by repeated assembly/disassembly and may reduce the gripping force.

Inner Cap

JBS402S

Material Polyethylene

| Part Number | Mass (g) | Unit Price (4 pcs./pkg.) |
|-------------|----------|--------------------------|
| JBS402S | 3 | |

Contains 4 pcs./pkg. Check the order quantity before ordering.

Ordering Example: Part Number JBS402S

Factory Frame / Pipe Frame Standard Units - Overview

Pipe Frame / Factory Frame Standard Units Workbenches

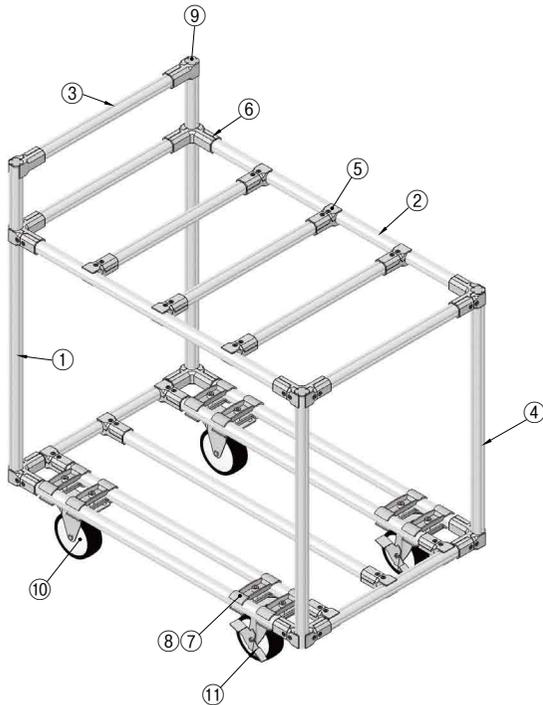
Standard Units Overview (P.891~P.906)

- With these pipe frame units, the part number and the number of the components are determined just by specifying the component types and each dimension.
- All the materials needed to construct a unit can be specified just a single Type Number.

Components List

| [PFUB] | | | | | [FFUB] | | | | |
|--------|---------------------|-------------------------|------|-------------|--------|---------------|-------------------------|------|-------------|
| Number | Part Number | Name | Qty. | Listed Page | Number | Part Number | Name | Qty. | Listed Page |
| ① | PFS28-Color-(T-133) | Pipe Frame | 2 | P891 | ① | FFA28-(T-133) | Factory Frame | 2 | P880 |
| ② | PFS28-Color-(D-103) | Pipe Frame | 7 | | ② | FFA28-(D-110) | Factory Frame | 7 | |
| ③ | PFS28-Color-(W-103) | Pipe Frame | 8 | | ③ | FFA28-(W-110) | Factory Frame | 8 | |
| ④ | PFS28-Color-(H-133) | Pipe Frame | 2 | | ④ | FFA28-(H-133) | Factory Frame | 2 | |
| ⑤ | PBSLN1 | Metal Joint | 14 | P894 | ⑤ | FFB1 | Metal Joint | 14 | P881 |
| ⑥ | PBSLN2 | Metal Joint | 8 | | ⑥ | FFB2 | Metal Joint | 8 | |
| ⑦ | JBS005 | Caster Attachment Parts | 8 | P904 | ⑦ | JBS005 | Caster Attachment Parts | 8 | P904 |
| ⑧ | JBS006 | Caster Attachment Parts | 8 | | ⑧ | JBS006 | Caster Attachment Parts | 8 | |
| ⑨ | PJ503-W (White) | Inner Cap | 4 | P897 | ⑨ | FFS103 | Inner Cap | 4 | P883 |
| ⑩ | PHCHK100 | Caster | 2 | P903 | ⑩ | PHCHK100 | Caster | 2 | P903 |
| ⑪ | PHCHS100 | Caster with Stopper | 2 | | ⑪ | PHCHS100 | Caster with Stopper | 2 | |

Assembly Drawing



For Shelf Panels

This unit doesn't include top panels or shelf panels. Please order separately.

For Top Shelf Panels

Select the product among the lineup from P.935~P.940.

| [M]Material | Part Number | Listed Page |
|---|---|-------------|
| Double-Sided Melamine Resin Glued Laminated Plywood Laminated Plywood | MPBHA10, MPBHA15, MPBHA20 PBHA12, PBHA16, PBHA20 | P935 |
| Single-Sided Rubber Glued Laminated Plywood (Standard) | NTBHA10, NTBHA14, NTBHA20 | P937 |
| Single-Sided Rubber Glued Laminated Plywood (Antistatic) | ATBHA10, ATBHA14, ATBHA20 | |
| Double-Sided Melamine Resin Glued Laminated Plywood with Soft Edge | MPBHAR10, MPBHAR15, MPBHAR20 | P939 |
| Single-Sided Rubber Glued Laminated Plywood with Soft Edge (Standard) | NTBHAR10, NTBHAR14, NTBHAR20 | |
| Single-Sided Rubber Glued Laminated Plywood with Soft Edge (Antistatic) | ATBHAR10, ATBHAR14, ATBHAR20 | |
| Aluminum Glued Laminated Plywood with Soft Edge | ALBHAR10, ALBHAR15, ALBHAR20 | |

Ordering Example

Part Number - A - B - Color - R - E - S
select from the above table. - W Dimension - D Dimension - Color - 10 - 32 - 32

For Shelf Panel mounting, use PJ706B (P.898) or FEB6 (P.881)

For Bottom Shelf Panels

Select the product among the lineup from P.935~P.940.

| [M]Material | Part Number | Listed Page |
|---|---|-------------|
| Double-Sided Melamine Resin Glued Laminated Plywood Laminated Plywood | MPBH10, MPBH15, MPBH20 PBH12, PBH16, PBH20 | P935 |
| Single-Sided Rubber Glued Laminated Plywood (Standard) | NTBH10, NTBH14, NTBH20 | P937 |
| Single-Sided Rubber Glued Laminated Plywood (Antistatic) | ATBH10, ATBH14, ATBH20 | |
| Double-Sided Melamine Resin Glued Laminated Plywood with Soft Edge | MPBHR10, MPBHR15, MPBHR20 | P939 |
| Single-Sided Rubber Glued Laminated Plywood with Soft Edge (Standard) | NTBHR10, NTBHR14, NTBHR20 | |
| Single-Sided Rubber Glued Laminated Plywood with Soft Edge (Antistatic) | ATBHR10, ATBHR14, ATBHR20 | |
| Aluminum Glued Laminated Plywood with Soft Edge | ALBHR10, ALBHR15, ALBHR20 | |

Ordering Example

Part Number - A - B - Color - E - S - X - Y
select from the above table. - W Dimension - D Dimension - Color - 32 - 32 - 32 - 32

For Shelf Panel mounting, use PJ706B (P.898) or FEB6 (P.881)

PFUA
(Pipe Frame)
FFUA
(Factory Frame)

W, D and H dimensions show the outer dimensions (from end to end of metal joint). For details, see Example of Metal Joint Calculation on P.912 and How to Calculate Pipe Dimension on P.879.

Cross Section View A-A

400
170
1800
D
W
A

Customer assembly required.
 With these pipe frame units, the number of the components is determined just by specifying the component types and each dimension. The unit can be completed just by assembling the components.
 The pictured unit has SR2 Alteration. The top plate and shelf panels are to be ordered separately.
 The photo shows PFUA.

RoHS

| Part Number | Type | Frame / Color | W 1mm Increment | D 1mm Increment | H 1mm Increment |
|-------------------------|------|---|--------------------|--------------------|--------------------|
| PFUA (Pipe Frame) | | W (White) V (Ivory) S (Dark Gray) | 400~1200 | 400~1000 | 400~1200 |
| FFUA (Factory Frame) | | | | | |

For frame types and colors, refer to P.880, 881.

Ordering Example

| Part Number | W | D | H |
|-------------|-------|------|------|
| PFUAV | W1000 | D600 | H800 |
| FFUA | W1150 | D900 | H850 |

| Part Number | Type | Frame / Color | W | Unit Price 1 ~ 20 pc(s). | | |
|-------------------------|------|---|---|--------------------------|---------|----------|
| | | | | D | | |
| | | | | 400~600 | 601~800 | 801~1000 |
| PFUA (Pipe Frame) | | W (White) V (Ivory) S (Dark Gray) | 400~600 601~800 801~1000 1001~1200 | | | |
| FFUA (Factory Frame) | | | 400~600 601~800 801~1000 1001~1200 | | | |

Alterations

| Part Number | W | D | H | (TC, SPN, FR, SR, FFR, FSR) |
|-------------|------|------|------|-----------------------------|
| PFUAS | W900 | D550 | H900 | TC2000-FR1 |
| FFUA | W900 | D550 | H900 | TC2150-FSR2 |

| Alteration | Code | Spec. | Unit Price | Alteration | Code | Spec. | Unit Price | Alteration | Code | Spec. | Unit Price |
|-----------------------------|------|---|------------|--|------|---|------------|--|------|--|------------|
| Full Height | TC | Changes the overall height. TC=1mm Increment 1600≤TC≤2200 Ordering Code TC2050 | TC | Factory Frame Joints for Flat Shelves Available for PFUA only | FR | Adds pipe frame joints for flat shelves. Components List ① PFS28-Color-(W-104) 2 pcs. ② PBSLN1 4 pcs. Order Shelf Panels separately. Ordering Code 1 Tier→FR1 2 Tiers→FR2 | W | Factory Frame Joints for Flat Shelves Available for FFUA only | FFR | Adds factory frame joints for flat shelves. Components List ① FFA28-(W-110) 2 pcs. ② FFB1 4 pcs. Order Shelf Panels separately. Ordering Code 1 Tier→FFR1 2 Tiers→FFR2 | W |
| | | | Unit Price | | | | Unit Price | | | | |
| Wrench for Mounting Casters | SPN | Adds a wrench for mounting casters JBS009 (P.904). | SPN | Factory Frame Joints for Inclined Shelves Available for PFUA only | SR | Adds pipe frame joints for inclined shelves. Components List ① PFS28-Color-(W-104) 3 pcs. ② PBSLN1 6 pcs. Order Shelf Panels separately. Ordering Code 1 Tier→SR1 2 Tiers→SR2 | W | Factory Frame Joints for Inclined Shelves Available for FFUA only | FSR | Adds factory frame joints for inclined shelves. Components List ① FFA28-(W-110) 3 pcs. ② FFB1 6 pcs. Order Shelf Panels separately. Ordering Code 1 Tier→FSR1 2 Tiers→FSR2 | W |
| | | | Unit Price | | | | Unit Price | | | | |

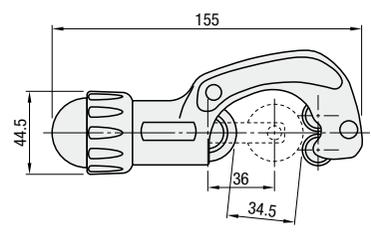
Cutters / Replacement Cutter Blades / Deburring Tools / Replacement Blades

How to Calculate Pipe Dimension Metal Joints / Plastic Joints

Cutters



PFCAT PFCATS



Reinforced aluminum pipe frames and factory frames cannot be cut with this cutter.

| Part Number | Applicable Frame | Mass (g) | Unit Price 1~9 pcs. | Volume Discount Rate 10~20 |
|-------------|--|----------|---------------------|----------------------------|
| PFCAT | Extruded Aluminum Pipe Frame / Plastic Coated Pipe Frame | 350 | | |
| PFCATS | Stainless Steel Pipe Frame | 356 | | |

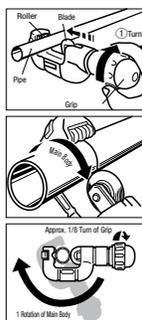
How to Use

1. Rotate the grip and place the pipe between the cutter blade and the rollers. Be sure that the pipe protrudes more than the width of the rollers.
2. Turn the grip further 1/4 rotation in the arrow direction direction in the diagram after the blade contacts the pipe, then rotate the pipe once to

cut along the circumference.

For orders larger than indicated quantity, please check with WOS.

3. Then turn the grip slowly (approx. 1/8 turn per each body rotation) to cut gradually deeper and turn the main body to completely cut the pipe. *If the cutting speed is too fast, it may cause pipe deformation, or shorten the blade's service life.



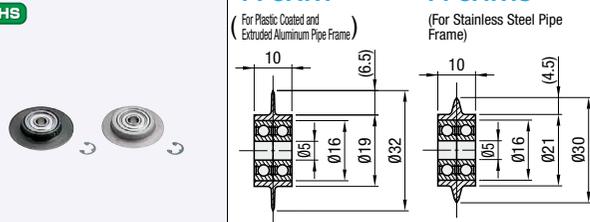
Caution

- If the cutter is used to cut unintended objects or used for purposes than the original, the cutter may be damaged or accidents may result.
- Be sure to check the cutter before use. If something is not right, do not use until it is repaired or replaced.
- Do not touch the blade during operation. Accidents or injury may result.
- Be careful of falling while carrying or operating.
- If the cutter becomes wet, be sure to wipe it dry. If water gets into the bearing, rust will prevent the bearing from functioning.

Replacement Cutter Blades

PFCATH (For Plastic Coated and Extruded Aluminum Pipe Frame)

PFCATHS (For Stainless Steel Pipe Frame)



Accessory: Retaining Ring E Type 1 pc.

| Part Number | Mass (g) | Unit Price 1~9 pc(s). | Volume Discount Rate 10~20 |
|--|----------|-----------------------|----------------------------|
| PFCATH (For Plastic Coated and Extruded Aluminum Pipe Frame) | 19 | | |
| PFCATHS (For Stainless Steel Pipe Frame) | 25 | | |

For orders larger than indicated quantity, please check with WOS.
How to Replace Replacement Blades: Remove the retaining ring E Type of the cutter body, then pull installation pin for replacement.

Ordering Example

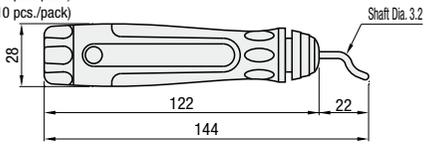
Part Number
PFCAT PFCATH

Deburring Tools / Replacement Blades

RoHS



M-NG1000-F (Deburring Tool: PFREMH-BS1010x1 pc.)
M-NG1000-S (Deburring Tool: PFREMH-BS1018x1 pc.)
PFREMH-BS1010 (Replacement Blades, 10 pcs./pack)
PFREMH-BS2010 (Replacement Blades, 10 pcs./pack)
PFREMH-BS1018 (Replacement Blades, 10 pcs./pack)



Material: Handle: Plastic + Rubber

Deburring Tool

| Part Number | Mass (g) | Unit Price 1~9 pc(s). | Volume Discount Rate 10~30 |
|-------------|----------|-----------------------|----------------------------|
| M-NG1000-F | 31 | | |
| M-NG1000-S | 31 | | |

For orders larger than indicated quantity, please check with WOS.

Replacement Blades

| Part Number | Unit Price 1~9 pc(s). | Volume Discount Rate 10~30 |
|---------------|---|----------------------------|
| PFREMH | | |
| BS1010 | For milling steel and aluminum. One sided blade used in clockwise rotation Black | |
| BS2010 | For cast iron, brass and plastic. Double sided blade used in both directions Silver | |
| BS1018 | For hard-cutting material such as stainless steel. One sided blade used in clockwise rotation Silver | |

* One set contains 10 pieces. For orders larger than indicated quantity, please check with WOS.

Ordering Example

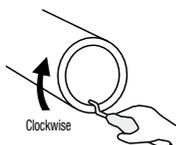
Part Number
M-NG1000-F PFREMH-BS1010

CAUTION

- Use for purposes other than deburring may cause damages or accidents.
Be sure to check the deburring tool before use. If something is not right, do not use until it is repaired or replaced.
Do not touch the blade during operation. Accidents or injury may result.
• The P/N PEREM has been changed to M-NG1000-F. The handle shape is slightly different but the functionality is the same.

How to Use

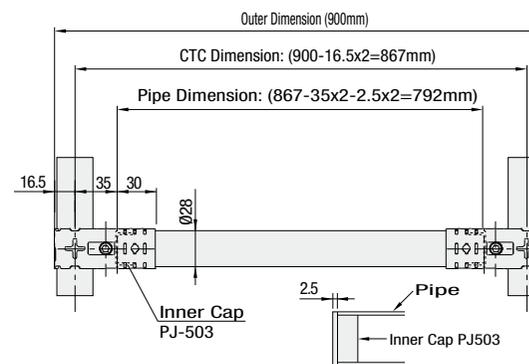
1. Hold the grip and apply the blade to the inside of the frame.
2. Turn at least one full turn while keeping the blade in the direction of the pipe.



Example of Metal Joint Calculation
When using PBLSN1

CTC Dimension = $900 - 16.5 \times 2 = 867$
 = Outer Dimension - Metal Joint Radius x2
 Pipe Dimension = $867 - 35 \times 2 - 2.5 \times 2 = 792$
 = CTC Dimension - Length From Metal Joint Center to Pipe End

* When rust preventing inner caps are used, the pipe will be shorter (2.5 x 2)
No inner cap is required for Extruded Aluminum Pipe Frame.



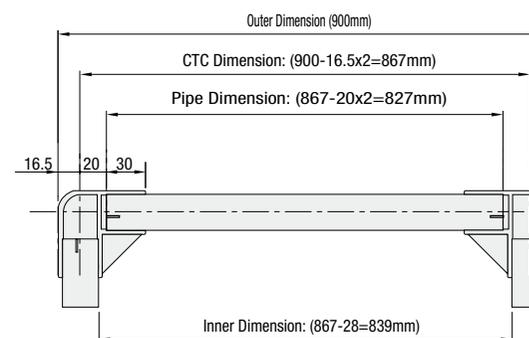
Example of Plastic Joint Calculation

Extruded Aluminum Pipe Frames and Stainless Steel Pipe Frames should not be combined with Plastic Joints.)

When using PJ002

CTC Dimension = $900 - 16.5 \times 2 = 867$
 = Outer Dimension - Plastic Joint Radius x2

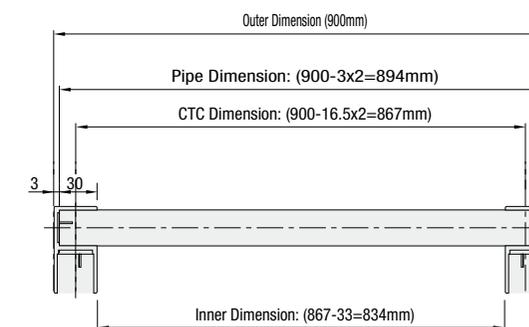
Pipe Dimension = $867 - 20 \times 2 = 827$
 = CTC Dimension - Length from Plastic Joint Center to Pipe End



When using PJ003

CTC Dimension = $900 - 16.5 \times 2 = 867$
 = Outer Dimension - Plastic Joint Radius x2

Pipe Dimension = $900 - 3 \times 2 = 894$
 = Outer Dimension - Plastic Joint ends to the Pipe ends



When using PJ401, PJ404 or PJ409

Inclined CTC Dimension = $900 \times \sqrt{2} \approx 1272$
 = Tube CTC Horizontal Dimension x $\sqrt{2}$

Inclined Pipe Dimension = $1272 - 35 \times 2 = 1202$
 = Inclined CTC Dimension - Length from Plastic Joint Center to Pipe End

Inclined CTC Dimension = Length from Plastic Joint Center to Pipe End

