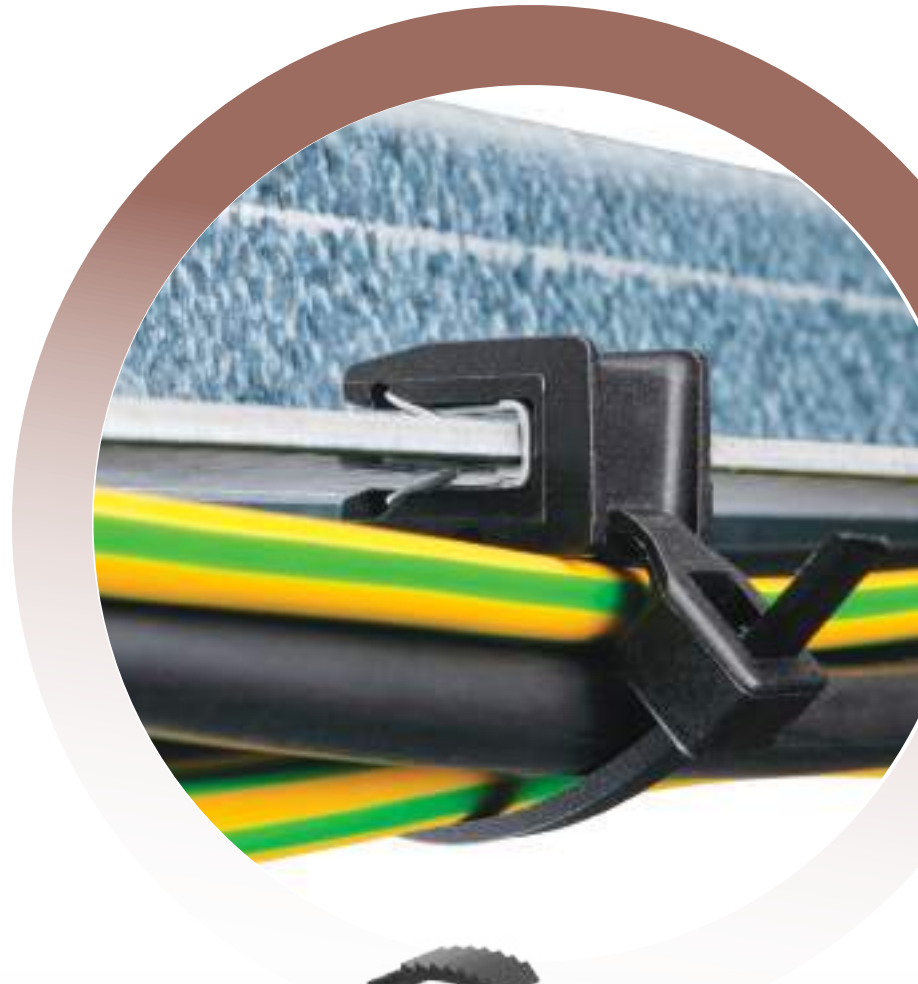


WIRE, CABLE & TUBE  
MANAGEMENT

## DESK REFERENCE



Corrugated Tube Holders

Cable Clips & Straps

Grounding Clips & Adaptors

Product Development



# CONTACT US

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1060 West 130th Street

Brunswick, OH 44212

330.220.5100, 800.221.2344

[contact.us@araymond-industrial.com](mailto:contact.us@araymond-industrial.com)



# CONTENTS

About Us ..... p.4-5  
Material Descriptions ..... p.6-7

**CORRUGATED HOSE CLIPS** ..... p.8-21

**WIRE, CABLE & TUBE HOLDERS** ..... p.22-37

**CABLE STRAPS** ..... p.38-49

**GROUNDING CLIPS & ADAPTORS** ..... p.50-55

**TAPE-ON CLIPS** ..... p.56-61

## INDEX

Alphabetical Product Index ..... p.62  
Part Number Index ..... p.63-64  
Design Notes ..... p.65-66  
Product Development Capabilities ..... p.67  
**Your Contacts** ..... **p.68**

# ABOUT US - MORE THAN FASTENING

## HISTORY

Since its inception in 1865, ARaymond has designed and manufactured assembly solutions for a variety of industrial markets starting with the glove, shoe and leather industries. With more than 150 years of experience in product innovation, state-of-the-art manufacturing practices and customer collaboration, ARaymond has become one of the world's foremost assembly solution providers targeting one key objective: Simplification of assembly processes to reduce costs.

## METAL TRANSFORMATION

At ARaymond we manage all major metal transformation processes—cutting, bending and stamping. We work with spring steel, stainless steel, brass and copper in thicknesses of 0.2 to 6.35 mm, and can provide single or multi-layer surface treatments (Zn, Zn-Ni, Zn-Fe, etc.). We have in-house capabilities to handle the entire process from design to production, surface treatment and quality control and we have the capacity to produce up to 140 million pieces per year for a specific reference.



### Corrugated Hose Clip

High strength, light weight spring steel clip. Suitable for high temperature and harsh environments.



## PLASTIC INJECTION

The ARaymond production facilities are equipped with presses as large as 1,000 tons and more than 1,000 molding tools specifically for EDS. We also have overmolding and bi-injection (multi-material) molding processes compatible with over 300 thermoplastic materials available (polyamide, polyethylene, polyvinyl acetates, polypropylenes and more). **For applications calling for tracking, RFIC (Radio Frequency IDentification) tags can be incorporated directly into the product.**

### Bi-injected cable strap

Excellent sealing performance to protect against water ingress for round and oval holes.

For more information, please contact our sales team.



A specific need? See back cover for contact information

## ENGINEERING & SERVICES

Utilization of ARaymond's advanced engineering team's technical expertise in combination with the customer's market sector skills enables the development of customized solutions. Engineers analyze the production lines, identify potential areas of improvement, and propose solutions to simplify processes and cut costs. ARaymond has equipped 220 engineers, located at 12 R&D centers, with the latest design software, in-house SLA modeling and fast prototyping capabilities.



### Cable Strap Adaptor

Multi-purpose base easily installs on a panel edge.  
Barbed design securely attaches to panel.



## ASSEMBLY

ARaymond's plants worldwide handle all modes of assembly: manual, semi-automated and cycle-time optimized fully automated assembly. Our many years of experience have made us experts in designing and building semi and fully-automatic assembly machines and devices.



### Electrical Connector Mount

Edge mounted for wire routing stability.  
Plastic connector rotates 360° for wire routing optimization. Extensive range of solutions available.

For more information, please contact our sales team.



# FINISH & MATERIAL DESCRIPTIONS - METAL

A few points should be clarified with your quality and production departments, as well as with your sales person:

- Type of assembly: Manual or automatic?
- Corrosion resistance: How many hours?
- Environment in which the assembly is located: Saline or polluted atmosphere?
- Colors: Will the part be visible? What colors are desirable?
- **Additional finishes available - Please contact us for more details**

## Common Finishes for Metal Parts



Finishes / Surface Treatments				Corrosion Resistance*	
Finish Code	Legacy Code	Color	Description	Red Rust	White Rust
1002	27		Plain Finish Oil Dip	None	None
6200	576		Degrease	None	None
3001	3B	Silver	Zinc Electroplate with Tri Clear Passivation	56	24
5100	4	Grey/Black	Zinc Phosphate & Oil	72	None
4072	360	Black	2 Coats Black Paint (Zinc Phosphate Base)	96	48
4073	67	Silver	2 Coats Aluminum Paint (Zinc Phosphate Base)	96	
4074	1	Olive Drab	2 Coats Olive Drab Paint (Zinc Phosphate Base)	96	
3805	598	Grey	Mechanical Zinc with Tri Clear Passivation	120	48
4078	440	Black	2 Coats Black Paint & Oil Dip (Zinc Phosphate Base)	168	72
3630	613	Grey	Mechanical Zinc with Tri Clear Passivation and Torque / Tension Sealer	240	96
3034	590	Silver	Zinc Nickel Electroplate with Tri Clear Passivation	480	240
6001	3255	Silver	2 Coats Geomet	240	
6002	3963	Silver	2 Coats Geomet & 1 Coat Plus Topcoat	480	240
6003	4252	Black	2 Coats Geomet & 1 Coat Black Topcoat	480	
6004	3965	Silver	2 Coats Geomet & 1 Coat Plus ML Topcoat	720	240
6007	3252	Black	2 Coats Geomet & 2 Coats Black Paint	720	240
4004	450	Silver	2 Coats Magni 565 (Metallic Base Coat / Silver Topcoat)	840	240
3026	415	Black	Zinc Nickel Electroplate with Black Passivation & Torque/Tension Sealer	960	240
4032	463	Black	1 Coat Magni 575 & 2 Coats Black (Zinc Phosphate Base)	1000	480

\* For information only/According to Salt Spray test - Data of June 2013

\* Depends on the geometry of the part

Note: Some finishes/coatings are not recommended on certain products due to part configurations

## Material Descriptions

Unless designated otherwise, the majority of our stamped metal fasteners are manufactured in spring or pre-hardened steel.

# MATERIAL DESCRIPTIONS - PLASTIC

ARaymond Tinnerman plastic parts are manufactured in various common polymers such as Nylon, Acetal, Polyethylene, Polypropylene, ABS and others.

- Most parts are available in natural, black and grey, but other colors can be produced as well.

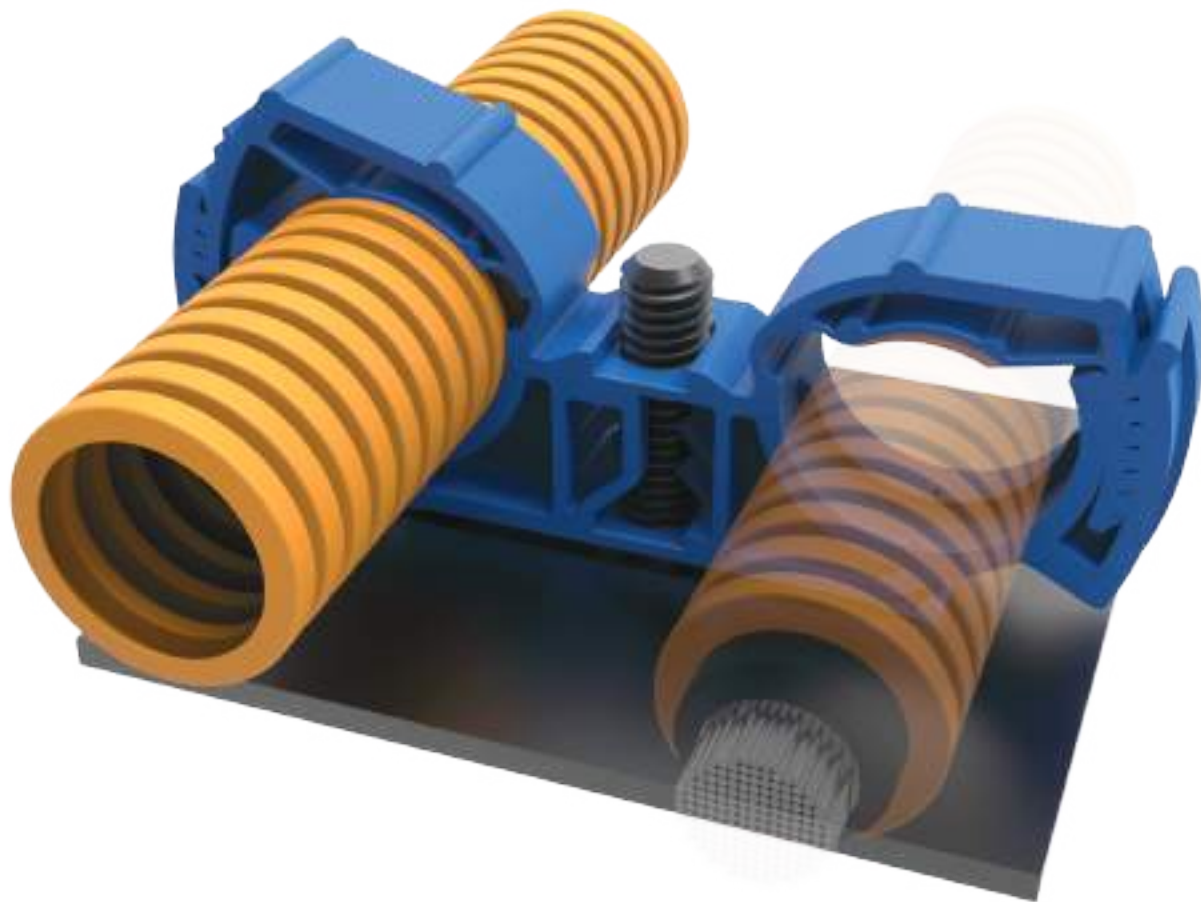
**Please contact us regarding specific material needs or specialty colors.**

## Common Materials for Plastic Parts



Surface Treatments			
Finish Code	Legacy Code	Material	Description
0117	AE	ABS	ABS
5107; 5108	AG	Acetal	POM - General Purpose Copolymer
5003; 5106; 5556	AG	Acetal	POM - High Flow Copolymer
3110	AA	Nylon	PA46 Heat Stabilized
2532	AA	Nylon	PA66 Heat Stabilized
2136; 2532	AA	Nylon	PA66 Heat Stabilized Impact Modified
2134	AA	Nylon	PA66 Impact Modified UV Protection
2529	AA	Nylon	PA66/6 Heat Stabilized Impact Modified
1106	AC	Nylon - Glass Filled	PA6 Glass Filled - 13%
2127	AC	Nylon - Glass Filled	PA66 Glass Filled - 13%
2129	AC	Nylon - Glass Filled	PA66 Glass Filled - 43%
4103; 4128; 4130	AD	Polypropylene	Polypropylene
4129	AB	Polyethylene	Low Density Polyethylene

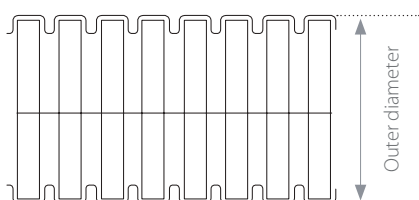
# Corrugated Hose Clips



SPECIFICALLY DESIGNED TO BE USED AROUND CORRUGATED TUBES OF WIRING ASSEMBLIES TO PREVENT FASTENERS FROM SLIDING ALONG THE WIRE BUNDLES.

Parts are suitable for most corrugated hoses, available in multiple mounting options, and are installed quickly and easily, without tools.








OUTER HOSE DIAMETER (D1)



NW (size)	4.5	7.5	8.5	10	13	17	19	22	26
Inner Hose Diameter									
Outer diameter (mm)	7.1	9.9	11.4	12.9	15.8	21	23	25.5	31



A specific need? See back cover for contact information

COLORED TAB	MILLIMETERS	INCHES (Approximation)	PAGE
	4.50mm	3/16"	p.10-11
	7.50mm	1/4"	p.12-13
	8.50mm / 10.00mm	5/16" / 3/8"	p.14-15
	13.00mm	1/2"	p.16
	17.00mm / 19.00mm	5/8"	p.17
	22.00mm	3/4"	p.18
	26.00mm	1"	p.19
Solution Configurator			p.20-21

TIPS FOR NAVIGATING THIS SECTION:

- Pages are organized by corrugated hose size, listed at the top of each page. Each size is designated a color as indicated in chart above.
- Dimensions for each page are listed in metric.
- Once you determine the page that corresponds to your desired corrugated tube size, you can select parts based on the additional product specifications as listed.
- Images depicting how each part attaches to its assembly environment are illustrated as follows:



ON Panel Edges



IN Panel Holes



ON Studs



ON/TO Cables or Tubes



WANT TO SEE MORE?

FOLLOW THESE STEPS FOR A FUN, INTERACTIVE EXPERIENCE



DOWNLOAD BLIPPAR APP



SCAN IMAGE TO THE LEFT

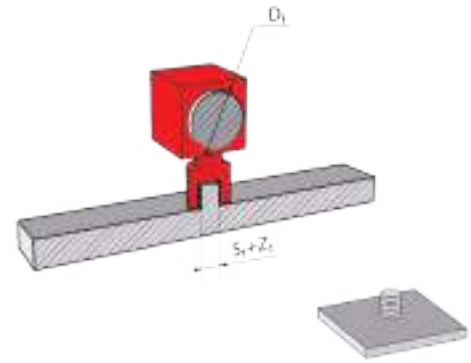
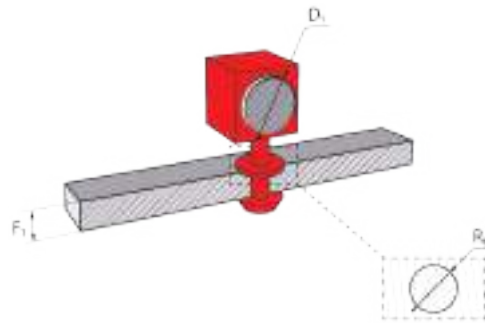


WATCH IT COME TO LIFE

4.50mm  
3/16"

## Corrugated Hose Clips

Plastic



All dimensions are in millimeters.

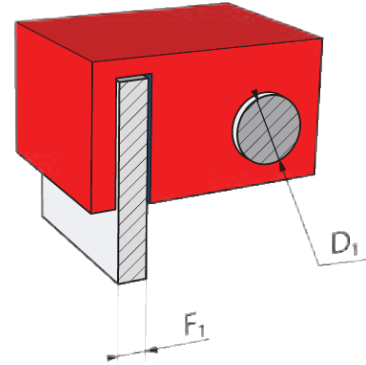
Mounting	Design	Reference	Panel Thickness (F1)	Hole Diameter (R1)	Stud Diameter (S1+Z1)
		163953	1.00-6.00	6.50-6.70	
		164292	0.80-2.00	6.90-7.10	
		164177	0.90-2.60	6.90-7.10	
		017095	1.00-6.00	6.50-6.70	
		201721		M6 x 1,00	
		017620			T5 Stud
		018633			M6 x 1,00

Material information on page 7. Please see print for specific material.









4.50mm  
3/16"

## Corrugated Hose Clips

Metal



All dimensions are in millimeters.

Mounting	Design	Reference	Panel Thickness (F1)
		017784	0.80-3.00
		017783	0.80-3.00
		017786	3.00-6.00
		017785	3.00-6.00

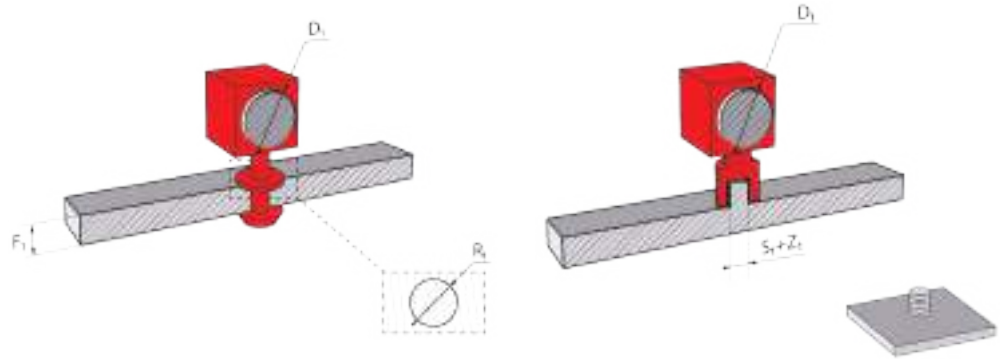
Most parts manufactured in spring steel

If you don't see what you need, please contact us. More sizes available. Contact information on back cover.

7.50mm  
1/4"

## Corrugated Hose Clips

Plastic



All dimensions are in millimeters.

Mounting	Design	Reference	Panel Thickness (F1)	Hole Diameter (R1)	Stud Diameter (S1+Z1)
		017713	1.00-6.00	6.50-6.70	
		017095	1.00-6.00	6.50-6.70	
		017693			T5 Stud

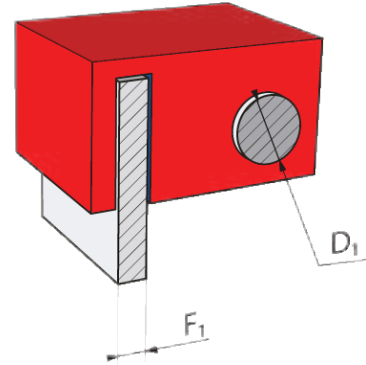
Material information on page 7. Please see print for specific material.

If you don't see what you need, please contact us. More sizes available. Contact information on back cover.

7.50mm  
1/4"

## Corrugated Hose Clips

Metal



All dimensions are in millimeters.

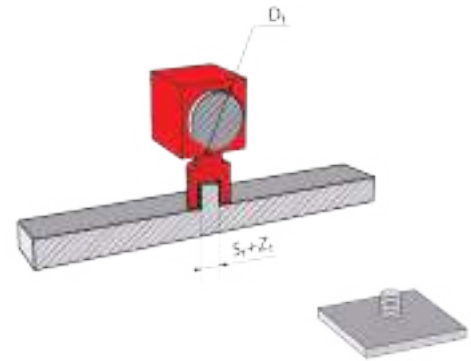
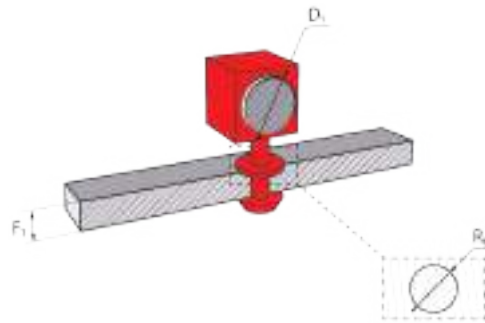
Mounting	Design	Reference	Panel Thickness (F1)
		017784	0.80-3.00
		017783	0.80-3.00
		017786	3.00-6.00
		017785	3.00-6.00

*Most parts manufactured in spring steel*

10.00mm  
3/8"

## Corrugated Hose Clips

Plastic



All dimensions are in millimeters.

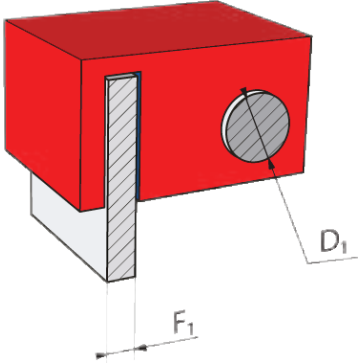
Mounting	Design	Reference	Panel Thickness (F1)	Hole Diameter (R1)	Stud Diameter (S1+Z1)
		<b>017096*</b>	1.00-6.00	6.50-6.70	
		164178	0.70-1.10	6.40-6.60	
		017714	1.00-6.00	6.50-6.70	
		017639			T5 Stud

Material information on page 7. Please see print for specific material.  
\*Indicates part also works with 8.50mm corrugated tube

8.50mm / 10.00mm  
5/16" / 3/8"

# Corrugated Hose Clips

Metal



All dimensions are in millimeters.

Mounting	Design	Reference	Panel Thickness (F1)
		017784	0.80-3.00
		017783	0.80-3.00
		017786	3.00-6.00
		017785	3.00-6.00

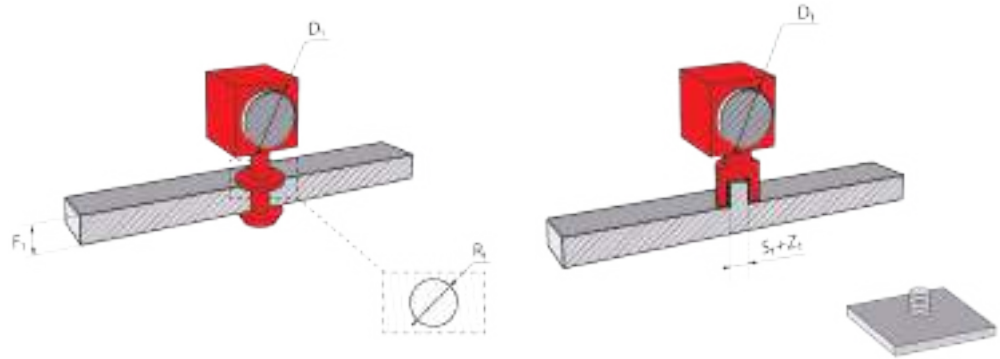
Most parts manufactured in spring steel

If you don't see what you need, please contact us. More sizes available. Contact information on back cover.

13.00mm  
1/2"

## Corrugated Hose Clips

Plastic



All dimensions are in millimeters.

Mounting	Design	Reference	Panel Thickness (F1)	Hole Diameter (R1)	Stud Diameter (S1+Z1)
		018890	2.50	6.50-6.70	
		017097	1.00-6.00	6.50-6.70	
		017600	1.00-6.00	6.50-6.70	
		017528			T5 Stud

Material information on page 7. Please see print for specific material.

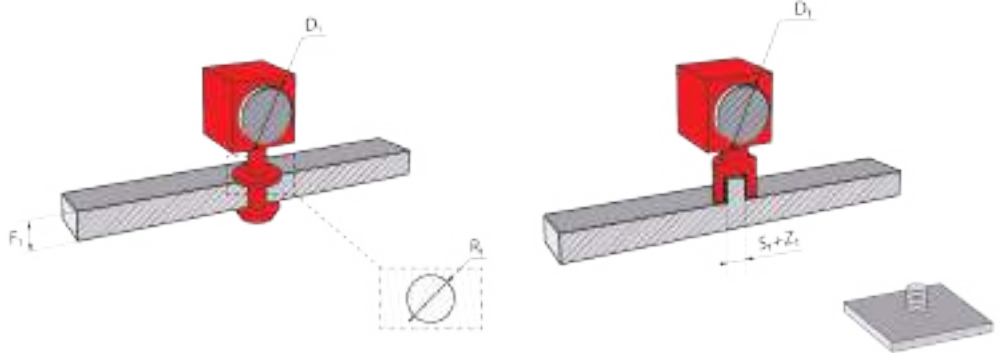
If you don't see what you need, please contact us. More sizes available. Contact information on back cover.



17.00mm  
5/8"

## Corrugated Hose Clips

Plastic



All dimensions are in millimeters.

Mounting	Design	Reference	Panel Thickness (F1)	Hole Diameter (R1)	Stud Diameter (S1+Z1)
		017098	0.80-6.00	6.50-6.70	
		017521	0.80-2.50	6.50-6.70	
		018480	2.00-3.70	6.50-6.70	
		017694			T5 Stud

19.00mm  
3/4"

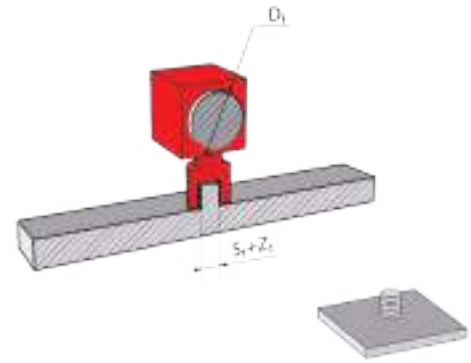
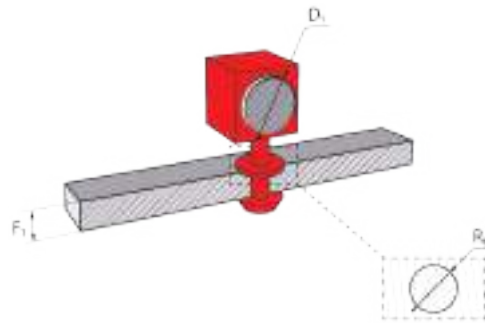
Mounting	Design	Reference	Panel Thickness (F1)	Hole Diameter (R1)	Stud Diameter (S1+Z1)
		019670	0.80-2.50	6.50-6.70	

Material information on page 7. Please see print for specific material.

22.00mm  
3/4"

## Corrugated Hose Clips

Plastic



All dimensions are in millimeters.

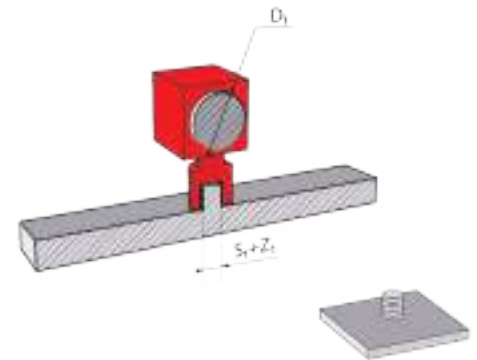
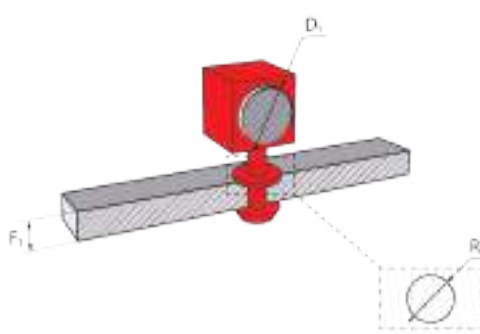
Mounting	Design	Reference	Panel Thickness (F1)	Hole Diameter (R1)	Stud Diameter (S1+Z1)
		017529	0.80-2.50	6.50-6.70	
		222837	1.80-3.50	6.50-6.70	
		019778	1.00-6.00	6.50-6.70	
		017716			T5 Stud

Material information on page 7. Please see print for specific material.

26.00mm  
1"

## Corrugated Hose Clips

Plastic



All dimensions are in millimeters.

Mounting	Design	Reference	Panel Thickness (F1)	Hole Diameter (R1)	Stud Diameter (S1+Z1)
		017878	0.80-2.50	6.50	
		175072	2.80-4.00	7.00	
		017790			T5 Stud

Material information on page 7. Please see print for specific material.

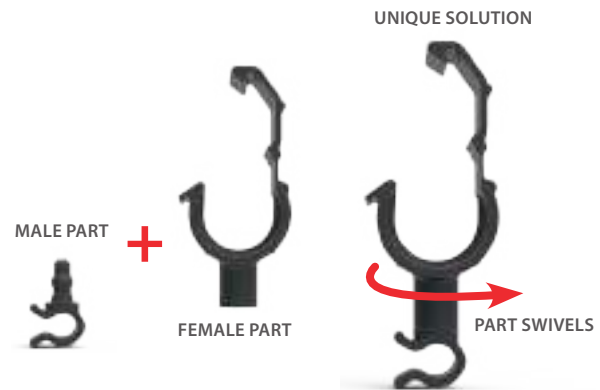
If you don't see what you need, please contact us. More sizes available. Contact information on back cover.

# Solution Configurator - Corrugated Hose Clips

**A WIDE PRODUCT RANGE** Mix and match to create your ideal solution.

Extensive range of swivel clips offer a wide variety of diameters and design configurations. Parts consist of male and female components that are combined to create ideal solutions.

The corrugated parts are listed at the top of each page and are sorted by tube size. Female solutions are on the left and the male solutions are on the right. Basically, any corrugated part on the right or left can be paired with any part on the opposite page.



- ▶ **Follow these steps to create your unique corrugated solution**
  1. **Select a corrugated part fitting your desired tube size from either the right or left page**
  2. **Find a mating solution on the opposite page that will fit your application**

CORRUGATED HOSE CLIPS

## FEMALE SOLUTIONS-CORRUGATED

	4.5mm 3/16"	7.5mm 1/4"	8.5mm 5/16"	10mm 3/8"	13mm 1/2"	17mm 5/8"	22mm 3/4"
Design							
Reference	018226-F	018777-F	234841-F	018623-F	020312-F	019175-F	019508-F






## FEMALE SOLUTIONS-TUBE HOLDERS

Design						
Reference	016399-F	013129-F	014669-F	013525-F	053953-F	017077-F
Tube Dia. (mm)	4.30-5.20	6.00-6.50	7.20-7.50	8.00-9.00	9.00-9.50	10.00-14.00







Design							
Reference	016896-F	015416-F	015782-F	053868-F	013104-F	017079-F	016866-F
Tube Dia. (mm)	11.00-13.00	12.00-13.00	13.00-14.00	15.00-16.00	16.00-18.00	16.00-22.00	16.00-24.00

Design							
Reference	017688-F	012938-F	201162-F	016423-F	175208-F	207187-F	055189-F
Tube Dia. (mm)	18.00-20.00	19.00-24.50	22.00-24.00	25.00-27.00	30.00-32.00	32.00-38.00	39.00-45.00

### MALE SOLUTIONS-CORRUGATED

	4.5mm 3/16"	7.5mm 1/4"	10mm 3/16"	13mm 1/2"	17mm 5/8"
Design					
Reference	017979-M	018175-M	018176-M	018714-M	018851-M

### MALE SOLUTIONS-PANEL ATTACHMENT








Design						
Reference	017050-M	018783-M	164442-M	164622-M	175036-M	202803-M
Panel Thick. (mm)	0.80-6.00	0.80-6.00	0.80-6.00	2.00-9.50	0.50-3.00	1.00-9.00
Hole Dia. (mm)	6.50-6.70	12.00-12.20	6.50-6.70	7.60-8.40	6.30-6.70	5.00-5.20/M6 x 1,00

Design				Design			
Reference	202124-M	082607-M	223534-M	Reference	019181-M	205384-M	221144-M
Panel Thick. (mm)	1.00-3.00	2.00-4.00	5.60-6.40	Stud Size (mm)	M6 x 1,00	T5 Stud	T5 Stud

### MALE SOLUTIONS-TUBE HOLDERS

Design						
Reference	054050-M	164536-M	015779-M	015125-M	016166-M	164533-M
Tube Dia. (mm)	3.50-6.00	4.30-5.20	6.00-6.50	7.80-8.50	8.00-9.00	9.50-10.50

Design							
Reference	013380-M	017078-M	164535-M	016708-M	164534-M	164438-M	016175-M
Tube Dia. (mm)	10.00-12.00	10.00-14.00	11.00-13.00	13.00-14.00	14.50-15.50	15.00-16.00	16.00-18.00

Design							
Reference	017080-M	164437-M	201163-M	014609-M	019758-M	020379-M	223345-M
Tube Dia. (mm)	16.00-22.00	18.00-20.00	19.00-21.00	22.00-24.00	28.00-30.00	34.00-36.00	38.00-45.00





# Wire, Cable & Tube Holders



**WIDE RANGE OF CABLE & TUBE HOLDERS TO ATTACH ONE OR MORE WIRES TO A PANEL.**

Available in all common tube diameters, ARaymond's tube holders are also compatible with multiple mounting options.

A specific need? See back cover for contact information

COLORED TAB	MILLIMETERS	INCHES (Approximation)	PAGE
	2.00 - 6.50mm	0.08" - 0.26"	p.24-27
	6.00 - 10.20mm	0.24" - 0.40"	p.28-31
	10.00 - 17.10mm	0.39" - 0.67"	p.32-33
	16.90 - 38.00mm	0.67" - 1.50"	p.34-35
Solution Configurator			p.36-37

TIPS FOR NAVIGATING THIS SECTION:

- Pages are organized by cable/tube diameter. Each size is designated a color as indicated in chart above.
- Dimensions for each page(s) are listed in metric.
- Once you determine the page that corresponds to your desired tube diameter, you can select parts based on the additional product specifications as listed.
- Images depicting how each part attaches to its assembly environment are illustrated as follows:



ON Panel Edges



IN Panel Holes



ON Studs



ON/TO Cables or Tubes



WANT TO SEE MORE?

FOLLOW THESE STEPS FOR A FUN, INTERACTIVE EXPERIENCE



DOWNLOAD BLIPPAR APP



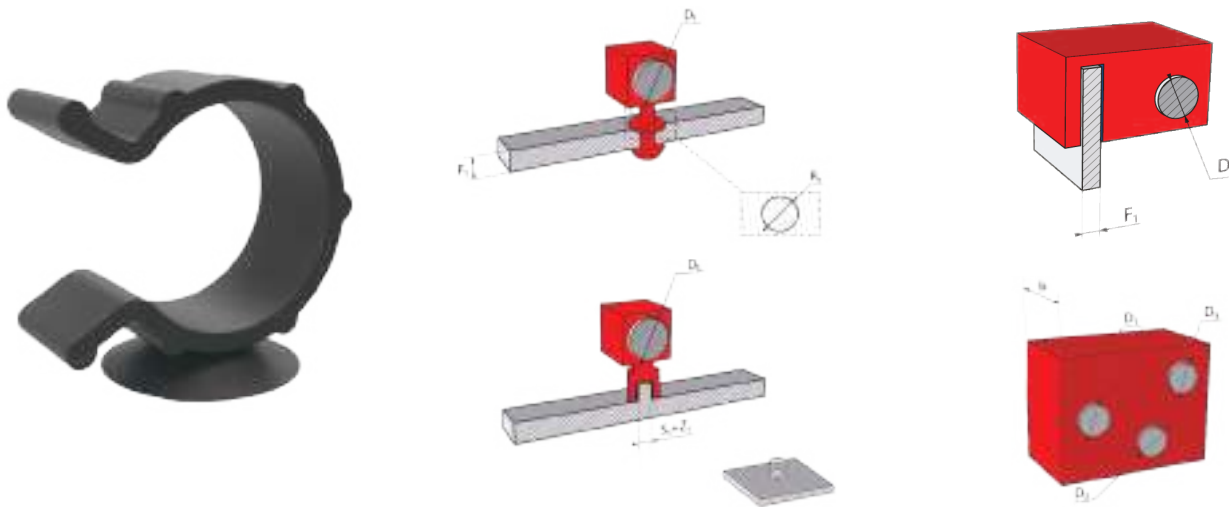
SCAN IMAGE TO THE LEFT



WATCH IT COME TO LIFE

2.00 - 6.50mm  
0.08" - 0.26"

## Wire, Cable & Tube Holders



All dimensions are in millimeters.

Mounting	Design	Reference	Tube or Cable Diameter (D1)	Panel Thickness (F1)	Hole Diameter (R1)	Stud Diameter (S1+Z1)	Tube/Cable Diameter (D2 / D3)
		244739	1.50-6.30	3.00-6.00			
		206902	2.00-8.00	0.70-4.00	6.20x12.20*		
		137604	2.16-2.41	1.37-2.26			
		136760	2.20-2.40	0.50-1.10			
		137543	2.80-12.70	0.80-1.00	6.20-6.50		
		136797	3.05-3.30	2.92-3.43			





















Most plastic parts are made with injection molded plastic & metal parts with spring steel. Please see print for specific material.  
\*Indicates oblong hole



2.00 - 6.50mm  
0.08" - 0.26"

## Wire, Cable & Tube Holders

All dimensions are in millimeters.

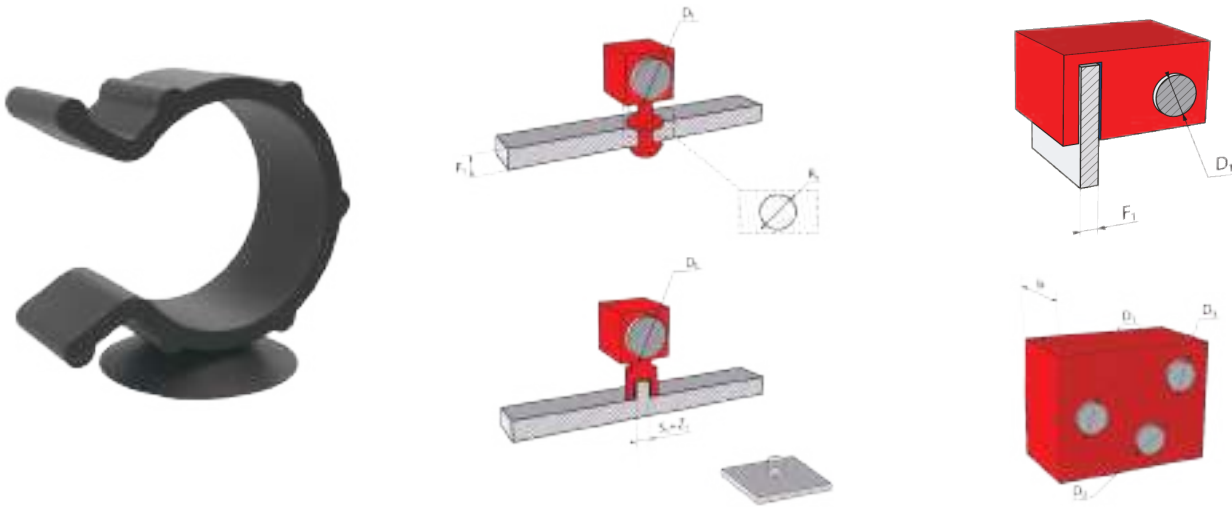
Mounting	Design	Reference	Tube or Cable Diameter (D1)	Panel Thickness (F1)	Hole Diameter (R1)	Stud Diameter (S1+Z1)	Tube/Cable Diameter (D2 / D3)
		136888	3.10-3.30	1.00-2.00			
		136893	3.84-4.09	1.52-2.26			
		016608	4.00-6.00	0.80-4.00	6.50-6.70		4.00-6.00
		219243	4.55-5.05			T5 Stud	
		202339	4.75-5.20				4.75-5.20
		016816	4.80-6.00	0.50-3.00	6.50-6.70		
		164457	4.80-6.40	2.80-3.20	9.95-10.45		4.80-6.40
		164450	4.80-6.80	6.60-7.15	9.70-10.20		4.80-6.80
		082047	5.00	1.00-2.00			
		242076	5.00-6.30	1.50-2.50			

Most plastic parts are made with injection molded plastic & metal parts with spring steel. Please see print for specific material.

If you don't see what you need, please contact us. More sizes available. Contact information on back cover.

2.00 - 6.50mm  
0.08" - 0.26"

## Wire, Cable & Tube Holders



All dimensions are in millimeters.

Mounting	Design	Reference	Tube or Cable Diameter (D1)	Panel Thickness (F1)	Hole Diameter (R1)	Stud Diameter (S1+Z1)	Tube/Cable Diameter (D2 / D3)
		163682	5.00-6.85	2.50-6.50	7.00-7.30		
		164730	5.05-5.35			M5 x .8	5.05-5.35
		241750	5.05-5.35			T5 Stud	5.05-5.35
		222569	5.10			T5 Stud	5.10
		164731	5.19-5.28			M5 x .8	
		164745	5.19-5.28	1.25-1.85	6.10-6.60		





















Most plastic parts are made with injection molded plastic & metal parts with spring steel. Please see print for specific material.

**If you don't see what you need, please contact us. More sizes available. Contact information on back cover.**

2.00 - 6.50mm  
0.08" - 0.26"

## Wire, Cable & Tube Holders

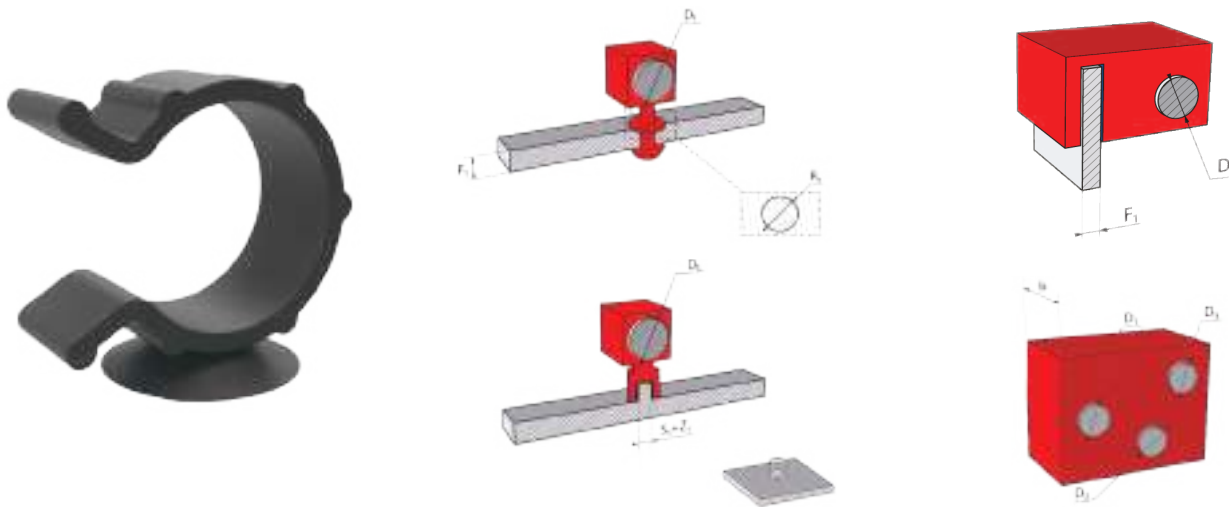
All dimensions are in millimeters.

Mounting	Design	Reference	Tube or Cable Diameter (D1)	Panel Thickness (F1)	Hole Diameter (R1)	Stud Diameter (S1+Z1)	Tube/Cable Diameter (D2 / D3)
		229022	5.19-5.28	1.25-1.85	6.10-6.60		5.19-5.28
		164728	5.19-5.28	1.75-2.25	6.05-6.55		5.19-5.28 / 5.19-5.28
		164741	5.19-5.28			M8 x 1,25	
		164743	5.19-5.28				5.19-5.28
		164729	5.19-5.28				5.19-5.28 / 5.19-5.28
		234772	5.20			T5 Stud	5.20 / 5.20
		014173	5.80-6.20	3.25-4.20			
		238091	6.00	1.20-1.70	6.25-6.75		
		253361	6.35		5.10		
		136896	6.22-6.48	1.02-2.03			

Most plastic parts are made with injection molded plastic & metal parts with spring steel. Please see print for specific material.

6.0 - 10.20mm  
0.24" - 0.40"

## Wire, Cable & Tube Holders



All dimensions are in millimeters.

Mounting	Design	Reference	Tube or Cable Diameter (D1)	Panel Thickness (F1)	Hole Diameter (R1)	Stud Diameter (S1+Z1)	Tube/Cable Diameter (D2 / D3)
		132068	3.00-13.00	1.50-2.50			
		054799	4.80-8.00			M6 x 1,00	
		108060	5.00-8.00			M6 x 1,00	
		081401	6.00-14.00	2.00-2.50			
		053760	6.00-7.00				6.00-7.00
		055999	6.00-8.00			M8 x 1,25	
		055127	6.00-9.00	2.00-7.00			

Most plastic parts are made with injection molded plastic & metal parts with spring steel. Please see print for specific material.

6.00 - 10.20mm  
0.24" - 0.40"

## Wire, Cable & Tube Holders

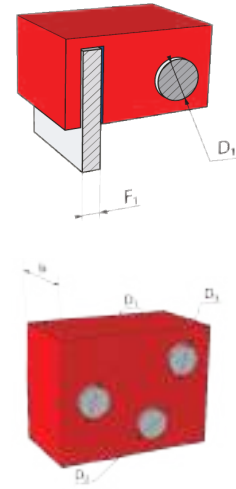
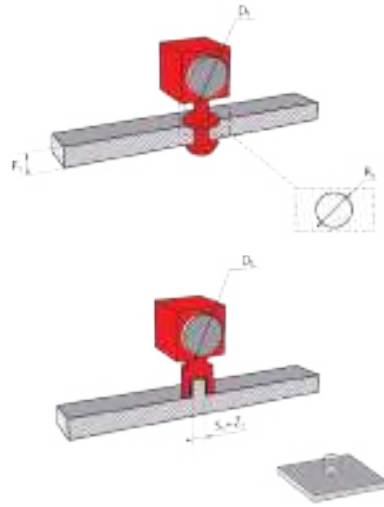
All dimensions are in millimeters.

Mounting	Design	Reference	Tube or Cable Diameter (D1)	Panel Thickness (F1)	Hole Diameter (R1)	Stud Diameter (S1+Z1)	Tube/Cable Diameter (D2 / D3)
		055128	6.00-9.00	7.00-12.00			
		137062	6.35-12.70	3.58-6.35	7.00-7.25		
		164744	6.60-6.87				6.60-6.87
		237803	7.30-8.00	0.75-1.50			
		016048	7.50-7.80	0.70-2.00	6.00-6.20		
		223908	7.75-8.25			T5 Stud	7.75-8.25
		242892	7.85-8.15	0.80-1.40			
		108011	8.00-10.00				
		205203	8.00	2.00-4.00			
		162763	8.00	2.50-3.50	7.50-7.70		8.00 / 7.50
		214323	8.00	3.40-3.6	6.50x9.00*		

Most plastic parts are made with injection molded plastic & metal parts with spring steel. Please see print for specific material.  
\*Indicates rectangular shaped hole

6.0 - 10.20mm  
0.24" - 0.40"

## Wire, Cable & Tube Holders



All dimensions are in millimeters.

Mounting	Design	Reference	Tube or Cable Diameter (D1)	Panel Thickness (F1)	Hole Diameter (R1)	Stud Diameter (S1+Z1)	Tube/Cable Diameter (D2 / D3)
		175000	8.00				8.00 / 8.00
		054477	8.00				8.00
		020040	8.00-10.00				8.00-10.00 / 8.00-10.00
		136998	8.45	1.90-2.10			
		136922	8.51-8.76	6.35-7.37			
		136991	9.00-10.50	3.00-4.00			
		132033	9.00-12.00	0.70-2.00	8.20		

Most plastic parts are made with injection molded plastic & metal parts with spring steel. Please see print for specific material.

6.00 - 10.20mm  
0.24" - 0.40"

## Wire, Cable & Tube Holders

All dimensions are in millimeters.

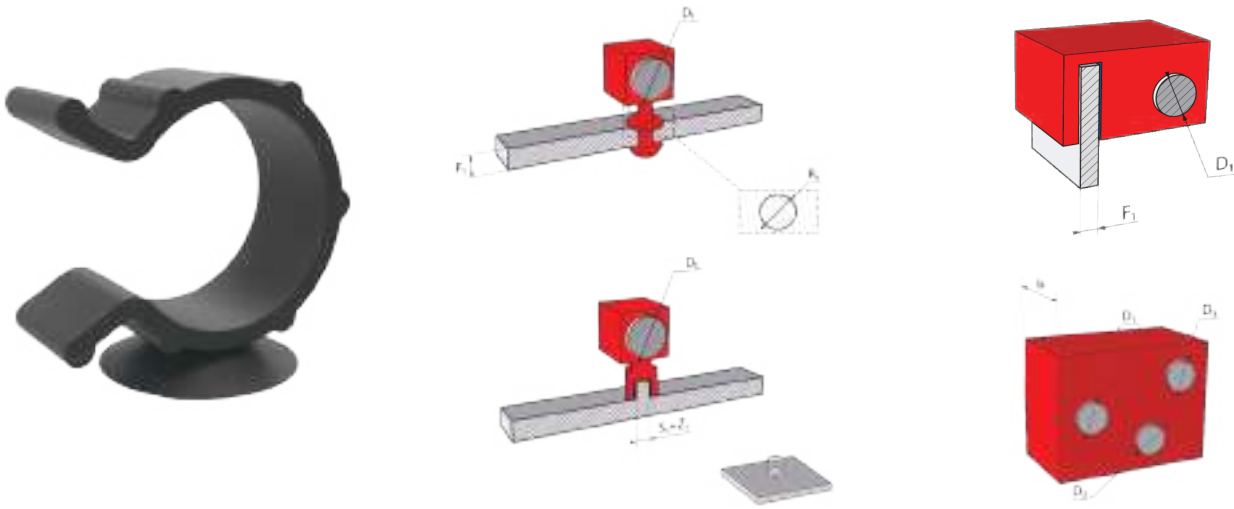
Mounting	Design	Reference	Tube or Cable Diameter (D1)	Panel Thickness (F1)	Hole Diameter (R1)	Stud Diameter (S1+Z1)	Tube/Cable Diameter (D2 / D3)
		164476	9.42-9.58	0.80-3.00	7.80-8.20		9.42-9.58
		163933	9.42-9.58	6.10-6.65	9.75-10.30		
		225553	9.50	1.80	9.00-9.20		
		253362	9.50		5.10		
		219240	9.58	0.60-3.00	9.00-9.20		
		206941	9.90-10.10			M6 x 1,00	
		018556	10.00				10.00 / 10.00
		012738	10.00				10.00
		222265	12.70				9.53

Most plastic parts are made with injection molded plastic & metal parts with spring steel. Please see print for specific material.

If you don't see what you need, please contact us. More sizes available. Contact information on back cover.

10.00 - 17.10mm  
0.39" - 0.67"

## Wire, Cable & Tube Holders



All dimensions are in millimeters.

Mounting	Design	Reference	Tube or Cable Diameter (D1)	Panel Thickness (F1)	Hole Diameter (R1)	Stud Diameter (S1+Z1)	Tube/Cable Diameter (D2 / D3)
		055129	10.00-14.00	2.00-7.00			
		055130	10.00-14.00	7.00-12.00			
		237044	12.40-13.00	0.76-3.18	6.10-6.60		
		253363	12.70		5.10		
		219241	12.70	2.00-6.35	7.00		
		244463	13.80-14.20	1.00-1.50			
		244281	14.15-14.40	4.34-6.35			












Most plastic parts are made with injection molded plastic & metal parts with spring steel. Please see print for specific material.



10.00 - 17.10mm  
0.39" - 0.67"

## Wire, Cable & Tube Holders

All dimensions are in millimeters.

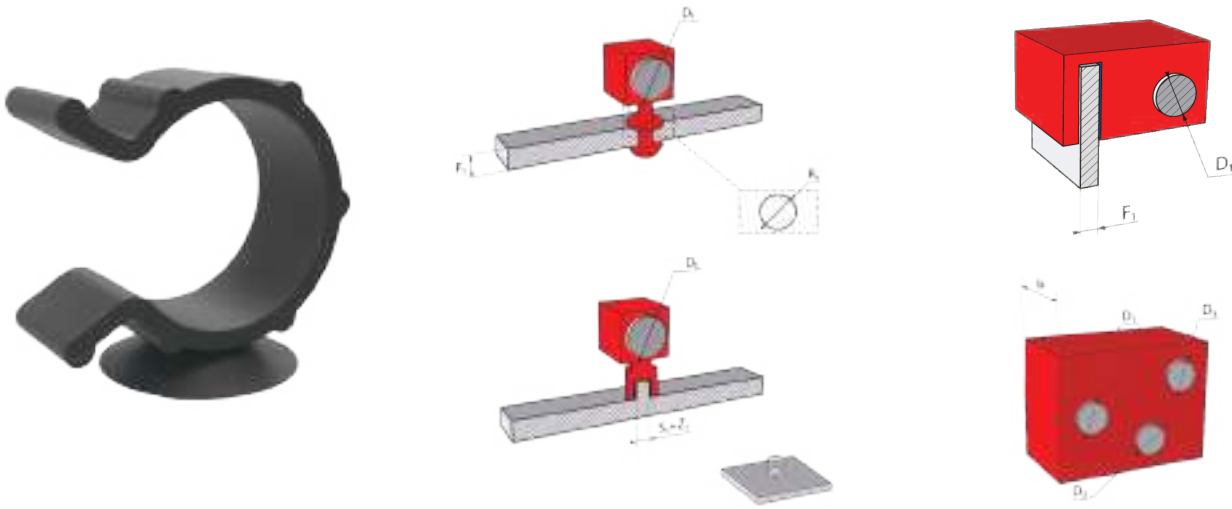
Mounting	Design	Reference	Tube or Cable Diameter (D1)	Panel Thickness (F1)	Hole Diameter (R1)	Stud Diameter (S1+Z1)	Tube/Cable Diameter (D2 / D3)
		164677	15.17-16.17				15.17-16.17
		164067	11.00-13.00	4.30	6.60		11.00-13.00
		201143	13.50	0.70-2.00	6.40-6.70		13.50
		164537	14.20-15.20	2.40-2.60	7.80-8.20		
		164716	14.55-14.85	0.90-1.90	8.70-9.20		
		018776	16.00	1.50-6.00	6.50-6.70		
		164441	12.63-12.77	5.00-8.00	8.70-9.20		6.61-6.80 / 12.63-12.77
		219018	15.50-16.10			M5 x 0,80	15.50-16.10

Most plastic parts are made with injection molded plastic & metal parts with spring steel. Please see print for specific material.

If you don't see what you need, please contact us. More sizes available. Contact information on back cover.

16.90 - 38.00mm  
0.67" - 1.50"

## Wire, Cable & Tube Holders



All dimensions are in millimeters.



















Mounting	Design	Reference	Tube or Cable Diameter (D1)	Panel Thickness (F1)	Hole Diameter (R1)	Stud Diameter (S1+Z1)	Tube/Cable Diameter (D2 / D3)
		055689	15.00-19.00			T5 Stud	
		253364	19.10		5.10		
		055131	15.00-21.00	2.00-7.00			
		055132	15.00-21.00	7.00-12.00			
		017363	16.00-18.00	0.50-3.00	6.35-6.70		16.00-18.00
		054478	17.00-21.00	0.70-2.00	6.50		

Most plastic parts are made with injection molded plastic & metal parts with spring steel. Please see print for specific material.

16.90 - 38.00mm  
0.67" - 1.50"

## Wire, Cable & Tube Holders

All dimensions are in millimeters.

Mounting	Design	Reference	Tube or Cable Diameter (D1)	Panel Thickness (F1)	Hole Diameter (R1)	Stud Diameter (S1+Z1)	Tube/Cable Diameter (D2 / D3)
		108130	21.00-23.00	0.80-2.00	6.50-6.70		
		207268	21.50-24.50	0.60-7.90	6.50-6.70		
		055133	22.00-32.00	2.00-7.00			
		055134	22.00-32.00	7.00-12.00			
		233857	23.00	0.80-6.00	6.50-6.70		
		016850	23.00-24.00	0.70-2.80	5.00-5.20		
		253365	25.40		5.10		
		163561	30.00-34.00	1.80-2.00	6.20-6.60		
		163562	33.00-37.00	1.80-2.00	6.20-6.60		

Most plastic parts are made with injection molded plastic & metal parts with spring steel. Please see print for specific material.

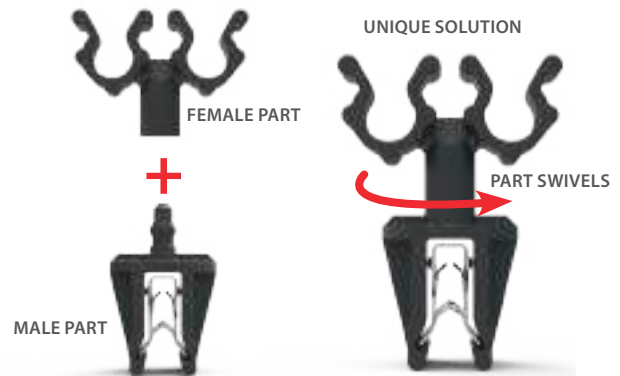
If you don't see what you need, please contact us. More sizes available. Contact information on back cover.

# Solution Configurator - Wire, Cable & Tube Holders

**A WIDE PRODUCT RANGE** Mix and match to create your ideal solution.

Extensive range of swivel clips offer a wide variety of diameters and design configurations. Parts consist of male and female components that are combined to create ideal solutions.

Tube diameters are color coded as they are in the rest of this section, with female solutions on the left and male solutions on the right. Basically, any part listed on the right or left can be paired with any part on the opposite page. If the desired combination requires the use of two male or two females, you can use one of our couplers to join them together.



- ▶ **Follow these steps to create your unique tube holder solution**
1. Select a part fitting your desired tube diameter from either the right or left page
  2. Find a mating solution on the opposite page that will fit your application

WIRE, CABLE & TUBE HOLDERS

## FEMALE SOLUTIONS-TUBE HOLDERS (DOUBLE)

Design				
Reference	016903-F	055882-F	014570-F	016277-F
Tube Dia. (mm)	6.00	9.00-10.50	13.50-14.00	16.00-17.00

## FEMALE SOLUTIONS-TUBE HOLDERS (SINGLE)

Design						
Reference	016399-F	013129-F	014669-F	013525-F	053953-F	017077-F
Tube Dia. (mm)	4.30-5.20	6.00-6.50	7.20-7.50	8.00-9.00	9.00-9.50	10.00-14.00







Design							
Reference	016896-F	015416-F	015782-F	053868-F	013104-F	017079-F	016866-F
Tube Dia. (mm)	11.00-13.00	12.00-13.00	13.00-14.00	15.00-16.00	16.00-18.00	16.00-22.00	16.00-24.00

Design							
Reference	017688-F	012938-F	201162-F	016423-F	175208-F	207187-F	055189-F
Tube Dia. (mm)	18.00-20.00	19.00-24.50	22.00-24.00	25.00-27.00	30.00-32.00	32.00-38.00	39.00-45.00

## COUPLERS



Design			
Reference	014369-M	016801-F	018519-FM
Description	Male	Female	Female/Male

## MALE SOLUTIONS-PANEL ATTACHMENT








Design						
Reference	017050-M	018783-M	164442-M	164622-M	175036-M	202803-M
Panel Thick. (mm)	0.80-6.00	0.80-6.00	0.80-6.00	2.00-9.50	0.50-3.00	1.00-9.00
Hole Dia. (mm)	6.50-6.70	12.00-12.20	6.50-6.70	7.60-8.40	6.30-6.70	5.00-5.20/M6 x 1,00

Design				Design			
Reference	202124-M	082607-M	223534-M	Reference	019181-M	205384-M	221144-M
Panel Thick. (mm)	1.00-3.00	2.00-4.00	5.60-6.40	Stud Size (mm)	M6 x 1,00	T5 Stud	T5 Stud

## MALE SOLUTIONS-TUBE HOLDERS

Design						
Reference	054050-M	164536-M	015779-M	015125-M	016166-M	164533-M
Tube Dia. (mm)	3.50-6.00	4.30-5.20	6.00-6.50	7.80-8.50	8.00-9.00	9.50-10.50

Design							
Reference	013380-M	017078-M	164535-M	016708-M	164534-M	164438-M	016175-M
Tube Dia. (mm)	10.00-12.00	10.00-14.00	11.00-13.00	13.00-14.00	14.50-15.50	15.00-16.00	16.00-18.00

Design							
Reference	017080-M	164437-M	201163-M	014609-M	019758-M	020379-M	223345-M
Tube Dia. (mm)	16.00-22.00	18.00-20.00	19.00-21.00	22.00-24.00	28.00-30.00	34.00-36.00	38.00-45.00











# Cable Straps



## COMPLETE RANGE OF OPTIMIZED CABLE STRAPS FOR MULTIPLE MOUNTING OPTIONS.

These lightweight straps reduce assembly time and waste at harness manufacturers. Available in a full range of common sizes.

A specific need? See back cover for contact information

MOUNTING / DESIGN		PAGE
	 Hole Mount	p.40-41
	 Panel-edge Mount	p.42
	 Stud Mount	p.43
	 Tube Mount	p.44
	 Standard Cable Straps	p.45-47
Solution Configurator		p. 48-49

TIPS FOR NAVIGATING THIS SECTION:

- Pages are organized by mounting option.
- Once you determine the page that corresponds to your desired mounting feature, you can select parts based on the additional product specifications as listed.
- Images depicting how each part attaches to its assembly environment are illustrated as follows:



ON Panel Edges



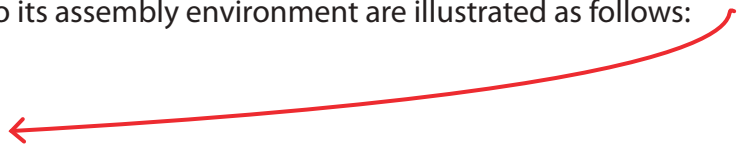
IN Panel Holes



ON Studs



ON/TO Cables or Tubes



WANT TO SEE MORE?

FOLLOW THESE STEPS FOR A FUN, INTERACTIVE EXPERIENCE



DOWNLOAD  
BLIPPAR APP



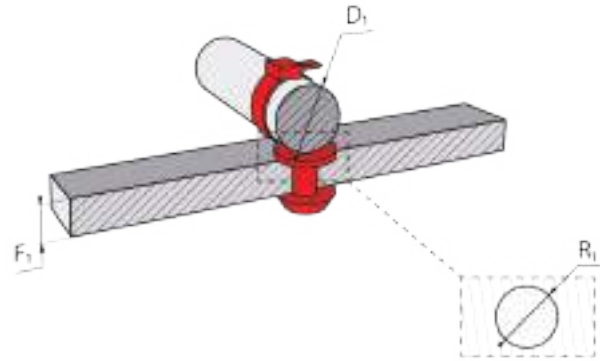
SCAN IMAGE  
TO THE LEFT



WATCH IT  
COME TO  
LIFE

# Cable Straps

## Hole Mount



All dimensions are in millimeters.

Mounting	Design	Reference	Tube or Cable Diameter (D1)	Panel Thickness (F1)	Hole Diameter (R1)
		216956	0.50-25.00	0.60-3.00	5.20-5.60
		205246	0.50-25.00	0.80-1.50	6.30-6.70
		235765	1.00-15.00	0.60-1.90	7.80-8.20
		235770	1.00-15.00	1.90-3.20	7.80-8.20
		214383	1.00-35.00	0.70-7.00	6.30-7.00
		175200	1.00-40.00	0.60-3.00	6.20-7.20
		164448	1.00-40.00	0.70-4.00	6.10-6.90
		164460	1.00-40.00	0.70-4.00	6.10-6.90













Material information on page 7. Please see print for specific material.  
All straps on this page have a tensile strength of 50 lbs.



# Cable Straps

## Hole Mount

All dimensions are in millimeters.

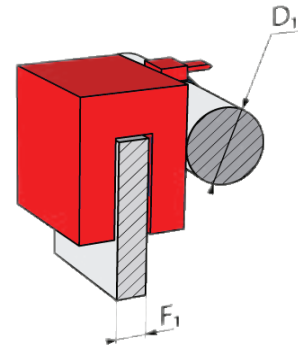
Mounting	Design	Reference	Tube or Cable Diameter (D1)	Panel Thickness (F1)	Hole Diameter (R1)
		236957	1.00-40.00	0.70-4.00	7.60-8.40
		213254	1.00-40.00	2.00-9.50	7.60-8.40
		235767	1.00-45.00	0.60-1.90	7.00x12.00*
		235769	1.00-45.00	1.90-3.20	7.00x12.00*
		208025	2.00-30.00	0.80-2.80	6.10-6.50
		014832	5.00-24.00	0.80-1.80	6.50-6.70

Material information on page 7. Please see print for specific material.  
 All straps on this page have a tensile strength of 50 lbs.  
 \*Indicates oblong hole

**If you don't see what you need, please contact us. More sizes available. Contact information on back cover.**

# Cable Straps

## Edge Mount



All dimensions are in millimeters.

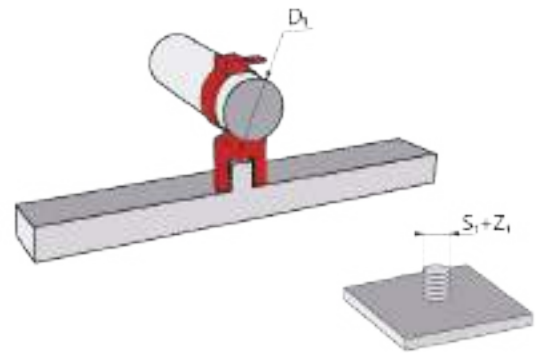
Mounting	Design	Reference	Tube or Cable Diameter (D1)	Panel Thickness (F1)
		082651	1.50-43.00	1.50-3.50
		082652	1.50-43.00	1.50-3.50
		082653	1.50-43.00	1.50-3.50
		210049	1.50-45.00	1.50-3.50

Most parts are made with injection molded plastic. Metal clip made from spring steel. Please see print for specific material. All straps on this page have a tensile strength of 50 lbs.

**If you don't see what you need, please contact us. More sizes available. Contact information on back cover.**

# Cable Straps

## Stud Mount



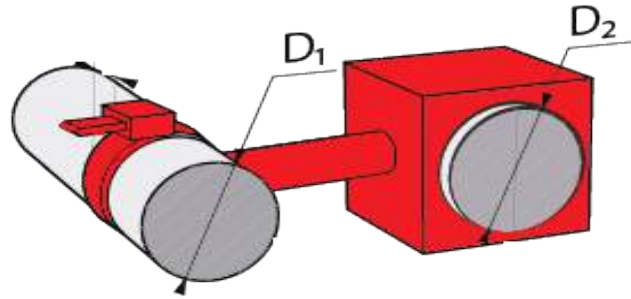
All dimensions are in millimeters.

Mounting	Design	Reference	Tube or Cable Diameter (D1)	Stud Diameter (S1+Z1)
		164459	1.00-40.00	M6 x 1,00
		201614	1.50-40.00	T5 Stud
		015770	10.00-55.00	T5 Stud
		017412	13.00-44.00	T5 Stud
		020494	2.00-25.00	M8 x 1,25
		202587	2.00-40.00	M8 x 1,25
		203449	2.00-40.00	T5 Stud
		015474	3.00-40.00	T5 Stud
		018062	2.50-41.00	T5 Stud








Material information on page 7. Please see print for specific material.  
All straps on this page have a tensile strength of 50 lbs.

# Cable Straps

## Tube Mount



All dimensions are in millimeters.

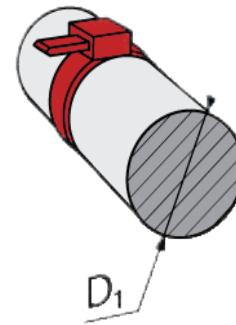
Mounting	Design	Reference	Tube Diameter (D1)	Tube Diameter (D2)
		235654	1.00-40.00	4.00-6.00
		235918	1.00-40.00	6.00-10.00
		235920	1.00-40.00	10.00-17.00
		235922	1.00-40.00	17.00-27.00
		235923	1.00-40.00	27.00-40.00

Material information on page 7. Please see print for specific material.  
All straps on this page have a tensile strength of 50 lbs.

**If you don't see what you need, please contact us. More sizes available. Contact information on back cover.**

## Cable Straps - Standard

18 Lb. (80N) Series



All dimensions are in millimeters.

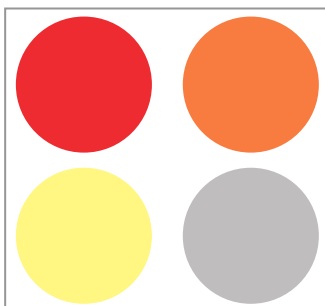
Mounting	Design	Reference	Standard Color	Length (l)	Width (b)	Thickness
		252945	UV Black	104.10	2.40	0.89
		252946	Natural	104.10	2.40	0.89
		252947	UV Black	205.70	2.40	0.89
		252948	Natural	205.70	2.40	0.89

Material information on page 7. Please see print for specific material.

### NOTES

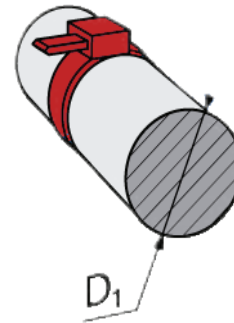
- Part references are organized by tensile strength.
- All part dimensions are in millimeters.
- Parts are packaged in bag quantities (100 or 1,000 depending on size)
- Standard colors are black and natural but additional colors are available. See image below.

#### Additional Colors



## Cable Straps - Standard

### 50 Lb. (222.5N) Series



All dimensions are in millimeters.

Mounting	Design	Reference	Standard Color	Length (l)	Width (b)	Thickness
		252339	UV Black or Natural	193.00	4.60	1.37
		252342	UV Black or Natural	281.90	4.60	1.37
		252341	UV Black or Natural	370.80	4.60	1.37

Material information on page 7. Please see print for specific material.

### 120 Lb. (534N) Series

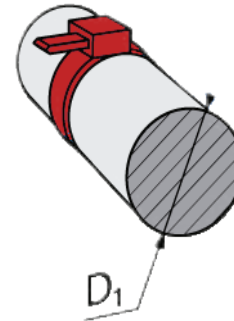
All dimensions are in millimeters.

Mounting	Design	Reference	Standard Color	Length (l)	Width (b)	Thickness
		252037	UV Black or Natural	228.60	7.60	1.75
		252040	UV Black or Natural	304.80	7.60	1.75
		252340	UV Black or Natural	381.00	7.60	1.75







Material information on page 7. Please see print for specific material.

## Cable Straps - Standard

150 Lb. (667.5N) Series



All dimensions are in millimeters.

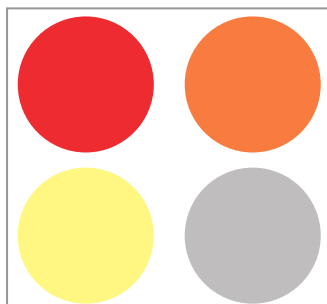
Mounting	Design	Reference	Standard Color	Length (l)	Width (b)	Thickness
		254895	UV Black	231.00	12.70	1.40
		254894	UV Black	307.00	12.70	1.40
		251634	UV Black	383.00	12.70	1.40

Material information on page 7. Please see print for specific material.

### NOTES

- Part references are organized by tensile strength.
- All part dimensions are in millimeters.
- Parts are packaged in bag quantities (100 or 1,000 depending on size)
- Standard colors are black and natural but additional colors are available. See image below.

Additional Colors



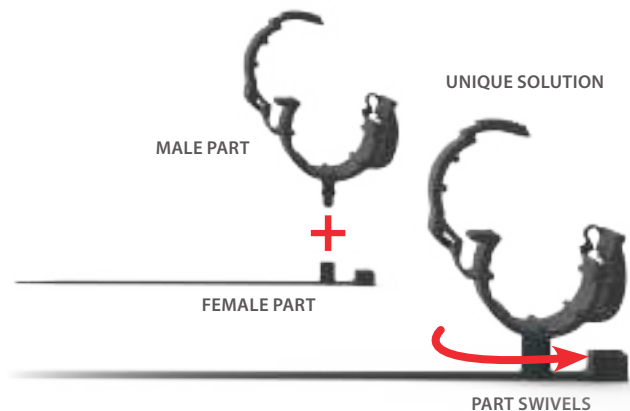
**If you don't see what you need, please contact us. More sizes available. Contact information on back cover.**

# Solution Configurator - Cable Straps

**A WIDE PRODUCT RANGE** Mix and match to create your ideal solution.

Extensive range of swivel clips offer a wide variety of diameters and design configurations. Parts consist of male and female components that are combined to create ideal solutions.

The cable strap parts are listed at the top of each page. Female solutions are on the left and the male solutions are on the right. Basically, any cable strap part on the right or left can be paired with any part on the opposite page.



- ▶ **Follow these steps to create your unique cable strap solution**
1. **Select a part fitting your desired tube diameter from either the right or left page**
  2. **Find a mating solution on the opposite page that will fit your application**

## FEMALE SOLUTIONS-CABLE STRAPS

Design					
Reference	013223-F	019869-F	164436-F	164330-F	055663-F
Tube Dia. (mm)	8.00-20.00	8.00-33.00	8.00-50.00	10.00-52.00	30.00-80.00

## FEMALE SOLUTIONS-TUBE HOLDERS






Design						
Reference	016399-F	013129-F	014669-F	013525-F	053953-F	017077-F
Tube Dia. (mm)	4.30-5.20	6.00-6.50	7.20-7.50	8.00-9.00	9.00-9.50	10.00-14.00

Design							
Reference	016896-F	015416-F	015782-F	053868-F	013104-F	017079-F	016866-F
Tube Dia. (mm)	11.00-13.00	12.00-13.00	13.00-14.00	15.00-16.00	16.00-18.00	16.00-22.00	16.00-24.00







Design							
Reference	017688-F	012938-F	201162-F	016423-F	175208-F	207187-F	055189-F
Tube Dia. (mm)	18.00-20.00	19.00-24.50	22.00-24.00	25.00-27.00	30.00-32.00	32.00-38.00	39.00-45.00



### MALE SOLUTIONS-CABLE STRAPS

Design					
Reference	013224-M	016817-M	204795-M	014269-M	013389-M
Tube Dia. (mm)	8.00-20.00	8.00-50.00	8.00-50.00	10.00-52.00	46.00-75.00

### MALE SOLUTIONS-PANEL ATTACHMENT








Design						
Reference	017050-M	018783-M	164442-M	164622-M	175036-M	202803-M
Panel Thick. (mm)	0.80-6.00	0.80-6.00	0.80-6.00	2.00-9.50	0.50-3.00	1.00-9.00
Hole Dia. (mm)	6.50-6.70	12.00-12.20	6.50-6.70	7.60-8.40	6.30-6.70	5.00-5.20/M6 x 1,00

Design				Design			
Reference	202124-M	082607-M	223534-M	Reference	019181-M	205384-M	221144-M
Panel Thick. (mm)	1.00-3.00	2.00-4.00	5.60-6.40	Stud Size (mm)	M6 x 1,00	T5 Stud	T5 Stud

### MALE SOLUTIONS-TUBE HOLDERS

Design						
Reference	054050-M	164536-M	015779-M	015125-M	016166-M	164533-M
Tube Dia. (mm)	3.50-6.00	4.30-5.20	6.00-6.50	7.80-8.50	8.00-9.00	9.50-10.50

Design							
Reference	013380-M	017078-M	164535-M	016708-M	164534-M	164438-M	016175-M
Tube Dia. (mm)	10.00-12.00	10.00-14.00	11.00-13.00	13.00-14.00	14.50-15.50	15.00-16.00	16.00-18.00

Design							
Reference	017080-M	164437-M	201163-M	014609-M	019758-M	020379-M	223345-M
Tube Dia. (mm)	16.00-22.00	18.00-20.00	19.00-21.00	22.00-24.00	28.00-30.00	34.00-36.00	38.00-45.00

# Grounding Clips



## DESIGNED TO REDUCE ASSEMBLY TIME.

While assembling the electric wire to the panel, ARaymond grounding clips ensure conductivity between the metal panel and the grounding wire or the lug connector.

Mounting & Design	DESCRIPTION	PAGE
 	For Electric Wires with Sheath	p.52
 	Lugged Grounding Connectors	p.53

### TIPS FOR NAVIGATING THIS SECTION:

- Images depicting how each part attaches to its assembly environment are illustrated as follows:



ON Panel Edges



# Adaptors

A specific need? See back cover for contact information



## ARAYMOND ADAPTORS OFFER A SOLUTION WHEN DRILLING INTO YOUR PANEL IS NOT AN OPTION.

Various designs are available in both plastic and metal allowing you to choose the most appropriate design for your mounting environment.

Mounting & Design	DESCRIPTION	PAGE
	For Cable Ties	p.54
	For Cable Ties	p.55

### TIPS FOR NAVIGATING THIS SECTION:

- Images depicting how each part attaches to its assembly environment are illustrated as follows:



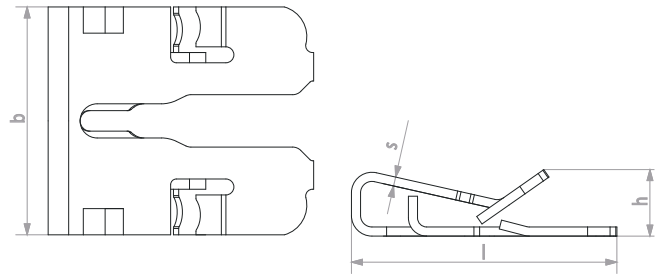
ON Panel Edges





IN Panel Holes

# Grounding Clips

For Electric Wires with Sheath



All dimensions are in millimeters.

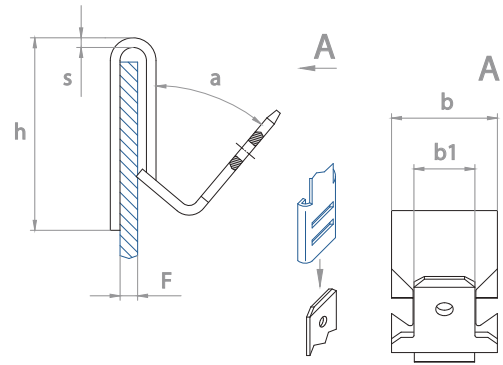
Mounting	Design	Reference	Panel Thickness (F)	Wire Type	Length (l)	Width (b)	Height (h)	Material Thick. (s)
		220492	1.20-2.50	H07V-K6	1.00-30.00	20.00	5.84	0.80

*Most parts manufactured in spring steel*

**If you don't see what you need, please contact us. More sizes available. Contact information on back cover.**

# Grounding Clips

For Electric Wires with Lugs



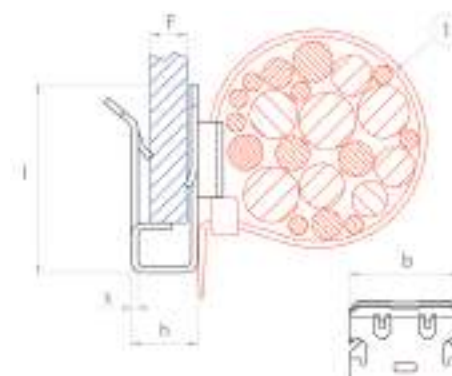
All dimensions are in millimeters.

Mounting	Design	Reference	Panel Thickness (F)	Height (h)	Width (b)	Lug Width (b1)	Lug Quantity	Lug Angle (a)
		055625	0.30-0.05	9.00	10.00	6.30	1	40.00
		214634	0.40-1.50	16.00	11.00	6.30	1	40.00
		014354	1.00-2.00	16.00	11.00	6.30	1	40.00
		019765	1.00-2.00	16.00	16.00	6.30	2	40.00

Most parts manufactured in spring steel

## Adaptors

### For Cable Ties



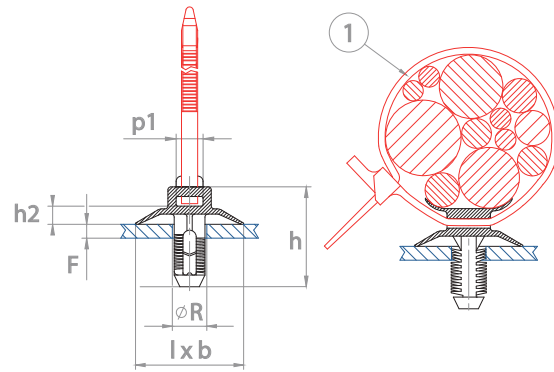
All dimensions are in millimeters.

Mounting	Design	Reference	Panel Thickness (F)	Width (b)	Length (l)	Height (h)	Strap Width (t)	Material Thick. (s)
		<b>020848</b>	8.90-9.10	18.00	15.10	13.00	5.00	0.50
		<b>220737</b>	3.00-6.00	15.00	14.10	10.10	5.00	0.50
		<b>222690</b>	1.00-3.00	15.00	14.10	8.00	5.00	0.50
		<b>019752</b>	0.80-1.20	16.00	15.70	2.40	5.00	0.50
		<b>017890</b>	1.50-4.50	25.00	17.80	6.20	5.80	0.60
		<b>208738</b>	1.50-4.00	15.00	14.20	6.00	5.00	0.50
		<b>019408</b>	1.00-3.00	18.00	15.30	13.00	5.00	0.50

*Most parts manufactured in spring steel*

# Adaptors

## For Cable Ties



All dimensions are in millimeters.

Mounting	Design	Reference	Panel Thickness (F)	Hole Diameter (R)	Strap Width (p1)	Length (l)	Width (b)	Height (h)	Height 2
		014130	2.50-2.60	6.50	6.60	11.00	10.00	5.00	8.50
		017160	2.50-2.60	6.40-6.60	6.60	11.00	10.00	5.00	3.40
		248137	1.00-6.50	8.80	12.70	22.00	22.00	10.90	4.80
		247633	1.00-15.80	8.80	12.70	22.00	22.00	10.90	4.80

Material information on page 7. Please see print for specific material.  
 \* Indicates adhesive backed.

Note: Parts indicated in red have been designed but not released at the time of catalog publication. Please contact sales for availability.

If you don't see what you need, please contact us. More sizes available. Contact information on back cover.

# Tape-On Clips



**TAPE-ON CLIPS ARE SIMPLE TO INSTALL, RELIABLE & COST-EFFECTIVE.**

Available with a variety of panel attachment features that suit multiple mounting options.



A specific need? See back cover for contact information

MOUNTING / DESIGN		PAGE
	Hole Mount	p.58
	Stud Mount	p.59
	Tube Mount	p.60

TIPS FOR NAVIGATING THIS SECTION:

- Pages are organized by mounting option.
- Once you determine the page that corresponds to your desired mounting feature, you can select parts based on the additional product specifications as listed.
- Images depicting how each part attaches to its assembly environment are illustrated as follows:



IN Panel Holes



ON Studs



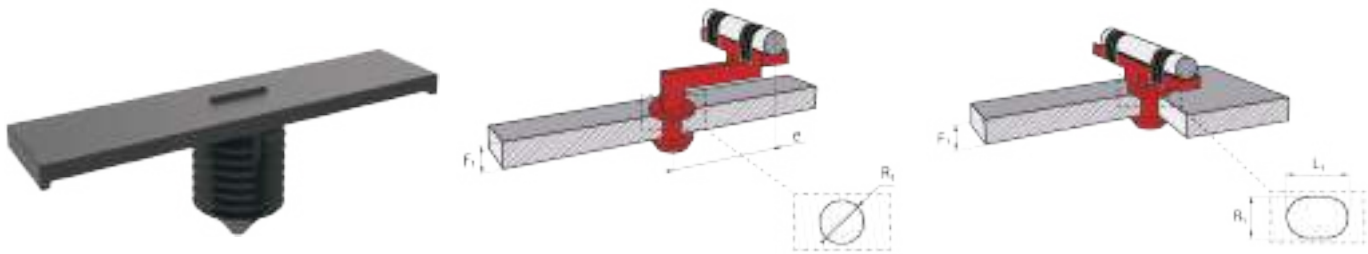
ON/TO Cables or Tubes



If you don't see what you need, please contact us. More sizes available. Contact information on back cover.

# Tape-On Clips

## Hole Mount



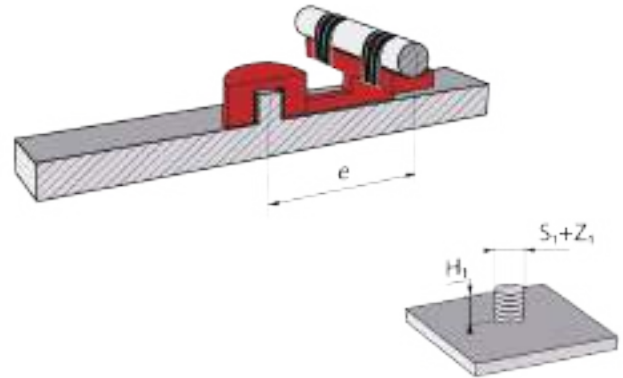
All dimensions are in millimeters.

Mounting	Design	Reference	Offset (e)	Panel Thickness (F1)	Hole Diameter (R1xL1)
		164452	32.00	0.70-4.00	6.10-6.50
		164465	23.00	0.70-4.00	6.10-6.50
		175137		0.70-4.00	6.50
		201340	15.00	0.80-4.00	6.50-6.70
		201662		0.60-3.00	6.20x12.20
		209423		0.70-4.00	6.30-6.70
		211640		0.60-2.00	6.40-6.60









Material information on page 7. Please see print for specific material.

# Tape-On Clips

## Stud Mount



All dimensions are in millimeters.

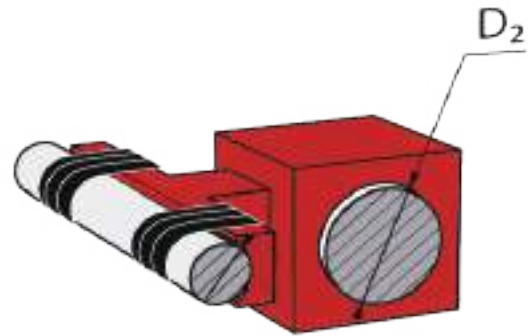
Mounting	Design	Reference	Offset (e)	Stud Specification (S1+Z1)	Stud Height (H1)
		164440	14.00	M6 x 1,00	
		164473	41.00	M6 x 1,00	
		211319	26.00	M8 x 1,25	
		211320	19.80	M5 x 0,80	15.00

Material information on page 7. Please see print for specific material.





If you don't see what you need, please contact us. More sizes available. Contact information on back cover.

# Tape-On Clips

## Tube Mount



All dimensions are in millimeters.

Mounting	Design	Reference	Tube or Cable Diameter (D2)
		164179	3.00-4.00
		211322	5.00-6.00

Material information on page 7. Please see print for specific material.

TAPE-ON CLIPS

**If you don't see what you need, please contact us. More sizes available. Contact information on back cover.**



# ALPHABETICAL PRODUCT INDEX

## A

Adaptors - Edge Mount.....	54
Adaptors - Plug In .....	55

## C

Cable Straps - Hole Mount.....	40-42
Cable Straps - Stud Mount.....	43
Cable Straps - Tube Mount.....	44
Cable Straps - 18 Lb.....	46
Cable Straps - 50 Lb.....	46
Cable Straps - 120 Lb.....	46
Cable Straps - 150 Lb.....	47
Cable Straps - Female - Configurator.....	48
Cable Straps - Male - Configurator.....	49
Cable & Tube Holders - 2.00-6.50mm.....	24-27
Cable & Tube Holders - 6.00-10.20mm.....	28-31
Cable & Tube Holders - 10.00-17.10mm.....	32-33
Cable & Tube Holders - 16.90-45.00mm.....	34-35
Corrugated Tube Holders - Female - Configurator.....	20
Corrugated Tube Holders - Male - Configurator.....	21
Corrugated Tube Holders - Metal 4.50-10.00mm.....	11, 13, 15
Corrugated Tube Holders - Plastic - 4.50mm.....	10
Corrugated Tube Holders - Plastic - 7.50mm.....	12
Corrugated Tube Holders - Plastic - 10.00mm.....	14
Corrugated Tube Holders - Plastic - 13.00mm.....	16
Corrugated Tube Holders - Plastic - 17.00mm.....	17
Corrugated Tube Holders - Plastic - 22.00mm.....	18
Corrugated Tube Holders - Plastic - 26.00mm.....	19
Couplers - Configurator.....	37

## G

Grounding Clips with Lugs.....	53
Grounding Clips with Sheath.....	52

## P

Panel Clips - Male - Configurator.....	21, 37, 49
--	------------

## T

Tape-Ons - Hole Mount.....	58
Tape-Ons - Stud Mount.....	59
Tape-Ons - Tube Mount.....	60
Tube Holders - Female - Configurator.....	20, 36, 48
Tube Holders - Male - Configurator.....	21, 37, 49

# PART NUMBER INDEX

012738.....	31	017096.....	14	019670.....	17	136888.....	25
012938.....	20,36,48	017097.....	16	019752.....	54	136893.....	25
013104.....	20,36,48	017098.....	17	019758.....	21,37,49	136896.....	27
013129.....	20,36,48	017160.....	55	019765.....	53	136922.....	30
013223.....	48	017363.....	34	019778.....	18	136991.....	30
013224.....	49	017412.....	43	019869.....	48	136998.....	30
013380.....	21,37,49	017521.....	17	020040.....	30	137062.....	29
013389.....	49	017528.....	16	020312.....	20	137543.....	24
013525.....	20,36,48	017529.....	18	020379.....	21,37,49	137604.....	24
014130.....	55	017600.....	16	020494.....	43	162763.....	29
014173.....	27	017620.....	10	020848.....	54	163561.....	35
014269.....	49	017639.....	14	053760.....	28	163562.....	35
014354.....	53	017688.....	20,36,48	053868.....	20,36,48	163682.....	26
014369.....	37	017693.....	12	053953.....	20,36,48	163933.....	31
014570.....	36	017694.....	17	054050.....	21,37,49	163953.....	10
014609.....	21,37,49	017713.....	12	054477.....	30	164067.....	33
014669.....	20,36,48	017714.....	14	054478.....	34	164177.....	10
014832.....	41	017716.....	18	054799.....	28	164178.....	14
015125.....	21,37,49	017783.....	11,13,15	055127.....	28	164179.....	60
015416.....	20,36,48	017784.....	11,13,15	055128.....	29	164292.....	10
015474.....	43	017785.....	11,13,15	055129.....	32	164330.....	48
015770.....	43	017786.....	11,13,15	055130.....	32	164436.....	48
015779.....	21,37,49	017790.....	19	055131.....	34	164437.....	21,37,49
015782.....	20,36,48	017878.....	19	055132.....	34	164438.....	21,37,49
016048.....	29	017890.....	54	055133.....	35	164440.....	59
016166.....	21,37,49	017979.....	21	055134.....	35	164441.....	33
016175.....	21,37,49	018062.....	43	055189.....	20,36,48	164442.....	21,37,49
016277.....	36	018175.....	21	055625.....	53	164448.....	40
016399.....	20,36,48	018176.....	21	055663.....	48	164450.....	25
016423.....	20,36,48	018226.....	20	055689.....	34	164452.....	58
016608.....	25	018480.....	17	055882.....	36	164457.....	25
016708.....	21,37,49	018519.....	37	055999.....	28	164459.....	43
016801.....	37	018556.....	31	081401.....	28	164460.....	40
016816.....	25	018623.....	20	082047.....	25	164465.....	58
016817.....	49	018633.....	10	082607.....	21,37,49	164473.....	59
016850.....	35	018714.....	21	082651.....	42	164476.....	31
016866.....	20,36,48	018776.....	33	082652.....	42	164533.....	21,37,49
016896.....	20,36,48	018777.....	20	082653.....	42	164534.....	21,37,49
016903.....	36	018783.....	21,37,49	108011.....	29	164535.....	21,37,49
017050.....	21,37,49	018851.....	21	108060.....	28	164536.....	21,37,49
017078.....	21,37,49	018890.....	16	108130.....	35	164537.....	33
017077.....	20,36,48	019175.....	20	132033.....	30	164622.....	21,37,49
017079.....	20,36,48	019181.....	21,37,49	132068.....	28	164677.....	33
017080.....	21,37,49	019408.....	54	136760.....	24	164716.....	33
017095.....	10,12	019508.....	20	136797.....	24	164728.....	27

# PART NUMBER INDEX

164729.....	27	216956.....	40	252340.....	46
164730.....	26	219018.....	33	252341.....	46
164731.....	26	219240.....	31	252342.....	46
164741.....	27	219241.....	32	252945.....	45
164743.....	27	219243.....	25	252946.....	45
164744.....	29	220492.....	52	252947.....	45
164745.....	26	220737.....	54	252948.....	45
175000.....	30	221144.....	21,37,49	253361.....	27
175036.....	21,37,49	222265.....	31	253362.....	31
175072.....	19	222569.....	26	253363.....	32
175137.....	58	222690.....	54	253364.....	34
175200.....	40	222837.....	18	253365.....	35
175208.....	20,36,48	223345.....	21,37,49	254894.....	47
201143.....	33	223534.....	21,37,49	254895.....	47
201162.....	20,36,48	223908.....	29		
201163.....	21,37,49	225553.....	31		
201340.....	58	229022.....	27		
201614.....	43	233857.....	35		
201662.....	58	234772.....	27		
201721.....	10	234841.....	20		
202124.....	21,37,49	235654.....	44		
202339.....	25	235765.....	40		
202587.....	43	235767.....	41		
202803.....	21,37,49	235769.....	41		
203449.....	43	235770.....	40		
204795.....	49	235918.....	44		
205203.....	29	235920.....	44		
205246.....	40	235922.....	44		
205384.....	21,37,49	235923.....	44		
206902.....	24	236957.....	41		
206941.....	31	237044.....	32		
207187.....	20,36,48	237803.....	29		
207268.....	35	238091.....	27		
208025.....	41	241750.....	26		
208738.....	54	242076.....	25		
209423.....	58	242892.....	29		
210049.....	42	244281.....	32		
211319.....	59	244463.....	32		
211320.....	59	244739.....	24		
211322.....	60	247633.....	55		
211640.....	58	248137.....	55		
213254.....	41	251634.....	47		
214323.....	29	252037.....	46		
214383.....	40	252040.....	46		
214634.....	53	252339.....	46		



# DESIGN NOTES

# DESIGN NOTES

# ARAYMOND IS ABLE TO MANAGE THE COMPLETE PRODUCT DEVELOPMENT PROCESS



At ARaymond we provide a complete spectrum of capabilities in the product development life cycle to design innovative assembly solutions.

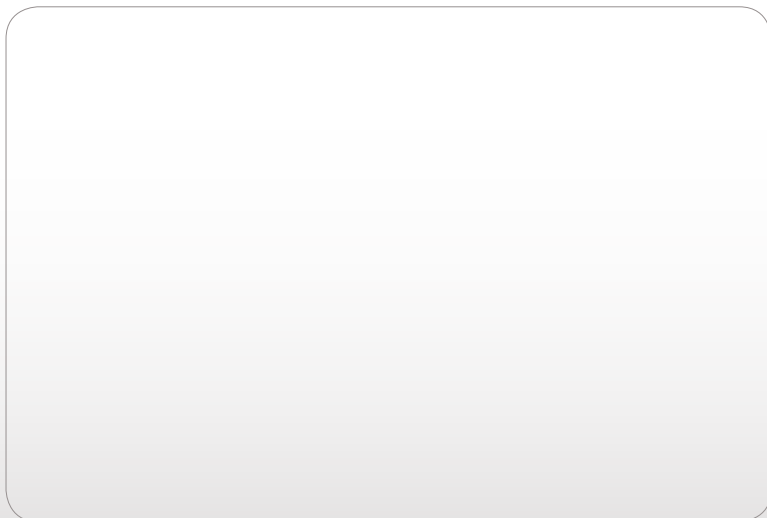
By understanding your needs and taking into account your manufacturing processes and methods, our experts are able to design specialized assembly solutions. We offer automation and assembly-line analysis, as well as process development as part of our comprehensive strategic approach for improving customer productivity.

In the product development process, digital simulation has been fully integrated for non-linear and dynamic mechanics, rheology, and thermal and fluid transfer treatment.

**A specific need? Contact us to see where we can help**  
See back cover for contact information

[www.araymond-industrial.com](http://www.araymond-industrial.com)  
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