

Inch

Hinged Terminal Board Standoffs / Spacer Sleeves

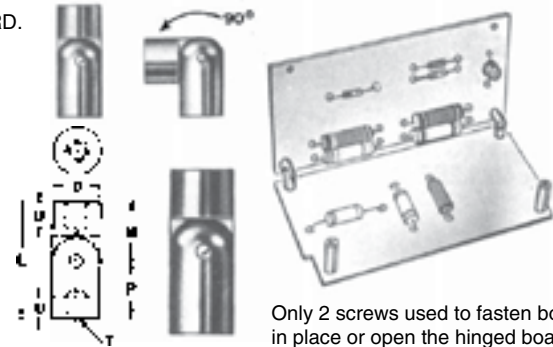
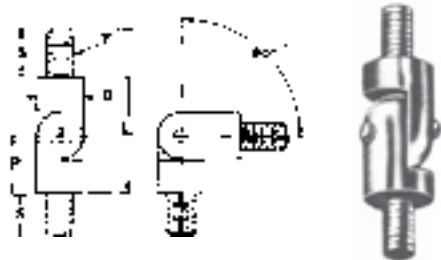
Pouce

Colonnettes pour plaques à bornes / douilles-entretoises à charnières

HINGED STANDOFFS FOR TERMINAL BOARDS

APPLICATIONS UNLIMITED • TIME SAVING • CUT COST OF SERVING • SPACE SAVER
 INTERCONNECT CIRCUITS OR SERVICES WITHOUT DANGER OF SHORTING • WIRING EXPOSED FOR EASY TEST

MATERIAL: **MADE OF BRASS** MIL SPEC. QQ-B-626A COMP. 22-1/2 HARD.
 FINISH: Cadmium Plate per QQ-P-416 Class 2, Type 2 and gold Iridite.



Only 2 screws used to fasten board in place or open the hinged board.

HINGE SPAENAUR No.	Thread T	Length L	Dia. D	S	P	PKG QTY.
605-009	4-40	1/2"	.187"	1/4"	1/4"	25
—	—	—	—	—	—	—
605-010	6-32	1/2"	.250"	5/16"	1/4"	25
—	—	—	—	—	—	—
605-011	8-32	1/2"	.250"	5/16"	1/4"	25
—	—	—	—	—	—	—

HINGE SPAENAUR No.	Thread T	Dia. D	Length L	U	M	P	PKG QTY.
605-003	4-40	.187"	3/4"	.172"	.375"	.375"	25
605-004	4-40	.187"	1"	.250"	.375"	.625"	25
605-005	6-32	.250"	3/4"	.172"	.375"	.375"	25
605-006	6-32	.250"	1"	.250"	.375"	.625"	25
605-007	8-32	.250"	3/4"	.172"	.375"	.375"	25
605-008	8-32	.250"	1"	.250"	.375"	.625"	25

TAPPED BRASS SPACERS Nickel Plated

These standoffs mount at front of board.



STANDOFF ONLY For Front of Board

SPAENAUR No.	Thread	O.D.	Lgth.	PKG QTY.
SPA-64	4-40	3/16"	1/2"	25
SPA-69	6-32	1/4"	1/2"	25
SPA-77	8-32	1/4"	1/2"	25

TAPPED BRASS SPACERS Nickel Plated

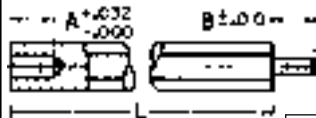
These standoffs mount at front of board.



STANDOFF ONLY For Front of Board

SPAENAUR No.	Thread	O.D.	Lgth.	PKG QTY.
SPA-105	4-40	3/16"	3/4"	25
SPA-106	4-40	3/16"	1"	25
SPA-71	6-32	1/4"	3/4"	25
SPA-72	6-32	1/4"	1"	25
SPA-79	8-32	1/4"	3/4"	25
SPA-80	8-32	1/4"	1"	25

HEX MALE/FEMALE THREADED SPACERS



1/4" O.D. (±.005") width across flats

L Length in Inches	THREAD SIZE					
	4-40 HOLE A: 1/4" STUD B: 3/16"		6-32 HOLE A: 3/8" (▲.130/.150") STUD B: 1/4"		8-32 HOLE A: 7/16" (♦3/8") STUD B: 3/8"	
	Nickle Plated BRASS	2011T3 ALUMINUM	Nickle Plated BRASS	2011T3 ALUMINUM	Nickle Plated BRASS	2011T3 ALUMINUM
1/4" (.250")	—	—	▲605-038	—	—	—
1/2" (.500")	605-012	608-174	605-020	608-182	♦605-028	♦608-188
5/8" (.625")	605-013	608-175	605-021	608-172	605-029	608-189
3/4" (.750")	605-014	608-176	605-022	608-173	605-030	608-190
1" (1.000")	605-A02-1X	608-177	*605-023	608-183	605-031	608-191
1-1/4" (1.250")	605-016	608-178	605-024	608-184	605-032	608-192
1-3/8" (1.375")	605-017	608-179	605-025	608-185	605-033	608-193
1-1/2" (1.500")	605-018	608-180	605-026	608-186	605-034	608-194
2" (2.000")	605-019	608-181	605-027	608-187	605-035	608-195

* 605-037 with thread relief under head.

More Standoffs, Spacers and Spacer Sleeves featured on pages G27 - G32.

Conduit Spacers / Half-Clamps

Inch

Espaceurs à conduits / Demi-colliers

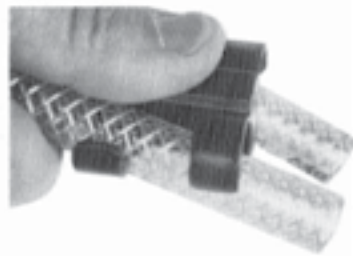
Pouce

T-CLIPS Fastening System

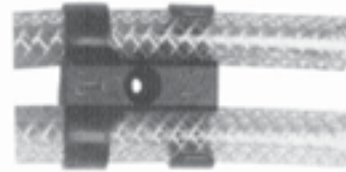
For fast, easy securing and routing of dual run wire, tubing, hose, pipe conduit, BX, etc.



1. Place open sides of T-Clip between tubes.



2. Snap T-Clip onto tubes with a quick quarter-turn.



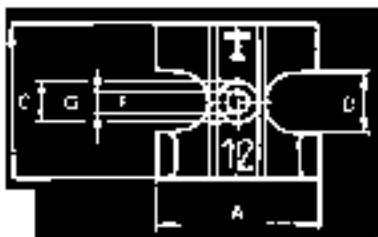
3. T-Clip is ready for mounting with tubes held in a uniform spacing.

T-Clips provide a quick, adaptable and inexpensive answer to securing, attaching, and routing of tubes, wires, hose and pipe. They are not only easy to use by the most inexperienced personnel, but allow your installations to look extremely neat and professional. T-Clips provide an exact, uniform spacing to dual runs, and can be mounted on walls, cabinets, boards, enclosures, and bulkheads. T-Clips are available in a wide range of sizes to fit almost any circular-sectioned item. A countersunk centre hole is provided in each T-Clip for the fastener of your choice.

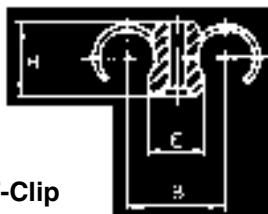
Many commercial applications, such as the installations of hydraulic hoses, electrical conduits and wires, telephone and fibre optics, liquid and gas tubings and pipes, and automotive hoses, can benefit from the ease of installation, safety, and the final appearance of the job.

Spacers for T-Clips from 086-102 to 086-107 allow for additional spacing between the mounting face and the items to be secured. As many spacers as necessary to provide required clearance can be used as the design allows stacking.

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T-Clips and Spacers must be ordered separately.



T-Clip



Spacer



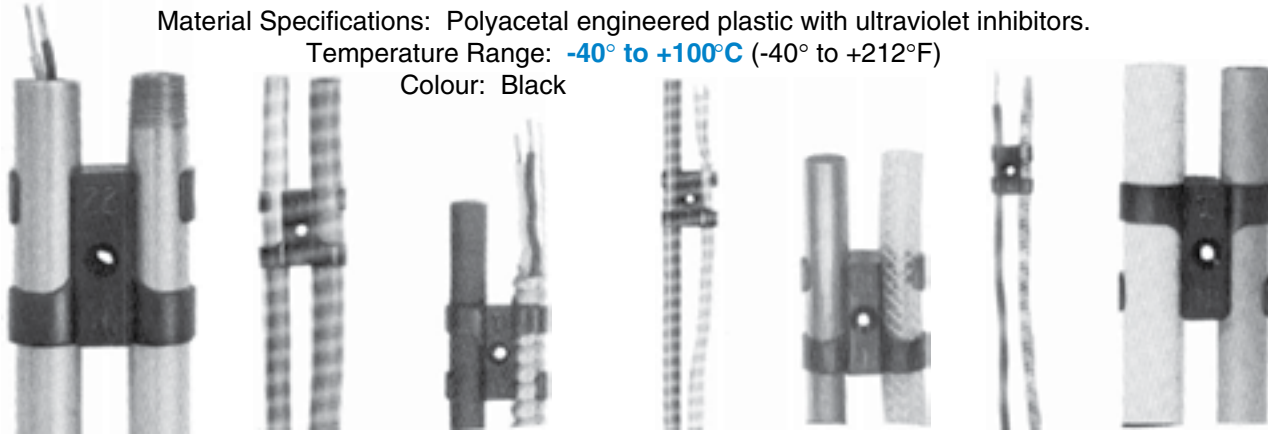
*.25" for 086-113

SPAENAUR No.		Holding Range	All dimensions in Inches								PKG QTY.
T-Clip	Spacer		A	B	C	D	E	F	G	H	
086-100	-	5/32 - 1/4"	.60	.40	.70	.24	.28	.12	.25	.36	50
086-101	-	1/4 - 5/16"	.80	.48	.80	.32	.32	.12	.26	.36	50
086-102	086-108	5/16 - 3/8"	1.00	.60	.96	.40	.40	.16	.32	.48	50
086-F86-1P	086-109	3/8 - 1/2"	1.20	.74	1.10	.47	.44	.16	.32	.57	50
086-104	086-110	1/2 - 5/8"	1.36	.82	1.33	.56	.46	.17	.36	.64	50
086-105	086-111	5/8 - 3/4"	1.68	1.04	1.61	.68	.56	.20	.40	.80	50
086-106	086-112	3/4 - 7/8"	2.20	1.24	1.88	.78	.64	.22	.44	.92	25
086-107	086-113	7/8 - 1"	2.48	1.56	2.40	.92	.80	.25	.50	1.10	25

Material Specifications: Polyacetal engineered plastic with ultraviolet inhibitors.

Temperature Range: -40° to +100°C (-40° to +212°F)

Colour: Black



CATALOG 14

SPAENAUR

Inch

Pouce

Self-Clinching Standoffs

Colonnet auto-clinchage

Steel / Aluminum

MATERIALS:

Carbon Steel, Heat Treated,
Zinc or Cadmium Plated
per QQ-P-416, Type I, Class 3.

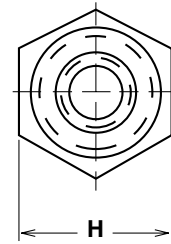
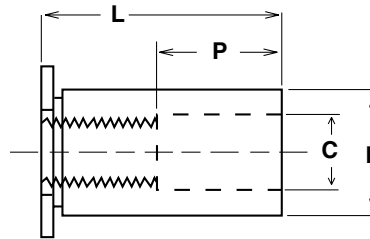
7075-T6 Aluminum,
No Finish

FOR USE IN:

Materials with Rockwell
Hardness of B-80 or less

Materials with Rockwell
Hardness of B-70 or less

Materials with Rockwell
Hardness of B-50 or less

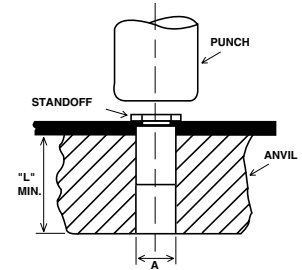


INSTALLATION PROCEDURE

1. Insert Standoff through hole in sheet into anvil.
2. Apply only sufficient squeezing force between parallel surfaces of punch and anvil to embed hex head flush in sheet. Avoid excessive pressures.

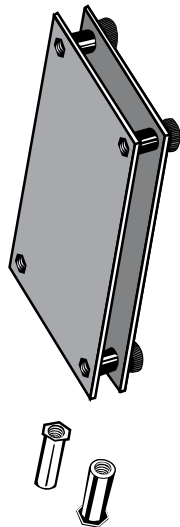
THREAD: Class 2B (MIL-S-7742)

"C" Dimension	"A" Hole in Anvil
.165"	.169"-.172"
.212"	.216"-.219"
.280"	.284"-.288"



For assembly of spaced panels, circuit boards and electronic components. Easily mounted, captive to panel, by squeezing into punched or drilled round holes. Use any hydraulic or mechanical press (not scissor action). Squeezing action embeds hexagonal head into ductile metal panel for high torque resistance. Displaced metal flows smoothly into undercut, to lock standoff securely into panel, flush with one surface.

Inch Sizes



PKG QTY. 100

THREAD SIZE		4-40	4-40	6-32	6-32	8-32	10-32
PANEL HOLE CODE SIZE		.166/.169"	.213/.215"			.281/.284"	
D		.160/.165"	.207/.212"			.275/.280"	
H		3/16"	1/4"			5/16"	
C		1/8"	1/8"	5/32"	5/32"	3/16"	13/64"
MIN. EDGE DISTANCE TO CENTRE OF HOLE		15/64"	17/64"			5/16"	
PANEL THICKNESS		.040" and up			.050" and up		
Length L	Dim. P	Kind of Metal	SPAENAUR No:				Through Thread Style
3/16"	NONE	STEEL	614-108	614-100	614-103		614-919
		ALUM	614-400				
STEEL				614-104			
ALUM		614-401	614-903		614-910	614-914	614-917
STEEL		614-109	614-101		614-906	614-911	
ALUM		614-402					
3/8"	3/16"	STEEL		614-102	614-105		614-110
		ALUM	614-403		614-907	614-912	614-915
Stainless Steel		614-920	614-C02-1K				
Stainless Steel		614-918	614-905	614-908	614-913	614-916	
ALUM		614-404					
5/8"	5/16"	Stainless Steel	614-900		614-909		
		STEEL			614-106		
3/4"		Stainless Steel	614-901				
1"	7/16"	STEEL			614-107		
1"	7/16"	Stainless Steel	614-902				
INSTALLATION (LB)		2000	2000	2000	2000	2500	2500
PUSH-OUT (LB)		160	160	160	300	400	400
TORQUE-OUT (IN-LB)		11	11	20	45	45	45
AXIAL PULL-THRU (LB)		175	200	250	300	450	450
▲TORQUE (IN-LB)		4-3/4	4-3/4	8-3/4	8-3/4	18	32

▲ Torque values are for reference only

For Metric Self Clinching Standoffs See Page G36

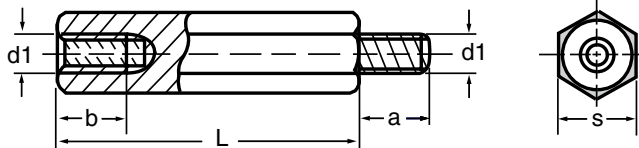
Self-Clinching Standoffs / Female-Male Standoffs

Metric

Colonnets à sertir / Colonnets mâles-femelles

Métrique

METRIC Threaded Hex Spacers with Internal and External Thread STEEL and BRASS



All dimensions in millimetres.

*Threaded length may be less.

SPAENAUR No.	L Spacer Body Length	d1 Thread Dia. x Pitch	Thread Length		S Across Flats (tol. h11)	Material and Finish	PKG QTY.
			a (±0.2)	b			
607-600	8 mm	M3 x 0.5 mm	5 mm	*6 mm	5.5 mm	STEEL, Zinc Plated	25
607-H93-1T	10 mm	M4 x 0.7 mm	6 mm	*7 mm	7.0 mm	STEEL, Zinc Plated	25
607-602	20 mm	M4 x 0.7 mm	6 mm	7 mm	7.0 mm	STEEL, Zinc Plated	25
605-036	15 mm	M4 x 0.7 mm	10 mm	10 mm	6.5 mm	BRASS, Nickel Pltd.	25

Stainless Steel

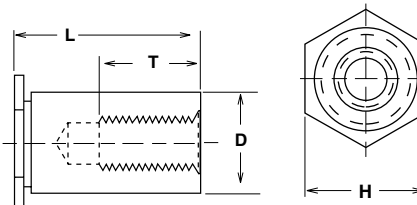
MATERIALS:

Carbon Steel, Heat Treated, Zinc or Cadmium Plated per QQ-P-416, Type I, Class 3.

300 Series Stainless Steel, Passivated, QQ-P-35, Type I.

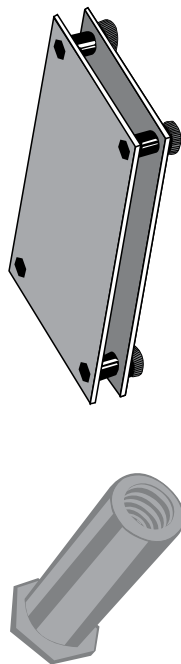
THREAD: Class 6H 1SO Metric

"D" Dimension	"A" Hole in Anvil
4.19 mm	4.3 mm
5.38 mm	5.5 mm
7.11 mm	7.2 mm



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Blind Thread Style



Metric Blind Thread Style				PKG QTY. 100	
THREAD SIZE		M3	M3		M4
PANEL HOLE CODE SIZE		4.20 mm	5.40 mm		7.20 mm
D		4.19 mm	5.38 mm		7.11 mm
H		4.8 mm	6.4 mm		7.9 mm
MIN. EDGE DISTANCE TO CENTRE OF HOLE		6.0 mm	6.8 mm		8.0 mm
PANEL THICKNESS		1. mm and up			1.3 mm and up
Length L	Dim. T	Kind of Metal			
(mm)	(mm)	Stainless Steel	615-900		
8	4.0	Stainless Steel			♦615-903
10	4.0	Stainless Steel	615-901	615-906	
12	5.0	Stainless Steel	*615-910	*615-904	
14	6.5	Stainless Steel	615-902		
16	6.5	Stainless Steel		615-905	
18	9.5	Stainless Steel		615-907	
22	9.5	Stainless Steel			
INSTALLATION & PERFORMANCE DATA					
INSTALLATION (kN)		6.7 - 8.9	6.7 - 8.9	8.9 - 11.1	
PUSH-OUT (N)		710	890	1780	
TORQUE-OUT (N°M)		1.24	1.35	5.08	
AXIAL PULL-THRU (N)		780	890	2000	
▲TORQUE (N°M)		0.55	0.55	2.0	

▲ Torque Values are for reference only.

See Page G35 for Inch Size Self Clinching Standoffs.

Inch

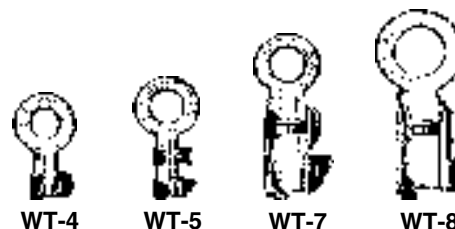
Solderless and Soldering Terminals / Connectors

Pouce

Cosses sans soudure / Connecteurs

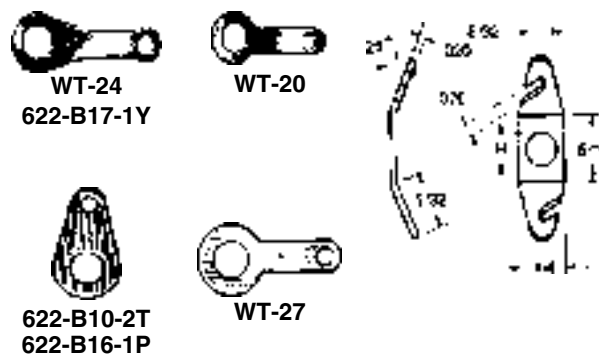
NON-INSULATED
RING TERMINALS BRASS - HOT TINNED

SPAENAUR No.	Screw Size	Style	Clamp Inside Width	Overall Length	PKG QTY.
WT-4	No. 8	Short	5/32"	9/16"	50
WT-5	No. 8	Long	7/64"	3/4"	50
WT-7	No. 10	Long	7/32"	15/16"	50
WT-8	1/4"	Long	3/16"	1-1/8"	50



SOLDERING FLAT TERMINALS
BRASS - HOT TINNED

SPAENAUR No.	Type	Screw Size	Wire Hole	Overall Length	PKG QTY.
WT-20	Flat	No. 6	5/64"	11/16"	50
622-B10-2T	Flat	No. 6	.078"	17/32"	50
WT-24	Flat	No. 6	.087"	7/8"	50
622-194	Flat	No. 8	.093"	7/8"	100
622-B16-1P	Flat	No. 8	.076"	17/32"	50
622-B17-1Y	Flat	No. 10	.087"	7/8"	50
WT-27	Flat	1/4"	5/64"	3/4"	50



SNAP TERMINAL CONNECTORS

SNAP PLUG

- 622-125** Clear Nylon
.156 Bullet Adapter
- 622-145** 16-14 AWG
.156 Bullet (Blue)
- 622-B25-1M**
Fully insulated
Bullet Receptacle (Blue)
(Mates with 622-145 & WT-64 Bullet)
- 622-B24-1W** 16-14 AWG
.180 Bullet (Blue)
- 622-162** 16-14 AWG
Bullet Receptacle
(Mates with 622-146 & WT-65 Bullet)

CLOSED END CONNECTORS

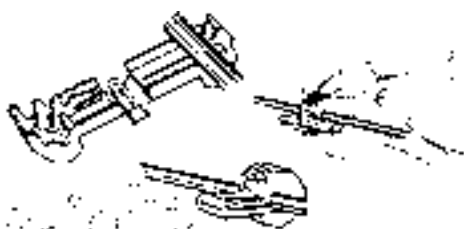
- 622-B06-1C** 22-18 AWG
 - 622-149** 18-10 AWG
- Closed -end Connectors
Clear Nylon with Tinned Copper

SELF STRIPPING TAP CONNECTOR

- 622-B26-1X** 18-14 AWG
Trailer Connector
(Blue)

FEMALE T-TAP CONNECTORS (Fully Insulated)

Electrolytic Copper - Tin Plated Finish



Male terminal not included.

- 622-181** For 22-18 gauge wire
Use with 1/4" M.Q.D.
Nos. 622-119 & 622-133
- 622-182** For 16-14 gauge wire
Use with 1/4" M.Q.D.
Nos. 622-120 & 622-137
- 622-183** For 12-10 gauge wire
Use with 1/4" M.Q.D.
Nos. 622-121 & 622-180

For tapping current from lead wire. No stripping is required. Place wire to be tapped in locating notch, and close with common pliers. Tap is fully installed and ready to accept 1/4" blade insulated male terminal.

PKG QTY. 50

CATALOG 14 SPAENAUR

Solderless Ring Terminals / Connectors

Inch

Cosses à anneaux sans soudure

Pouce

NON-INSULATED Pure Electrolytic Copper Heavy Tin Plating

QUICK CONNECT TERMINALS



WT-56

1/4" Male Tab
Wire Size - 16-14 ga.



WT-57

Female Tab Socket
Wire Size - 16-14 ga.



WT-59

Angle Female Tab Socket
Wire Size - 16-14 ga.

FLAG TYPE TERMINALS



WT-50

Hole Dia. - 13/64"
Stud Size - 8-10
Wire Size - 22-18 ga.



WT-51

Hole Dia. - 13/64"
Stud Size - 8-10
Wire Size - 16-14 ga.



WT-52

Hole Dia. - 13/64"
Stud Size - 8-10
Wire Size - 12-10 ga.

RING TONGUE TERMINALS



622-B15-1A

Hole Dia. - 9/64"
Stud Size - 5-6
Wire Size 22-18 ga.



WT-33

Hole Dia. - 9/64"
Stud Size - 5-6
Wire Size - 22-16 ga.



WT-34

Hole Dia. - 13/64"
Stud Size - 10
Wire Size - 22-18 ga.



WT-35

Hole Dia. - 17/64"
Stud Size - 12-1/4"
Wire Size - 22-18 ga.

SPADE FLAGS

For 22-18 AWG Studs

622-173

#6



622-174

#8



Brass,
Tin Plated

For 16-14 AWG Studs

622-175

#6



622-176

#8



Copper,
Tin Plated

622-141

#10

For 12-10 AWG Studs

622-177

#6



622-178

#8



Copper,
Tin Plated

622-142

#10

SNAP TERMINAL CONNECTORS



622-B23-1K

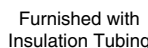
Snap Terminal (Standard)
For use with
16-14 gauge wire



622-125

Snap Terminal Connector

Fits No. WT-64



Furnished with
Insulation Tubing



WT-65

Snap Terminal (Large)
For use with
16-14 gauge wire

622-148

**Double
(Male-Female)
ADAPTER**

For 1/4" mating parts



Brass

622-144

**Economy,
Female Disconnect**
Wire Range 16-14

For 1/4" Blade



Brass, Tin Pltd.

622-147

**Female
Piggyback
Disconnect Terminal**
Wire Range 20-14

Brass, Tin Plated



For 1/4" blade

SPADE TONGUE TERMINALS



WT-45

Hole Dia. - 9/64"
Stud Size - 4-6
Wire Size - 22-18 ga.
(with flange)



WT-46

Hole Dia. - 9/64"
Stud Size - 4-6
Wire Size - 22-18 ga.



WT-47

Hole Dia. - 9/64"
Stud Size - 4-6
Wire Size - 16-14 ga.



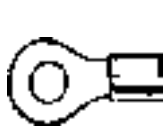
WT-48

Hole Dia. - 13/64"
Stud Size - 10
Wire Size - 16-14 ga.



WT-49

Hole Dia. - 13/64"
Stud Size - 10
Wire Size - 12-10 ga.



622-B02-1X

Hole Dia. - 13/64"
Stud Size - 10
Wire Size - 12-10 ga.



WT-41

Hole Dia. - 13/32"
Stud Size - 3/8"
Wire Size - 16-14 ga.

BUTT CONNECTORS



WT-53

Wire Size - 22-18 ga.



WT-54

Wire Size - 16-14 ga.



WT-55

Wire Size - 12-10 ga.

HOOK TYPE TERMINAL



WT-75

Hole Dia. - 11/64"
Stud Size - 4-8
Wire Size - 22-18 ga.



622-185

Hole Dia. - 17/64"
Stud Size - 12-1/4"
Wire Size - 12-10 ga.



622-B01-1P

Hole Dia. - 17/64"
Stud Size - 12-1/4"
Wire Size - 12-10 ga.

PKG QTY. 50 - ALL ITEMS ON THIS PAGE

Illustrations on this page are approximate size
Stock may differ slightly from that shown

G

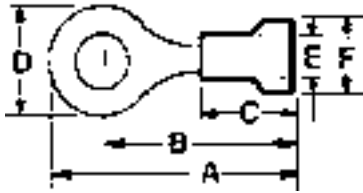
Inch

Insulated Solderless Terminals

Pouce

Bornes isolées sans soudure

INSULATED



SINGLE-GRIP

**Pure Electrolytic Copper
Heavy Bright Tin Plating**

Heavy plastic sleeve has been added to basic terminal to provide insulation from tongue to wire insulation. Sleeve also prevents wire from flexing at the crimp for greater strength.

Colour Coded Insulation		
22-18 Red	16-14 Blue	12-10 Yellow

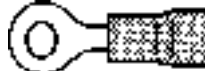
PKG QTY. 100

RING TONGUE TERMINALS



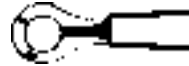
WT-86

Wire 22-18, Stud 5-6, A = 25/32,
B = 43/64, C = 7/16, D = 7/32,
E = 1/8, F = 15/64



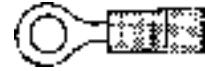
WT-87

Wire 22-18, Stud 5-6, A = 27/32,
B = 23/32, C = 7/16, D = 9/32,
E = 1/8, F = 15/64



622-187

Wire 22-18, Stud 8, A = 59/64,
B = 47/64, C = 15/32, D = 13/32,
E = 1/8, F = 15/64



WT-88

Wire 22-18, Stud 10, A = 55/64,
B = 45/64, C = 7/16, D = 21/64,
E = 1/8, F = 15/64



WT-89

Wire 22-16, Stud 12-1/4, A = 1-7/64,
B = 57/64, C = 7/16, D = 15/32,
E = 1/8, F = 15/64



WT-90

Wire 22-18, Stud 3/8, A = 1-1/4,
B = 63/64, C = 7/16, D = 17/32,
E = 1/8, F = 15/64

PKG QTY. 100



WT-91

Wire 16-14, Stud 5-6, A = 3/4,
B = 41/64, C = 7/16, D = 15/64,
E = 5/32, F = 1/4



WT-92

Wire 16-14, Stud 5-6, A = 55/64,
B = 45/64, C = 7/16, D = 21/64,
E = 5/32, F = 1/4



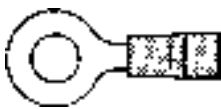
622-188

Wire 16-14, Stud 8, A = 61/64,
B = 3/4, C = 31/64, D = 13/32,
E = 3/16, F = 1/4



WT-93

Wire 16-14, Stud 10, A = 29/32,
B = 47/64, C = 7/16, D = 21/64,
E = 5/32, F = 1/4



WT-94

Wire 16-14, Stud 12-1/4, A = 1-7/64,
B = 57/64, C = 7/16, D = 15/32,
E = 5/32, F = 1/4



WT-95

Wire 16-14, Stud 3/8, A = 1-1/4,
B = 63/64, C = 7/16, D = 17/32,
E = 5/32, F = 1/4

PKG QTY. 100



622-190

Wire 12-10, Stud 6, A = 63/64,
B = 13/16, C = 9/16, D = 23/64,
E = 17/64, F = 21/64



622-189

Wire 12-10, Stud 8, A = 63/64,
B = 13/16, C = 9/16, D = 23/64,
E = 17/64, F = 21/64



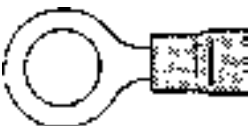
622-B08-1T

Wire 12-10, Stud 10, A = 59/64,
B = 47/64, C = 7/16, D = 3/8,
E = 13/64, F = 21/64



WT-97

Wire 12-10, Stud 12-1/4, A = 1-11/64,
B = 59/64, C = 7/16, D = 33/64,
E = 13/64, F = 21/64



WT-98

Wire 12-10, Stud 3/8, A = 1-9/32,
B = 63/64, C = 7/16, D = 19/32,
E = 13/64, F = 21/64

Illustrations on this page are approximate size
Stock may differ slightly from that shown

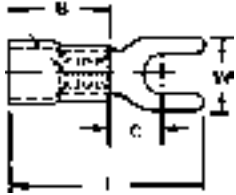
PKG QTY. 100

Insulated Solderless Fork & Spade Terminals

Inch

Cosses à fourche et cosses ouvertes isolées sans soudure

Pouce



**INSULATED
FORK TONGUE TERMINALS**

Pure Electrolytic Copper
Heavy Bright Tin Plating

Colour Code:

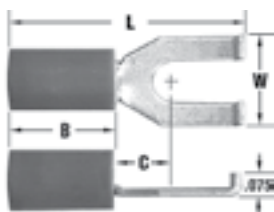
22-18 Wire Size	Red
16-14 Wire Size	Blue
12-10 Wire Size	Yellow

PKG QTY.100

SPAENAUR No.	WIRE RANGE	MAX. INSUL DIA. OF WIRE	FOR STUD SIZE	HOLE SIZE	C	W	B	L	ILLUSTRATION
WT-100	22-18	.160"	6	.144"	5/16"	5/16"	1/2"	1"	
622-108	22-18	.160"	6	.144"	1/4"	19/64"	1/2"	29/32"	
622-191	22-18	.160"	8	.169"	1/4"	19/64"	1/2"	29/32"	
622-B07-1N	16-14	.185"	6	.144"	1/4"	19/64"	1/2"	31/32"	
622-109	16-14	.185"	6	.144"	9/32"	23/64"	1/2"	31/32"	
622-192	16-14	.185"	8	.169"	9/32"	23/64"	1/2"	31/32"	
WT-102	16-14	.185"	10	.196"	9/32"	23/64"	1/2"	31/32"	
622-B14-1X	12-10	.260"	8	.169"	9/32"	3/8"	1/2"	1"	
WT-103	12-10	.260"	10	.196"	9/32"	3/8"	1/2"	1"	

FLANGED FORK TONGUE TERMINALS — Insulated

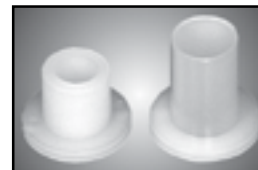
PKG QTY.100 (Except 622-165, PKG QTY. 50)



SPAENAUR No.	Wire Size	Max. Insul. Dia. of Wire	Stud Size	Hole Size	C	W	B	L
WT-99	22-18	.160"	6	.144"	1/4"	19/64"	1/2"	29/32"
622-164	16-14	.185"	6	.144"	1/4"	19/64"	1/2"	29/32"
622-165	16-14	.185"	8	.169"	1/4"	19/64"	1/2"	29/32"

See page G44 for CRIMPING TOOLS.

Pages D72 and D73 feature NYLON MACHINE SCREW INSULATORS and NYLON SHOULDER WASHERS, very useful in isolating and reducing corrosion in electrical applications.



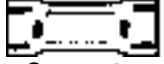


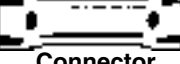


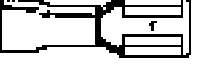








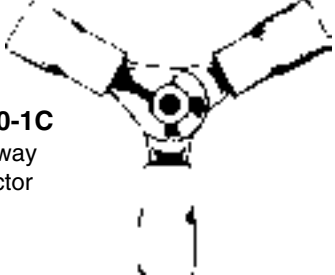








Inch

Insulated Solderless Terminals, Connectors, Couplers & Adapters

Pouce

Bornes, connecteurs, accoupleurs et adaptateurs isolés sans soudure

WIRE RANGE 22-18 (RED) (Metric .3-1.3 mm)		WIRE RANGE 16-14 (BLUE) (Metric 1.3-2.5 mm)		WIRE RANGE 12-10 (YELLOW) (Metric 2.5-6 mm)	
622-110 Parallel Connector		622-B19-1N Parallel Connector		622-112 Parallel Connector	
WT-83 Butt Connector		WT-84 Butt Connector		WT-85 Butt Connector	
622-116 1/4" F.Q.D. Connector		622-117 1/4" F.Q.D. Connector		622-118 1/4" F.Q.D. Connector	
622-119 1/4" M.Q.D. Connector		622-120 1/4" M.Q.D. Connector		622-121 1/4" M.Q.D. Connector	
622-122 3/16" F.Q.D. Connector		622-123 3/16" F.Q.D. Connector		For Stud 622-129 #6 622-171 #8 622-161 #10 	
For Stud 622-B22-1T #6 622-170 #8 622-159 #10 Hook 	622-124 3/16" M.Q.D. Connector		622-B20-1C Three-way connector 		
For Stud 622-168 #6 622-169 #8 622-130 #10 Locking Spade 	For Stud 622-128 #6 622-167 #8 622-160 #10 Hook 	622-172 #6 622-166 #8 622-131 #10 Locking Spade 			
622-B13-1M Three-way connector 	622-B21-1N Four-way connector 	622-139 Four-way connector 			

G

FULLY INSULATED NYLON COUPLER

A male and a female slip-on encased in nylon, that when connected form a fully insulated assembly.

- Eliminates post-insulation
- Helps prevent shorting or flash over when disconnected with power on



622-126
1/4" M.Q.D.
Adapter
Clear Nylon

SPAENAUR No.	Wire Range	SPAENAUR No.	Wire Range	Max. Temp Rating
622-132 Female	22-18	622-B09-1K Male	22-18	105°C
622-B05-1Y Female	16-14	622-137 Male	16-14	105°C
622-A01-1Z Female	12-10	622-180 Male	12-10	105°C

Will take 1/4" blade Have 1/4" blade

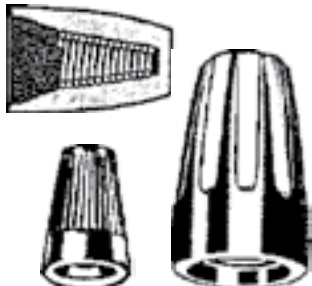
Contact Sales Desk For Package Quantities

Wire Terminal Fasteners

Inch

Fixations de barrette


Pouce



TWIST-ON NYLON WIRE CONNECTORS

Black connectors have Steel Insert
PKG QTY. 50


SPAENAUR No.	Colour	Wire Combinations
622-B04-1P	Black	2 #20 or 2 #18
622-152	Ivory	2 or 3 #18, 2 #16
622-153	Black or Orange	2, 3 or 4 #18 2 or 3 #16, 2 #14
622-154	Yellow	5 or 6 #18 2 or 3 #14 or 2 #12
622-155	Red	12 #18, 2, 3 or 4 #12 or 2 or 3 #10



TERMINAL CUP WASHERS FOR BINDING HEAD SCREWS

BRASS
Plain and Nickel Plated
PKG QTY. 100

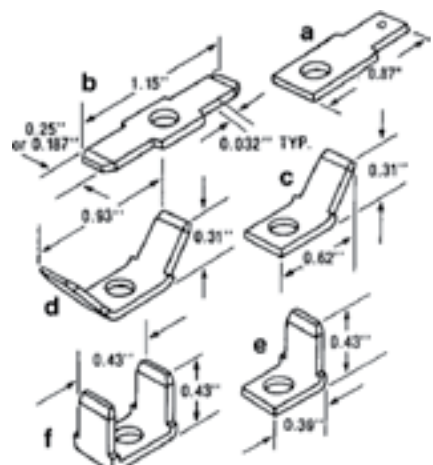
SPAENAUR No.		Screw Size	Outside Diameter
Plain Brass	Nickel Plated		
W-533	W-533N	6	.21/64"
W-534	W-534N	8	.450"
W-535	W-535N	10	.498" - .512"
W-536	W-536N	12	9/16"
643-A03-2K	W-537N	14	37/64"



C-WASHERS

Steel - Zinc Plated

SPAENAUR No.	A	B	Thick.	PKG QTY.
W-83C	5/32"	5/16"	.032"	100



Hole Size .140"

QUICK CONNECT BLADES

BRASS, Zinc plated

.187" and .25" quick-connect blades are available for connecting wire terminated with female quick connects. Single and double sided types in flat, 45°, and 90° angle bends can be supplied. Material is Brass with Zinc plating. Various quick-connects can be combined.

Style		SPAENAUR No.	
		Blade Width 0.187"	Blade Width 0.25"
b	Flat, Two-Sided	—	622-303
d	45°, Two-Sided	622-306	622-307
f	90°, Two-Sided	622-310	—
a	Flat, Single-Sided	622-300	622-301
c	45°, Single-Sided	622-304	622-B12-1W
e	90°, Single-Sided	—	622-309


PKG QTY. 100

PLASTIKIT 804-083
«PLASTIKIT»

Insulated
SOLDERLESS TERMINALS

16 SIZES
160 PIECES

Put up in a translucent polypropylene plastic container.
Size: 7" x 3-1-2" x 1-1/4"



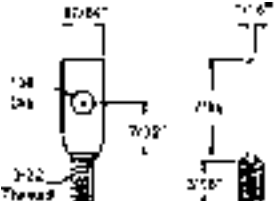


For the complete assortment contents turn to A103


Inch

Ignition Terminals / Spring Clips

Pouce

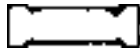
Bornes d'allumage / pincettes à ressort

<p align="center">SPADE BOLTS STEEL - CADMIUM PLATED</p>  <p>Spenaaur No. R-328 Straight Type 8-32 x 3/16" Thread 9/64" (.138) Hole Dia. 43/64" O/A Length PKG QTY. 100</p>	<p align="center">IGNITION REPAIR PARTS</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">  <p>Spenaaur No. WT-106 Spark Plug Clip (Angle) Uninsulated 7 mm</p> <p>NOTE: Use No. 876-F18-1Tor No. 876-1836 Pliers for Crimping (See page G44.)</p> <p align="right">PKG QTY. 100</p> </div> <div style="width: 45%;">  <p>Spenaaur No. 622-B11-1K Spark Plug Clip (Straight) Uninsulated 7 mm</p> <p align="right">PKG QTY. 100</p> </div> </div>
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<p align="center">SPRING CLIPS</p> <p>Made of Spring Brass Nickel Plated</p> <p>Spenaaur No. C-240 H = .144"</p> <p align="right">PKG QTY. 50</p>	<p>Double Type Solid Copper</p> <p>3/8" W x 2" L Hole = .187"</p> <p>Spenaaur No. C-242 Spring Clip</p>  <p align="right">PKG QTY. 50</p>
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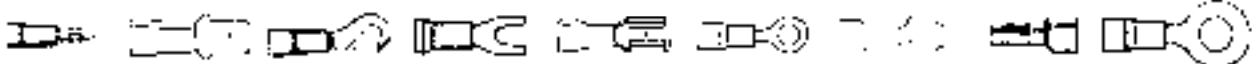
ASSORTMENT 805-628A

Large size SOLDERLESS TERMINALS

67 Sizes  **Total: 1010 terminals**

Includes insulated Standard Ring, Spade, Hook, Three-way and Four-way Terminals, Quick-disconnect, Butt, Trailer, and T-type connectors. Most complete "Terminal" Kit available

Large Size Drawer: 18" x 12" x 3" With 32 SCOOPED compartments.
Drawer fits Slide Racks on page A3
Shipping Weight: **4.86 kg** (12.75 lbs.)



For the complete assortment contents turn to A104

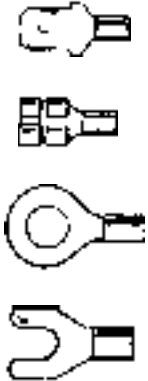

ASSORTMENT A-200-B

NON-INSULATED SOLDERLESS TERMINALS

24 SIZES - 478 PIECES
Plus one (T-138) Crimping Tool.

REGULAR SIZE welded STEEL Drawer has hinged lid, "scooped" bins, and is finished in Grey enamel.
Drawer will fit into Slide Racks shown on page A2

Shipping Wt. **2.84 kg** (6-1/4 lbs.)

For the complete assortment contents turn to A105

CATALOG 14 SPAENAUR

Crimpers / Wire Strippers / Cutters & Terminal Assortment

Inch

Sertisseuses / dénudeuses / pinces coupantes et assortiment de bornes

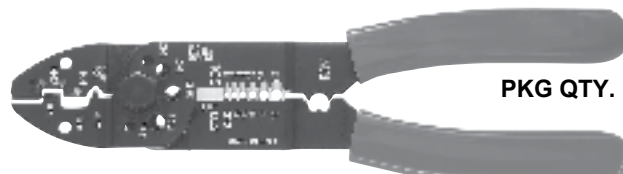
Pouce



PKG QTY. 1

**876-F18-1T
SOLDERLESS TERMINAL CRIMPER**

Ideal for use on non-insulated solderless terminals. Special crimping dies designed to provide strong, secure bond between terminal and wire. Stripping dies will handle 22 to 10 gauge cable easily, without nicking wire. Bolt cutting dies handle five popular-sized bolts - 4-40, 6-32, 8-32, 10-24 and 10-32. Black oxide finish with deep etched markings. Jumbo cushion grip handles for added comfort - puts more power into the squeeze.



PKG QTY. 1

**876-1836
ALL PURPOSE ELECTRICIAN'S TOOL**

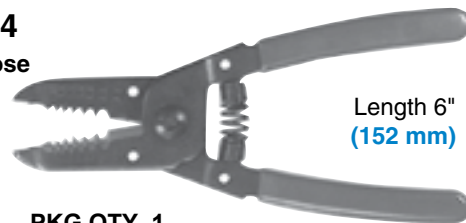
Has two wire cutters, cuts and strips 8 to 18 AWG solid wire or 10 to 22 AWG stranded wire, crimps insulated and non-insulated terminals, lugs and splices.

WIRE STRIPPER AND CUTTER

Strips six standard wire sizes without nicking wire: No. 10 through 20 AWG (.26 through .8 mm) Scissors action of 1/2" wide cutter makes clean cuts with little effort. Serrated nose jaws to bend, shape, or pull wire; holes for looping wire ends. Compact; only 6" long. Coil-spring opening action reduces fatigue. Comfortable, plastic covered handles.

876-1794

Multi-Purpose



Length 6"
(152 mm)

PKG QTY. 1

**876-528
ELECTRICIANS' SCISSORS**

Full length 5"
Length of cut 1-7/8"

Hot drop-forged. Fully nickel plated. Commercial finish. Double stripping notch for 19 gauge (.035) and 23 gauge (.022) wire. Scraper and file on back edge of blade.



PKG QTY. 1

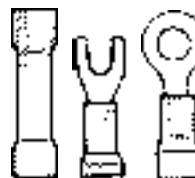
**ASSORTMENT
ASSORTIMENT A-215**

**Plastic Insulated
SOLDERLESS
TERMINALS**

**21 SIZES - 541 PIECES
Plus one (876-1836) Crimping Tool.**

REGULAR SIZE welded STEEL Drawer has hinged lid, "scooped" bins and is finished in Grey enamel. Drawer will fit into Slide Racks shown on page A2

Shipping Wt. **2.95 kg** (6-1/2 lbs.)



Name	Insulation Length	Insulation Colour	Compatible Wire Size	Spaenaur No.	Compatible Screw/Stud Size	Outside Width	Overall Length	Qty.	Page				
Ring -Tongue Terminals Insulated	7/16"	Yellow	12 AWG - 10 AWG	622-B08-1T	#10	3/8"	59/64"	25	G39				
				WT-97	#12 - 1/4"	33/64"	1-11/64"						
				WT-98	3/8"	19/32"	1-9/32"						
		Blue	16 AWG - 14 AWG	WT-91	#5 - #6	15/64"	3/4"	30					
				WT-92	#10	21/64"	55/64"						
				WT-93	#12 - 1/4"	15/32"	1-7/64"						
	Red	22 AWG - 16 AWG	WT-94	#5 - #6	7/32"	25/32"	30						
			WT-89	#12 - 1/4"	15/32"	1-7/64"							
			WT-90	3/8"	17/32"	1-1/4"							
	Fork -Tongue Terminals	1/2"	Yellow	12 AWG - 10 AWG	WT-103	#10	3/8"	1"		25			
					Blue	16 AWG - 14 AWG	622-B07-1N	#4 - #6			19/64"	29/32"	30
							WT-102	#10			23/64"	31/32"	
Insulated Solderless Butt Connector		Red	22 AWG - 18 AWG	WT-100	#5 - #6	5/16"	1"	30					
				WT-85	12 AWG - 10 AWG	25	G41						
				WT-84	16 AWG - 14 AWG								
All Purpose Electrician's Tool		Red	22 AWG - 18 AWG	WT-83	18 ga. - 8 ga.			876-1836	1	G44			

Inch

Heat Guns & Torches / Crimp 'N Seal® Connectors

Pouce

Pistolets chauffants et chalumeaux / connecteurs Crimp 'N Seal®



Electric Heat Gun

115 VOLTS AC

Two temperature settings 750°F & 1100°F. Cool down time not required. Fold down stand for hands free operation.

SPAENAUR No. 876-194

PKG QTY. 1



Overall Height 5-3/4"

Power Torch Portable Butane Heat Tool

PKG QTY. 1

Ideal for heat shrinkable connectors and tubing, soldering, and a variety of other applications. This versatile heat tool is fast and light weight, and will stand alone for hands-free operation. The self-igniting torch uses butane fuel, and is refillable. The tank capacity provides approximately 70 minutes of continuous usage.

SPAENAUR No. 876-F51-1A



Heat Shrink Tubing



Heat Shrink Connectors



Soldering

(Butane not included.)



Crimp 'N Seal®

Waterproof HEAT SHRINK Connectors

Crimp 'N Seal® waterproof connectors provide an environmental seal and offer superior strain relief. When heat is applied, the tough polymer jacket shrinks while simultaneously activating the adhesive inside the tubing to completely encapsulate the connection.

Easy Installation steps:



1. STRIP

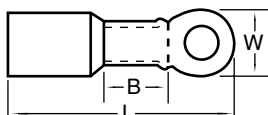


2. CRIMP



3. HEAT

Crimp 'N Seal® Waterproof HEAT SHRINK Connector Rings



SPAENAUR No.	Wire Range	Stud Size	"B"	"W"	"L"	Max. Wire Insulation	PKG QTY.
622-001	22-18	6	.250"	.25"	1.06"	.170"	10
622-002	22-18	10	.250"	.31"	1.08"	.170"	10
622-003	16-14	6	.250"	.31"	1.00"	.190"	10
622-004	16-14	8	.250"	.31"	1.03"	.190"	10
622-005	16-14	10	.250"	.31"	1.03"	.190"	10
622-006	16-14	1/4"	.250"	.46"	1.27"	.190"	10
622-007	16-14	5/16"	.250"	.46"	1.27"	.190"	10
622-008	16-14	3/8"	.250"	.53"	1.30"	.190"	10
622-009	12-10	8	.250"	.37"	1.22"	.240"	10
622-010	12-10	10	.250"	.37"	1.20"	.240"	10
622-011	12-10	1/4"	.250"	.52"	1.41"	.240"	10
622-012	12-10	3/8"	.250"	.59"	1.47"	.240"	10
622-013	12-10	1/2"	.250"	.72"	1.54"	.240"	10

CATALOG 14

SPAENAUR

Crimp 'N Seal® Forks / Splices / Disconnect & Bullets

Inch

Cosses à fourche / épissures / déconnexions et cosses cylindriques Crimp 'N Seal®

Pouce

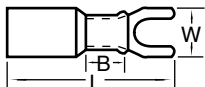


Crimp 'N Seal®

Waterproof HEAT SHRINK Connectors



Forks



SPAENAUR No.	Wire Range	Stud Size	"B"	"W"	"L"	Max. Wire Insulation	PKG QTY.
622-014	22-18	6	.250"	.32"	1.04"	.170"	10
622-015	22-18	10	.250"	.32"	1.04"	.170"	10
622-016	16-14	6	.250"	.38"	1.07"	.190"	10
622-017	16-14	8	.250"	.38"	1.07"	.190"	10
622-018	16-14	10	.250"	.38"	1.07"	.190"	10
622-019	12-10	10	.250"	.38"	1.20"	.240"	10

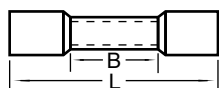
3 & 4 Way Splices



SPAENAUR No.	Wire Range	Style	Stud Size	Overall Dia.	Max. Wire Insulation	PKG QTY.
622-020	22-18	3 WAY	.15"	1.60"	.170"	10
622-021	22-18	4 WAY	.15"	1.60"	.170"	10
622-022	16-14	3 WAY	.15"	1.75"	.190"	10
622-023	16-14	4 WAY	.15"	1.75"	.190"	10
622-024	12-10	3 WAY	.15"	2.15"	.240"	10
622-025	12-10	4 WAY	.15"	2.15"	.240"	10



Butt Splices

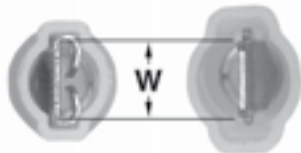


SPAENAUR No.	Wire Range	"B"	"L"	Max. Wire Insulation	PKG QTY.
622-026	22-18	.58"	1.45"	.170"	10
622-027	16-14	.58"	1.45"	.190"	10
622-028	12-10	.74"	1.64"	.240"	10



FEMALE

MALE

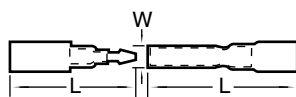


Quick Disconnects Fully Insulated

SPAENAUR No.	Wire Range	Style	"W"	"L"	Max. Wire Insulation	PKG QTY.
622-029	22-18	MALE	.25"	1.50"	.170"	10
622-030	22-18	FEMALE	.25"	1.42"	.170"	10
622-031	16-14	MALE	.25"	1.50"	.190"	10
622-032	16-14	FEMALE	.25"	1.42"	.190"	10
622-033	12-10	MALE	.25"	1.45"	.240"	10
622-034	12-10	FEMALE	.25"	1.40"	.240"	10



Bullets



SPAENAUR No.	Wire Range	Style	"W"	"L"	Max. Wire Insulation	PKG QTY.
622-035	16-14	MALE	.157"	1.21"	.190"	10
622-036	16-14	FEMALE	.156"	1.82"	.190"	10