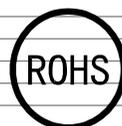


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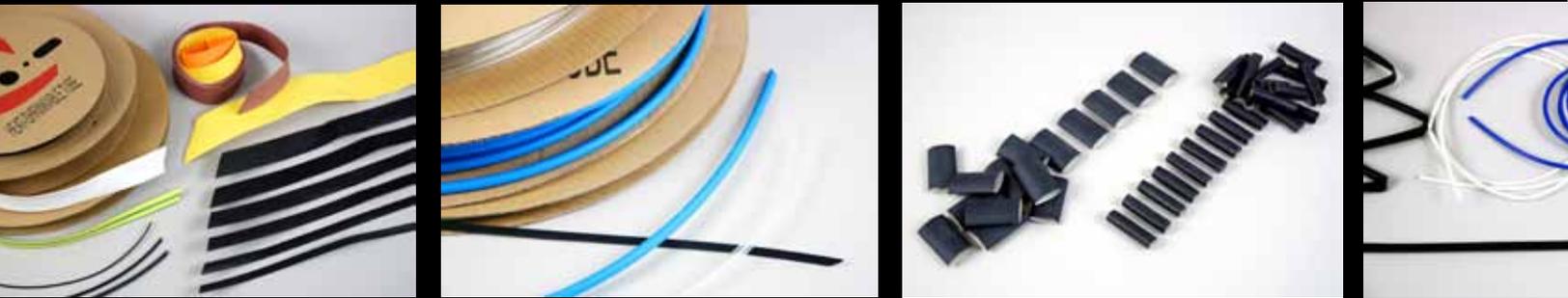
HEAT SHRINK TUBING



POLYOLEFIN SINGLE WALL TUBING • POLYOLEFIN DUAL WALL TUBING
SPECIAL DESIGN SINGLE WALL TUBING • EXTRUSION TUBE

CYG AGENT

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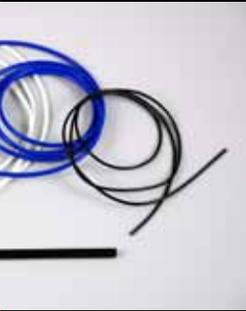
CYG Electronics (Shenzhen) Co. Ltd. (CYG) is the leading manufacturer of heat shrinkable products in China. With more than 15 years experience in industry research and development, CYG is the 3rd largest heat shrink manufacturer in the world. CYG now has six sub-factories, and went public with a successful Chinese stock market launch in 2002. [Shanghai Stock Exchange Code: 600525]

CYG produces a comprehensive range of heat shrinkable tubing in various colors and shrink ratios, Teflon tubing products and PVC tubing. All products are manufactured under TS16949 Quality System and ISO9001 Environment System certifications and are produced to meet or exceed UL224 or MIL approval requirements. They are widely used in fields such as automotive, communications, construction, electrical, energy and logistics.

Environmentally responsible production is a requirement at CYG. As both a Samsung and Sony Green Partner, our products not only meet Sony's environment substance requirements, but are also EU ROHS compliant.

Today, CYG enjoys an excellent reputation for exporting high quality products to Europe, North America, South America, Australia, and South East Asia.

Being a key supplier of electrical insulation and protection products, it is our mission to deliver safe, reliable and innovative new products that combine optimal value with high quality. We back everything we manufacture with exceptional customer service to our partners.





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To place an order or for any questions,
call customer service at:
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orders@cygheatshrink.com

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**CB-HFT(600) UL/CUL NON-ADHESIVE
HEAT SHRINKABLE TUBING**

CB-HFT(600) is UL/CUL rated halogen-free, flexible, flame-retardant polyolefin 2:1 heat shrinkable tubing. This tubing is low smoke generating, abrasion resistant and in case of burning, produces no dioxin. CB-HFT tubing is widely used in enclosed areas where a flame-retardant, halogen-free environment is required. It is perfect for electrical and electronics applications and has uses in fields such as aerospace, automotive, construction, power delivery, and mass transit vehicles including buses, trains, airplanes, and marine vessels.



**Certifications: UL, CUL, F-mark,
Sony Green Partner**

SPECIFICATIONS

Specifications of HFT(600):

Item	Specifications	
Shrink Temperature (C)	90C	
Operating Temperature Range (C)	125C	
Radial Shrinking Ratio (%)	≥50	
Longitudinal Change (%)	≤±5	
Tensile Strength (Mpa)	≥10.4	
Elongation at break (%)	≥200	
Aging in Circulating-air Oven	158.0±1.0°C, 168hrs	
After aging	Tensile Strength (Mpa)	≥7.3
	Elongation at break (%)	≥100
Volume Resistance (Ω .cm)	≥10 ¹⁴	
Dielectric Strength at 1 min, AC2500V	No breakdown	
Heat shock	No cracking	
Flammability	VW-1	
Concentricity (%)	≥70	

SIZING

Size (Inches) (Reel Size in feet)	As Supplied (inches)		After Recovery (inches)	
	MIN ID	WALL	MAX ID	WALL
1/16 (500 ft)	.062	.0078±.003	≤.0313	.0157±.0024
3/32 (500 ft)	.093	.0078±.003	≤.0469	.0165±.0032
1/8 (500 ft)	.125	.0098±.004	≤.0625	.0181±.0032
3/16 (250 ft)	.187	.0098±.004	≤.0938	.0196±.0039
1/4 (250 ft)	.25	.0110±.004	≤.125	.0220±.0039
5/16 (250 ft)	.313	.0118±.004	≤.157	.0228±.0039
3/8 (200 ft)	.375	.0118±.004	≤.1875	.0236±.0039
1/2 (200 ft)	.50	.0141±.005	≤.25	.0256±.0047
5/8 (200 ft)	.625	.0141±.005	≤.313	.0275±.0047
3/4 (100 ft)	.75	.0157±.006	≤.375	.0295±.0047
1 (100 ft)	1	.0157±.006	≤.50	.0354±.0059
1-1/2 (100 ft)	1.5	.0216±.009	≤.75	.0433±.0098
2 (100 ft)	2	.0236±.009	≤1	.0472±.0098
3 (100 ft)	3	.0275±.012	≤1.5	.0571±.0098
4 (100 ft)	4	.0275±.012	≤2	.0571±.0098

Other sizes are available upon special order.

Part numbers for above products are CB-HFT600-(Dia. Size)-(Color)-(Reel Size), for example, CB-HFT600-1/2-BK-200 would be HFT600 series, in a 1/2" diameter, in black, on a standard 200 foot reel. 1/8" through 3/8" are available in a Flat style (option) for easier use with printers.

CB-HFT(TM) HEAT-SHRINKABLE IDENTIFICATION MARKER SLEEVES

CB-HFT(TM)-L is our ladder material. CB-HFT(TM)-B is our bulk material on a reel. CB-HFT(TM) is used to identify wire and cable, tools, hoses and equipment in operating environments where temperatures range from 55°F to 135°F. It can withstand abrasion and exposure to cleaning solvents and other industrial fluids. Sleeves are flame-retardant and can be used for electrical insulation.

This tubing can be custom printed with words and symbols on both sides by thermal transfer equipment and all markings are permanent after printing. Available in 2:1 and 3:1 shrink ratios and in many different sizes and shapes.



Certificate: UL, CUL, F-mark, Sony Green Partner

Standard: UL224, AMS-DTL-23053/5, SAE-AS81531, MIL-STD-202

Standard color: flat white and yellow

SPECIFICATIONS

Specifications:

Item	Specifications
Physical performance	
Operation temp.	-55°C~135°C
Tensile strength (M Pa)	≥10.3Mpa
Ultimate elongation ratio(%)	≥200%
Flexibility (-55°C, 4hrs)	No cracking
Heat shock	No cracking, dripping, flowing
Print performance	
UL 224,	50 Rubber erasure , identification
MIL-M-81531-4.6.2	50 Rubber erasure , identification
MIL-STD-202	30 Rubber erasure , identification
Electrical performance	
Dielectric strength	≥19.7KV/mm
Volume Resistance	≥1014Ω•cm
Flammability as per AMS-DTL-23053	Average burn time is <1
Fluid resistance (23°C, 24hrs)	Print identified
Tensile strength (M Pa)	≥6.5Mpa
Ultimate elongation ratio(%)	≥100%
MIL-M-81531-4.6.2	20 rubber erasure, identification

SIZING CB-HFT (TM) 3X

SIZE Inch	Min Expanded diameter as supplied (mm)	Max diameter After recovery (mm)	Recommended use range (mm)
3/32	2.4	0.80	0.9-2.0
1/8	3.2	1.07	1.1-2.7
3/16	4.8	1.60	1.8-4.1
1/4	6.4	2.11	2.3-5.5
3/8	9.5	3.2	3.5-8.0
1/2	12.7	4.2	4.7-10.8
3/4	19.1	6.35	7-16.3
1	25.4	8.46	9.3-21.6
1-1/2	38.1	12.7	13-33.5
2	50.8	16.9	17-48

SIZING CB-HFT (TM) 2X

SIZE Inch	Min Expanded diameter as supplied (mm)	Max diameter After recovery (mm)	Recommended use range(mm)
3/32	2.4	1.2	1.3-2.0
1/8	3.2	1.6	1.7-2.7
3/16	4.8	2.4	2.5-4.1
1/4	6.4	3.2	3.3-5.5
3/8	9.5	4.8	4.9-8.0
1/2	12.7	6.4	6.5-10.8
3/4	19.1	9.5	9.6-16.3
1	25.4	12.7	12.8-21.6
1-1/2	38.1	19.1	19.2-33.5
2	50.8	25.4	25.5-48

**CB-HFT(3X) ,CB-HFT(4X) UL/CUL
NON-ADHESIVE HEAT SHRINKABLE TUBING**

CB-HFT(3X) 3:1 shrink ratio and CB-HFT(4X) 4:1 shrink ratio are UL/CUL rated, non-adhesive, halogen-free, flexible, flame-retardant polyolefin heat shrinkable tubing. This tubing can be used in areas where larger than the standard 2:1 shrink ratio are needed. It is also used for protection and marking of special shaped objects, such as wire terminations and electrical connections, cables and electronic components.



**Certificate: UL, CUL, F-mark,
Sony Green Partner**

SPECIFICATIONS

Specifications of HFT(3X) and HFT(4X):

Item		Specifications
Shrink Temperature (C)		90C
Operating Temperature Range (C)		125C
Shrinking Ratio		3:1, 4:1
Longitudinal Change (%)		≤5
Tensile Strength (Mpa)		≥10.4
Elongation at break(%)		≥200
Aging in Circulating-air Oven		158.0±1.0℃, 168hrs
After aging	Tensile Strength (Mpa)	≥7.3
	Elongation at break (%)	≥100
Volume Resistance (Ω cm)		≥10 ¹⁴
Dielectric Strength at 1 min, AC2500V		No breakdown
Flammability		VW-1
Concentricity (%)		≥65

SIZE OF HFT (3X)

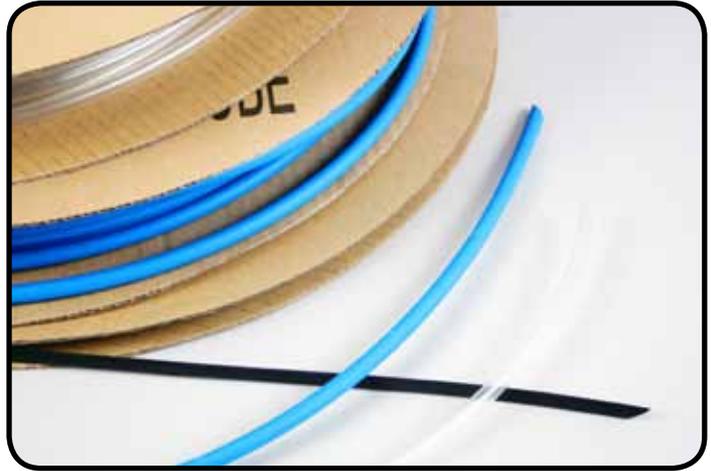
Size (mm)	As Supplied (mm)		After Recovery (mm)	
	Min. Inside Diameter	Nominal Wall-thickness	Max. Inside Diameter	Wall-thickness
1.5/0.5	1.5	0.18±0.08	0.5	0.4±0.1
3/1	3.0	0.20±0.08	1.0	0.55±0.1
4.5/1.5	4.5	0.20±0.08	1.5	0.55±0.1
6/2	6.0	0.22±0.0	2.0	0.6±0.15
9/3	9.0	0.25±0.0	3.0	0.7±0.15
12/4	12.0	0.25±0.1	4.0	0.7±0.15
15/5	15.0	0.25±0.1	5.0	0.7±0.15
18/6	18.0	0.3±0.12	6.0	0.8±0.2
24/8	24.0	0.36±0.15	8.0	1.0±0.2
30/10	30.0	0.36±0.15	10.0	1.0±0.2
33/11	33.0	0.36±0.15	11.0	1.0±0.2
39/13	39.0	0.45±0.15	13.0	1.25±0.2

SIZE OF HFT (4X)

Size (mm)	As Supplied (mm)		After Recovery (mm)	
	Inside diameter	Nominal Wall-thickness	Inside diameter	Wall-thickness
8/2	8.5±0.5	0.30±0.15	≤2.0	0.95±0.15
10/2.5	10.5±0.5	0.30±0.15	≤2.5	1.00±0.15
12/3	12.5±0.5	0.30±0.15	≤3.0	1.00±0.15
16/4	16.5±0.5	0.30±0.15	≤4.0	1.00±0.15
18/4.5	18.5±0.5	0.30±0.15	≤4.5	1.00±0.15
20/5	20.5±0.5	0.30±0.15	≤5.0	1.00±0.15
24/6	25.5±0.5	0.40±0.20	≤6.25	1.40±0.20

CB-HFT(1000) MIL/UL NON-ADHESIVE HEAT SHRINKABLE TUBING

CB-HFT(1000) is MIL Spec, non-adhesive, low-smoking, halogen-free 2:1 polyolefin cross-linked heat shrinkable tubing that is designed to meet the specialized requirements of the automotive industry. It has good resistance to oil and is an excellent insulator. This material is very flexible and has excellent mechanical strength, so it is suitable for a wide range of applications including automotive oil pipes, electronics insulation, wire protection, and any place protection is needed in extreme environments.



Certificate: UL, CUL, F-mark, Sony Green
Partner Standard: UL224, AMS-DTL-23053/5

SPECIFICATIONS

Specifications of HFT(1000):

Item	Test method	Standard	Specifications
Operating Temperature Range			-55°C - +135°C
Shrink Temperature			+100 °C - +140°C
Tensile Strength (MPa)	ASTM D638	≥10.4MPa	14.1MPa
Elongation at Break	ASTM D638	≥200%	329%
Dielectric Strength	ASTM D2671	≥19.7kv/mm	26kv/mm
Volume Resistance	ASTM D876	≥1×10 ¹²	3.6×10 ¹⁴
Longitudinal Change		-5% ~ +5%	-4%
Radial Shrink Ratio		≥50%	66%
Concentricity		≥50%	73%
Aging in Circulating – Air Oven	175±2°C, 168hrs		
Tensile Strength	ASTM D638	≥6.9MPa	9.5MPa
Dielectric Strength	ASTM D2671	≥15.8kv/mm	24kv/mm
Heat Shock	250±3℃/4hrs	No dropping, No flow, No cracking	pass
Copper corrosion	ASTM D2671	175±2℃/168hrs	No corrosion

SIZE OF HFT (1000)

Size in inches (Reel size in ft)	Inside diameter		Wall thickness after recovery (in inches)
	Min ID As supplied (in inches)	Max ID After recovery (in inches)	
1/16 (500 ft)	.0625	0.3125	0.017±0.003
3/32 (500 ft)	.09375	0.046875	0.02±0.003
1/8 (500 ft)	.125	.0625	0.02±0.003
3/16 (250 ft)	.1875	.09375	0.02±0.003
1/4 (250 ft)	.25	.125	0.025±0.003
3/8 (200 ft)	.375	.1875	0.025±0.003
1/2 (200 ft)	.5	.25	0.025±0.003
3/4 (100 ft)	.75	.375	0.03±0.003
1 (100 ft)	1	.5	0.035±0.005
1-1/2 (100 ft)	1.5	.75	0.04±0.006
2 (100 ft)	2	1	.0449±0.007

CB- DWT (2X)(3X)(4X) UL/CUL ADHESIVE LINED HEAT SHRINKABLE TUBING

CB-DWT(2X)(3X)(4X) is 2:1, 3:1 and 4:1, UL/CUL rated, adhesive-lined, flexible, halogen-free and flame-retardant polyolefin heat shrinkable tubing which is ROHS compliant and meets Sony’s environment related substance requirements. This tubing has good mechanical strength and provides protection from fluids, moisture and corrosion. CB-DWT is used in a wide variety of electrical applications, including back end connector sealing, breakouts, and connector-to-cable transitions. High expansion ratio makes it possible to repair most damaged cable jackets without removing connectors.



Certificate: UL, CUL, F-mark, Sony Green Partner

SPECIFICATIONS

Specifications of DWT(2X), DWT(3X) and DWT(4X):

Item	Specifications	
Shrink Temperature(C)	110°C	
Operating Temperature Range(C)	-55°C—125°C	
Tensile Strength (Mpa)	≥10.4	
Elongation at break (%)	≥200	
Radial shrinking ratio (%)	≥50	
Longitudinal Change (%)	≤10	
Aging in Circulating-air Oven	158.0±1.0°C, 168hrs	
After Aging	Tensile Strength (Mpa)	≥7.3
	Elongation at break(%)	≥100
Dielectric Strength at 1min, AC2500V	No breakdown	
Volume Resistance (Ω cm)	≥10 ¹³	
Flammability	VW-1	
Water Absorption (%)	Less than 0.4%	
Fluid Resistance	Excellent	
(Copper Corrosion)	(No Corrosion)	
Softening Point of Meltable Liner (°C)	120±5	
Peel Strength of Meltable Liner (N/25mm)	>80	

SIZE OF DWT (2X)

Size(Inch)	As Supplied		After Recovery		
	Min ID (inches)	Nominal Wall (inches)	Max ID (inches)	Total Wall (inches)	Nominal Adhesive Wall(inches)
1/16	.0625	.0118	.03125	.0177±.0047	.0078
3/32	.09375	.01378	.046875	.02165±.0047	.0118
1/8	.125	.01575	.0625	.02362±.006	.0118
3/16	.1875	.01575	.09375	.02953±.006	.01378
1/4	.25	.01575	.125	.02953±.006	.01378
3/8	.375	.01575	.1875	.0315±.0079	.01378
1/2	.5	.01575	.25	.0315±.0079	.01378
3/4	.75	.01969	.375	.0374±.0110	.01578
1	1	.01969	.5	.04528±.0110	.0177
1 -1/2	1.5	.0256	.75	.04921±.0161	.0177

SIZE OF DWT (3X)

Size (Inch)	As Supplied		After Recovery		
	Min ID (inches)	Nominal Wall (inches)	Max ID (inches)	Total Wall (inches)	Nominal Adhesive Wall (inches)
1/8	.125	.01575	.04167	.03346±.011	.01378
3/16	.1875	.01575	.0625	.04134±.011	.01772
1/4	.25	.0177	.08333	.04331±.011	.01772
3/8	.375	.0236	.125	.05709±.011	.01772
1/2	.5	.0236	.1667	.05906±.0145	.01772
3/4	.75	.0295	.25	.07874±.0217	.02559
1	1	.0295	.3333	.07874±.0217	.02559
1 1/4	1.25	.0315	.4167	.08661±.0217	.02953
1 1/2	1.5	.03346	.5	.10±.0217	.03937
2	2	.03937	.6667	.10±.0217	.03937

SIZE OF DWT (4X)

Size (mm)	As Supplied (Expanded)		After Recovery (Recovered)	
	Min ID(mm)	Max ID(mm)	Total Wall (mm)	Nominal Adhesive Wall (mm)
4/1	4	1	1.10±0.3	0.50
8/2	8	2	1.10±0.3	0.50
12/3	12	3	1.40±0.3	0.61
16/4	16	4	1.8±0.3	0.76
24/6	24	6	2.25±0.55	0.76
32/8	32	8	2.54±0.55	1.02
52/13	52	13	2.60±0.55	1.02

CB- DWT(1000) ADHESIVE-LINED HEAT SHRINKABLE TUBING

CB-DWT(1000) is a 3:1, MIL Spec, adhesive-lined, flexible, flame-retardant polyolefin heat-shrinkable dual-wall tubing. This tubing has good mechanical strength, oil-resistance and bio resistance when used for extreme environments and specialized protection. CB- DWT(1000) is widely used in jacketing for wire bundles and harnesses.



Standard: UL224 and MIL - SAE-AMS-DTL23053/4, F Mark, Sony Green Partner

SPECIFICATIONS

Specification of DWT(1000):

Item	Test methods	Specifications	Typical value
Operating Temperature Range			-55°C +135°C
Shrink Temperature			+100°C + 140°C
Shrink Ratio			3:1
Tensile Strength	ASTM D638	≥10.4MPa	14.1MPa *1
Elongation At Break (%)	ASTM D638	≥200%	329%
2% Scan Modulus	ASTM D882	≤172MPa	153MPa
Heat Shock	250±3 □, 4hrs	No cracking, dripping, flowing	Pass
Cold Shock	ASTM D745, -55±2 □	No cracking	Pass
Dielectric Strength	ASTM D2671	≥19.7kv/mm	26kv/mm
Volume Resistance	ASTM D876	≥1×10 ¹²	3.6×10 ¹³
Aging	175±2 □, 168hrs	Adhesive, no dripping	
Sleeving, no cracking	Pass		
Oil Resistant	24±3 □, 24hrs		
Tensile Strength After Aging	ASTM D638	≥6.9MPa	9.5MPa
Dielectric Strength After Aging	ASTM D2671	≥15.8kv/mm	24kv/mm

SIZE OF DWT (1000)

Size	Inside Diameter (inches)		Wall After Recovery (inches)	
	Min. as supplied	Max. after recovery	Total wall	Adhesive wall
1/8	.125	.04167	.0382±.0060	.02
3/16	.1875	.0625	.0429±.0060	.025
1/4	.25	.08333	.0469±.0070	.027
3/8	.375	.125	.0500±.0070	.03
1/2	.5	.1667	.0551±.0070	.035
3/4	.75	.25	.0650±.0070	.04
1	1	.3333	.0752±.0070	.04

CB-DWT(3000) SEMI-RIGID HEAT SHRINKABLE TUBINGS WITH MELTABLE LINER

CB-DWT(3000) is a 4:1, MIL Spec, semi-rigid, flame-retardant, adhesive-lined polyolefin heat shrinkable tubing. It is designed to meet automotive requirements for sealing and electrical insulation when used for covering wire splices, terminations and components. It provides abrasion protection for wire splices, and is fluid-resistant and moisture-proof, to guard against corrosion.



Standard: UL224, MIL - SAE-AMS-DTL-23053, F mark, Sony Green partner

SPECIFICATIONS

Specifications of DWT(3000):

Item	TEST METHOD	Specifications
Operating temperature range (°C)		-40°C to 135°C
Min. shrink temperature (°C)		110°C
Longitudinal Change (%)	ASTM D 2671	0~10%
Tensile Strength (M Pa)	ASTM D 2671	≥10.3
Elongation at break(%)	ASTM D 2671	≥250
Scant Modulus at 2% (expanded)* (M Pa)	ASTM D 2671	≥137
Heat Shock 4 hours at 250°C (437)	ASTM D 2671	No dripping, flowing or cracking of outer jacket
Dynamic Cut Through (KG)	ASTM D 3032	
Volume Resistance (ohm-cm)	ASTM D 2671	1.0 x 10 ¹²
Flammability	ASTM-D2671	Self-extinguishing within 30 seconds
Tensile Strength(M Pa) after aging	ASTM D 2671	
Oil-resistance:	97# oil at 23±3 °C, 24h	100±3 %, 1h
IRM 902#		
IRM903#	No cracking	

SIZE OF DWT (3000)

P/N	As supplied (mm)		After recovery	
	Min. inside diameter	Max. inside diameter	Total wall	Min. adhesive wall
CB-DWT(3000)-1	5.72	1.27	1.20	0.56
CB-DWT(3000)-2	7.44	1.65	1.52	0.76
CB-DWT(3000)-3	10.85	2.41	1.91	1.02
CB-DWT(3000)-4	17.78	4.45	2.41	1.37

CB-DWT(FR) HEAT SHRINKABLE DUAL-WALL TUBING WITH FLAME-RETARDANT ADHESIVE

CB-DWT(FR) is a 4:1, MIL spec, adhesive lined, flexible, flame-retardant adhesive and polyolefin heat shrink dual-wall tubing. It is special designed for automotive wire harnesses and features good mechanical strength, sealing, oil-resistance and insulation properties. CB-DWT(FR) is widely used for all kinds of automotive wire harnesses, and is especially useful in harsh environments or where special protection is required.

**Standard: UL224, MIL - SAE-AMS-DTL-23053,
F mark, Sony Green partner**



SPECIFICATIONS

Specifications of DWT(FR):

Item		Specifications
Shrink Temperature(C)		100C - 150C
Operating Temperature Range(C)		-55C - 135C
Tensile Strength (Mpa)		≥10.4
Elongation at Break (%)		≥200
Radial Shrinking Ratio (%)		≥50
Longitudinal Change (%)		≤10
Aging in Circulating-Air Oven		158.0±1.0°C, 168hrs
After Aging	Tensile Strength (Mpa)	≥7.3
	Elongation at break(%)	≥100
Dielectric Strength at 1min, AC2500V		No breakdown
Volume Resistance (Ω cm)		≥10 ¹³
Flammability		VW-1
Water Absorption (%)		Less than 0.4%
Fluid Resistance		Excellent
(Copper Corrosion)		(No Corrosion)
Softening Point of meltable Liner(°C)		120±5
Peel Strength of Meltable Liner(N/25mm)		>80

SIZE OF DWT (FR)

Size	As supplied		After full recovery	
	ID (mm)	ID (mm)	Total Wall	Adhesive Wall
7.6	≥ 7.6	≤1.65	1.5±0.3	0.70
9.0	≥ 9.0	≤2.30	1.5±0.4	0.70
11.6	≥ 11.6	≤2.54	2.3±0.4	1.20
17.8	≥ 17.8	≤4.45	2.5±0.4	1.20

CB-KYNAR(175C) FLAME-RETARDANT PVDF HEAT SHRINKABLE TUBING

CB-KYNAR(175C) is 2:1, MIL Spec, clear, thin wall, semi-rigid, flame-retardant heat-shrinkable tubing with both high temperature and chemical resistance. This is especially suitable for applications requiring high temperature performance, outstanding abrasion resistance and cut-through resistance, or superior chemical and solvent properties. Provides electrical insulation and strain relief of multipoint connectors and solder joints. CB-KYNAR(175C) is ideal for applications that require dense packing of components or visual inspection of covered components.

Standard: UL224, SAE-AMS-DTL25053/8



SPECIFICATIONS

Specifications of KYNAR(175):

Item	Test Method	Unit	Specifications For CYG-KYNAR(150°C)	Specifications For CYG-KYNAR(175°C)
Min. Shrink Temperature		°C	140°C	155°C
Operation Temperature Range		°C	-55°C ~150°C	-55°C ~175°C
Specific Gravity	ASTM D792	g/cm ³	1.78	1.78
Tensile Strength	ASTM D2671	M Pa	≥30	≥34.5
Elongation at Break	ASTM D2671	%	≥150	≥150
Elongation at Break after Aging	225□,168h	%	≥100	≥50
Heat Shock	275□,4h	-	-No Cracking-	-No Cracking-
Cold Bend	-55□,4h	-	-No Cracking-	-No Cracking-
Dielectric Strength	ASTM D2671	kV/mm	≥15.7	≥30
Volume Resistance	ASTM D257	Ω.cm	≥1013	≥1013
Flammability	UL-224	VW-1	Pass	Pass

SIZE OF KYNAR (175)

Size	Min. inside diameter as supplied(mm)	Max. Inside Diameter after recovery (mm)	Recovered Wall Thickness (mm)	Size	Min. inside diameter as supplied(mm)	Max. Inside Diameter after recovery (mm)	Recovered Wall Thickness (mm)
3/64	1.2	0.6	0.25 ± 0.05	3/8	9.5	4.8	0.33 ± 0.05
1/16	1.6	0.8	0.25 ± 0.05	1/2	12.7	6.4	0.33 ± 0.05
3/32	2.4	1.2	0.25 ± 0.05	4/3	19.1	9.5	0.43 ± 0.08
1/8	3.2	1.6	0.25 ± 0.05	1	25.4	12.7	0.48 ± 0.08
3/16	4.8	2.4	0.25 ± 0.05	1 1/2	38.1	19.1	0.48 ± 0.08
1/4	6.4	3.2	0.33 ± 0.05				

CB-PTFE HEAT SHRINKABLE TUBING

CB-PTFE is a 1.8:1, MIL Spec, high temperature, highly flame-retardant PTFE tubing with excellent chemical resistance. It is designed to provide insulation and mechanical protection in severe chemical and thermal environments. CB-PTFE is normally used to cover hydraulic hoses and couplings to prevent contamination and corrosion. The high mechanical strength and extremely low coefficient of friction make it ideal for reducing damage to bearing shafts and similar applications.



Standard: UL224 and MIL - SAE-AMS-DTL-23053/12

SPECIFICATIONS

Specifications of PTFE:

Item	Test Method	Unit	Specifications
Specific Gravity	ASTM D792	g/cm ³	2.16
Operating Temperature		C	-55C to+260C
Min. Melting Temperature:		°C	327°C
Tensile Strength	ASTM D638	M Pa	24.5
Elongation at break	ASTM D638	%	350
Bending Modulus	ASTM D790	M Pa	490
Impact Strength	ASTM D256+23□-54□j/m		No crack
Hardness (shore)	ASTM D2240	Shore D	55
Coefficient of Dynamic Friction			0.1
Flammability	UL-224		VW-1
Dielectric Constant 103-106Hz	ASTM D150		2.1
Dielectric Dissipation			
Factor 106Hz	ASMT D150		0.0002
Arc Resistance	ASMT D495	S	>300
Linear Coefficient of Expansion	ASTM D257	’Q/cm	>1018
Weather Resistance	“Weather-o-meter”(2000h)		No crack
Fluid resistance	ASTM D543		Excellent
Chemical resistance	ASTM D543		Excellent

SIZE OF PTFE

SIZE	Inside diameter		Wall thickness After recovery (mm)
	Min. supplied inside diameter	Max. Recovered inside diameter	
AWG 30	0.8	0.38	0.23
AWG 28	0.9	0.46	0.23
AWG 26	1.1	0.53	0.25
AWG 24	1.2	0.66	0.25
AWG 22	1.4	0.81	0.30
AWG 20	1.5	0.97	0.30
AWG 18	1.9	1.17	0.30
AWG 16	2.3	1.47	0.30
AWG 14	3.0	1.83	0.30
AWG 12	3.8	2.31	0.30
AWG 10	4.8	2.84	0.30
AWG 8	6.1	3.53	0.38
AWG 6	7.6	4.41	0.38
AWG 4	9.4	5.53	0.38
AWG 2	10.9	6.93	0.38
AWG 0	11.9	8.69	0.38

Standard Color: Clear (Natural)

*Other colors and sizes are available upon special order

CB-TT(L/S/T) PTFE NON-HEAT SHRINKABLE TUBING

CB-TT series PTFE is a UL Rated tubing that features high temperature (260C) resistance, corrosion resistance, excellent insulation and mechanical strength properties. This tubing is widely used throughout the electrical and chemical industries, and its high temperature rating allows aerospace, military, computer and power transmission applications. This product is UL listed under file number E180908. All are F mark.



SPECIFICATIONS

Specifications of TT:

Item	Test Method	Unit	Specifications
Specific Gravity	ASTM D792	g/cm ³	2.16
Tensile strength	ASTM D638	M Pa	24.5
Elongation at break	ASTM D638	%	350
Flexural Modulus	ASTM D790	M Pa	490
Impact Strength	ASTM D256+23 \square -54 \square j/m		-No break- 107
Hardness	ASTM D2240	Shore D	55
Coefficient of Dynamic Friction			0.1
Melting Point		C	327C
Service Temperature 20000h with 50% Retention Of Elongation at break		C	260C
Flammability	UL-224		VW-1
Dielectric Constant At 103-106Hz	ASTM D150		2.1
Dissipation Factor At 106Hz	ASTM D150		0.0002
Arc Resistance	ASTMD495		
(Stainless steel electrodes)	S	>300	
Volume Resistance	ASTM D257	Ω cm	>1018
Weather Resistance	"Weather-o-meter"(2000h)		No break
Solvent Resistance	ASTM D543		Excellent
Chemical Resistance	ASTM D543		Excellent

SIZE OF TT

PTFE Insulation Tubing						
Size	ID(mm)			OD(mm)		
AWG	MIN	NOR	MAX	CB-TT(S)	CB-TT(T)	CB-TT(L)
30	0.25	0.30	0.38	0.76	0.76	0.60
28	0.33	0.38	0.46	0.84	0.84	0.68
26	0.41	0.46	0.53	0.92	0.92	0.76
24	0.51	0.56	0.66	1.16	1.06	0.86
23	0.58	0.66	0.74	1.26	1.16	0.96
22	0.66	0.71	0.81	1.31	1.21	1.01
21	0.74	0.81	0.89	1.41	1.31	1.11
20	0.81	0.86	0.97	1.66	1.46	1.16
19	0.91	0.96	1.07	1.76	1.56	1.26
18	1.01	1.07	1.17	1.87	1.67	1.37
17	1.14	1.19	1.32	1.99	1.79	1.49
16	1.29	1.34	1.47	2.14	1.94	1.64
15	1.45	1.50	1.65	2.30	2.10	1.80
14	1.62	1.68	1.83	2.48	2.28	2.08
13	1.83	1.93	2.05	2.73	2.53	2.33
12	2.05	2.16	2.31	2.96	2.77	2.56
11	2.31	2.41	2.57	3.21	3.01	2.81
10	2.59	2.69	2.84	3.49	3.29	3.09
9	2.90	3.00	3.15	4.00	3.76	3.40
8	3.28	3.38	3.53	4.38	4.14	3.78
7	3.65	3.76	3.94	4.76	4.52	4.16
6	4.11	4.22	4.41	5.22	4.98	4.72
5	4.62	4.72	4.95	5.72	5.48	5.22
4	5.18	5.28	5.53	6.28	6.04	5.78
3	5.81	5.94	6.20	6.94	6.70	6.44
2	6.55	6.68	6.93	7.68	7.44	7.18
1	7.34	7.46	7.75	8.46	8.22	7.96
0	8.26	8.38	8.69	9.38	9.14	8.88

Standard color: clear(natural)

CB-PVC300/CB-PVC600 PVC TUBING

CB-PVC300/CB-PVC600 is a UL/CUL Rated PVC flexible, flame-retardant, non-heat shrinkable tubing which has excellent electrical and physical properties, including excellent acid fastness and corrosion resistance. This tubing is suitable for insulation use in automotive electronics, terminal lugs, small electrical parts, lead wires of toy motors and transformers etc. This product is UL listed under file number E180908 for black, and E250610 for clear. All are F mark.



SPECIFICATIONS

Specification of PVC300/ PVC600:

Item		Specifications
Temperature Rating (C)		105°C
Longitudinal Change		≤±5%
Tensile Strength (MPa)		≥10.4
Elongation at break (%)		≥100
Aging in Circulating-air Oven		136.0±1.0□, 168hrs
After aging	Tensile Strength (Mpa)	≥7.3
	Elongation at break(%)	≥100
Potential Rating (V)		300V, 600V
Volume Resistance (Ω cm)		≥1010
Dielectric Strength (V)		2500(60s),No breakdown
Corrosion of Bare Copper		No corrosion
Heat Shock		No cracking
Cold Bend		No cracking

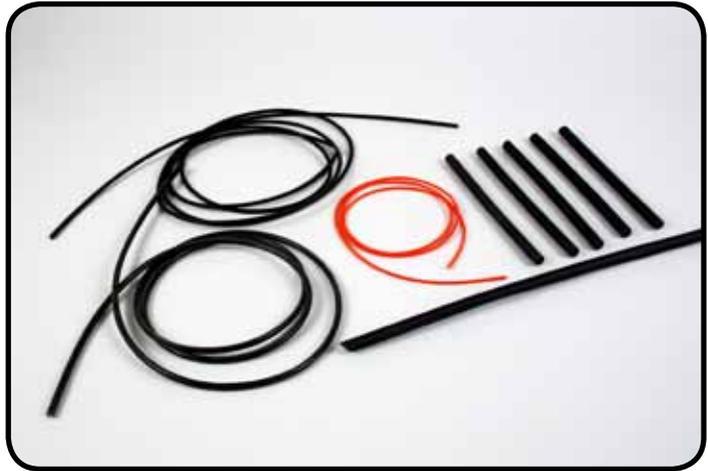
SIZE OF PVC300/PVC600

AWG size	Inside diameter (mm)	Average Wall-thickness (mm)	
		For CB-300	For CB-600
5/8	16.0	0.7±0.18	0.7±0.18
9/16	14.3		
1/2	12.7	0.57±0.15	0.57±0.1
7/16	11.1		
3/8	9.53		
5/16	7.92		
0#	8.38		
1#	7.47	0.45±0.1	
2#	6.68		
3#	5.94		
4#	5.28		
5#	4.72		
6#	4.22		
7#	3.87		
8#	3.38		
9#	3.00	0.35±0.1	
10#	2.69		
11#	2.41		
12#	2.16		
13#	1.93		
14#	1.68		
15#	1.50		
16#	1.34		
17#	1.19		
18#	1.07		
19#	0.96		
20#	0.86		0.45±0.15
21#	0.79		

Inside Diameter tolerance ±5%
 Other sizes are available upon special order.

CB-SGS FIBERGLASS TUBING

CB-SGS series tubing is a UL rated, flexible, flame-retardant, halogen-free and comprised of silicone resin continuously coated on electrical grade braided fiberglass tubing. CB-SGS is widely used in many consumer appliances, lighting fixtures, stoves, oven and furnace controls, relays, breaker panels, switch-gear and other commercial and industrial equipment.



Certifications: UL1441

SPECIFICATIONS

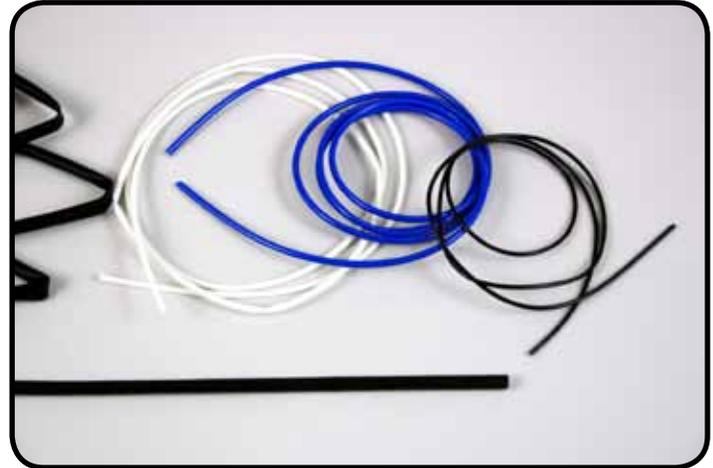
Specifications of SGS:

Products No.	Dielectric grade	Min. Ave. breakdown	Min. Individual	Operation temperature
SGS-15	C-2	1500V	1000V	-10C~200C
SGS-25	C -1	2500V	1800V	-10C~200C
SGS-40	B	4000V	3000V	-10C~200C
SGS-70	A	7000V	5000V	-10C~200C

SIZE of SGS Fiberglass Tubing: SGS SERIES are available in size 0.5mm though 25mm.

CB-SRS SERIES FIBERGLASS TUBING

CB-SRS series tubing is a UL rated, flexible, flame-retardant, halogen-free and is coated with silicone rubber under high temperature. It has good electrical insulation properties and is widely used in many consumer appliances, lighting fixtures, stoves, oven and furnace controls, relays, breaker panels, switch-gear and other commercial and industrial equipment.



Certification: UL1441

Remarks:

- CB-SRS1 is Silicone rubber fiberglass (fiber inside and rubber outside)
- CB-SRS2 is Silicone rubber fiberglass (rubber inside and fiber outside)

SPECIFICATIONS

Specifications of SRS:

Products No.	Dielectric grade	Min. Ave. breakdown	Min. Individual	Operation temperature
SRS1	A	7000V	5000V	-10C~200C
SRS2	A	7000V	6000V	-10C~200C

SIZE of SRS: SRS SERIES are available in size 1.0mm though 12mm.

OTHER CYG PRODUCTS AVAILABLE

- Ladder Style Marker Material – Printable Heat Shrink Marker Material on a carrier strip
- PET Heat Shrinkable Film – thin film used for battery, capacitor and light bulb encapsulation
- Heat Shrinkable Butt Splice Connectors – Plastic covered heat shrinkable splice connectors
- Heat Shrinkable Bus Bar Tubing – Heat shrink used specifically for Bus Bars
- Nylon Cable Ties
- Cold Shrink – Cold shrinkable tubing used in power line applications
- Heat Shrinkable Boots – Specialized heat shrinkable boots and end caps
- Many Specialized Heat Shrink application products

Please call for additional information.

HEAT SHRINK RELATED EQUIPMENT

HEAT SHRINK PRINTER

**XD4 Dual Head Heat
Shrink Printer**



**Prints on both sides
of heat shrink**

A4+M Heat Shrink Printer



**Prints on one side
of heat shrink**

Heat Shrink Printer Ribbons



Black



White

HEAT SHRINK PROCESSING MACHINES THAT USE HALOGEN LIGHT SOURCE

FOCUS-LITE 10

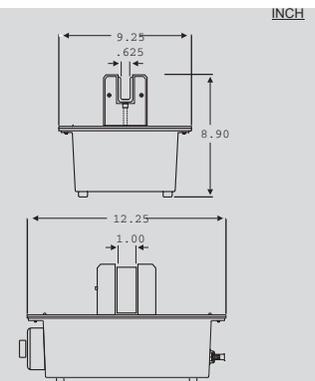
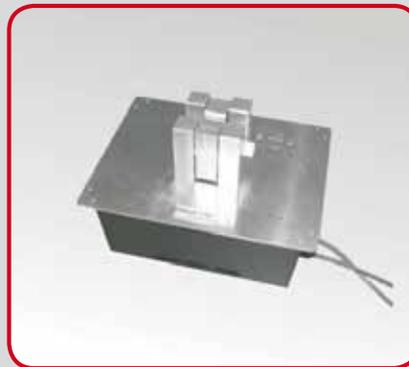
Specifications

Shrink Length: up to 1.0"

Largest Work Piece Diameter: 5/8"

Includes: Dimmer Switch, Adjustable Timer, Glare Shield, 6' power cord w/GFCI Activation: Foot pedal

Energy Used: 146 watts (avg.) / 125VAC
 Bulb: Commercial quality Quartz Halogen
 Avg. Shrink Time: 2-4 Seconds (polyolefin)
 Ship Weight: 20lbs.



Contact factory or exact dimensions and specifications.

FOCUS-LITE™30

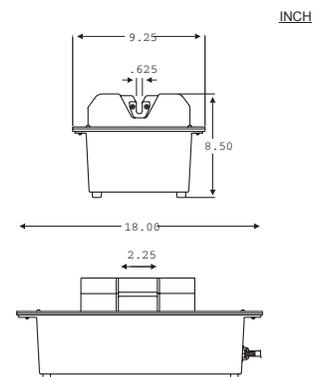
Specifications

Shrink Length: up to 2.25"

Largest Work Piece Diameter: 5/8"

Includes: Dimmer Switch, Adjustable Timer, Glare Shield, 6' power cord w/GFCI Activation: Foot pedal

Energy Used: 146 watts (avg.) / 125VAC
 Bulb: Commercial quality Quartz Halogen
 Avg. Shrink Time: 2-4 Seconds (polyolefin)
 Ship Weight: 40lbs.



Contact factory or exact dimensions and specifications.

FOCUS-LITE™80

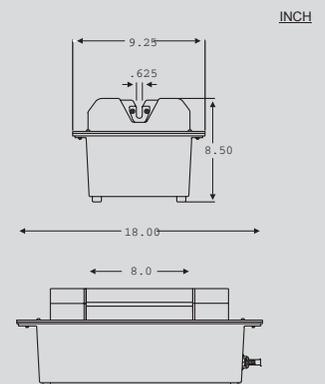
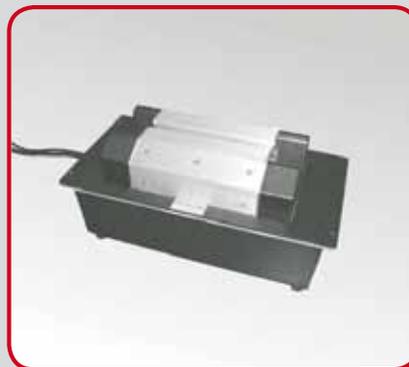
Specifications

Shrink Length: up to 8.0"

Largest Work Piece Diameter: 5/8"

Includes: Dimmer Switch, Adjustable Timer, Glare Shield, 6' power cord w/GFCI Activation: Foot pedal

Energy Used: 300 watts (avg.) / 125VAC
 Bulb: Commercial quality Quartz Halogen
 Avg. Shrink Time: 2-4 Seconds (polyolefin)
 Ship Weight: 40lbs.

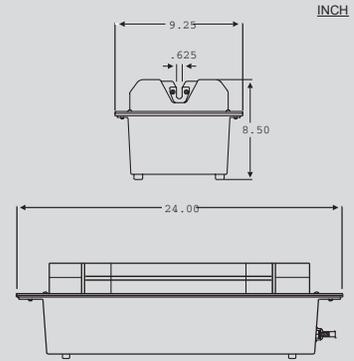


Contact factory or exact dimensions and specifications.

FOCUS-LITE™ 160

Specifications

Shrink Length: From 1.0" - 16.0"
 Largest Work Piece Diameter: 5/8"
 Includes: Dimmer Switch, Adjustable
 Timer, Glare Shield, 6' power cord w/GFCI
 Activation: Foot pedal
 Energy Used: 146 watts (avg.) / 125VAC
 Bulb: Commercial quality Quartz Halogen
 Avg. Shrink Time: 2-4 Seconds (polyolefin)
 Ship Weight: 25lbs. to 40lbs.

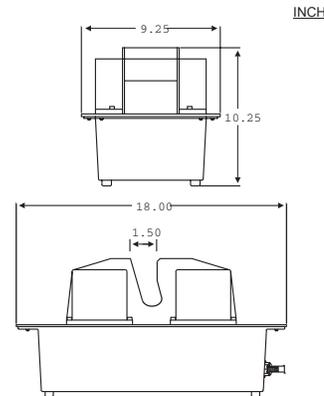
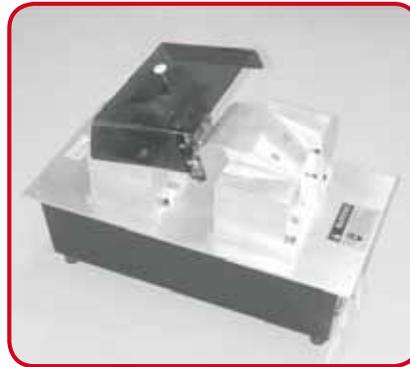


Contact factory for exact dimensions and specifications.

FOCUS-LITE™ G2

Specifications

Shrink Length: up to 3.0"
 Largest Work Piece Diameter: 1.5"
 Includes: Dimmer Switch, Adjustable Timer,
 Glare Shield, 6' power cord w/GFCI
 Activation: Foot pedal
 Energy Used: 300 watts (avg.) / 125VAC
 Bulb: Commercial quality Quartz Halogen
 Avg. Shrink Time: 2-4 Seconds (polyolefin)
 Ship Weight: 40lbs.

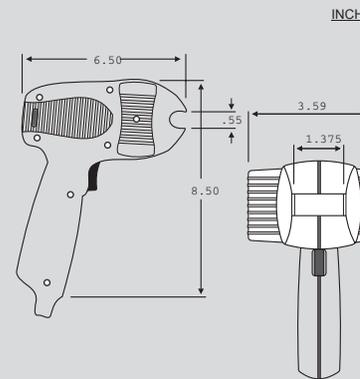


Contact factory for exact dimensions and specifications.

**FOCUS-LITE G3
 - HAND HELD**

Specifications

Shrink Length: up to 1.375"
 Largest Work Piece Diameter: 5/8"
 Includes: Dimmer Switch, Adjustable Timer,
 6' power cord w/GFCI
 Activation: Trigger switch
 Energy Used: 120 watts (avg.) / 125VAC
 Bulb: Commercial quality Quartz Halogen
 Avg. Shrink Time: 2-4 Seconds (polyolefin)
 Ship Weight: 4lbs.



Contact factory for exact dimensions and specifications.

HEAT GUNS

ULTRAHEAT™ II

SV 803 - Variable Temperature Heat Gun

STEINEL's Ultra Heat II is a variable temperature heat gun featuring 3 airflow settings for maximum user control. This model also has a soft grip handle for comfortable operation.

SPECIFICATIONS

Item	Specifications
Variable Temperature:	Up to 1050°F
3-Stage Airflow:	Cool air, 140°F
Low air	
High air	
Power Cord:	Rubber construction, double insulated for safety
Output:	1400 watts
Voltage:	120 VAC / 60 Hz
Certifications:	UL/C-UL
Warranty:	Full One Year
Item Number:	34103



HB 1750 - STEINEL HEAT BLOWERS

SPECIFICATIONS

Item No. 34750	Model HB 1750 (Includes all 5 keys)
34751	HB 1750 B Blower w/ Blue key
34752	HB 1750 G Blower w/ Gray key
34753	HB 1750 Y Blower w/ Yellow key
34754	HB 1750 O Blower w/ Orange key
34755	HB 1750 R Blower w/ Red key
Dimensions (h x w x d)	9 1/2" x 5" x 9 1/2"
Weight	2.4 lbs
Voltage	120 VAC / 60 Hz
Output	1750 W
Temperature	200 °F - 1200 °F (all five keys)
Airflow rate	Up to 23 CFM, adjustable with baffle
Power cord	Industrial grade rubber, length: 6 ft.



SPECIFICATIONS

Color Key	Model	Temperature Range
	HB 1750	200 °F - 1200 °F
Blue	HB 1750 B	200 °F - 300 °F
Gray	HB 1750 G	300 °F - 500 °F
Yellow	HB 1750 Y	500 °F - 750 °F
Orange	HB 1750 O	750 °F - 1000 °F
Red	HB 1750 R	1000 °F - 1200 °F

