ENERGY
ACCESSORIES

Chapter VI
Tools and Accessories

Torch Box with Contents FH-1630-S-MC10

DESCRIPTION

- Torch box with nozzles BN28, BN38 and PN17, torch handle HSZ, constant pressure regulator R1, automatic cut-off valve CV, 4 m long high pressure hose SW4
- Weight: 4.8 kg
- Dimensions: 470 x 210 x 74 mm

Product name	Part Number
FH-1630-S-MC10	286311-000

Torch Handle FH-1630-S-HNZ FH-1630-S-HSZ

DESCRIPTION

- Torch handle with holder and shut-off valve for use on all FH-1630-S nozzles. Handle HSZ has in addition a pilot/full flame lever
- Nozzle connection thread: R 3/8", right
- Hose connection thread: R 3/8", left

Product name	Part Number
FH-1630-S-HNZ	597225-000
FH-1630-S-HSZ	839029-000

Nozzles for FH-1630-S

Nozzles for FH-1630-S	Flame diameter (mm)	Gas consumption (kg/h)	Stern length (mm)	Part Number
FH-1630-S-BN28	28	0.46	195	295849-000
FH-1630-S-BN38	38	0.90	195	918209-000
FH-1630-S-BN50	50	2.00	195	604437-000
For Plumbing FH-1630-S-PN17	17	0.24	195	114047-000

Torch Box with Contents FH-1630-PIE-MC10

DESCRIPTION

- Torch box with nozzles BN28, BN38, BN50 and PN18, torch handle
- FH-1630-PIE with piezo ignition, safety regulator LGS, 4 m long high pressure hose SW4
- Weight: 4.8 kg
- Dimensions: 450 x 210 x 74 mm

Product name	Part Number
FH-1630-PIE-MC10	187225N001

Torch Handle with Piezo Ignition FH-1630-PIE

DESCRIPTION

- Torch handle with piezo ignition, gas supply only while handle is pressed
- Nozzle connection: bayonet socking
- Hose connection thread: R 3/8", left

Product name	Part Number
FH-1630-PIE	660983-000

Nozzles for FH-1630-PIE

Nozzles for FH-1630-PIE	Flame diameter (mm)	Gas consumption (kg/h)	Stern length (mm)	Part Number
FH-1630-PIE-BN28	28	0.46	195	983099-000
FH-1630-PIE-BN38	38	0.90	195	201385-000
FH-1630-PIE-BN50	50	2.00	195	354957-000
For Plumbing FH-1630-PIE-PN18	18	0.24	210	201393N001

Constant Pressure Regulator FH-1630-PIE-R2

DESCRIPTION

- Applicable on propane gas tanks with a capacity of 5 kg or 11 kg. Thread connection fits to all FH-1630 high pressure hoses
- Gas flow: max. 6 kg/h
- Constant pressure: 2 bar
- Hose connection thread: R 3/8", left
- Gas bottle connection thread: W 21.8 x 1/14", left (DIN-Kombi)

Product name	Part Number
FH-1630-PIE-R2	052161N001

Automatic Cut-off Valve FH-1630-PIE-CV

DESCRIPTION

- The automatic cut-off valve is fitted between the hoses SW4, SW5 or SW10 and the constant pressure regulator and cuts off the gas supply in the event of damage to the hose or torch handle
- Connection threads: R 3/8", left

Product name	Part Number
FH-1630-PIE-CV	651823-000

Safety Regulator FH-1630-PIE-LGS

DESCRIPTION

- The safety regulator with integrated constant pressure regulator (2 bar, 2 kg/h) and automatic cut-off valve is fitted between the hose and the gas bottle
- Hose connection thread: R 3/8", left
- Gas bottle connection thread: W 21.8 x 1/14", left (DIN-Kombi)

Product name	Part Number
FH-1630-PIE-LGS	149567-000

High Pressure Hoses

DESCRIPTION

- Fitted with screw connections for
- FH-1630 constant pressure regulator and torch handle
- Connection threads: R 3/8", left
- Internal diameter: 4 mm
- Colour: orange

Product name	Length (m)	Part Number
FH-1630-PIE-SW4	4	299247-000
FH-1630-PIE-SW5	5	981741-000
FH-1630-PIE-SW10	10	753079-000

Torch Assembly FH-1630-S-TS1

DESCRIPTION

- Torch assembly of nozzle BN38, torch handle FH-1630-S-HNZ and 5 m long pressure hose SW5

Product name	Part Number
FH-1630-S-TS1	398323-000

Heavy Duty Hot-Air Heating Tools

FEATURES

- Robust, double-insulated heavy duty unit
- 1600-3400 watts
- Integral stand allowing use as bench tool
- Safe, quiet operation
- Precisely variable tempertaure
- Variety of reflectors available

APPLICATION

- Used for installing dual or single wall tubing up to approximately 75 mm in diameter and a variety of other applications. Closed loop versions and a range of accessories available on request

Product name	Part Number
CV-1981-230V1600WMK2	813914-000
CV-1983-220V-2260W	773898-000
CV-1983-230V-3400W-VDE	538361-000
NOTE Product data sheet available on request.	

Complete Tool Kit IT-1000-001

DESCRIPTION

- The tool kit contains all basic tools usually required for the cable preparation and the installation of accessories. Following tool sets are assembled in a leather case

Product name	Contents	Part Number
IT-1000-001	Complete tool kit	087184N002
IT-1000-003	1 x Wedge positioner for spreading cable cores	963194N001
IT-1000-005	1 x Hammer, 300 g 1 x Screwdriver, 3.5 mm 1 x Screwdriver, 6.5 mm 1 x Hacksaw 1 x Hacksaw junior	264977N001
IT-1000-006	1 x Pipe wrench, 250 mm 1 x Side cutter, 160 mm 1 x Pincers, 180 mm 1 x Blunt nose pliers, 180 mm 1 x Scissors, 200 mm	799664N001
IT-1000-007	1 x Folding ruler, 2 m 1 x Wire brush 1 x Hook knife 1 x Cable knife 1 x Sharpening stone, 125x100 mm 1 x File set, medium size	010396N001
IT-1000-008	1 x Control mirror, 100x100 mm 1 x Spreader 3 way 2 x Core separator 6 x Cleaning tissues 1 x Refillable solvent bottle (empty), 0.4 litre	218728N001
IT-1000-010	1 x Diameter tape, 2 m	938372N001
IT-1000-011	1 x Scoring tool for easy-strip screens	473548N001
IT-1000-012	1 x Leather tool case, 400x125x280 mm	635918N001
IT-1000-015	1 x Tee-handle spinner wrench, 300 mm 1 x Hexagon insert socket for wrenches, 13 mm 1 x Hexagon insert socket for wrenches, 17 mm 1 x Hexagon insert socket for wrenches, 19 mm 1 x Hexagon insert socket for wrenches, 22 mm	906235-000

NOTE   The individual tool sets can be also ordered separately.

Cordless Impact Wrench IT-1000-033-UK/US

DESCRIPTION

- The ergonomic cordless impact wrench allows safe, fast and convenient installation of mechanical connectors and lugs using shear-head bolts. The wrench can be used for shear-head bolts up to 100 Nm. It is equipped with belt hook with integrated LED work light and delivered in stable compartmented carrying case

The content of the case

- 1 x Cordless impact wrench
- 1 x Battery charger
- 2 x Li-ion battery 3.0 Ah (14.4 V)
- 8 x ½" hexagonal socket: 10; 13; 16; 17; 19; 22; 24; 27 mm
- 1 x Adapter to ¼" hexagonal drive
- 4 x Allen key insert: H5x65, H6x38, H6x65 and H8x65 mm
- 1 x Installation instruction

Product name	Part Number
IT-1000-033	CU1692N001

Product name Spare parts	Description	Part Number
IT-1000-033-BAT-LI-ION	battery Li-ion 3.0 Ah (14.4 V)	CH7652-000
IT-1000-033-CHRG-220V	charger for battery	CH7653-000

IT-1000-002 Cable preparation stand

FEATURES

- Lightweight aluminium construction
- Floor or bench mounting
- Adaptor included for the installation of terminations
- Removable legs for ease of transport

APPLICATION

- For use in cable preperation

Product name	Cable Diameter (mm)	Length (mm)	Height (mm)	Height Adjustment of The Upper Part	Total Height	Weight (kg)	Part Number
IT-1000-002	15 – 100	700 – 1210	800	450 – 580	1010 – 1140	11.5	989800-000

Cable Knife EXRM-0607

DESCRIPTION

- Cable knife with fixed blade
- Length: 175 mm

Product name	Part Number
EXRM-0607	834686N001

Hook Knife EXRM-0947

DESCRIPTION

- Cable knife for oversheath stripping for cables with an outer diameter > 20 mm.
- Hook form of the blade ensures an easy and safe dismantling

Product name	Part Number
EXRM-0947	250533N001

Scoring Tool for Easy Strip Screens IT-1000-011

DESCRIPTION

- Fixed blade scoring tool for easy strip conduct layer

Product name	Scriber depth (mm)	Part Number
IT-1000-011	0.4	473548N001
IT-1000-011-0.6	0.6	605019N001

Ratchet Type Cutter KR 600

DESCRIPTION

- Ratchet type cable cutter for aluminium and copper conductors, stranded or solid up to 400 mm^2
- Application range: Ø max. 52 mm

Product name	Part Number
KR 600	708728-1

Insulation Stripping Pliers EXRM-1004

DESCRIPTION

- Insulation stripping tool for paper insulated cables
- Length: 190 mm
- Application range: Ø 15–50 mm

Product name	Part Number
EXRM-1004	702607N001

Insulation Stripping String EXRM-0764

DESCRIPTION

- Insulation stripping string for plastic insulated cables
- Length: 2000 mm

Product name	Part Number
EXRM-0764	332451N001

Insulation and Oversheath Stripping Tool IT-1000-024

DESCRIPTION

- Designed for insulation removing and oversheath stripping of plastic insulated cables, ranging from 35 mm^2 10 kV to 500 mm^2 35 kV
- The automatic feed (2 steps) and the 0 position, for a radial cut, allow a quick, safe and exact cutting of the cable oversheath and insulation. The special shape of the knife lifts the sheath at the cutting point and thus prevents damage to any components underneath. Tool is supplied completely with an operating manual in a box
- Application range: Ø 15 - 50 mm, thickness up to 10 mm

Product name	Part Number
IT-1000-024	D23436N001

Product name Spare blade	Part Number
IT-1000-024-01	CJ8178-000

Screen Removal Tool IT-1000-017

DESCRIPTION

- Designed for screen removing of round plastic insulated conductors with coextruded and bonded semi-conductive screen. It is continuously adjustable to the core diameters within given range. Cutting depth easily changed with a knurled head screw. Delivered completely with operating manual, hexagonal allen key and a spare blade in a tool box

Application ranges	Product name IT-1000-017-1	Part Number
Over semi-conductive	Ø 16 – 34 mm	
Rated Voltages Uo/U (Um) (kV)	Cable Cross Section (mm²) according to IEC 502	
6 / 10 (12)	25 – 300	
8.7 / 15 (17.5)	25 – 240	E87283N001
12 / 20 (24)	25 – 185	
18 / 30 (36)	35 – 120	
20 / 35 (42)	35 – 95	

Application ranges	Product name IT-1000-017-2	Part Number
Over semi-conductive layer	Ø 19 – 45 mm	
Rated Voltages Uo/U (Um) (kV)	Cable Cross Section (mm²) according to IEC 502	
6 / 10 (12)	70 – 630	
8.7 / 15 (17.5)	50 – 630	490679N001
12 / 20 (24)	25 – 500	
18 / 30 (36)	35 – 400	
20 / 35 (42)	35 – 300	

Application ranges	Product name IT-1000-017-3	Part Number
Over semi-conductive layer	Ø 26 – 48 mm	
Rated Voltages Uo/U (Um) (kV)	Cable Cross Section (mm²) according to IEC 502	
6 / 10 (12)	120 – 800	
8.7 / 15 (17.5)	70 – 800	E13408N001
12 / 20 (24)	50 – 630	
18 / 30 (36)	35 – 500	
20 / 35 (42)	35 – 400	

Product name Spare blade	Part Number
EXRM-1606	A43920N001

Stripping Tool HVIA-STRIPPER

DESCRIPTION

- Stripping tool for coextruded and bonded cable screens and primary insulation for HV cables. Completely delivered in a heavy-duty plastic case, with operating manual and one set of coated blades

Product name	Cable diameter (mm)		Part Number
	min.	max.	
HVIA-STRIPPER-35/90	35	90	F46396-000
HVIA-STRIPPER-75/150	75	150	D03633-000

TE connectivity

Hexagon Insert Socket EXRM-1228

DESCRIPTION

- Extra long hexagon insert socket wrench is used for the installation of RICS adapters
- Insert socket size: 24 mm
- Length: 90 mm

Product name	Part Number
EXRM-1228	040695N001

Installation Tool IT-1000-019

DESCRIPTION

- Tool for holding mechanical connectors in position while tightening the bolts
- Length of handle: 205 mm
- Application range: Ø 15 – 60 mm

Product name	Part Number
IT-1000-019	541259N001

Cleaning Tissues EPPA-004

DESCRIPTION

- Tissues impregnated with water-soluble cleaning solution. For cleaning and degreasing of metal and plastic surfaces
- Size: 200 x 140 mm folded to 80 x 60 mm
- Packaging: 50 pieces in a box

Product name	Part Number
EPPA-004	A78013-000

Channel Pulling Tool IT-1000-014

DESCRIPTION

- Tool used for installation and securing of closing channels on heat-shrinkable wraparounds such as CRSM, MRSM and RFSM

Product name	Part Number
IT-1000-014	651467-000

Ligarex Pliers IT-1000-004

DESCRIPTION

- These special pliers are used for tightening the Ligarex ties. The Ligarex ties are used in earth connections of paper cables with metal sheaths

Product name	Part Number
IT-1000-004	613689-000

Product name Ligarex ties	Length (mm)	Part Number
EXRM-0302-250	250	827684N001
EXRM-0302-500	500	132336N001
EXRM-0302-800	800	393583N001

Inflation Tool RDSS-IT-16

DESCRIPTION

- Inflation tool for RDSS duct seals complete with ON/OFF switch and an automatic pressure monitoring system.
- The required CO_2 gas cylinders (E7512-0160) must be ordered separately.

Product name	Part Number
RDSS-IT-16	826061-000

RDSS
Inflatable sealing system for cable ducts

PROPERTIES

- The RDSS system consists of an inflatable bladder in laminated aluminium. Both sides are equipped with a pressure-activated sealing compound
- The bladder is wrapped around the cable or cables, and is then inserted in the hole. RDSS can also be used to seal holes without cables
- The pre-mounted compressed air hose is connected to a tool with a CO_2 gas cylinder. The tool automatically inflates the bladder to a pressure of 3 bar
- The pre-mounted compressed air hose is removed, after which a gel seal closes the inlet hole. The sealing compound now forms a permanent seal with both the cavity wall and the cables
- In ducts with 3 or more cables, an additional RDSS-CLIP sealing clip must be used, see selection table

APPLICATION

- For sealing against water and moisture in concrete, plastic or metal cable ducts
- Ducts can be sealed with or without cables

BENEFITS

- Easy installation, without having to remove the cables, as the seal is wrapped around the cables
- Seals both empty ducts and ducts containing multiple cables
- Prevents ingress of soil and water and can withstand highly polluted environments
- Easy to remove

RDSS Sealing bladder

Product name	Application range	Pack QTY	Part Number
RDSS-45(S10)	See table	10	863155-000
RDSS-60(S10)	See table	10	776895-000
RDSS-75(S10)	See table	10	938709-000
RDSS-100(S10)	See table	10	828695-000
RDSS-125(S10)	See table	10	588693-000
RDSS-150(S10)	See table	10	485455-000

Adapter

Product name	Application range	Pack QTY	Part Number
RDSS-AD-210(S4)	See table	4	679588-001

Sealing clip

Product name	Application range	Pack QTY	Part Number
RDSS-CLIP-45(S5)	See table	5	196693-000
RDSS-CLIP-75(S5)	See table	5	291933-000
RDSS-CLIP-100(S5)	See table	5	848365-000
RDSS-CLIP-125(S5)	See table	5	296347-000
RDSS-CLIP-150(S5)	See table	5	741939-000
RDSS-AT/AP-150*	See table	1	059487-000

*	Duct blinding piece.

Accessories

| Part number		Pack QTY	Part Number
E4540-1435/1(B48)	Soap dispenser	48	CS9536-000
E7512-0160(B60)	Gas cylinders	68	985444-000
RDSS-IT-16	Inflation tool, cylinder type	1	826061-000

RDSS

Inflatable sealing system for cable ducts
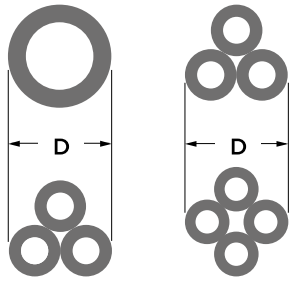
Cable or cable bundle diameters:
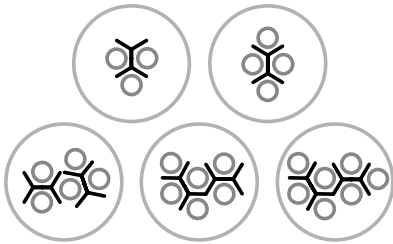
For each clip used, subtract 5 mm from the maximum cable diameter shown in the table to determine the maximum cable bundle diameter.

When three or more cables have to be sealed, an Raychem RDSS-Sealing-Clip is used in combination with the RDSS-Inflatable duct seal.
One RDSS-Clip seals up to 4 cables.

If more cables are to be sealed, use one extra clip per three additional cables as shown in the following examples for different multi-cable configurations:

Each RDSS-Seals empty ducts (except for size 150) and ducts containing up to 2 cables. The table above shows the minimum and maximum diameter of the cable or of the sum of 2 cables depending on the duct size. Dimensions in mm.

All Rayflate-RDSS sizes are packed in boxes of 10 pieces with 1 lubricant dispenser and an installation instruction.
RDSS-Clips are packed in boxes of 5 pieces. RDSS-Clips must be ordered as a separate item.

Ordering information and selection table

Duct inside Ø	RDSS-45 cable Ø	RDSS-60 cable Ø	RDSS-75 cable Ø	RDSS-100 cable Ø	RDSS-125 cable Ø	RDSS-150 cable Ø
32,5	0 – 14					
35	0 – 18					
40	0 – 27					
45	0 – 32	0 – 18				
50		0 – 30				
55		0 – 38	0 – 28			
60		0 – 45	0 – 30			
65			0 – 40			
70			0 – 46			
75			0 – 56	0 – 45		
80				0 – 52		
85				0 – 60		
90				0 – 66		
95				0 – 74		
100				0 – 80	0 – 65	
105				55 – 95*	0 – 75	
110				60 – 100*	0 – 83	
115					0 – 91	
120					0 – 95	
125					0 – 103	60 – 100
130					70 – 110*	60 – 107
135					75 – 115*	60 – 112
140					80 – 120*	60 – 118
145					85 – 125*	60 – 123
150					90 – 130*	60 – 129
155						60 – 134*
160						60 – 139*
165						105 – 145*
170						110 – 150*
175						115 – 155*
180						120 – 160*
Clip selection	RDSS-CLIP-45	RDSS-CLIP-60	RDSS-CLIP-75	RDSS-CLIP-100	RDSS-CLIP-125	RDSS-CLIP-150

▮	Suitable also for empty ducts
▮	Only with cables

* RDSS-Clips must also be used for 2-cable configurations.

Selection table for RDSS-AD-210 adaptor for large duct sizes

Duct inside Ø	1 x RDSS-AD-210 + RDSS-125 cable Ø	2 x RDSS-AD-210 + RDSS-125 cable Ø	1 x RDSS-AD-210 + RDSS-150 cable Ø	2 x RDSS-AD-210 + RDSS-150 cable Ø
130	0*			
135	0*			
140	0 – 40			
145	0 – 50			
150	0 – 65			
155	0 – 83			
160	0 – 91			
165	0 – 103			
170	70 – 110	0*	60 – 107	
175	75 – 115	0 – 40	60 – 112	
180	80 – 120	0 – 50	60 – 118	
185	90 – 130	0 – 65	60 – 129	
190		0 – 83	60 – 135	
195		0 – 95	60 – 139	
200		0 – 103	105 – 145	60 – 100
205		75 – 115	115 – 155	60 – 112
210		80 – 120	120 – 160	60 – 118

▮	Suitable for empty ducts
▮	With cables only

* Empty ducts only.

All dimensions in mm

CES
Raychem Heat-Shrinkable Cable Entry Seals

PROPERTIES

- Heat-shrinkable cable entry seals (CES) provide a watertight, fume-tight seal where cables enter connection boxes, bulkheads, or other enclosures CESs are available in two basic types: standard and threaded

APPLICATION

- Cable penetration into panels, junction boxes and sealed cabinets
- Bulkhead penetration

Standard CES

Product name	No. of legs	Overall Nom. recommended length	Min. expanded I.D. body	Max. recovered I.D. body	Max. I.D. of part	Drill size	Max. O.D. of nut	Pack QTY	Part Number
CES-1	1	69.85	12.70	4.32	19.05	25.40	35.81	20	409534-001
CES-2	1	69.85	19.05	6.35	19.05	25.40	35.81	20	967279-001
CES-3	1	95.25	28.45	12.70	27.94	35.05	48.31	10	912229-001
CES-4	1	114.30	40.64	19.05	39.62	50.80	69.09	10	848633-001
CES-5	1	177.80	69.85	36.32]	73.66	88.90	103.38	5	744945-001

GUROFLEX MV

Cold-pour insulating compound Casting Material

APPLICATION	
	▪ Typically used as a filling compound for cable termination boxes and bus bar enclosures typically associated with switchgear, transformers and motors where clearnces are an issue
	▪ Used to replace traditional oil based hot pour compounds

BENEFITS	
	▪ Cold pour - safe to use
	▪ Clasified non hazardous
	▪ Excellent electrical properties
	▪ Cures to a soft solid - no leakage problems
	▪ No topping up or waiting time
	▪ Unaffected by water and oil based insulating compounds
	▪ Can be installed in hot or cold conditions
	▪ Can be cut out if re-entry required
	▪ HCL resisitant
	▪ Conforms to CENELEC standard HD 629.1 S1

GUROFLEX MV Cold-pour insulating compound

Product name	Volume	Product	Pack QTY	Part Number
JOR-59060	1 litre	GUROFLEX-MV-C100	60	EA2308-000
JOR-59003	5.3 litres	GUROFLEX-MV-C530	1	C82946-000
JOR-59005	10 litres	GUROFLEX-MV-C1000	1	E57640-000
On request	Grease to aid release / removal	EPPA-119-CABLE-GREASE	1	941945-000

TE Connectivity is a global industrial technology leader creating a safer, sustainable, productive, and connected future. Our broad range of connectivity and sensor solutions, proven in the harshest environments, enable advancements in transportation, industrial applications, medical technology, energy, data communications, and the home. With more than 85,000 employees, including over 8,000 engineers, working alongside customers in approximately 140 countries, TE ensures that EVERY CONNECTION COUNTS.

- Mining
- Nuclear power plants
- OEMs
- Overhead distribution
- Petrochemical plants
- Railways
- Street lighting

- Substations
- Transmission lines
- Underground distribution
- Windfarms
- Solar
- Hydro-electric

WHEREVER ELECTRICITY FLOWS, YOU'LL FIND TE ENERGY

te.com/energy

FOR MORE INFORMATION:

TE Technical Support Centers

France:	+ 33 380 583 200	Italy:	+ 39 333 2500 915
Germany:	+ 49 896 089 903	Poland and Baltics:	+ 48 224 576 753
UK:	+ 44 8 708 707 500	Czech Republic:	+ 42 0 272 011 105
Spain:	+ 34 916 630 400	Sweden and Norway:	+ 46 850 725 000
Benelux:	+ 32 16 351 731	Middle East:	+ 971 4 2 117 000
Denmark:	+ 45 43 480 424	USA:	+ 1 800 327 6996

te.com/energy