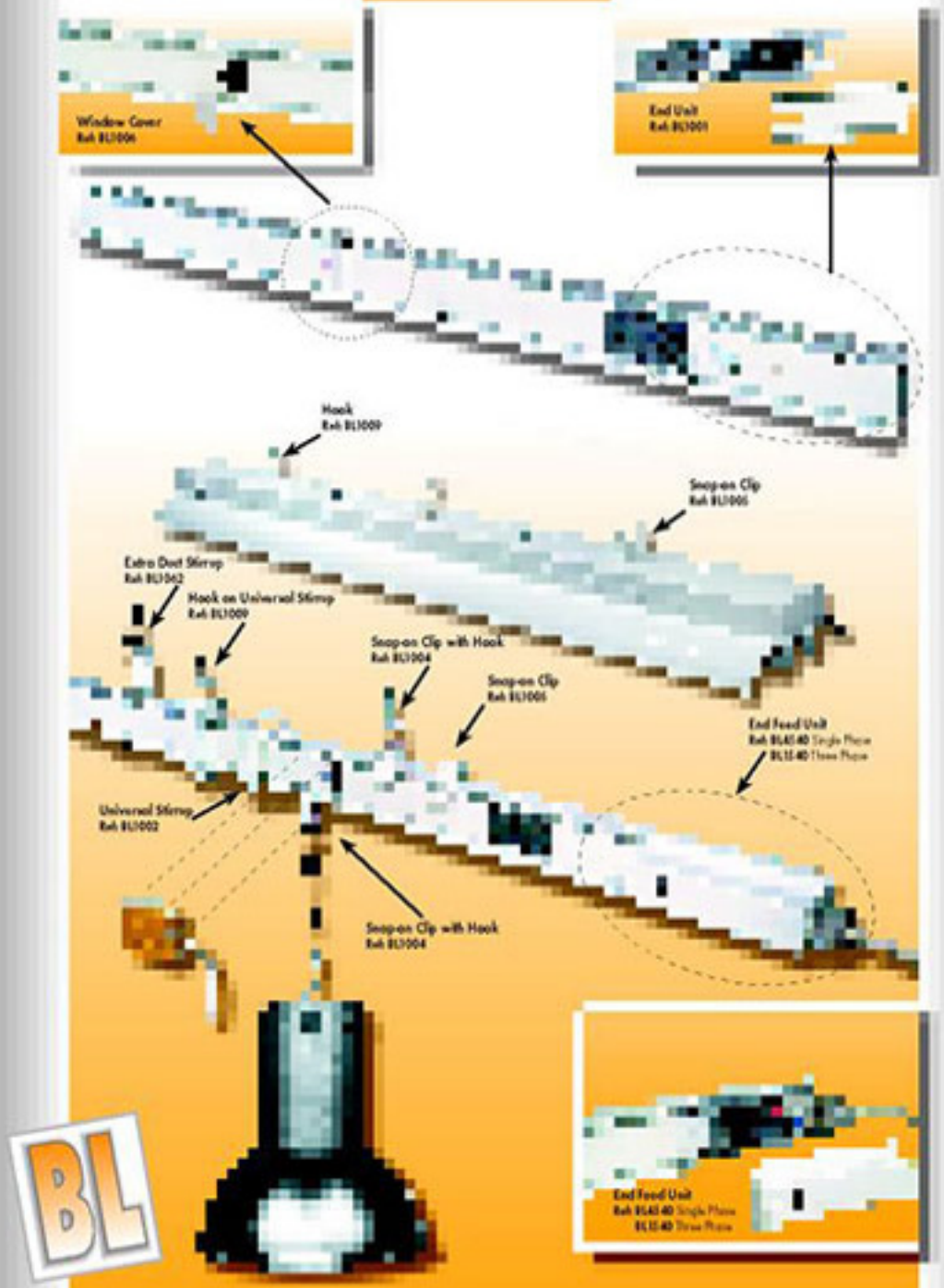
Busduct Elements



General Applications

Applications

- Exhibitions, Malls
- Banks, Public Halls
- Educational Buildings
- Theaters, Conference Rooms
- Laboratories, Hospitals, Sport Centers
- Commercial and Administrative Offices
- Industrial Buildings, Workshops, Warehouses
- Airports, Railway and Subway Stations, Bus Terminals

Lighting Busduct-BL

The BL product is suitable for connection of light fixtures at industrial workshops, shopfloors, technical offices, showrooms, educational institutes, manufacturing sites, high-rise buildings, museums, hospitals, commercial complexes etc...

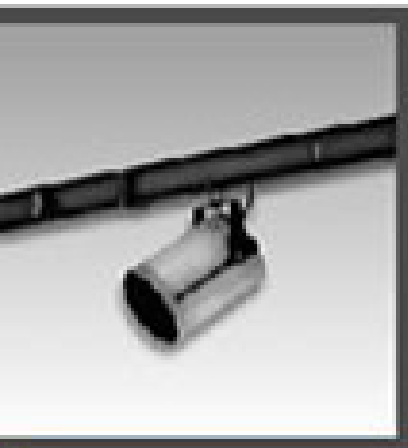
It is available in 25 and 40 amps versions with 2 to 4 insulated copper conductors (single or 3 phase) housed in a hot dip galvanized steel which is also used as earth connection (PE).

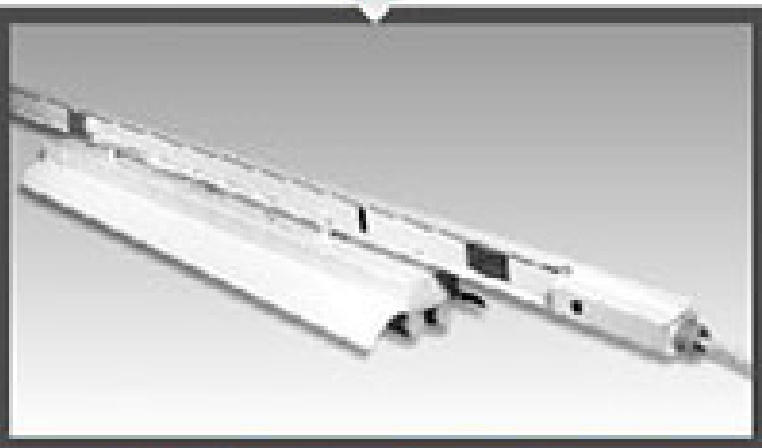
BL parts are manufactured to standard lengths, connected easily together by sliding mechanism. On every straight length piece, tap-off windows for obtaining electrical supply are provided at equal spaces. By connecting tap-off units or sockets to each tap-off window, power is supplied to many equipment along the line with even distribution of electrical power.

A variety of fixing accessories makes BL installation possible to almost any structure or building. These accessories are also used for installing all types of industrial light fixtures, loudspeakers, central clocks, fire detectors, etc... to BL housing.

BL is available in galvanized or painted steel (powder coated). It's protection degree is normally IP30, which increases to IP51 when the tap-off windows are covered. BL busducts can be produced to higher protection degrees according to the customer's specifications.

BL





Technical advantages

Compared with conventional electrical power distribution systems such as cable trays and lighting channels, the lighting busduct "BL" has the following advantages and technical details:

1- In spite of its light appearance, the I shape of BL housing provides high strength, so that compact and distributed installation of all types of industrial light fixtures, florescent or any other kind of fixture is possible along the busduct's length.

2- Once installed, light fixtures are easily spaced in straight line.

3- Reduced installation time, since all parts are prefabricated and tested. Lighting busduct replaces cable, cable tray, distribution box and connecting terminals.

Rated voltage V	VAC VDC	380 450	
Conductors and isolation	-	Copper bar PVC coated	
Rated current A	A	40	25
Conductor cross-section mm	mm²	7	4
No. of conductors		3-5-4	
Resistance at 1Hz	mΩ/m	3.6	4.5
Housing thickness	mm	0.6	
Protection conductor cross-section copper equivalent mm	mm²	15	
Mean weight per meter in kg	kg	1.7	
Short circuit withstand	KA	7	
Protection degree		IP 307 IP 517	

4- With color coded socket outlets, distribution of electrical load on each phase (R, S, T) is easily possible and load balance can be controlled from distance.

5- Fixing accessories, for installing wires and cables of other electrical systems such as fire alarms, paging, central clock, loudspeakers, etc... are provided on the busduct housing or inside an extra trunking over it which prevents additional costs for cable tray and cable holders.

6- The installed busduct can easily be modified, extended or displaced and the number of connected lighting frames can be changed quickly.

7- Total "BL" busduct system is a reusable investment, it can easily be installed at other locations.

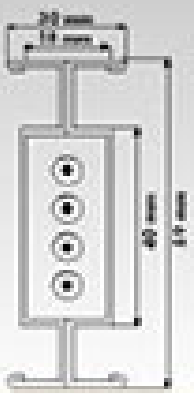
Straight Units

"BL" busduct straight lenghts are produced in standard lenght of 0.5, 1, 2, 3 and 4 meters.
Conductor numbers varies depending on application from 2 (single phase) to 4 (three-phase) PVC insulated (class E) copper wires.

Tap-off windows with 0.5 or 1 meter spacing are provided on both sides of the busduct housing.

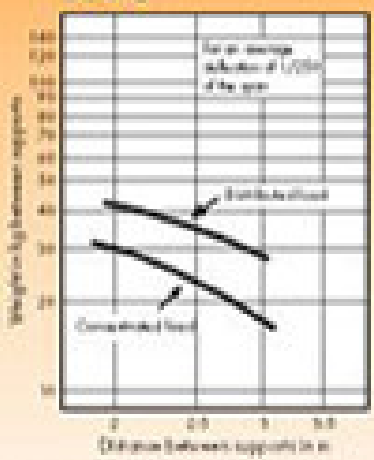
Electrical connection is made by sliding through male and female contacts of all the parts. Mechanical connection is ensured by fastening special nuts provided.

BL



Connection of units

BL 0.6



Maximum distributed or concentrated load is based on support distances.

Finger protection

Tap-off Units

Due to a wide application range of "BL", different types of tap-off units are provided.

Tap-off elements provides electrical connection between the load and the conductors. They are available in single and three phase. Their connection to conductors are made by spring bronze rods. Earth connection (PE) is made prior to making live electrical connection.

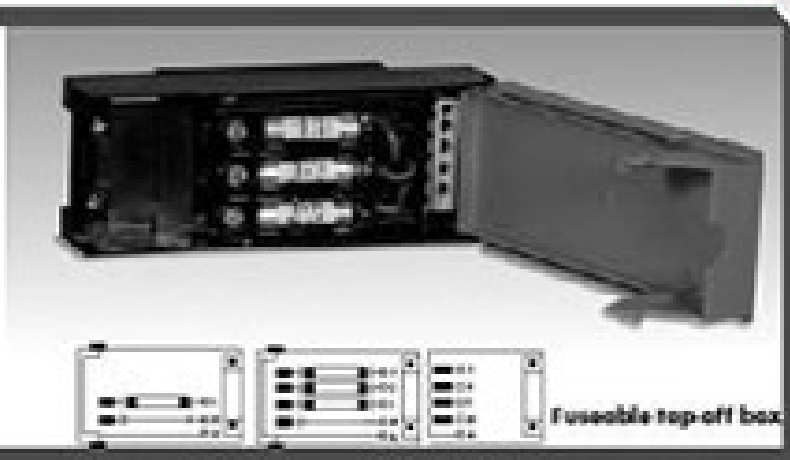
Single and three phase tapping connections (sockets) has 2 or 4 contact outlets suitable for supplying power to lighting systems and are available in different types.

Each connector has 1 or 2 meters of 1mm² cable. Single and three phase protected conductor boxes called "Fuseable tap-off box" are also available. Fuseable boxes contain 1, 2 or 3 cylindrical fuse bases, together with a single earth terminal.

Safety of tap-off boxes

The cover of tap-off boxes are designed in such a way that it can not be opened unless the box is removed from the busduct.

BL



Fuseable tap-off box

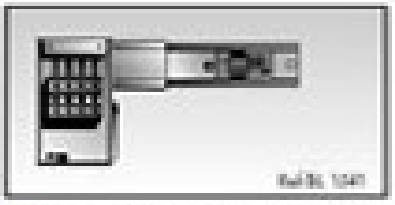
Tapping connection (socket)

Tapping connector (socket) single and three phase

Description	Order Reference	Amps	Body Color	Cover Color
Tapping connection (N+L1+PE) with 1m or 2m connecting cable	BL1011/BL1021	10	White	Orange
Tapping connection (N+L2+PE) with 1m or 2m connecting cable	BL1112/BL1121	10	White	White
Tapping connection (N+L3+PE) with 1m or 2m connecting cable	BL1113/BL1123	10	White	Yellow
Tapping connection (L2+L3+PE) with 1m or 2m connecting cable	BL1115/BL1125	10	Brown	Yellow
Tapping connection (N+L1+L2+L3+PE)	BL1034	10	Brown	White
Fuseable tap-off box (N+L1+PE)	BL1042	6	Brown	Orange
Fuseable tap-off box (N+L1+L2+L3+PE)	BL1044	6	Brown	Orange
Fuseable tap-off box (N+L1+L2+L3+PE)	BL1046	10	Brown	Orange

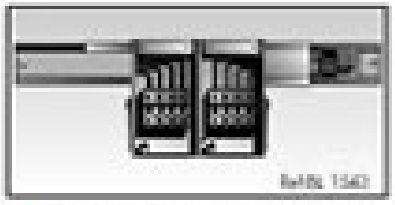
Feeding Units

Electrical power supply to the busduct is provided by special feeder unit box. They are available in three types, based on their applications.

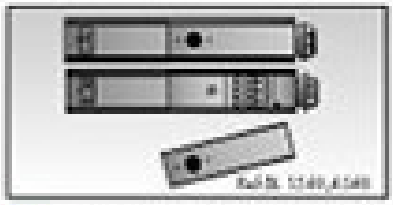


A- Feeding box unit, is used to energize busduct from the beginning of the line and it consists of four 25mm² cable terminals.

Box dimensions provides the possibility for installing different protection elements, such as miniature circuit breakes cylindrical, neozed or any other type of fuses. This unit is usually for industries and workshop uses.



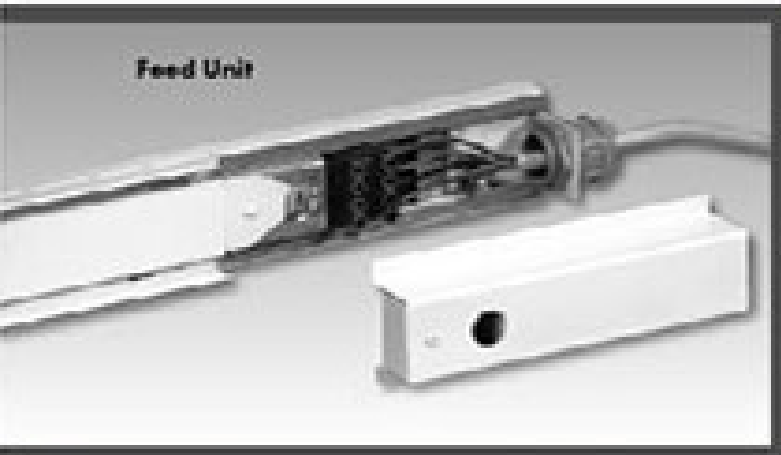
B- Center feeding box unit, is used in cases where for technical or economical reasons, feeding from the center or electrical separation of the line is required.



C- Feed unit, is a small and economical unit to replace feeding box. This unit is available in single and three phase and consists of a cable gland, 16mm² cable terminal single or 3 phase and a protection body.

Due to its light weight this unit is suitable for use in offices, showrooms, museums etc...

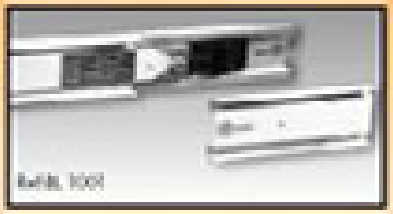
BL



Accessories Accessories

End piece

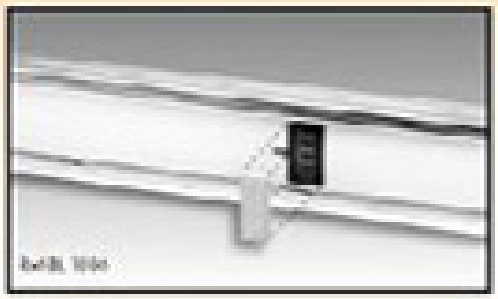
This element is connected to the end of the last piece in the busduct line in order to close off busduct ends.

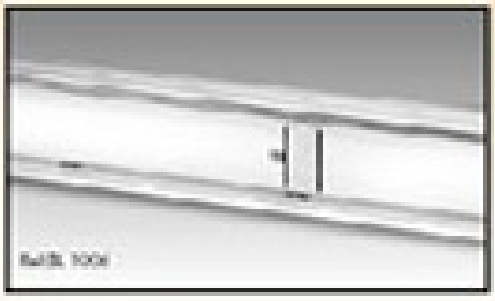


Tap-off support window cover

For safety reasons, when tap-off window is not in use it can be covered by a plastic cover.

This cover stops dust, water splashes and unwanted parts from entering the busduct. This will upgrade the protection degree from IP30 to IP51.





Installation Accessories

"BL" housing has a wide application in lighting provision. To install busduct structures and to assemble different types of light fixtures, a full range of installation accessories are designed and supplied.

Universal stirrups

This is used for installing busduct in the following forms:

1- Direct connection to the ceiling, drop ceiling and other structures.

2- Suspension from the ceiling by chain or rod.

3- Installation against the wall.

4- Installation on flat surface.

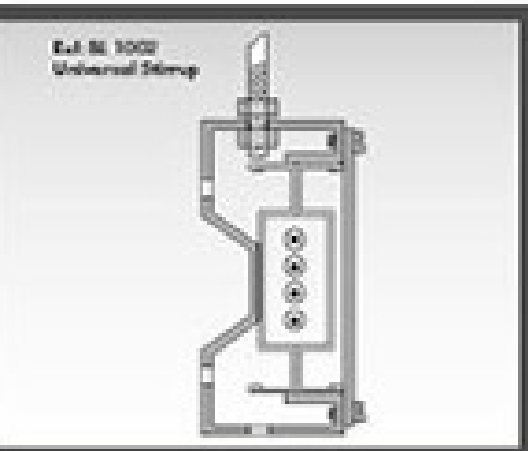
Extra duct stirrup

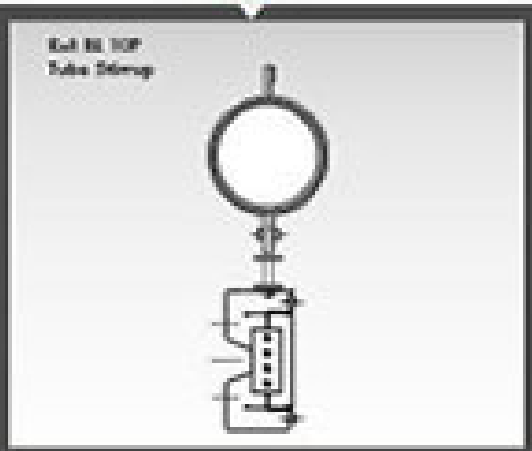
Similar to universal stirrup, it can be used in different forms and in particular for installing low current systems for which more details is given in "accessory parts section" of this brochure.

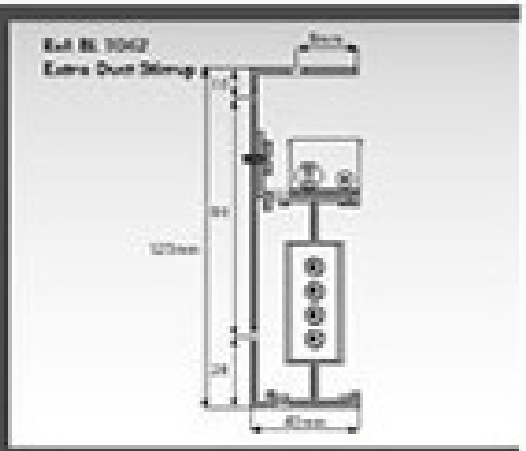
Tube stirrup for space frames

This stirrup is designed for installing "BL" busduct to cylindrical elements of space frame (different tubes) and together with the hook, universal and double size stirrups, busduct can be connected to space frames.

BL







s o r i e s A c c e s s o r i e s

Snap-on clip

This is a simple element used for direct assembly of different light fixtures on to the busduct.

The element is first screwed to the light fixture, then light fixture is connected to the busduct.

In places with low ceiling, such as offices, snap-on clip can replace universal and extra duct stirrups where space between busduct and light fixture is reduced to a minimum.

Snap-on clip with hook

This combination is suitable for suspension of industrial light fixtures, florescent and others to the busduct line. It can also be used for installing the busduct line in suspension form.

Hook

The hook has many applications. Combination of hook and universal stirrup provides suitable element for suspension of the busduct line by chain.

This combination also makes suspension of light fixtures to the busduct lines possible.

The hook could be a single interlink, in cases where light fixtures are connected to the busduct line by chain.

Suplementary Parts

Cable Support/Wire Duct/Extra Duct Stirrup

BL conductor numbers are limited to 4. If more wires or cables are needed to carry extra power for low current systems such as loudspeakers, telephones, fire alarm, central clock, computers etc., they can be fixed to the busduct in two ways. One is to use wire duct and extra duct stirrups and the second way is to use a special cable stirrup.

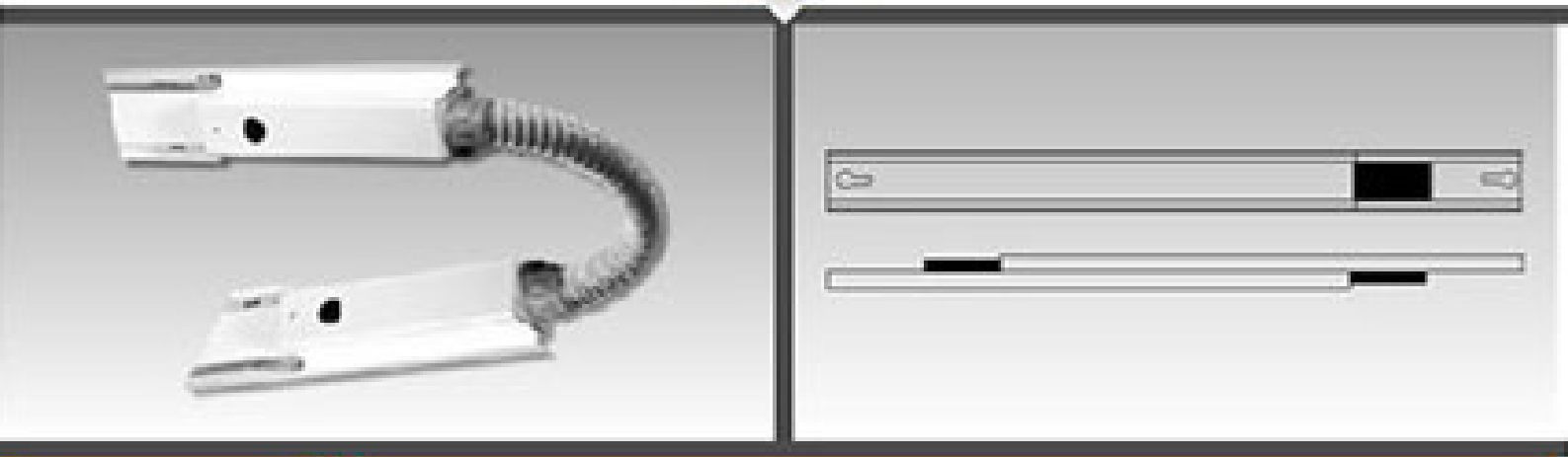
Flexible connecting unit

This unit is used for the connection of two non planner busduct lines.

Separater unit

By this unit separation of two co-axis busduct lines are possible.

BL



Wire duct - Extra duct stirrup

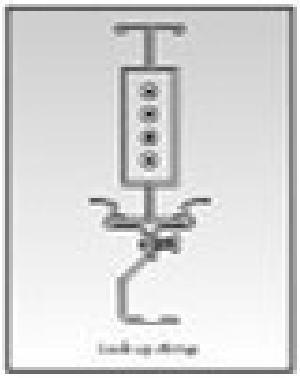
In case there is a need to pass a number of wires and cables through a separate duct, double decked stirrup can be used.

Application of this element is similar to universal stirrup with the difference that this supports both busduct and the duct. It can support duct up to 30 X 30 mm in dimensions.

Busduct Installation

Installation of the busduct line is possible either by hanging or by direct connection to the ceiling, drop ceiling or to the wall, with the availability of all the necessary accessories for any one of these variations, according to the diagrams below.

In any installation format, the weight of all different elements that are to be hanged from the busduct should be considered i.e.: light fixtures, wire duct, loud speakers etc., in order to find the correct distance between supports (refer to table on page 3). In hanging format, steel cable can be used at suitable spacing to limit the horizontal movements. for more details consult our design office.



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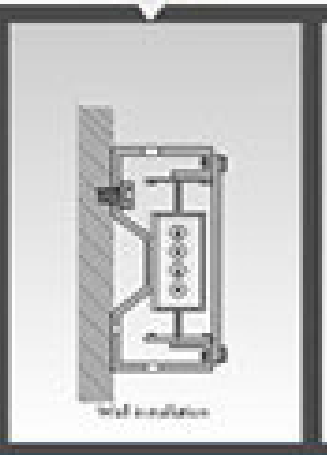
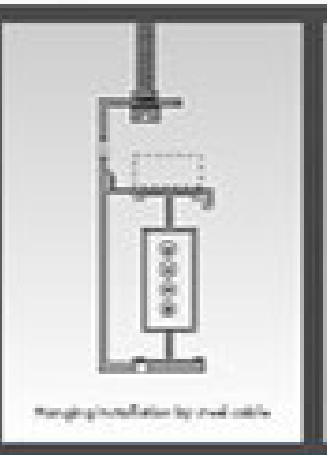
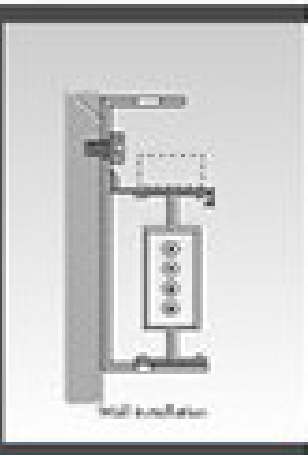


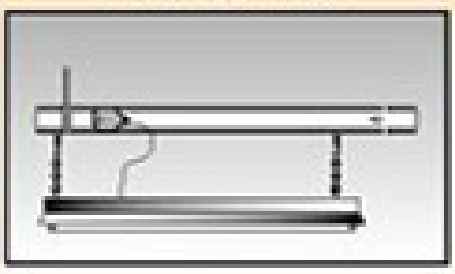




Light Fixture Installation to Busduct Line

Light fixtures are installed on to the busduct line either directly or by hanging (shown below):

- Connection of the snap-on clip and tapping connection (socket) is made prior to installation to the line.
- On the busduct line, light fixture mechanical connection is ensured by click on and electrical connection by tapping connection (socket).



IP 30 or 53

BL Parts

STRAIGHT LENGTH

Description		Single Phase Reference #	Three Phase Reference #
Straight Length 25 Amps	4 meter	• BL 4224	• BL 4244
	3 meter	4223	4243
	2 meter	4222	4242
	1 meter	4221	4241
	0.5 meter	4220	4240
Straight Length 40 Amps	4 meter	4424	4444
	3 meter	4423	4443
	2 meter	4422	4442
	1 meter	4421	4441
	0.5 meter	4420	4440

FEED UNITS

Description	Reference #
End Feed Unit, single phase 25A with 10mm² cable terminal	4540
End Feed Unit, three phase 40A with 16mm² cable terminal	1540
End Feed Box Unit, three phase	1541
Center Feed Box Unit, three phase	1543

INSTALLATION ACCESSORIES

Description		Reference #
Supplementary Parts	End Pieces	1001
	Separator Unit	1108
	Flexible Connection Unit	1171
	Window Cover	1006
	2x3cm Trunking suitable for installation on busduct Top with 2m length	1053
	Universal Stirrup	1002
	Extra Duct Stirrup	1062
	Tube Stirrup	10 P
	Snap-on Clip with hook	1004
	Snap-on Clip	1005
	Lock-up Stirrup	1008
	Hook	1009

TAP-OFF UNITS

Description		Reference #	Reference #	Reference #
Tap-off Box, without fuse, single phase+earth		L1+N	L2+N	L3+N
	with one meter cable	1011	1112	1113
	with two meter cable	1021	1122	1123
		L1+L2	L2+L3	L1+L3
	with one meter cable	1114	1115	1116
	with two meter cable	1124	1125	1126
Three phase+earth		3 phase+N	N/L1/L2/L3	1034
Tap-off Box, with fuse	Single phase with 6A fuse			1042
	Three phase with 6A fuse			1044
	Three phase with 10A fuse			1046

• When ordering add "BL" in front of reference number.

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Electrical Prefabricated Busduct Systems

Lighting Busduct

BL

25 to 40 A