



UNIDUCT
CABLE CONDUIT SYSTEM

PVC ELECTRICAL CONDUITS AND ACCESSORIES



www.unitech-ikk.com
www.ikkgroup.com



UNITECH
For Building and Construction Materials

PVC ELECTRICAL CONDUITS AND ACCESSORIES



UNIDUCT
CABLE CONDUIT SYSTEM



PVC Electrical Conduits and Accessories

Index

About UNITECH	4
About Uniduct	11
Uniduct Range of Product	13
Contact Information	24



**ABOUT
UNITECH**

Unitech Introduction

Unitech is a Saudi based Multinational Company providing building and construction solutions that is empowering the region's construction industry for the past 40+ years. We have been successfully providing solutions through mastering our main business activities: Design, Manufacture and Trade.

**Design:**

Provide Design & Engineering Solution to the construction sector, complying with international & local standards.

**Manufacture:**

Operating with Global Standards, we are widely recognized for our advanced light steel solutions and Hot-Dip Galvanization Facility.

**Trade:**

We are one of the region's largest Importer/Exporter of Building & Construction Materials.

Unitech is an **ISO QMS 9001:2015** certified company and is a member of the US Green Building Council. Our experienced teams and operations are present across the Middle-East North Africa regions (MENA) and Pakistan, giving us an extensive regional network that benefits our clients and partners. We are also present in Europe via our design and engineering office in Stuttgart.

For more information, please visit: www.unitech-ikk.com

Mission & Vision

Mission

UNITECH is committed to transforming the construction and building sector by equipping engineers with advanced solutions and expert support at every project stage. As a leading industry provider, we empower our team to deliver exceptional service that consistently exceeds expectations. By fostering a cohesive and forward-focused culture, we attract and retain top talent, driving our mission forward. Our innovative, customer-centric products set new industry benchmarks and pave the way for future progress.

Vision

To be the Customer's First Choice...

Our Strategy

Unitech's strategy continues to focus on accelerating its business throughout the region, to service the construction sector via superior products & solutions, backed up by a group of highly experienced people in the field. Unitech also aims to enhance its geographical presence in its areas of interest and where opportunities exist.

We combine a deep understanding of building and construction materials markets with a successful history of upgrading our products and developing our processes.

We have the qualified employees, the know-how and the products to service major construction projects, medium sized to mega projects taking in care our positive contribution to our societies.

We thrive towards excellence by acknowledging:



Customer Satisfaction



Partner and Supplier Relations



Employee Retention



Positive Influence on Society and Environment

Our Employees

We are a company that prides itself on its 'family' culture and we seek out high-caliber people. We are a company that has, at its core, a team philosophy that is clearly apparent each and every day - there is a real sense of being there for one another.

We believe in nurturing the skills of our team members and providing growing levels of responsibility. Our people bring unique skills, energy, expertise, experience and perspectives to our workforce.

Unitech's family of employees consists of experienced, well-motivated and dedicated team of engineers, technicians, sales executives and management staff. This team is committed to serve our customers, with the best solutions available in the market.

Our Journey

40+ Years of Excellence

Since 1979, having been set to become an independent company under the framework developed by Sheikh Isam Kabbani, Unitech started its journey of success with confidence and enthusiasm, hard work and care to detail and a commitment to become the best within its industry.

Its dedicated people could only imagine what the future could bring to this newly established entity. Unitech's journey of success has been marked with outstanding achievements and superior accomplishments. Year by year, Unitech has been acknowledged as the "First Choice for Building & Construction Material" by major construction consultants in the region, governmental authorities, well-known contracting and project development corporations.

We have obtained invaluable knowledge about the construction industry in general, providing specialized solutions to construction projects throughout MENA region. From a couple of outlets in Saudi Arabia, Unitech today is present all over the Kingdom and in several countries throughout the region providing its products and solution to various locations worldwide.



Est. 1979

THE BEGINNING

Unitech was established in the Western Region of KSA as a Sales Company selling basic construction material.

During the same year, another branch was established in the heart of the kingdoms capital, Riyadh.



1980 to 1989

AGE OF GREAT RISK

Unitech Dammam was open for business in the oil-rich eastern coast of Saudi Arabia.

Within these 10 years the idea of in-house manufacturing facility was born and Specialized Factory for Steel Products (SFSP) was established in Riyadh.



1990 to 1999

AGE OF GROWTH

Branches of Unitech were established in Makkah, Madina, Khamis Mushayt and Jubail.

The need to increase its range of products and the necessity to have production lines for mass production lead to the decision to move the SFSP Factory from Riyadh to Jeddah.

Pioneering Construction Since 1979

We are constantly evolving in order to become more flexible in our operations, more sustainable in our societies, and more innovative in conducting our business.

By delivering superior products tailored to the specific construction needs, ambitious solutions, and an outstanding customer service, we serve today's needs through developing tomorrow's markets.

Helping construction projects experience success is what fueled its days. Unitech is keen to continue offering superior products, a wide spectrum of solutions, governed by our top-notch management style.

Such aspirations require trust in our responsibilities. Our Responsibilities for the future and with this in mind we continue to target excellence with committed efforts.



2000 to 2015

AGE OF CONSTRUCTION BOOM

Qassim, Hofuf and Yanbu Branches were inaugurated in KSA and branches outside KSA were established in UAE, Egypt, Lebanon, Oman, Jordan and Germany in order to facilitate the construction boom in the Middle East.

During this period SFSP state of the art facilities were launched in DIC UAE and Unitech thrived, marking some of the best years in business.



2016 to 2019

AGE OF GREAT CHANGE

This period, marked the age of great change in order to align with the economic shift in the GCC and the world in general.

Company wide right sizing initiatives were taken especially in KSA to align with the kingdom's ambitious vision 2030 and during this period the upgraded SFSP state of the art facilities were launched in JIC 3 KSA.



2020 & Beyond

NEW FRONTIER

This period marks the expansion of Unitech into the South and Central Asian territories. We aim to cater these markets and play an active role in these countries development.

During 2020, Unitech Pakistan was officially inaugurated and marked the entrance of Unitech into Asian Market.

Our Manufacturing Arm SFSP

SFSP is a leading manufacturer and fabricator of light steel construction products in the region, servicing the construction sector through its state of the art facilities which are spread all over the MENA region. Products of SFSP are manufactured from quality raw material according to the relevant international standards to meet all kinds of construction projects requirements, such as MEP, façade, blockwork & waste management systems.

Commitment to Quality

Our commitment to quality is clearly revealed in the way we do our business; our processes, our close interaction with our clients as well as the strict product inspection procedures. To achieve this, we have implemented quality systems & processes that are continually being improved to satisfy our customer's needs.

Product Development

Product development process is substantial to the success of our business. We leverage all resources to provide up-to-date reliable products, environmentally friendly, durable to withstand the toughest weather conditions. Our engineers are constantly testing the products, seeking to present a combination of performance and quality across all our product ranges.

For more information, please visit:
www.sfsp-ikk.com

Value Chain

Our value chain starts up with the quality of the raw materials and ends up in client satisfaction. Our business practices backed up by all technologically essential business elements are supported by an efficient logistics, warehousing and delivery system that maintains a valuable supply chain for products.

The value chain is integrated in our business module, giving us strength and preserving our good reputation gained through the past 4 decades.

Engineering Specialty

Our products development engineers integrate their vast knowledge to provide the perfect solution to projects within the required specifications and time-frame.

The products development department maintains highly skilled calibers with a dedication towards efficient and reliable solutions even in the most complicated cases where delicacy and skillful approaches are indispensable.

Design and Product Safety

Our design and engineering office in Stuttgart ensures our products comply with relevant European and international standards of fabrication, taking into attention the safety factors which govern the public safety of projects.

Sustainability and Responsibility

We are constantly working hard to reduce our environmental footprints while maintaining the high quality and safety standards. We have set our targets to become three times more efficient in the next 10 years. Our responsibility towards our stakeholders is valued through our positive contributions towards our colleagues, our business partners and our communities as well.

Our Design Office



UNITECH DEUTSCHLAND is a "Design & Engineering" Office. Unitech Germany support Unitech & SFSP operations through well-informed cadre of engineers. They help our customers from conception to the completion by delivering design, engineering and project management services.

Thanks to our multidisciplinary team in Unitech Germany and their expertise, we assist you in your ambition to develop your innovation, your engineering and your organization. Our goal is to serve our clients through these elements:

- Excellent in engineering ideas and solutions
- High quality in performance
- Firmness on meeting deadlines

ABOUT UNIDUCT



About UNIDUCT

UNIDUCT cable management system are 100% Saudi manufactured product. UNIDUCT products are produced in Isam M. Khairy Kabbani Plastic & Insulation Factory (IKKPF) is a subsidiary of IKK Group of Companies which is one of the largest conglomerates in Saudi Arabia, headquartered in Jeddah. IKKPF having its manufacturing base in Dammam, 2nd Industrial City produces Electrical Cable Management Conduit Pipes and Fittings as per Saudi, British & American standards.

IKKPF is recognized as a leader and serves traders and contractors throughout the Kingdom and in its neighbouring countries for producing high quality conduits and fittings. UNIDUCT products not only meet the highest local and international standards but are ideally suited to the environmental conditions of the kingdom and

its neighbouring countries.

Our modern manufacturing equipment and our expertise in plastic processing ensures that the utmost product standards and quality is maintained for all the items that we produce. We are dedicated in catering and delivering to our customer needs and strive hard in providing the right products at the right time.



UNIDUCT® Product Markings

UNIDUCT conduit pipes and fittings meet the requirements prescribed by the following standards organisations: SASO, BS, NEMA and ASTM.

Our PVC pipe conduit range in straight runs of 2.9, 3, 6 meters are marked with standards specification requirements, logo, product name, standard, schedule/class, country of origin, manufacturer name, and a unique batch number that ensures traceability tracking and quality control.

UNIDUCT PRODUCT RANGE

Material Properties & Characteristics

UNIDUCTS products are non-flame propagating, combustion proof with good insulation properties having high anti-current puncture proof and lower thermal conductivity than that of metals. The products are also impact resistant, moisture proof, acids and alkalis-resistant and rust-free. Since PVC conduit pipes have no smell to attract rodents, it does not cause any kind of biotic attacks. Easy to install and maintain with complete range of solvent cement fabricated electrical fittings, light in weight with a specific weight which is about one fifth of the steel pipe, resulting in a drop-down on the transportation cost, and facilitating pipes installation.

General Properties	Test Method (ASTM)	Unit	Value
MECHANICAL PROPERTIES			
Tensile Strength	D - 638 / type 1	PSI MPA	7,000 > 48.0
Modulus of Elasticity in Tension	D - 639 / type 1	PSI MPA	500,000 > 3447.0
Flexural Strength	D - 790 proc. B	PSI MPA	14,500 93
Izod Impact	D - 256	Ft - Lbs / In of notch	0.65
Hardness (Rockwell)	D - 785	Rockwell "R"	119
THERMAL PROPERTIES			
Coefficient of Thermal Linear Expansion	D - 696	in/in/ °F	3.0×10^{-5}
	D - 696	mm/mm/ °C	5.4×10^{-5}
Vicat Softening Point	D - 1525 (Rate A)	°C	> 80
Heat Deflection	D - 648 (264 psi)	°C (°F)	> 70 (158)
ELECTRICAL PROPERTIES			
Dielectric Strength	D - 150	Volts / Mil	1413
Dielectric Constant	D - 150	60 cps at 30 °C	3.7
Volume Resistivity	D - 257	Ohm/cm at 95 °C	1.2×10^{12}
FLAMMABILITY PROPERTIES			
Flammability Rating	UL - 94/0.062	Rating	V - 0
Flame Spread	ASTM E84		10
Smoke Developed	ASTM E84		250
Limiting Oxygen Index	UL 94		43%
Burning Rate			Self Extinguishing

UNIDUCT®

Conduits, Tubings & Ducts

SASO & BRITISH STANDARD

SASO GSO IEC 61386-21/2014 & BS-EN-61386 PIPES

Nominal Size	Light Gauge		Medium Gauge		Heavy Gauge	
	Max. Wall Thickness	Min. Inside Diameter	Max. Wall Thickness	Min. Inside Diameter	Max. Wall Thickness	Min. Inside Diameter
	mm	mm	mm	mm	mm	mm
16	1.15	13.7	1.50	13.0	1.90	12.2
20	1.30	17.4	1.55	16.9	2.10	15.8
25	1.45	22.1	1.80	21.4	2.20	20.6
32	1.70	28.6	2.10	27.8	2.70	26.6
38	2.00	34.0	2.25	33.5	2.75	32.5
40	2.10	35.8	2.30	35.4	2.80	34.4
50	2.45	45.1	2.85	44.3	3.40	43.2

UNIDUCT® Conduits are offered in 2.9 meters long and black/ white color

Note: Previously BS6099

AMERICAN STANDARD (NEMA TC-2)

ELECTRICAL PLASTIC TUBING (EPT) & CONDUIT (EPC-40 & EPC-80)

DIMENSIONS OF ELECTRICAL PLASTIC TUBING

Trade Size	Outside Diameter		EPT-A-PVC		EPC-40-PVC		EPC-80-PVC	
			Min. Wall Thickness	Min. Inside Diameter	Min. Wall Thickness	Min. Inside Diameter	Min. Wall Thickness	Min. Inside Diameter
inch	inch	mm	mm	mm	mm	mm	mm	mm
1/2"	0.840	21.34	1.52	17.17	2.77	14.68	3.73	12.75
3/4"	1.050	26.67	1.52	22.50	2.87	19.81	3.91	17.72
1"	1.345	33.40	1.52	29.21	3.38	25.50	4.55	23.11
1 1/4"	1.660	42.15	1.78	37.46	3.56	33.90	4.85	31.16
1 1/2"	1.900	48.26	2.03	43.02	3.68	39.72	5.08	36.72
2"	2.375	60.32	2.54	54.07	3.91	51.33	5.54	47.77
2 1/2"	2.875	73.02	2.79	66.24	5.16	61.31	7.01	57.15
3"	3.500	88.90	3.18	81.33	5.49	76.40	7.62	71.62
4"	4.500	114.30	3.81	105.43	6.02	100.60	8.56	94.91
5"	5.563	141.30	-	-	6.55	126.36	9.52	119.71
6"	6.625	168.28	-	-	7.11	152.04	10.97	143.40
8"	8.625	219.00	-	-	8.18	199.39	12.70	189.48

The above table conforms to SEC Specification 23 - TMSS 01 Table 3 (EPC 40).

EPT-A-PVC Electrical Plastic Tubing for encasement in concrete, EPC 40 Electrical Plastic Conduit for normal duty application

EPC 80 Electrical Plastic Conduit for heavy-duty application

Note: Pipe Length: Standard 3 / 6 meters

UNIDUCT®

Conduits, Tubings & Ducts

TC-6 & 8 PIPES

PVC PLASTIC UTILITIES DUCT FOR UNDERGROUND INSTALLATIONS DIMENSIONS OF UNDERGROUND UTILITIES DUCT

Nominal Size	Metric Designators	Outside Diameter	EB - 20	EB - 35	DB - 60	DB - 100	DB - 120
			Min. Wall Thickness	Min. Wall Thickness	Min. Wall Thickness	Min. Wall Thickness	Min. Wall Thickness
inch	mm	mm	mm	mm	mm	mm	mm
1"	27	33.40	-	-	-	-	1.52
1 1/2"	41	48.26	-	-	-	-	1.52
2"	53	60.32	1.52	1.52	1.52	-	1.96
3"	78	88.90	1.55	1.93	2.34	2.84	3.00
4"	103	114.30	2.08	2.54	3.07	3.68	3.91
5"	129	141.30	2.62	3.20	3.86	4.55	4.85
6"	155	168.28	3.18	3.86	4.62	5.41	5.77

In the above table EB-35 & DB-120 confirms to SEC Specification 23 - TMSS 01, Table-4.

*Type EB for Encased Burial in Concrete & Type DB for Direct Burial without Concrete

Note: Pipe Length: Standard 6 meters (6m)

SASO STANDARD

uPVC CONDUITS / DUCTS

SIZE AND DIMENSIONS AS PER SSA 14/15, GS 675/1997 & DIN 8061/62

Nominal Outside Diameter	Series 2 (SDR 51)		Series 3 (SDR 34.4)		Series 4 (SDR 21)		Series 5 (SDR 13.5)	
	Nominal Wall Thickness	Nominal Weight	Nominal Wall Thickness	Nominal Weight	Nominal Wall Thickness	Nominal Weight	Nominal Wall Thickness	Nominal Weight
mm	mm	kg/mtr	mm	kg/mtr	mm	kg/mtr	mm	kg/mtr
16	-	-	-	-	-	-	1.2	0.090
20	-	-	-	-	-	-	1.5	0.137
25	--	--	-	-	1.5	0.174	1.9	0.212
32	-	-	-	-	1.8	0.264	2.4	0.342
40	-	-	1.8	0.334	1.9	0.350	3.0	0.525
50	-	-	1.8	0.422	2.4	0.552	3.7	0.809
63	-	-	1.9	0.562	3.0	0.854	4.7	1.290
75	1.8	0.642	2.2	0.782	3.6	1.220	5.6	1.820
90	1.8	0.774	2.7	1.130	4.3	1.750	6.7	2.610
110	2.2	1.160	3.2	1.640	5.3	2.610	8.2	3.900
125	2.5	1.480	3.7	2.130	6.0	3.340	9.3	5.010
140	2.8	1.840	4.1	2.650	6.7	4.180	10.4	6.270
160	3.2	2.410	4.7	3.440	7.7	5.470	11.9	8.170
200	4.0	3.700	5.9	5.370	9.6	8.510	14.9	12.800
250	4.9	5.650	7.3	8.310	11.9	13.200	18.6	19.900

Available in colors: Grey. Length: 6 meters

UNIDUCT®

Conduits, Tubings & Ducts

KUWAIT SPECS

uPVC CABLE DUCTS

Nominal Size	Outside Diameter		Wall Thickness	
	Min.	Max.	MOC & NHA	MEW
mm	mm	mm	mm	mm
50	50.0	50.2	3.0	-
75	75.0	75.3	-	2.6
90	90.0	90.3	4.5	-
110	110.0	110.3	4.5	3.2
160	160.0	160.4	5.0	3.6
200	200.0	200.4	-	4.5

Note: uPVC cable ducts meets requirements of local governmental bodies like MOC, NHA & MEW. The cable ducts are offered in 4,5,8 & 6 meters in length with grey or black color and solvent sockets.

BAHRAIN, UAE & QATAR SPECS

uPVC ELECTRICAL & TELEPHONE DUCTS (ACCORDING TO BTC, ETISALAT & QNBN)

Duct No.	Outside Diameter of Duct	Wall Thickness	Inside Diameter of Socket at Entry	Inside Diameter of Socket at Shoulder	Socket Length	Effective Duct Length
	mm	mm	mm	mm	mm	meter
D54	96.5 ± 0.2	3.25 ± 0.2	97.1 ± 0.2	96.1 ± 0.1	100	5.9
D56	56.5 ± 0.2	3.25 ± 0.2	57 ± 0.2	56 ± 0.1	70	3.07
38 mm	38.0 ± 0.1	2.0 ± 0.1	38.2 ± 0.1	37.8 ± 0.1	40	3

BAHRAIN SPECS

uPVC UTILITIES DUCT / CONDUIT (AS PER EDD - SIZE & DIMENSION AS PER BS 3506)

Nominal Pipe Size	Outside Diameter		Wall Thickness							
			Class B		Class C		Class D		Class E	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
inch	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
4	114.10	114.50	3.4	3.8	4.5	4.0	6.0	6.6	7.3	7.8
6	168.00	168.50	4.5	5.0	6.6	6.0	8.8	9.7	10.8	11.9

Note: Ducts are offered in 5.8 or 6 meters in length with grey or black color and solvent cement end socket.

UNIDUCT® Split Duct

Split Duct is the fastest and easiest way to repair broken ducts and is also cost effective. Cutting and replacing of your conductors. The male - female groove design leads the industry in providing a strong, rigid solution for duct repair situations. The interlocking design allows the split duct sections to be staggered and butted together. Joints may be sealed with tape and reinforced with plastic or metallic straps to produce a rigid, stable unit. Available in 2" through 6" diameters, this product line also contains couplings and sweeps necessary to complete the system. The fast and easy method of installing duct around existing cable for repair and temporary installations as Sch. 40 and 80. Split Sleeve Coupling for Joining Split Duct to existing duct for Sch. 40 and 80.

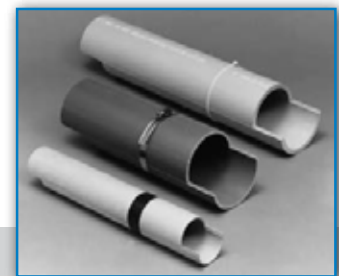


Segment	Nominal Size
degree [°]	inch
45°	2" - 6"
22 1/2°	2" - 6"
11 1/4°	2" - 6"

Two 45° Elbow may be segmented for 90°

UNIDUCT® Fittings / Conduit Accessories

BRITISH STANDARD
BS 4607 PART 3



Standard Coupling

Available in Black Color. White Color upon request.



Code No.	Size	Std. Packs
	mm	pcs
SCPG020B	20	200
SCPG025B	25	110
SCPG032B	32	60
SCPG038B	38	45
SCPG050B	50	15

Expansion Coupling

Available in Black Color. White Color upon request.



Code No.	Size	Std. Packs
	mm	pcs
ECPG020B	20	80
ECPG025B	25	40
ECPG032B	32	40
ECPG038B	38	25
ECPG050B	50	15

Reducers

Available in Black Color. White Color upon request.



Code No.	Size	Std. Packs
	mm	pcs
RCPG25/20B	20X25	180

Saddle & Base

Available in Black Color. White Color upon request.



Code No.	Size	Std. Packs
	mm	pcs
SDBA020B	20	200
SDBA025B	25	200
SDBA032B	32	130
SDBA038B	38	130
SDBA050B	50	50

Female Adaptor

Available in Black Color. White Color upon request.



Code No.	Size	Std. Packs
	mm	pcs
FTAA020B	20	200
FTAA025B	25	120
FTAA032B	32	60
FTAA038B	38	40
FTAA050B	50	20

Male Threaded Adaptor

Available in Black Color. White Color upon request.



Code No.	Size	Std. Packs
	mm	pcs
MTAA020B	20	250
MTAA025B	25	125
MTAA032B	32	100
MTAA038B	38	60
MTAA050B	50	25

Fittings / Conduit Accessories (Circular Boxes)

1 Way Terminal Junction Box

Available in Black Color. White Color upon request.



Code No.	Size	Std. Packs
	mm	pcs
1TJB020B	20	40
1TJB025B	25	35

2 Way Terminal Junction Box

Available in Black Color. White Color upon request.



Code No.	Size	Std. Packs
	mm	pcs
2TJB020B	20	30
2TJB025B	25	25

3 Way Terminal Junction Box

Available in Black Color. White Color upon request.



Code No.	Size	Std. Packs
	mm	pcs
3TJB020B	20	25
3TJB025B	25	20

4 Way Terminal Junction Box

Available in Black Color. White Color upon request.



Code No.	Size	Std. Packs
	mm	pcs
4TJB020B	20	20
4TJB025B	25	18

Angle 2 Way Terminal Junction Box

Available in Black Color. White Color upon request.



Code No.	Size	Std. Packs
	mm	pcs
ATJB020B	20	30
ATJB025B	25	30

2 Way U Type Terminal Junction Box

Available in Black Color. White Color upon request.



Code No.	Size	Std. Packs
	mm	pcs
UTJB020B	20	30
UTJB025B	25	30

Y Type Terminal Junction Box

Available in Black Color. White Color upon request.



Code No.	Size	Std. Packs
	mm	pcs
YTJB020B	20	25
YTJB025B	25	25

H Type Terminal Junction Box

Available in Black Color. White Color upon request.



Code No.	Size	Std. Packs
	mm	pcs
HTJB020B	20	24
HTJB025B	25	24

Loop in Box

Available in Black Color. White Color upon request.



Code No.	Size	Std. Packs
	mm	pcs
LPIN020B	20	40
LPIN025B	25	40

Terminal Lid

Available in Black Color. White Color upon request.



Code No.	Size	Std. Packs
	mm	pcs
TRL66B	66	225

UNIDUCT®

Fittings / Conduit Accessories

AMERICAN STANDARD NEMA TC3

Male Adaptors

Available in grey color only



Code No.	Size	Std. Packs
	mm	pcs
MTAA034G	3/4	120
MTAA001G	1	120

Pipe Base Spacer

Available in black and grey color only



Code No.	Size	Std. Packs
	mm	pcs
BASP4X2B	4 x 2	100
BASP6X2B	6 x 2	100

Coupler

Available in grey color only



Code No.	Size	Std. Packs
	mm	pcs
SCPG034G	3/4	100
SCPG001G	1	70

Pipe Inter Spacer

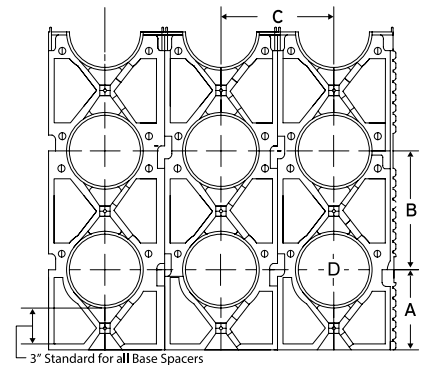
Available in black and grey color only



Code No.	Size	Std. Packs
	mm	pcs
INSP4X2B	4 x 2	100
INSP6X2B	6 x 2	75

SUGGESTED SPECIFICATION FOR PEC DUCT BASE & INTER SPACER

Duct (Conduit) bank shall be encased in concrete with at least three inches of concrete at the top and bottom and two inches on each side. A horizontal and vertical separation between the ducts of 2 inches/50.8 MM shall be maintained by installing IKK PF high impact spacers with horizontal and vertical locking intervals of 1.5 Meters to 2 Meters.



DIMENSIONS - BASE SPACERS

CODE	NOMINAL SIZE OF DUCT / CONDUIT (inch/mm)	SEPARATION (inch/mm)	A (inch/mm)	C (inch/mm)	D (dia. / mm)
BASP4X2B	4 / 110	2 / 50.80	5.31 / 134.87	6.75 / 171.45	4.63 / 117.60
BASP6X2B	6 / 160	2 / 50.80	6.38 / 162.05	8.88 / 225.55	6.75 / 171.45

DIMENSIONS - INTERMEDIATE SPACERS

CODE	NOMINAL SIZE OF DUCT / CONDUIT (inch/mm)	SEPARATION v (inch/mm)	A (inch/mm)	C (inch/mm)	D (dia. / mm)
INSP4X2B	4 / 110	2 / 50.80	6.51 / 165.35	6.75 / 171.45	4.63 / 117.60
INSP6X2B	6 / 160	2 / 50.80	8.64 / 219.45	8.88 / 225.55	6.75 / 171.45

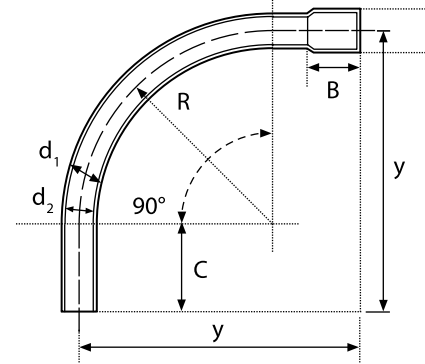
UNIDUCT®

Long Radius Bends

BRITISH STANDARD

BS - EN - 4607 FITTINGS

Nominal Size	Outside Diameter of Bend [d1]		Min. Inside Diameter of Bend [d2]	Radius
	Dimension	Tolerance		
	mm	mm	mm	R
20	20	± 0.022	16.9	65
25	25	± 0.022	21.4	90
32	32	± 0.025	27.8	125
38	38	± 0.028	33.5	159
40	40	± 0.030	36.4	180
50	50	± 0.030	44.3	240



NEMA STANDARD

NEMA TC-3 BENDS USING NEMA TC-2 PIPES

Nominal Size	Outside Dia.		Radius	Socket Depth [B]		Radius	Socket Depth [B]	
			[R]	Max.	Min.	[R]	Max.	Min.
inch	inch	mm	inch	inch	inch	mm	mm	mm
1/2"	0.840	21.34	4.00	1.500	0.652	101.60	38.10	16.56
3/4"	1.050	26.67	4.50	1.500	0.719	114.30	38.10	18.26
1"	1.315	33.40	5.75	1.875	0.875	146.05	47.63	22.23
1 1/4"	1.660	42.16	7.25	2.000	0.938	184.15	50.80	22.83
1 1/2"	1.900	48.26	8.25	2.000	1.062	209.55	50.80	26.97
2"	2.375	60.32	9.50	2.000	1.125	241.30	50.80	28.58
2 1/2"	2.875	73.02	10.50	3.000	1.469	266.70	76.20	37.31
3"	3.500	88.90	13.00	3.125	1.594	330.20	79.38	40.49
4"	4.500	114.30	16.00	3.375	1.750	406.40	85.73	44.45
6"	6.625	168.28	30.00	3.750	2.125	762.00	95.25	53.98
8"	8.625	219.08	40.00	6.500	4.875	1016.00	165.10	123.83

NEMA STANDARD

NEMA TC-9 BENDS USING NEMA TC-8 & 6 PIPES

Note: Size 1" and 1 1/2" can be produced upon request

Nominal Size	Outside Dia.		U.S. Customary Unites			Metric		
			45° & 90° Radius	22° & 30° Radius	22°,30°,45° & 90° Sweep Radius	45° & 90° Bends, Radius	22° & 30° Bends, Radius	22°,30°,45° & 90° Sweep Radius
inch	inch	mm	degree	degree	feet	degree	degree	feet
2"	2.375	60.32	18, 24, 36, 48, 60	18, 24, 36, 48, 60	12 1/2	0.46, 0.61, 0.91, 1.22, 1.52	0.46, 0.61, 0.91, 1.22, 1.52	3.8
3"	3.500	88.90	18, 24, 30, 36, 48, 60	18, 24, 36, 48, 60	12 1/2	0.46, 0.61, 0.76, 0.91, 1.22, 1.52	0.46, 0.61, 0.91, 1.22, 1.52	3.8
4"	4.500	114.30	18, 24, 36, 48, 60	18, 24, 36, 48, 60	12 1/2	0.46, 0.61, 0.91, 1.22, 1.52	0.46, 0.61, 0.91, 1.22, 1.52	3.8
5"	5.563	141.30	36, 48, 60	48, 60	12 1/2	0.91, 1.22, 1.52	1.22, 1.52	3.8
6"	6.625	168.28	48, 60	48, 60	12 1/2	1.22, 1.52	1.22, 1.52	3.8

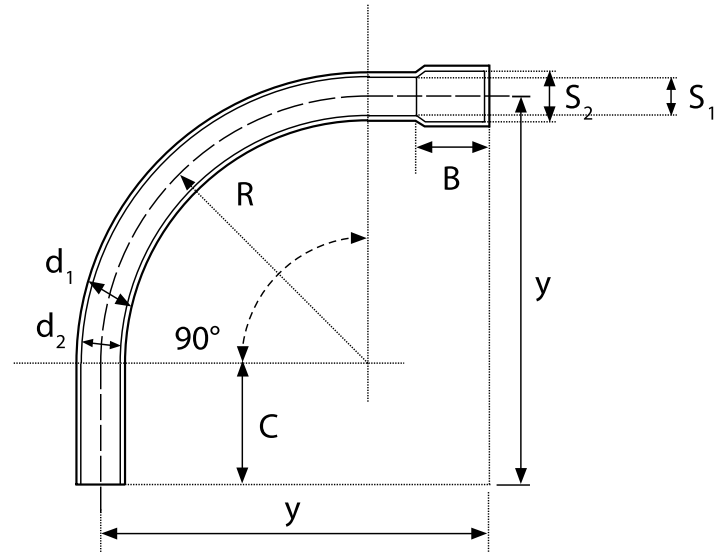
UNIDUCT®

Long Radius Bends

SASO STANDARD

DIN / SASO BENDS USING SSA 14/15, GS 675 / 1997 & DIN 8061 / 62

Nominal Outside Diameter	Radius
mm	mm
16	90
20	100
25	114
32	145
40	180
50	210
63	240
75	260
90	330
110	400
140	490
160	760
200	850
250	900



QATAR SPECS

QATAR NATIONAL BROADBAND NETWORK CO. (QNBC)

Duct Type	Outside Dia of Duct	Wall Thickness	Internal Duct Dia at SPIGOT at Entry	Inside Dia. Of Socket at Entry	Inside Dia. Of Socket at Shoulder	Socket Length	Effective Duct Length	Actual Duct Length	Radius
	[d1]		[d2]	[S2]	[S1]				[R]
	mm	mm	mm	mm	mm	mm	mm	mm	mm
Duct Bend D54 / 90°	96.5 ± 0.2	3.25 ± 0.2	90.0	97.1 ± 0.1	96.1 ± 0.1	100	1.3 ± 0.005	14 ± 0.005	0.50
Duct Bend D56 / 90°	56.5 ± 0.2	3.25 ± 0.2	50.0	57 ± 0.1	56 ± 0.1	70	0.8 ± 0.005	0.87 ± 0.005	0.25
Duct Bend D54 / 30°	96.5 ± 0.2	3.25 ± 0.2	90.0	97 ± 0.1	96 ± 0.1	100	14 ± 0.005	1.5 ± 0.005	1.00
Duct Bend D56 / 30°	56.5 ± 0.2	3.25 ± 0.2	50.0	57 ± 0.1	56 ± 0.1	70	1.0 ± 0.005	1.07 ± 0.005	0.50

UNIDUCT®

Couplings & Bell Ends

QATAR SPECS

QATAR NATIONAL BROADBAND NETWORK CO. (QNBC) REGISTER COUPLING

Duct Type	Outside Dia of Duct	Wall Thickness	Inside Dia of Socket at Entry	Inside Dia of Socket at Shoulder	Inside Diameter	Socket Length	Effective Duct Length	Actual Duct Length
			[A]		[D]	[C]		
	mm	mm	mm	mm	mm	mm	meter	meter
Duct Collar D54	96.5 ± 0.2	3.25 ± 0.2	971 ± 1	961 ± 1	90.00	100	0.1	0.3

WELD • ON

PLASTIC PIPE CEMENT

CLEAR • MEDIUM BODIED • FAST SETTING

This is solvent cement (adhesive) is specially designed for electrical and telecommunication duct installation manufactured by IPS Weld-On Adhesive, Inc., U.S.A.

Distinct characteristics of the proposed 701 Weld-On Cement :

1. Clear, Medium bodied, Fast setting solvent.
2. Highly viscous - 500 cPs of a medium body.
3. Meets the requirement for Low VOC (Volatile Organic Compound)
4. Adheres to a standard for PVC material ASTM D1755
5. Can Brush Sizes were carefully chosen for the smallest pipe & fitting size

For Sizes & Code No. please see the table below :

Code No.	Sizes	Std. Packs
615KSCW701	QUART	12 PCS
615KSCW701/2	1 PINT	12 PCS
615KSCW701/4	1/2 PINT	48 PCS
615KSCW701/8	1/4 PINT	48 PCS

CAUTION: Inflammable Mixture. Do not use near fire or flame.



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