

Prime Conduit, Inc.

P&C[®] DUCT



Type EB-20

Type EB-35

Type DB-60

Type DB-120

Special CA Type DB-100

DB Sweeps



P&C[®] Duct

Prime Conduit P&C[®] (Power & Communications) Duct and fittings are designed and formulated specifically for concrete encased and direct burial applications of power utility primaries, secondaries, street lighting and distribution systems. Prime Conduit P&C Duct complies with NEMA Standard TC-6 & 8, and ASTM F-512 for utility duct. Both EB and DB duct are rated for use with 90°C conductors. P&C Duct fittings comply with NEMA TC-9 Standard.

Advantages:

- Manufactured for high modulus PVC compound
- High impact strength
- Excellent structural strength
- Superior load bearing
- Multiple duct banks can be pre-assembled and lowered into trench
- No special cutting or tapering devices required
- Provides easy bending around obstructions minimizing the need for special angle couplings and sweeps
- Superior aging and weathering characteristics

Features:

- Heat resistant
- Fire resistant
- Conforms to NEMA Standard TC-6 & 8 and ASTM Standard F-512 for utility duct
- Sweeps conform to NEMA Standard TC-9
- Prime Conduit P&C Duct Type EB-20 is ETL Listed
- Low coefficient of expansion
- Continuous rigid control
- Smooth inner wall and smooth transition between joints

Engineering Features:

Chemical Inertness resists water absorption and is totally immune to galvanic or electrolytic attacks.

Solvent Cemented Joints provide leak proof duct runs tested at 25 psi. This type of joint eliminates the need for costly mechanical rodding procedure. Prime Conduit P&C Duct can be rodded pneumatically.



P&C® Duct - Type EB

Prime Conduit nonmetallic P&C Duct Type EB is manufactured from Prime Conduit's exclusive high modulus PVC compound, developed especially for power and communications applications, and is designed for use in concrete encased installations. Type EB is rated for 90°C Cable.



P&C Duct Type EB-20

Nom. Size	Part Number 10'	Part Number 20'	Std. Crate Qty. 10' (ft.)	Std. Crate Qty. 20' (ft.)	Approx. Wt. per 100 ft (lbs.)	Avg. O.D. (in.)	*Min. Wall (in.)
2"	-	48711-020	-	2,800	37	2.375	0.060
3"	-	48713-020	-	2,000	60	3.500	0.061
4"	48715-010	48715-020	570	1,140	99	4.500	0.082
5"	48716-010	48716-020	380	760	148	5.563	0.103
6"	48717-010	48717-020	260	520	211	6.625	0.125

ETL Listed to UL651 in compliance with the NEC
 Meets NEMA Standard TC-6 & 8
 EB-20/ASTM F-512

*Minimum wall thickness relates to 500,000 modulus
 One belled end per 10' & 20' length

P&C Duct Type EB-35 Heavy Wall

Nom. Size	Part Number 10'	Part Number 20'	Std. Crate Qty. 10' (ft.)	Std. Crate Qty. 20' (ft.)	Approx. Wt. per 100 ft (lbs.)	Avg. O.D. (in.)	*Min. Wall (in.)
2"	-	68711-020	-	2,800	39	2.375	0.060
3"	-	68713-020	-	2,000	72	3.500	0.076
4"	-	68715-020	-	1,140	115	4.500	0.100
5"	68716-010	68716-020	380	760	174	5.563	0.126
6"	-	68717-020**	-	520	248	6.625	0.152

Meets NEMA Standard TC-6&8
 EB-35/ASTM F-512

*Minimum wall thickness relates to 500,000 modulus
 One belled end per 10' & 20' length
 ** Special order

Use DB Sweeps with EB Duct

P&C® Duct – Type DB

Prime Conduit nonmetallic P&C Duct Type DB is manufactured from Prime Conduit's exclusive high modulus PVC compound, developed especially for power and communications applications, and is designed for use in direct burial or concrete encased installations. Type DB is rated for 90°C Cable.

Trenching:

Trench should be graded true and free from stones and soft spots. Backfill should also be free of stones and be firmly tamped around the sides of the conduit, to develop maximum supporting strength. Tamping on top of the conduit is not recommended.

Backfill:

In rocky soil where it is impossible to have an even trench bottom, a selected backfill should be put in before laying the conduit. Selected backfill (not tamped) at least 6" over the top of the conduit is recommended. After final backfill is placed, tamping may be used to finish the grade.

The method of direct burial varies with soil condition, load conditions, and engineering preferences. A common practice is to lay one tier at a time, backfill, and repeat with the desired spacing of ducts being made as ducts are layered.

Many companies have used the heavier wall Type DB-120 in a duct-to-duct formation. Where limited loads occur, this type of installation has proven satisfactory.

P&C Duct Type DB-60

Nom. Size	Part Number	Std. Crate Qty. (ft.)	Approx. Wt. per 100 ft (lbs.)	Avg. O.D. (in.)	¹ Min. Wall (in.)
2"	48811-020	2,800	38	2.375	0.060
3"	48813-020	2,000	83	3.500	0.092
3-1/2"	48814-020	2,000	108	4.000	0.107
4"	48815-020	1,140	133	4.500	0.121
5"	48816-020	760	203	5.563	0.152
6"	48817-020	520	283	6.625	0.182



P&C Duct Type DB-120 Heavy Wall

Nom. Size	Part Number 10'	Part Number 20'	Std. Crate Qty. 10' (ft.)	Std. Crate Qty. 20' (ft.)	Approx. Wt. per 100 ft (lbs.)	Avg. O.D. (in.)	² Min. Wall (in.)
1"	-	48808-020	-	8,000	19	1.315	0.060
1-1/2"	-	48810-020	-	4,500	28	1.900	0.060
2"	-	68811-020	-	2,800	47	2.375	0.077
3"	-	68813-020	-	2,000	98	3.500	0.118
4"	-	68815-020	-	1,140	162	4.500	0.154
5"	-	68816-020	-	760	252	5.563	0.191
6"	68817-010	68817-020	260	520	351	6.625	0.227

P&C Duct Type DB-120 Heavy Wall Utility

Nom. Size	Part Number	Std. Crate Qty. (ft.)	Approx. Wt. per 100 ft (lbs.)	Avg. O.D. (in.)	³ Min. Wall (in.)
2"	68811UTL-020	2,800	44	2.375	0.083
3"	68813UTL-020	2,000	98	3.500	0.127
4"	68815UTL-020	1,140	165	4.500	0.166
5"	68816UTL-020	760	252	5.563	0.205
6"	68817UTL-020	520	356	6.625	0.244

¹Type DB-60 meets DB-60/ASTM F-512; Minimum wall thickness relates to 500,000 modulus

²Type DB-120 meets DB-120/ASTM F-512; Minimum wall thickness relates to 500,000 modulus

³Type DB-120 Heavy Wall Utility meets DB-120/ASTM F-512; Minimum wall thickness relates to 400,000 modulus Meets NEMA Standard TC-6 & 8

One belled end per 10' or 20' length

P&C® Duct – Special California Type DB-100

Prime Conduit DB-100 nonmetallic P&C Duct Type DB is manufactured to NEMA Standard TC-6 & 8 and to specifications that exist within the State of California, and is designed for use in direct burial or concrete encased installations. Rated for use with 90°C cable.

P&C Duct Type DB-100

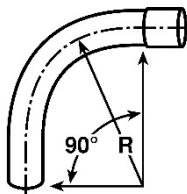
Nom. Size	Part Number	Std. Crate Qty. (ft.)	Approx. Wt. per 100 ft (lbs.)	Avg. O.D. (in.)	⁴ Min. Wall (in.)
3"	68913-020	2,000	95	3.500	0.112
4"	68915-020	1,140	156	4.500	0.145
5"	68916-020	760	237	5.563	0.179
6"	68917-020	520	337	6.625	0.213

⁴Meets NEMA Standard TC-6 & 8 and ASTM F-512
 Minimum wall thickness relates to 500,000 modulus
 One belled end per 20' length

DB-100 Sweeps – Belled

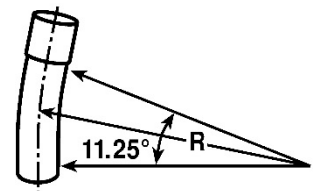
90° Sweep – 48" Radius

Nom. Size	Part Number
4"	PE9HN
5"	PE9HP



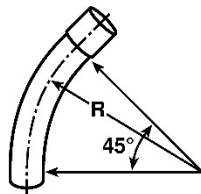
11¼° Sweep – 150" Radius

Nom. Size	Part Number
5"	PE3SP



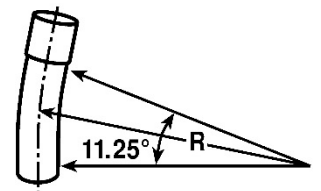
45° Sweep – 150" Radius

Nom. Size	Part Number
5"	PE7SP



11¼° Segmented Sweep – 150" Radius

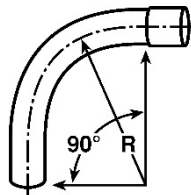
Nom. Size	Part Number
4"	PE3SNS
5"	PE3SPS
6"	PE3SRS



Note: Sweeps 72" and larger may be shipped in segments. Consult factory for specifics.
 Consult factory for additional sizes/configurations.
 Meets NEMA Standard TC-9.

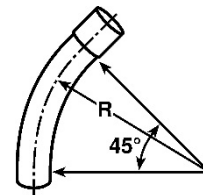
P&C® Duct DB-60 Sweeps

DB-60 90° Sweeps - Belled



Part Number	Size	Radius
PF9CJ	2"	18"
PF9CL	3"	18"
PF9CN	4"	18"
PF9DJ	2"	24"
PF9DL	3"	24"
PF9DN	4"	24"
PF9DP	5"	24"
PF9FJ	2"	36"
PF9FL	3"	36"
PF9FN	4"	36"
PF9FP	5"	36"
PF9FR	6"	36"
PF9HL	3"	48"
PF9HN	4"	48"
PF9HP	5"	48"
PF9HR	6"	48"
PF9IL	3"	60"
PF9IN	4"	60"
PF9IP	5"	60"
PF9IR	6"	60"
PF9SJ	2"	150"
PF9SL	3"	150"
PF9SR	6"	150"
PF9VL	3"	300"
PF9VN	4"	300"
PF9VP	5"	300"
PF9VP	5"	300"

DB-60 45° Sweeps - Belled



Part Number	Size	Radius
PF7CJ	2"	18"
PF7CL	3"	18"
PF7DJ	2"	24"
PF7DL	3"	24"
PF7DN	4"	24"
PF7FJ	2"	36"
PF7FL	3"	36"
PF7FN	4"	36"
PF7FP	5"	36"
PF7FR	6"	36"
PF7HJ	2"	48"
PF7HL	3"	48"
PF7HN	4"	48"
PF7HP	5"	48"
PF7HR	6"	48"
PF7IL	3"	60"
PF7IP	5"	60"
PF7NN	4"	120"
PF7SJ	2"	150"
PF7SL	3"	150"
PF7SN	4"	150"
PF7SP	5"	150"
PF7SR	6"	150"
PF7VN	4"	300"
PF7VP	5"	300"
PF7VR	6"	300"

Note: Sweeps 72" and larger may be shipped in segments. Consult factory for specifics.

Consult factory for additional sizes/configurations.

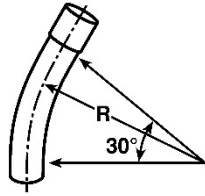
Use 3-1/2" Schedule 40 elbows for 3-1/2" DB-60 (48814-020) conduit.

Use DB Sweeps with EB Duct.

Meets NEMA Standard TC-9.

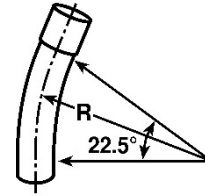
P&C® Duct – DB-60 Sweeps

DB-60 30° Sweeps - Belled



Part Number	Size	Radius
PF6CJ	2"	18"
PF6CL	3"	18"
PF6DL	3"	24"
PF6DN	4"	24"
PF6DP	5"	24"
PF6FJ	2"	36"
PF6FL	3"	36"
PF6FN	4"	36"
PF6FR	6"	36"
PF6HJ	2"	48"
PF6HN	4"	48"
PF6HP	5"	48"
PF6HR	6"	48"
PF6IN	4"	60"
PF6IP	5"	60"
PF6SJ	2"	150"
PF6SN	4"	150"
PF6SP	5"	150"
PF6VJ	2"	300"
PF6VN	4"	300"
PF6VR	6"	300"

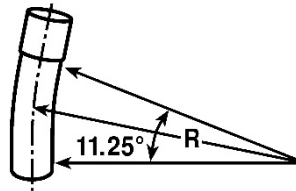
DB-60 22 ½° Sweeps - Belled



Part Number	Size	Radius
PH5DL	3"	24"
PF5DN	4"	24"
PF5DP	5"	24"
PF5FL	3"	36"
PF5FN	4"	36"
PF5FP	5"	36"
PF5FR	6"	36"
PF5HL	3"	48"
PF5HN	4"	48"
PF5HR	6"	48"
PF5IJ	2"	60"
PF5IL	3"	60"
PF5IP	5"	60"
PF5IR	6"	60"
PF5SL	3"	150"
PF5SN	4"	150"
PF5SP	5"	150"
PF5SR	6"	150"
PF5VN	4"	300"
PF5VP	5"	300"
PF5VR	6"	300"

Note: Sweeps 72" and larger may be shipped in segments. Consult factory for specifics.
 Consult factory for additional sizes/configurations.
 Use 3-1/2" Schedule 40 elbows for 3-1/2" DB-60 (48814-020) conduit.
 Use DB Sweeps with EB Duct.
 Meets NEMA Standard TC-9.

DB-60 11 ¼ ° Sweeps - Belled

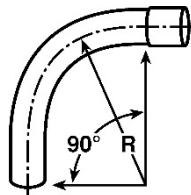


Part Number	Size	Radius
PF3CJ	2"	18"
PF3CL	3"	18"
PF3DP	5"	24"
PF3FJ	2"	36"
PF3FL	3"	36"
PF3FN	4"	36"
PF3FP	5"	36"
PF3FR	6"	36"
PF3HL	3"	48"
PF3HN	4"	48"
PF3HP	5"	48"
PF3HR	6"	48"
PF3IJ	2"	60"
PF3IR	6"	60"
PF3SJ	2"	150"
PF3SN	4"	150"
PF3SP	5"	150"
PF3SR	6"	150"
PF3VJ	2"	300"
PF3VL	3"	300"
PF3VN	4"	300"
PF3VP	5"	300"

Note: Sweeps 72" and larger may be shipped in segments. Consult factory for specifics.
 Consult factory for additional sizes/configurations.
 Use 3-1/2" Schedule 40 elbows for 3-1/2" DB-60 (48814-020) conduit.
 Use DB Sweeps with EB Duct.
 Meets NEMA Standard TC-9.

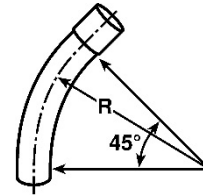
P&C® Duct – DB-120 Sweeps

DB-120 90° Sweeps - Belled



Part Number	Size	Radius
PH9CJ	2"	18"
PH9CL	3"	18"
PH9CN	4"	18"
PH9DJ	2"	24"
PH9DL	3"	24"
PH9DN	4"	24"
PH9DP	5"	24"
PH9FJ	2"	36"
PH9FL	3"	36"
PH9FN	4"	36"
PH9FP	5"	36"
PH9FR	6"	36"
PH9HJ	2"	48"
PH9HL	3"	48"
PH9HN	4"	48"
PH9HP	5"	48"
PH9HR	6"	48"
PH9IJ	2"	60"
PH9IL	3"	60"
PH9IN	4"	60"
PH9IR	6"	60"
PH9OJ	2"	66"
PH9SJ	2"	150"
PH9SL	3"	150"
PH9SN	4"	150"
PH9SP	5"	150"
PH9SR	6"	150"
PH9VN	4"	300"
PH9VP	5"	300"
PH9VR	6"	300"

DB-120 45° Sweeps - Belled

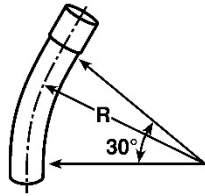


Part Number	Size	Radius
PH7CJ	2"	18"
PH7CL	3"	18"
PH7CN	4"	18"
PH7DJ	2"	24"
PH7DL	3"	24"
PH7DN	4"	24"
PH7DP	5"	24"
PH7FJ	2"	36"
PH7FL	3"	36"
PH7FN	4"	36"
PH7FP	5"	36"
PH7FR	6"	36"
PH7HJ	2"	48"
PH7HL	3"	48"
PH7HN	4"	48"
PH7HP	5"	48"
PH7HR	6"	48"
PH7IJ	2"	60"
PH7IL	3"	60"
PH7IP	5"	60"
PH7IR	6"	60"
PH7SJ	2"	150"
PH7SN	4"	150"
PH7SP	5"	150"
PH7SR	6"	150"

Note: Sweeps 72" and larger may be shipped in segments. Consult factory for specifics.
 Consult factory for additional sizes/configurations.
 Meets NEMA Standard TC-9.

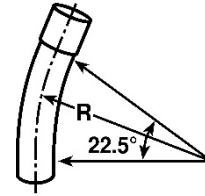
P&C® Duct – DB-120 Sweeps

DB-120 30° Sweeps - Belled



Part Number	Size	Radius
PH6CJ	2"	18"
PH6CL	3"	18"
PH6CN	4"	18"
PH6DJ	2"	24"
PH6DN	4"	24"
PH6DP	5"	24"
PH6FJ	2"	36"
PH6FL	3"	36"
PH6FN	4"	36"
PH6FP	5"	36"
PH6FR	6"	36"
PH6HN	4"	48"
PH6HR	6"	48"
PH6IN	4"	60"
PH6SL	3"	150"

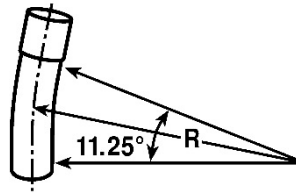
DB-120 22.5° Sweeps - Belled



Part Number	Size	Radius
PH5CJ	2"	18"
PH5CL	3"	18"
PH5CN	4"	18"
PH5DJ	2"	24"
PH5DL	3"	24"
PH5DP	5"	24"
PH5FJ	2"	36"
PH5FL	3"	36"
PH5FN	4"	36"
PH5FP	5"	36"
PH5HL	3"	48"
PH5HN	4"	48"
PH5HP	5"	48"
PH5HR	6"	48"
PH5IJ	2"	60"
PH5IL	3"	60"
PH5IR	6"	60"
PH5SN	4"	150"
PH5SP	5"	150"
PH5SR	6"	150"
PH5VJ	2"	300"
PH5VN	4"	300"

Note: Sweeps 72" and larger may be shipped in segments. Consult factory for specifics.
 Consult factory for additional sizes/configurations.
 Meets NEMA Standard TC-9.

DB-120 11.25° Sweeps - Belled



Part Number	Size	Radius
PH3CJ	2"	18"
PH3CN	4"	18"
PH3DJ	2"	24"
PH3DN	4"	24"
PH3DP	5"	24"
PH3FJ	2"	36"
PH3FL	3"	36"
PH3FN	4"	36"
PH3FP	5"	36"
PH3FR	6"	36"
PH3HN	4"	48"
PH3IN	4"	60"
PH3IP	5"	60"
PH3IR	6"	60"
PH3SJ	2"	150"
PH3SL	3"	150"
PH3SN	4"	150"
PH3SP	5"	150"
PH3SR	6"	150"
PH3VR	6"	300"

Note: Sweeps 72" and larger may be shipped in segments. Consult factory for specifics.
 Consult factory for additional sizes/configurations.
 Meets NEMA Standard TC-9.

P&C® Duct & Telephone Duct – Quick Comparison

Conduit Quick Comparison	EB-20	EB-35	DB-60	DB-120 HW	DB-120 HW Utility	Sch 40	Sch 80
Description	EB = Encased Burial	EB = Encased Burial	DB = Direct Burial	DB = Direct Burial	DB = Direct Burial	Schedule = Wall thickness rating	Schedule = Wall thickness rating
Description - Number	"20" Pipe Stiffness per ASTM F-512	"35" Pipe Stiffness per ASTM F-512	"60" Pipe Stiffness per ASTM F-512	"120" Pipe Stiffness per ASTM F-512	"120" Pipe Stiffness per ASTM F-512	40 is thinner than 80	40 is thinner than 80
Direct Bury			x	x	x	x	x
Concrete Encasement	x	x	x	x	x	x	x
Encased in concrete in trenches outside of buildings (UL651)	x					x	x
Aboveground use indoors or outdoors exposed to sunlight and weather, and for underground use by direct burial or encasement in concrete (UL651)						x	x
ETL Listed to UL651	x					x	x
ASTM F-512	x	x	x	x	x		
NEMA TC6 & 8	x	x	x	x	x		
NEMA TC2						x	x
NEC 352						x	x
Material: PVC	x	x	x	x	x	x	x
UV inhibitors						x	x
Use DB Sweeps?	x	x	x	x	x		
Use Sch 40 Elbows?	Yes, ream ID of spigot end to ensure smooth transition from EB Duct to Sch 40 Elbow	Yes, ream ID of spigot end to ensure smooth transition from EB Duct to Sch 40 Elbow	Use DB Sweeps	Use DB Sweeps	Use DB Sweeps	x	Use Schedule 80 Elbows
4" Conduit Min. Wall Thickness	0.082	0.1	0.121	0.154	0.166	0.237	0.337
4" Conduit Avg. Outer Diameter	4.5	4.5	4.5	4.5	4.5	4.5	4.5

P&C® Duct Frequently Asked Questions

DB2

DB2 is a Canadian product, which is not the same as the DB 60, 120 or 100. Refer to CSA C22.2 No. 211.1, the Standard applies to rigid PVC conduit - type EB1 for encasement in concrete or masonry and type DB2/ES2 for direct burial or encasement in concrete or masonry - and associated fittings in accordance with the Rules of the Canadian Electrical Code, Part I, for ordinary locations.

Cold Field Bending

Refer to www.nema.org to find information on the NEMA Standard TCB-2 (NEMA Guidelines for the Selection and Installation of Underground Nonmetallic Duct) which discusses in detail cold field bending.

Expansion Fittings & EB Duct

EB Duct is required to be concrete encased and cannot be used exposed. When encased in concrete the ducts will not expand nor contract and therefore expansion fittings are not necessary. The only reason somebody may use the expansion fittings is when the conduit is installed and left exposed for a couple of days before encasing it. Also be aware the expansion fitting will have an edge since its ID is less than that of the conduit. It is recommended that the contractor "ream" the ID of the expansion fitting prior to installing it so that there is a smooth transition between the conduit and fitting.

EB-35 Field Bendable

EB-35 can be field bent with standard bending equipment and plugs. Because of the EB Duct's thin wall it will want to collapse faster than other ducts. Most contractors will use a DB-60 or DB-120 for bending. The DB uses the same fittings as EB Duct does. The thicker wall of DB makes it easier to make field bends.

Aggregate Size

Refer to the National Electrical Code Section 300.5(F) where it says if the rocks can damage the conduit please do not use them. Also see the National Electrical Safety Code Section 321B. The NESC says that backfill material within 150mm of the conduit should be free of solid material greater than 100mm in maximum dimension or with sharp edges likely to damage the conduit.

NEMA TC-6 & 8

This is a NEMA standard that applies to EB and DB duct. TC 6&8, Polyvinyl Chloride (PVC) Plastic Utilities for Underground Installations; Defines general requirements, performance requirements, test methods, and marking for the following types of PVC plastic utilities duct, intended for installation underground for communications and electrical wire and cable.