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Applications Engineering Note

Split Duct Kits for Cable Installation

AEN 167, Revision 0

The purpose of split duct kits is to provide a selection of ducts that would typically be used in small vaults with 2-inch entrance ducts and large vaults or manholes with 4-inch entrance ducts to allow for cable installation. This saves time during placing operations by eliminating customizing ducts in the field or modifying other equipment. Once set up, <u>the split ducts</u> <u>ensure that the cable minimum bend radius is maintained, and the cable does not press</u> <u>against a manhole or vault edge</u>. The split ducts are reusable and for unique situations optional pieces are available. As with any equipment, inspect before each use for any loose bolts or other problems. Order directly from Highland:

Section 1: MDPE – Split Duct Kits by Highland Valley Supply Company

How to Order:

By Phone- Call Highland Valley Supply at 877-803-1478

By Email- Send email to sales@highlandvalley.com

By Fax- Fax to Highland Valley Supply at 877-678-8003

Highland - Split Duct Cable Installation Guidelines

Typical Configurations – 2-inch Split Ducts

Highland Vault Kit PN: Vaultkit2

Two Inch Split Ducts used to guide cable into or out of vaults:

1. Tugger located at the rear of a vault ranging from the vault wall edge to approximately 4 feet from the edge:

Use 2-inch duct PN HDPE20450272 (45° x 24-inch tangent x 72 inches) and 2-inch coupler (PN SL237-12).

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Note: 72-inch duct is installed with 24-inch tangent attached to vault entry duct and 48-inch straight section extended to beyond end of vault. When the tugger is placed at the edge of the vault then use the same 72-inch duct with the 48-inch straight section attached with a coupler to the entry duct.

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2. Tugger over the vault at center:

Use 2-inch duct PN HDPE2045035 (45° x 42-inch) and 2-inch coupler PN SL237-12



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3. Tugger perpendicular to the vault at center:

Use 2-inch duct PN HDPE204513 (45° x 24-inch tangent x 36 inches) and 2-inch coupler PN SL237-12

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Note: Two-inch split ducts that are typically used are included in kit PN: Vaultkit2. Optional sizes of split ducts are also available and can be ordered from Highland. See ordering info below.

Couplers are secured with Deltec straps or tie wraps.

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Typical Configurations – 4-inch Split Ducts

Four-Inch Split Ducts used to guide cable into or out of large data center vaults or manholes:

1.	Highland Data Center (Large Vault) Kit PN:	DCKIT4
~	Lightand Manhala Kit DN	

2. Highland Manhole Kit PN:

MHKIT4

4-inch split duct kits contain typical sizes that are used for cable installation in larger data center type vaults and manholes. Optional other size split ducts are also available and can be ordered from Highland. See ordering info below.

Below are some set-ups of 4-inch ducts. Note that the split duct with a 2-foot access window allows for cases when MaxCell is used and other cables are already installed in the same duct.

Couplers are secured with Deltec straps or tie wraps.



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Representative split ducts above

How to Order:

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By Phone- Call Highland Valley Supply at 877-803-1478

By Email- Send email to sales@highlandvalley.com

By Fax- Fax to Highland Valley Supply at 877-678-8003

Available Split-Duct Kits:

Data Center Kit – 4-Inch Part No. DCKIT4

Description: 4-inch Data Center Kit, for large vaults with large access.

Includes:

- 1. 4- SL400-12 (4" HDPE Coupling, 12" Long, Split)
- 2. 1- HDPE40-2R (4" HDPE 2' Long Piece, Split)
- 3. 1- HDPE40-4R (4" HDPE 4' Long Piece, Split)
- 4. 1- HDPE4064-R (4" HDPE Window x 72" Cut Length, Split)
- 5. 2- HDPE404503 (4" HDPE x 45 Degree x 36" Cut Length, Split)
- 6. 1- HDPE403006 (4" HDPE x 30 Degree x 72" Cut Length, Split)



Manhole Kit- 4 Inch Part No. MHKIT4

Description: 4-Inch Manhole Kit, for manholes with 32" round covers, or similar opening.

Includes:

- 1. 4- SL400-12 (4" HDPE Coupling, 12" Long, Split)
- 2. 1- HDPE40-2R (4" HDPE 2' Long Piece, Split)
- 3. 1- HDPE40-4R (4" HDPE 4' Long Piece, Split)
- 4. 2- HDPE404503 (4" HDPE x 45 Degree x 36" Cut Length, Split)
- 5. 1- HDPE403006 (4" HDPE x 30 Degree x 72" Cut Length, Split)
- 6. 1- HDPE4090080 (4" HDPE x 90 Degree x 64" Cut Length, Split)
- 7. 1- HDPE4042-R (4" HDPE Window x 46" Cut Length, Split)

<u> Vault Kit – 2-Inch</u>

Part No. VAULTKIT2

Description: 2-Inch Vault Kit

Includes:

- 1. 1- **SL237-12** (2" HDPE Coupling, 12" Long, Split)
- 1- HDPE204513 (2" HDPE x 45 Degree x 1' Tangent x 36" Cut Length, Split)
- 3. 1- HDPE2045035 (2" HDPE x 45 Degree x 42" Cut Length, Split)
- 1- HDPE20450272 (2" HDPE x 45 Degree x 2' Tangent x 72" Cut Length, Split)

4-Inch Optional Pieces - Can be ordered individually

Description: Additional 4-Inch material to be used if needed Includes-

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- 1. 1- SL400-12 (4" HDPE Coupling, 12" Long, Split)
- 2. 1- HDPE40-2R (4" HDPE 2' Long Piece, Split)
- 3. 1- HDPE40-4R (4" HDPE 4' Long Piece, Split)
- 4. 1- HDPE40-6R (4" HDPE 6' Long Piece, Split)
- 5. 1- HDPE404503 (4" HDPE x 45 Degree x 36" Cut Length, Split)
- 6. 1- HDPE4090080 (4" HDPE x 90 Degree x 64" Cut Length, Split)
- 7. 1- HDPE4042-R (4" HDPE Window x 46" Cut Length, Split)

2-Inch Optional Pieces - Can be ordered individually

Description: Additional 2-Inch material to be used if needed Includes-

- 1. 1- SL237-12 (2" HDPE Coupling, 12" Long, Split)
- 2. 1- HDPE2045035 (2" HDPE x 45 Degree x 42" Cut Length, Split)
- 3. 1- HDPE203002 (2" HDPE x 30 Degree x 24" Cut Length, Split)
- 1- HDPE20-2R (2" HDPE 2' Long Piece, Split)
- 5. 1- HDPE20-4R (2" HDPE 4' Long Piece, Split)
- 6. 1- HDPE20-6R (2" HDPE 6' Long Piece, Split)



Section 2: Steel – Split Ducts by GPM Company

GMP split feeders and split feeder extensions:

Split (Flexible Steel) Ducts are available in 4 inch diameter from GMP Company for use in large vaults and manholes. These split flexible cable guides ("Elephant Trunks") allow for entry and exit of cables in manholes. The 90-inch main is used as the first section with a nozzle that is inserted into the entry 4-inch duct. Length is extended by adding additional sections of 90-inch or 36-inch extender pieces.

https://www.gmptools.com/split-cable-feeder/ https://www.gmptools.com/cable-feeder-nozzles/

90-inch split main – PN 88830 90-inch split extension – PN 88832 36-inch split extension – PN 88831

4-inch split nozzle – PN 60596

Note: Bend radius of 20+ inches will be maintained by the ducts. How to order: <u>https://www.gmptools.com/where-to-buy/</u>

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Typical Configurations of Split Metal Ducts:





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