

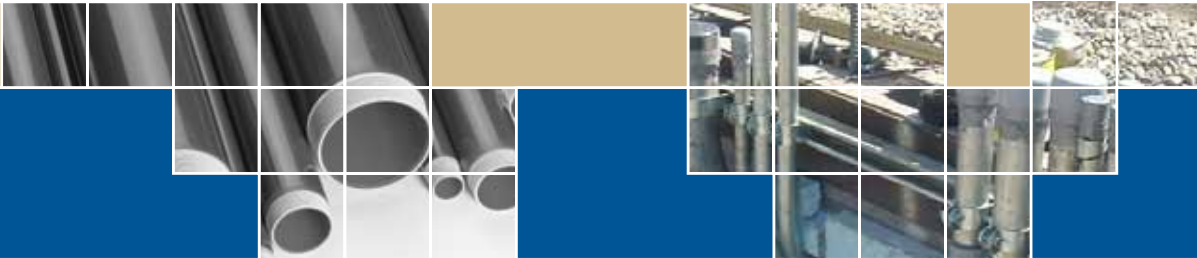


**KRUPPSMETAL**



# Kruppsconduit

**Metal Raceway Product Range**



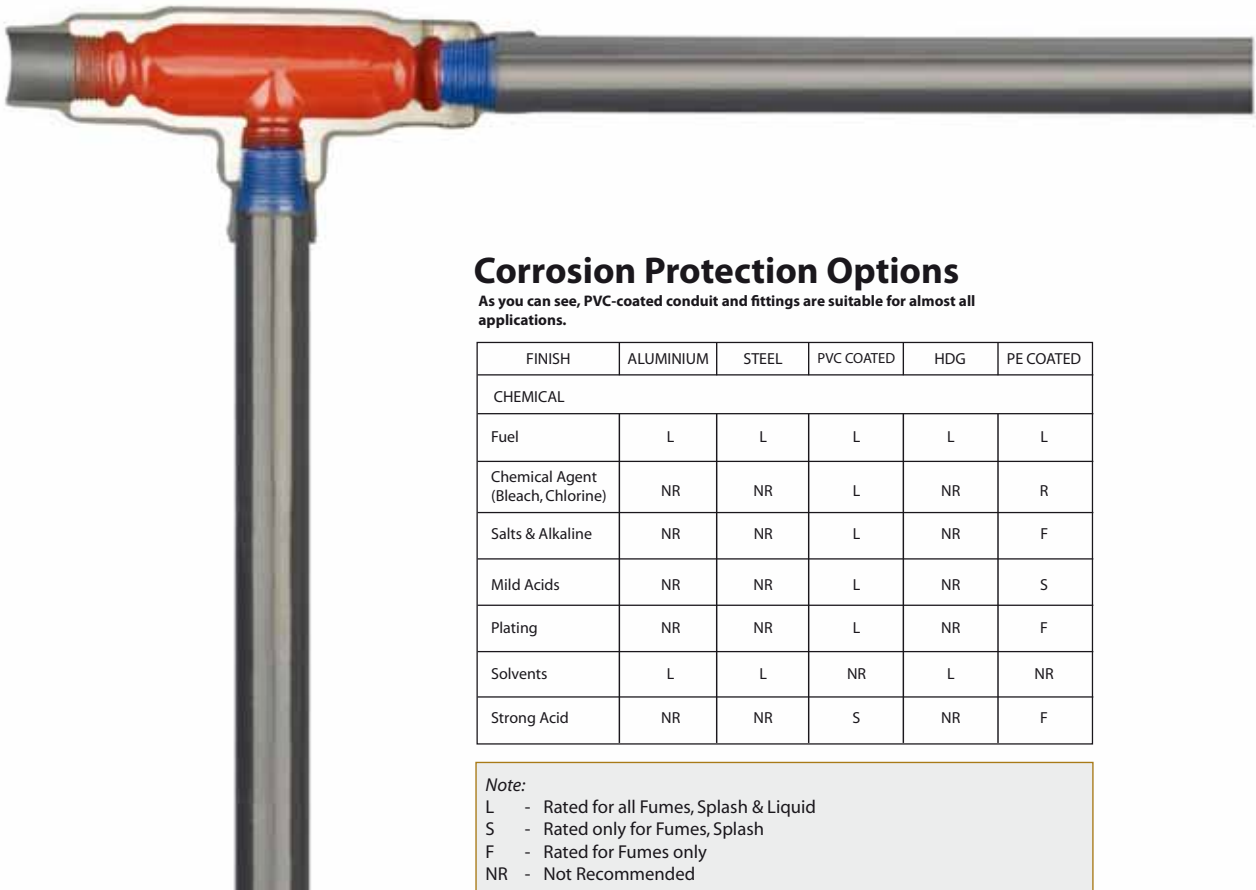
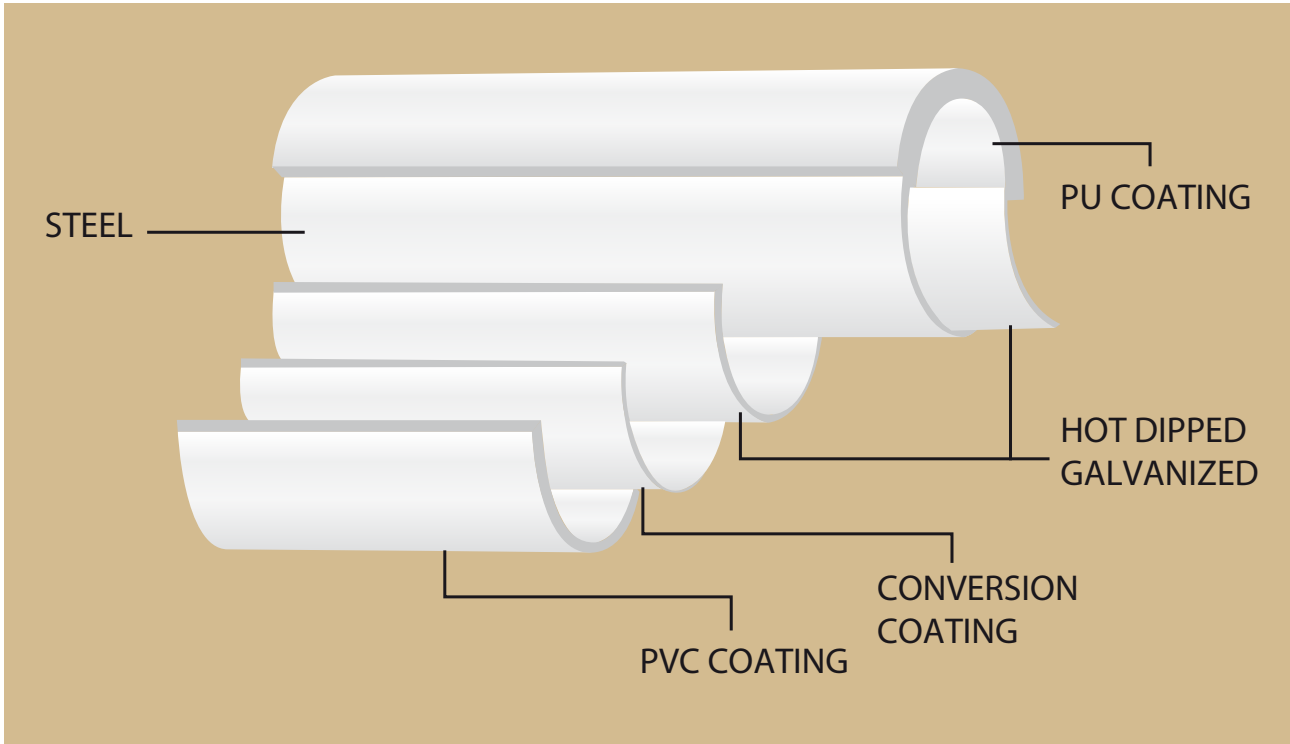
## **PVC Coated Rigid Steel Conduit — (PVRSC)**

Kruppsmetal PVC coated galvanized rigid steel conduit are UL Listed. The PVC coating is used to provide the primary corrosion protection for the rigid steel conduit. Our conduit are UL 6 and its fittings are UL 514B Standard for safety. The PVC coating is done according to SEMKO high temperature H2O PVC coating adhesion test procedure for 200 hrs.

PVC coated Rigid Steel Conduit are Hot dipped Galvanized both inside and outside prior to PVC & Urethane Coating. The External PVC coating will be of 40mil in thickness to protect the coating from tool damage during installation. The Internal Coating of the Rigid Steel Conduit will have a nominal of 2 mil thickness of Urethane. The PVC exterior and urethane Interior Coating will permit field bending without cracking or flaking at temperatures above 30° F.

PVC Coated conduit accessories are coated at 20 mil thickness external and 2 mil thickness internally and all the accessories except unions will have a 2 inch sleeve extended to the accessories, The inside of the extended sleeve is suitable to the outside diameter of the conduit. PVC Coated Coupling on the outside will have a series of longitudinal ribs 40 mil in thickness to protect the coating from tool damage during installation. The male / female threads of the conduits and its accessories are well protected with a coating of urethane 2 mil in thickness.





### Corrosion Protection Options

As you can see, PVC-coated conduit and fittings are suitable for almost all applications.

FINISH	ALUMINIUM	STEEL	PVC COATED	HDG	PE COATED
CHEMICAL					
Fuel	L	L	L	L	L
Chemical Agent (Bleach, Chlorine)	NR	NR	L	NR	R
Salts & Alkaline	NR	NR	L	NR	F
Mild Acids	NR	NR	L	NR	S
Plating	NR	NR	L	NR	F
Solvents	L	L	NR	L	NR
Strong Acid	NR	NR	S	NR	F

**Note:**

- L - Rated for all Fumes, Splash & Liquid
- S - Rated only for Fumes, Splash
- F - Rated for Fumes only
- NR - Not Recommended



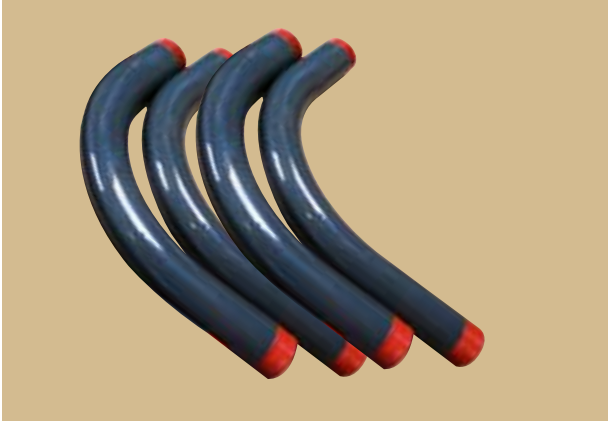
PART NUMBER	SIZE		OD / PVC		INSIDE DIA		WALL THICKNESS		LENGTH		Weight / Lth.		BUNDLE Length	Threads Per Inch	PRIMARY BUNDLE	
	US (inch)	MET (mm)	US (inch)	MET (mm)	US (inch)	MET (mm)	US (inch)	MET (mm)	MTR	FT	KG	LBS			KG	LBS
KCRMC50-PVC	1/2	16	0.920	23.00	0.632	15.80	0.104	2.60	3.05	10	3.85	8.49	10	14	38.50	84.90
KCRMC75-PVC	3/4	21	1.130	28.25	0.836	20.90	0.107	2.67	3.05	10	5.07	11.20	10	14	50.70	112.00
KCRMC100-PVC	1	27	1.395	34.88	1.063	26.57	0.126	3.15	3.05	10	7.43	16.40	10	11.5	74.30	164.00
KCRMC125-PVC	1-1/4	35	1.740	43.50	1.394	34.85	0.133	3.32	3.05	10	9.83	21.69	10	11.5	98.30	216.90
KCRMC150-PVC	1-1/2	41	1.980	49.50	1.624	40.60	0.138	3.45	3.05	10	12.4	26.79	10	11.5	121.40	267.90
KCRMC200-PVC	2	53	2.455	61.40	2.083	52.07	0.146	3.65	3.05	10	16.21	35.78	5	11.5	162.10	357.80
KCRMC250-PVC	2-1/2	63	2.955	73.90	2.489	62.22	0.193	4.82	3.05	10	24.73	54.59	5	8	247.30	545.90
KCRMC300-PVC	3	78	3.580	89.50	3.090	77.25	0.205	5.13	3.05	10	32.70	72.18	5	8	327.00	721.80
KCRMC350-PVC	3-1/2	91	4.080	102.00	3.570	89.25	0.215	5.38	3.05	10	38.55	85.00	4	8	385.50	850.00
KCRMC400-PVC	4	103	4.580	114.50	4.050	101.25	0.225	5.63	3.05	10	45.70	100.88	4	8	457.60	1008.80
KCRMC500-PVC	5	129	5.643	141.01	5.073	126.82	0.245	6.13	3.05	10	60.56	133.68	4	8	605.60	1336.80
KCRMC600-PVC	6	155	6.705	167.62	6.093	152.32	0.266	6.65	3.05	10	90.28	199.29	4	8	902.80	1992.90

**Standards:**

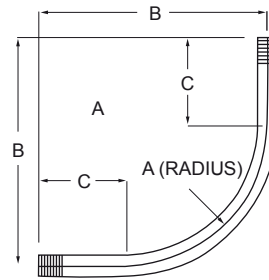
- AS/NZ 2053-7-2002 – Australian / Newzealand Standard Institute Follows NEMA Standards for Rigid Steel Race Ways
- ANSI C80.1 – American National Standard Institute for PVC Coated Electrical Conduit (PVRSC)
- UL-6 – UL Standard for Electrical Rigid Metal Conduit
- NEC-344 – National Electric code 2002.
- FS-WW-C-581 – Federal Specification (Class 1 Type A)

**Note:**

Outside Diameter for size 1/2" to 2" a tolerance of  $\pm 0.015 \pm 0.38$  mm  
 Outside Diameter for size 2-1/2" to 4" a tolerance of  $\pm 0.025 \pm 0.64$  mm  
 Outside Diameter for size 5" to 6" a tolerance of  $\pm 1\%$

**PVC Coated**
**90 Degree Elbow Standard**


- Dimensions listed in inches unless otherwise noted
- Dimensional data is for reference only
- NPT thread are protected with PU Coating and PVC End Caps on both sides.
- PVC Coated Galvanized Rigid Elbows meet UL6 and ANSI C80.1



Part Number	Size	Unit Quantity	A	B	C
KRB9050-PVC	1/2"	50	4.0	6.9	2.9
KRB9075-PVC	3/2"	50	4.5	7.4	2.9
KRB90100-PVC	1"	25	5.8	8.7	3.0
KRB90125-PVC	1-1/4"	20	7.3	10.6	3.3
KRB90150-PVC	1-1/2"	15	8.3	11.9	3.6
KRB90200-PVC	2"	10	9.5	13.8	4.3
KRB90250-PVC	2-1/2"	50	10.5	15.8	5.3
KRB90300-PVC	3"	35	13.0	18.8	5.8
KRB90350-PVC	3-1/2"	35	15.0	21.8	6.8
KRB90400-PVC	4"	35	16.0	23.1	7.1
KRB90500-PVC	5"	bulk	24.0	35.2	11.2
KRB90600-PVC	6"	bulk	30.0	42.6	12.6

**Note:**

Rigid Conduit Elbows other than the above standard radius can be manufactured according to the customer's request.

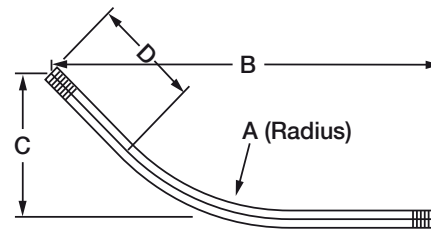


Water Treatment Plant



**PVC Coated**
**45 Degree Elbow Standard**


- Dimensions listed in inches unless otherwise noted
- Dimensional data is for reference only
- NPT thread are protected with PU Coating and PVC End Caps on both sides.
- PVC Coated Galvanized Rigid Elbows meet UL6 and ANSI C80.1



Part Number	Size	Unit Quantity	A	B	C	D
KRB4550-PVC	1/2"	50	4.0	7.0	2.9	1.9
KRB4575-PVC	3/2"	50	4.5	7.4	3.0	2.0
KRB45100-PVC	1"	25	5.8	9.5	4.0	2.7
KRB45125-PVC	1-1/4"	20	7.3	13.1	5.4	4.3
KRB45150-PVC	1-1/2"	15	8.3	14.0	5.8	4.3
KRB45200-PVC	2"	10	9.5	16.1	6.6	5.4
KRB45250-PVC	2-1/2"	50	10.5	19.0	7.9	6.8
KRB45300-PVC	3"	35	13.0	20.5	8.5	6.7
KRB45350-PVC	3-1/2"	35	15.0	22.8	9.5	7.1
KRB45400-PVC	4"	35	16.0	29.2	12.1	10.5
KRB45500-PVC	5"	bulk	24.0	36.1	15.0	11.2
KRB45600-PVC	6"	bulk	30.0	42.9	17.8	12.8

**Note:**

Rigid Conduit Elbows other than the above standard radius can be manufactured according to the customer's request.



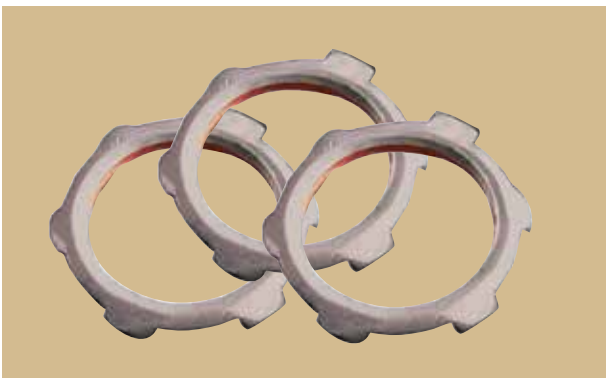
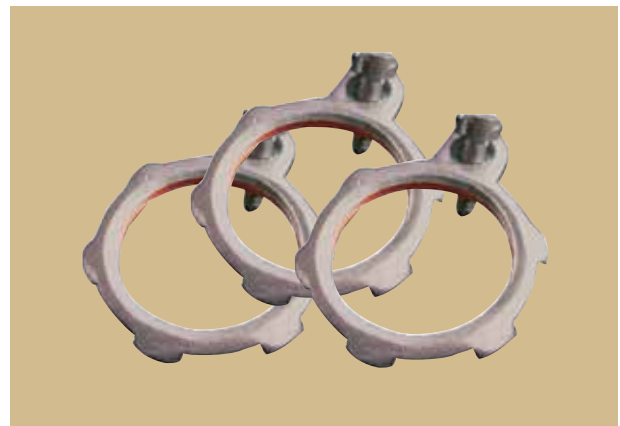
Water Treatment Plant

**PVC Coated**
**Coupling / Locknut**
**COUPLING**

Part Number	Trade Size	Unit Quantity	Standard Package
KC50-PVC	1/2"	50	500
KC75-PVC	3/4"	50	500
KC100-PVC	1"	50	500
KC125-PVC	1-1/4"	25	250
KC150-PVC	1-1/2"	25	250
KC200-PVC	2"	25	250
KC250-PVC	2-1/2"	10	100
KC300-PVC	3"	10	100
KC350-PVC	3-1/2"	10	100
KC400-PVC	4"	5	50
KC500-PVC	5"	5	50
KC600-PVC	6"	5	50


**Locknut**
**GROUNDING LOCKNUT**

Part Number	Trade Size	Unit Quantity	Standard Package
KLNG50-PVC	1/2"	200	2000
KLNG75-PVC	3/4"	200	2000
KLNG100-PVC	1"	200	2000
KLNG125-PVC	1-1/4"	100	1000
KLNG150-PVC	1-1/2"	100	1000
KLNG200-PVC	2"	50	500
KLNG250-PVC	2-1/2"	50	500
KLNG300-PVC	3"	25	250
KLNG350-PVC	3-1/2"	25	250
KLNG400-PVC	4"	10	100
KLNG500-PVC	5"	10	100
KLNG600-PVC	6"	10	100


**LOCKNUT**

Part Number	Trade Size	Unit Quantity	Standard Package
KLN50-PVC	1/2"	200	2000
KLN75-PVC	3/4"	200	2000
KLN100-PVC	1"	200	2000
KLN125-PVC	1-1/4"	100	1000
KLN150-PVC	1-1/2"	100	1000
KLN200-PVC	2"	50	500
KLN250-PVC	2-1/2"	50	500
KLN300-PVC	3"	25	250
KLN350-PVC	3-1/2"	25	250
KLN400-PVC	4"	10	100

**Standards:**

- Conduit Fittings meet UL514B

## PVC Coated Straps



### MALLEABLE IRON STRAP

Part Number	Trade Size	Unit Quantity	Standard Package
KPSM50-PVC	1/2"	100	1000
KPSM75-PVC	3/4"	100	1000
KPSM100-PVC	1"	50	500
KPSM125-PVC	1-1/4"	25	250
KPSM150-PVC	1-1/2"	25	250
KPSM200-PVC	2"	25	225
KPSM250-PVC	2-1/2"	10	100
KPSM300-PVC	3"	10	100
KPSM250-PVC	3-1/2"	10	100
KPSM400-PVC	4"	5	50

### 2 HOLE STRAP

Part Number	Trade Size	Unit Quantity	Standard Package
KP2S50-PVC	1/2"	100	1000
KP2S75-PVC	3/4"	100	1000
KP2S100-PVC	1"	100	1000
KP2S125-PVC	1-1/4"	100	1000
KP2S150-PVC	1-1/2"	50	500
KP2S200-PVC	2"	25	250
KP2S250-PVC	2-1/2"	25	250
KP2S300-PVC	3"	20	200
KP2S250-PVC	3-1/2"	10	100
KP2S400-PVC	4"	10	100



### MALLEABLE IRON STRAP BASE

Part Number	Trade Size	Unit Quantity	Standard Package
KSC50-PVC	1/2"	100	1000
KSC75-PVC	3/4"	100	1000
KSC100-PVC	1"	50	500
KSC125-PVC	1-1/4"	25	250
KSC150-PVC	1-1/2"	25	250
KSC200-PVC	2"	25	250
KSC250-PVC	2-1/2"	10	100
KSC300-PVC	3"	10	100
KSC350-PVC	3 1/2"	10	100
KSC400-PVC	4"	10	100
KSC500-PVC	5"	10	100
KSC600-PVC	6"	10	100

#### Standards:

- Conduit Fittings meet UL514B



**PVC Coated**
**U-BOLT**

Part Number	Trade Size	Unit Quantity	Standard Package
KUP50	1/2"	50	500
KUP75	3/4"	50	500
KUP100	1"	50	500
KUP125	1-1/4"	50	500
KUP150	1-1/2"	50	500
KUP200	2"	50	50
KUP250	2-1/2"	50	50
KUP300	3"	50	25
KUP350	3-1/2"	50	25
KUP400	4"	50	10
KUP500	5"	50	10
KUP600	6"	50	10


**3 PIECE COUPLING**

Part Number	Trade Size	Unit Quantity	Standard Package
K3PC50	1/2"	50	500
K3PC75	3/4"	50	500
K3PC100	1"	50	500
K3PC125	1-1/4"	50	500
K3PC150	1-1/2"	50	500
K3PC200	2"	50	50
K3PC250	2-1/2"	50	50
K3PC300	3"	50	25
K3PC350	3-1/2"	50	25
K3PC400	4"	50	10
K3PC500	5"	50	10
K3PC600	6"	50	10


**FEMALE-MALE UNION - UNF**

Part Number	Trade Size	Unit Quantity	Standard Package
KPUNF-1	1/2"	50	500
KPUNF-2	3/4"	50	500
KPUNF-3	1"	50	500
KPUNF-4	1-1/4"	50	500
KPUNF-5	1-1/2"	50	500
KPUNF-6	2"	10	50
KPUNF-7	2-1/2"	10	50
KPUNF-8	3"	5	25
KPUNF-9	3-1/2"	5	25
KPUNF-10	4"	5	10
KPUNF-11	5"	5	10
KPUNF-12	6"	5	10

**PVC Coated**
**PIPE STRAP FOR STRUT**

Part Number	Trade Size	Unit Quantity	Standard Package
KPSC50	1/2"	50	500
KPSC75	3/4"	50	500
KPSC100	1"	50	500
KPSC125	1-1/4"	50	500
KPSC150	1-1/2"	50	500
KPSC200	2"	50	50
KPSC250	2-1/2"	50	50
KPSC300	3"	50	25
KPSC350	3-1/2"	50	25
KPSC400	4"	50	10
KPSC500	5"	50	10
KPSC600	6"	50	10


**CONDUCT HANGER**

Part Number	Trade Size	Unit Quantity	Standard Package
KPHC50	1/2"	50	500
KPHC75	3/4"	50	500
KPHC100	1"	50	500
KPHC125	1-1/4"	50	500
KPHC150	1-1/2"	50	500
KPHC200	2"	50	50
KPHC250	2-1/2"	50	50
KPHC300	3"	50	25
KPHC350	3-1/2"	50	25
KPHC400	4"	50	10
KPHC500	5"	50	10
KPHC600	6"	50	10

**BEAM CLAMP**

Part Number	Trade Size	Unit Quantity	Standard Package
KPBC50	1/2"	50	500
KPBC75	3/4"	50	500
KPBC100	1"	50	500
KPBC125	1-1/4"	50	500
KPBC150	1-1/2"	50	500
KPBC200	2"	50	50
KPBC250	2-1/2"	50	50
KPBC300	3"	50	25
KPBC350	3-1/2"	50	25
KPBC400	4"	50	10
KPBC500	5"	50	10
KPBC600	6"	50	10



**PVC Coated**
**CONDUIT BUSH**

Bush	Grounding Bush	Trade Size	Unit Quantity	Standard Package
KBM50-PV	KGBM50-PV	1/2"	100	1000
KBM75-PV	KGBM75-PV	3/4"	100	1000
KBM100-PV	KGBM100-PV	1"	100	1000
KBM125-PV	KGBM125-PV	1-1/4"	50	500
KBM150-PV	KGBM150-PV	1-1/2"	50	500
KBM200-PV	KGBM200-PV	2"	50	500
KBM350-PV	KGBM350-PV	2-1/2"	25	250
KBM300-PV	KGBM300-PV	3"	25	250
KBM350-PV	KGBM350-PV	3-1/2"	10	100
KBM400-PV	KGBM400-PV	4"	10	100
KBM500-PV	KGBM500-PV	5"	10	100
KBM600-PV	KGBM600-PV	6"	10	100


**Water Tight Hub**

**MAYERS HUB**

Hub	Grounding Hub	Trade Size	Unit Quantity	Standard Package
KWH50-PV	KGWH50-PV	1/2"	50	500
KWH75-PV	KGWH75-PV	3/4"	50	500
KWH100-PV	KGWH100-PV	1"	25	250
KWH125-PV	KGWH125-PV	1-1/4"	10	100
KWH150-PV	KGWH150-PV	1-1/2"	10	100
KWH200-PV	KGWH200-PV	2"	10	100
KWH250-PV	KGWH250-PV	2-1/2"	5	50
KWH300-PV	KGWH300-PV	3"	5	50
KWH350-PV	KGWH350-PV	3-1/2"	2	10
KWH400-PV	KGWH400-PV	4"	2	10
KWH500-PV	KGWH500-PV	5"	2	10
KWH600-PV	KGWH600-PV	6"	2	10

**FEMALE-FEMALE UNION - UNY**

Part Number	Trade Size	Unit Quantity	Standard Package
KPUNY-1	1/2"	50	500
KPUNY-2	3/4"	50	500
KPUNY-3	1"	50	500
KPUNY-4	1-1/4"	50	500
KPUNY-5	1-1/2"	50	500
KPUNY-6	2"	50	50
KPUNY-7	2-1/2"	50	50
KPUNY-8	3"	50	25
KPUNY-9	3-1/2"	50	25
KPUNY-10	4"	50	10
KPUNY-11	5"	50	10
KPUNY-12	6"	50	10



**PVC Coated**
**GUA SERIES CONDULET BOXES - GUAC**

Part Number	Trade Size	Unit Quantity	Standard Package
KPGUAC50	1/2"	10	500
KPGUAC75	3/4"	10	500
KPGUAC100	1"	10	500
KPGUAC125	1-1/4"	10	500
KPGUAC150	1-1/2"	10	500
KPGUAC200	2"	10	50
KPGUAC250	2-1/2"	10	50
KPGUAC300	3"	5	25
KPGUAC350	3-1/2"	5	25
KPGUAC400	4"	5	10
KPGUAC500	5"	5	10
KPGUAC600	6"	5	10


**GUA SERIES CONDULET BOXES - GUAX**

Part Number	Trade Size	Unit Quantity	Standard Package
KPGUAX50	1/2"	10	500
KPGUAX75	3/4"	10	500
KPGUAX100	1"	10	500
KPGUAX125	1-1/4"	10	500
KPGUAX150	1-1/2"	10	500
KPGUAX200	2"	10	50
KPGUAX250	2-1/2"	10	50
KPGUAX300	3"	5	25
KPGUAX350	3-1/2"	5	25
KPGUAX400	4"	5	10
KPGUAX500	5"	5	10
KPGUAX600	6"	5	10


**GUA SERIES CONDULET BOXES - GUAL**

Part Number	Trade Size	Unit Quantity	Standard Package
KPGUAL50	1/2"	10	500
KPGUAL75	3/4"	10	500
KPGUAL100	1"	10	500
KPGUAL125	1-1/4"	10	500
KPGUAL150	1-1/2"	10	500
KPGUAL200	2"	10	50
KPGUAL250	2-1/2"	10	50
KPGUAL300	3"	5	25
KPGUAL350	3-1/2"	5	25
KPGUAL400	4"	5	10
KPGUAL500	5"	5	10
KPGUAL600	6"	5	10

**PVC Coated**
**GUA SERIES CONDULET BOXES - GUAM**

Part Number	Trade Size	Unit Quantity	Standard Package
KPGUAM50	1/2"	10	500
KPGUAM75	3/4"	10	500
KPGUAM100	1"	10	500
KPGUAM125	1-1/4"	10	500
KPGUAM150	1-1/2"	10	500
KPGUAM200	2"	10	50
KPGUAM250	2-1/2"	10	50
KPGUAM300	3"	5	25
KPGUAM350	3-1/2"	5	25
KPGUAM400	4"	5	10
KPGUAM500	5"	5	10
KPGUAM600	6"	5	10


**GUA SERIES CONDULET BOXES - GUAW**

Part Number	Trade Size	Unit Quantity	Standard Package
KPGUAW50	1/2"	10	500
KPGUAW75	3/4"	10	500
KPGUAW100	1"	10	500
KPGUAW125	1-1/4"	10	500
KPGUAW150	1-1/2"	10	500
KPGUAW200	2"	10	50
KPGUAW250	2-1/2"	10	50
KPGUAW300	3"	5	25
KPGUAW350	3-1/2"	5	25
KPGUAW400	4"	5	10
KPGUAW500	5"	5	10
KPGUAW600	6"	5	10


**GUA SERIES CONDULET BOXES - GUAN**

Part Number	Trade Size	Unit Quantity	Standard Package
KPGUAN50	1/2"	10	500
KPGUAN75	3/4"	10	500
KPGUAN100	1"	10	500
KPGUAN125	1-1/4"	10	500
KPGUAN150	1-1/2"	10	500
KPGUAN200	2"	10	50
KPGUAN250	2-1/2"	10	50
KPGUAN300	3"	5	25
KPGUAN350	3-1/2"	5	25
KPGUAN400	4"	5	10
KPGUAN500	5"	5	10
KPGUAN600	6"	5	10

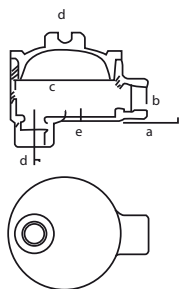
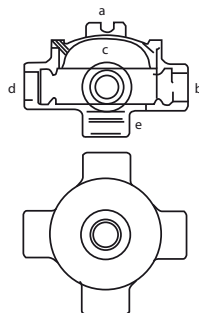


**PVC Coated**
**GUA SERIES CONDULET BOXES**

Part Number	Trade Size	Unit Quantity	Standard Package
KPGUA50	1/2"	10	500
KPGUA75	3/4"	10	500
KPGUA100	1"	10	500
KPGUA125	1-1/4"	10	500
KPGUA150	1-1/2"	10	500
KPGUA200	2"	10	50
KPGUA250	2-1/2"	10	50
KPGUA300	3"	5	25
KPGUA350	3-1/2"	5	25
KPGUA400	4"	5	10
KPGUA500	5"	5	10
KPGUA600	6"	5	10


**GUA SERIES CONDULET BOXES - GUAT**

Part Number	Trade Size	Unit Quantity	Standard Package
KPGUAT50	1/2"	10	500
KPGUAT75	3/4"	10	500
KPGUAT100	1"	10	500
KPGUAT125	1-1/4"	10	500
KPGUAT150	1-1/2"	10	500
KPGUAT200	2"	10	50
KPGUAT250	2-1/2"	10	50
KPGUAT300	3"	5	25
KPGUAT350	3-1/2"	5	25
KPGUAT400	4"	5	10
KPGUAT500	5"	5	10
KPGUAT600	6"	5	10


**GUAB Only**

**All others**
**Dimensions In Inches:**

Length of Hub Hub Size	Dimension "e" Length
1/2 - 3/4	7/8
1 - 1 1/4	1
1 1/2 - 2	1 1/16

**PVC Coated**

**EYS SEAL FITTING  
VERTICAL / HORIZONTAL POSITION**

Part Number	Trade Size	Unit Quantity	Standard Package
KPEYS11	1/2"	10	10
KPEYS12	3/4"	10	10
KPEYS13	1"	10	10
KPEYS14	1-1/4"	10	10
KPEYS15	1-1/2"	10	10
KPEYS16	2"	1	5
KPEYS17	2-1/2"	1	5
KPEYS18	3"	1	5
KPEYS19	3-1/2"	1	5
KPEYS20	4"	1	2
KPEYS21	5"	1	2
KPEYS22	6"	1	2

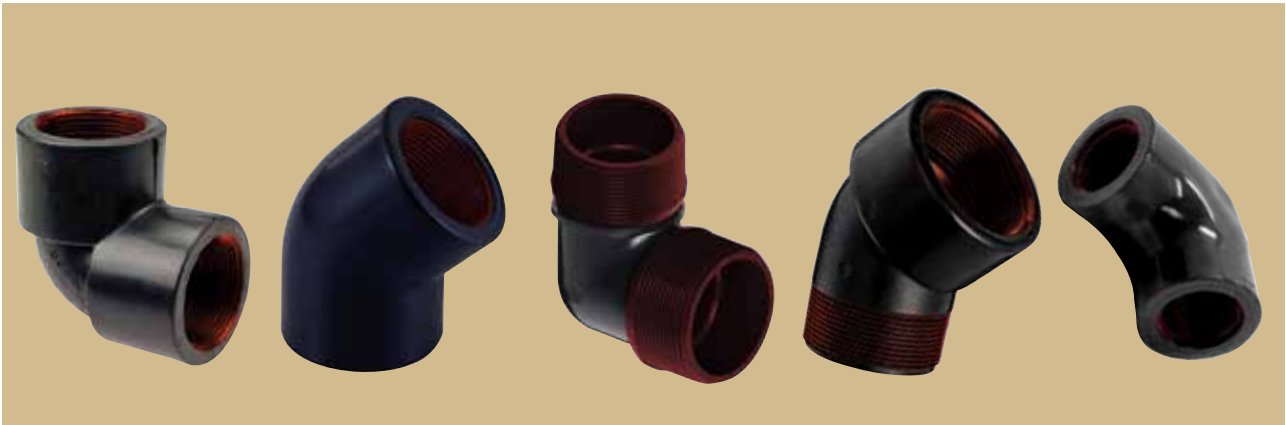

**EYS SEAL FITTING - VERTICLE MALE & FEMALE**

Part Number	Trade Size	Unit Quantity	Standard Package
KPEYS1	1/2"	10	10
KPEYS2	3/4"	10	10
KPEYS3	1"	10	10
KPEYS4	1-1/4"	10	10
KPEYS5	1-1/2"	10	10
KPEYS6	2"	1	5
KPEYS7	2-1/2"	1	5
KPEYS8	3"	1	5
KPEYS9	3-1/2"	1	5
KPEYS10	4"	1	2
KPEYS11	5"	1	2
KPEYS12	6"	1	2

**EYS SEAL FITTING - EZS ANY ANGLE**

Part Number	Trade Size	Unit Quantity	Standard Package
KPEZS1	1/2"	10	10
KPEZS2	3/4"	10	10
KPEZS3	1"	10	10
KPEZS4	1-1/4"	10	10
KPEZS5	1-1/2"	10	10
KPEZS6	2"	1	5
KPEZS7	2-1/2"	1	5
KPEZS8	3"	1	5
KPEZS9	3-1/2"	1	5
KPEZS10	4"	1	2
KPEZS11	5"	1	2
KPEZS12	6"	1	2



**PVC Coated**

**SHORT ELBOW**

PART NUMBER						Trade Size	Unit Quantity	Standard Package
MALE 90°	FEMALE 90°	MALE 45°	FEMALE 45°	MALE-FEMALE 90°	MALE-FEMALE 45°			
KPSE90-50	KPSEF90-50	KPSE45-50	KPSEF45-50	KPSEMF90-50	KPSEMF45-50	1/2"	10	10
KPSE90-75	KPSEF90-75	KPSE45-75	KPSEF45-75	KPSEMF90-75	KPSEMF45-75	3/4"	10	10
KPSE90-100	KPSEF90-100	KPSE45-100	KPSEF45-100	KPSEMF90-100	KPSEMF45-100	1"	10	10
KPSE90-125	KPSEF90-125	KPSE45-125	KPSEF45-125	KPSEMF90-125	KPSEMF45-125	1-1/4"	10	10
KPSE90-150	KPSEF90-150	KPSE45-150	KPSEF45-150	KPSEMF90-150	KPSEMF45-150	1-1/2"	10	10
KPSE90-200	KPSEF90-200	KPSE45-200	KPSEF45-200	KPSEMF90-200	KPSEMF45-200	2"	5	5
KPSE90-250	KPSEF90-250	KPSE45-250	KPSEF45-250	KPSEMF90-250	KPSEMF45-250	2-1/2"	5	5
KPSE90-300	KPSEF90-300	KPSE45-300	KPSEF45-300	KPSEMF90-300	KPSEMF45-300	3"	1	5
KPSE90-350	KPSEF90-350	KPSE45-350	KPSEF45-350	KPSEMF90-350	KPSEMF45-350	3-1/2"	1	5
KPSE90-400	KPSEF90-400	KPSE45-400	KPSEF45-400	KPSEMF90-450	KPSEMF45-400	4"	1	2
KPSE90-500	KPSEF90-500	KPSE45-500	KPSEF45-500	KPSEMF90-500	KPSEMF45-500	5"	1	2
KPSE90-600	KPSEF90-60	KPSE45-600	KPSEF45-600	KPSEMF90-600	KPSEMF45-600	6"	1	12



Picture sourced from Internet

## PVC Coated Conduit Nipple



CONDUIT NIPPLES – STEEL				CONDUIT NIPPLES – STEEL			
Part Number	Conduit Size	Length	Unit Quantity	Part Number	Conduit Size	Length	Unit Quantity
KNPV0	1/2"	Close	20 Pcs.	KNPV55	1 1/2"	12"	5 Pcs.
KNPV1	1/2"	1 1/2"	20 Pcs.	KNPV56	2"	Close	5 Pcs.
KNPV2	1/2"	2"	20 Pcs.	KNPV57	2"	2 1/2"	5 Pcs.
KNPV3	1/2"	2 1/2"	20 Pcs.	KNPV58	2"	3"	5 Pcs.
KNPV4	1/2"	3"	20 Pcs.	KNPV59	2"	3 1/2"	5 Pcs.
KNPV5	1/2"	3 1/2"	20 Pcs.	KNPV60	2"	4"	5 Pcs.
KNPV6	1/2"	4"	20 Pcs.	KNPV61	2"	5"	5 Pcs.
KNPV7	1/2"	5"	20 Pcs.	KNPV62	2"	6"	5 Pcs.
KNPV8	1/2"	6"	20 Pcs.	KNPV63	2"	8"	5 Pcs.
KNPV9	1/2"	8"	20 Pcs.	KNPV64	2"	10"	5 Pcs.
KNPV10	1/2"	10"	20 Pcs.	KNPV65	2"	12"	5 Pcs.
KNPV11	1/2"	12"	20 Pcs.	KNPV66	2 1/2"	Close	5 Pcs.
KNPV12	3/4"	Close	20 Pcs.	KNPV67	2 1/2"	3"	5 Pcs.
KNPV13	3/4"	2"	20 Pcs.	KNPV68	2 1/2"	3 1/2"	5 Pcs.
KNPV14	3/4"	2 1/2"	20 Pcs.	KNPV69	2 1/2"	4"	5 Pcs.
KNPV15	3/4"	3"	20 Pcs.	KNPV70	2 1/2"	5"	5 Pcs.
KNPV16	3/4"	3 1/2"	20 Pcs.	KNPV71	2 1/2"	6"	5 Pcs.
KNPV17	3/4"	4"	20 Pcs.	KNPV72	2 1/2"	8"	5 Pcs.
KNPV18	3/4"	5"	20 Pcs.	KNPV73	2 1/2"	10"	5 Pcs.
KNPV19	3/4"	6"	20 Pcs.	KNPV74	2 1/2"	12"	5 Pcs.
KNPV20	3/4"	8"	20 Pcs.	KNPV75	3"	Close	1 Pc.
KNPV21	3/4"	10"	20 Pcs.	KNPV76	3"	3"	1 Pc.
KNPV22	3/4"	12"	20 Pcs.	KNPV77	3"	3 1/2"	1 Pc.
KNPV23	1"	Close	20 Pcs.	KNPV78	3"	4"	1 Pc.
KNPV24	1"	2"	20 Pcs.	KNPV79	3"	5"	1 Pc.
KNPV25	1"	2 1/2"	20 Pcs.	KNPV80	3"	6"	1 Pc.
KNPV26	1"	3"	20 Pcs.	KNPV81	3"	8"	1 Pc.
KNPV27	1"	3 1/2"	20 Pcs.	KNPV82	3"	10"	1 Pc.
KNPV28	1"	4"	20 Pcs.	KNPV83	3"	12"	1 Pc.
KNPV29	1"	5"	20 Pcs.	KNPV84	3 1/2"	Close	1 Pc.
KNPV30	1"	6"	20 Pcs.	KNPV85	3 1/2"	4"	1 Pc.
KNPV31	1"	8"	20 Pcs.	KNPV86	3 1/2"	5"	1 Pc.
KNPV32	1"	10"	20 Pcs.	KNPV87	3 1/2"	6"	1 Pc.
KNPV33	1"	12"	20 Pcs.	KNPV88	3 1/2"	8"	1 Pc.
KNPV34	1 1/4"	Close	5 Pcs.	KNPV89	3 1/2"	10"	1 Pc.
KNPV35	1 1/4"	2"	5 Pcs.	KNPV90	3 1/2"	12"	1 Pc.
KNPV36	1 1/4"	2 1/2"	5 Pcs.	KNPV91	4"	Close	1 Pc.
KNPV37	1 1/4"	3"	5 Pcs.	KNPV92	4"	4"	1 Pc.
KNPV38	1 1/4"	3 1/2"	5 Pcs.	KNPV93	4"	5"	1 Pc.
KNPV39	1 1/4"	4"	5 Pcs.	KNPV94	4"	6"	1 Pc.
KNPV40	1 1/4"	5"	5 Pcs.	KNPV95	4"	8"	1 Pc.
KNPV41	1 1/4"	6"	5 Pcs.	KNPV96	4"	10"	1 Pc.
KNPV42	1 1/4"	8"	5 Pcs.	KNPV98	5"	Close	1 Pc.
KNPV43	1 1/4"	10"	5 Pcs.	KNPV99	5"	5"	1 Pc.
KNPV44	1 1/4"	12"	5 Pcs.	KNPV100	5"	6"	1 Pc.
KNPV45	1 1/2"	Close	5 Pcs.	KNPV101	5"	8"	1 Pc.
KNPV46	1 1/2"	2"	5 Pcs.	KNPV102	5"	10"	1 Pc.
KNPV47	1 1/2"	2 1/2"	5 Pcs.	KNPV103	5"	12"	1 Pc.
KNPV48	1 1/2"	3"	5 Pcs.	KNPV104	6"	Close	1 Pc.
KNPV49	1 1/2"	3 1/2"	5 Pcs.	KNPV105	6"	6"	1 Pc.
KNPV50	1 1/2"	4"	5 Pcs.	KNPV106	6"	8"	1 Pc.
KNPV51	1 1/2"	5"	5 Pcs.	KNPV107	6"	10"	1 Pc.
KNPV52	1 1/2"	6"	5 Pcs.	KNPV108	6"	12"	1 Pc.
KNPV53	1 1/2"	8"	5 Pcs.				
KNPV54	1 1/2"	10"	5 Pcs.				

**Standards:**

- Conduit Fittings meet UL514B

**PVC Coated**
**Conduit Bodies**

**TYPE LB**

Malleable Iron HDG	Trade Size	Internal Vol. in Cu. In.	Unit Qty.	Weight Lbs. Per 100
KLB50M-PVC	1/2"	4.5	10	71
KLB75M-PVC	3/4"	7.5	10	97
KLB100M-PVC	1"	12.5	10	143
KLB125M-PVC	1-1/4"	32.0	5	287
KLB150M-PVC	1-1/2"	35.3	5	331
KLB200M-PVC	2"	73.0	1	534
KLB250M-PVC	2-1/2"	142.0	1	1105
KLB300M-PVC	3"	173.0	1	1160
KLB350M-PVC	3-1/2"	292.0	1	1989
KLB400M-PVC	4"	324.0	1	2099

**TYPE LL**

Malleable Iron HDG	Trade Size	Internal Vol. in Cu. In.	Unit Qty.	Weight Lbs. Per 100
KLL50M-PVC	1/2"	4.5	10	76
KLL75M-PVC	3/4"	7.5	10	95
KLL100M-PVC	1"	12.5	10	138
KLL125M-PVC	1-1/4"	32.0	5	309
KLL150M-PVC	1-1/2"	33.3	5	332
KLL200M-PVC	2"	68.0	1	497
KLL250M-PVC	2-1/2"	173.0	1	1160
KLL300M-PVC	3"	173.0	1	1437
KLL350M-PVC	3-1/2"	292.0	1	2321
KLL400M-PVC	4"	324.0	1	2431

**TYPE LR**

Malleable Iron HDG	Trade Size	Internal Vol. in Cu. In.	Unit Qty.	Weight Lbs. Per 100
KLR50M-PVC	1/2"	4.5	10	71
KLR50M-PVC	3/4"	7.5	10	100
KLR100M-PVC	1"	12.5	10	157
KLR125M-PVC	1-1/4"	32.0	5	332
KLR150M-PVC	1-1/2"	35.3	5	345
KLR200M-PVC	2"	68.0	1	626
KLR250M-PVC	2-1/2"	142.0	1	1105
KLR300M-PVC	3"	173.0	1	1437
KLR350M-PVC	3-1/2"	292.0	1	2321
KLR400M-PVC	4"	324.0	1	2500

**TYPE T**

Malleable Iron HDG	Trade Size	Internal Vol. in Cu. In.	Unit Qty.	Weight Lbs. Per 100
KT50M-PVC	1/2"	6.0	10	111
KT75M-PVC	3/4"	9.5	10	137
KT100M-PVC	1"	15.0	10	196
KT125M-PVC	1-1/4"	33.0	5	332
KT150M-PVC	1-1/2"	36.3	5	368
KT200M-PVC	2"	76.0	1	663
KT250M-PVC	2-1/2"	142.0	1	1271
KT300M-PVC	3"	173.0	1	1547
KT350M-PVC	3-1/2"	292.0	1	2542
KT400M-PVC	4"	324.0	1	2645

**TYPE C**

Malleable Iron HDG	Trade Size	Internal Vol. in Cu. In.	Unit Qty.	Weight Lbs. Per 100
KC50M-PVC	1/2"	4.5	10	98
KC50M-PVC	3/4"	7.5	10	118
KC100M-PVC	1"	12.5	10	170
KC125M-PVC	1-1/4"	35.0	5	309
KC150M-PVC	1-1/2"	35.3	5	368
KC200M-PVC	2"	75.0	1	552
KC250M-PVC	2-1/2"	153.0	1	1216
KC300M-PVC	3"	181.0	1	1437
KC350M-PVC	3-1/2"	290.0	1	2210
KC400M-PVC	4"	320.0	1	2321

**TYPE TB**

Malleable Iron HDG	Trade Size	Internal Vol. in Cu. In.	Unit Qty.	Weight Lbs. Per 100
KTB50M-PVC	1/2"	6.0	10	10
KTB75M-PVC	3/4"	9.5	10	10
KTB100M-PVC	1"	15.0	10	10
KTB125M-PVC	1-1/4"	33.0	5	5
KTB150M-PVC	1-1/2"	36.0	5	5
KTB200M-PVC	2"	76.0	1	1

**Standards:**

- Conduit Fittings meet UL514B



## Conduit Body Cover

### Covers

Cover	Gasket	Trade Size	Unit Quantity	Standard Package	Weight Lbs. Per 100
KCA150-PV	GASK015N	1/2"	50	250	5
KCA250-PV	GASK025N	3/4"	50	250	6
KCA350-PV	GASK035N	1"	50	250	20
KCA450-PV	GASK045N	1-1/4" - 1-1/2"	50	50	25
KCA650-PV	GASK065N	2"	25	25	25
KCA850-PV	GASK085N	2-1/2" - 3"	10	10	78
KCA950-PV	GASK095N	3-1/2" - 4"	5	5	140



#### Standards:

- Conduit Fittings meet UL514B

### Technical Details:

#### Standards:

Exterior PVC and interior urethane coating performance shall be confirmed by the characteristics and tests listed below. Test samples shall be selected at random.

#### FLAMMABILITY

The PVC coating will burn if subjected to sustained flame or heat above 400°F, however, it will self extinguish upon removal of the heat source or flame.

#### TOXICITY

Prolonged exposure to heat greater than 200°F or exposure to fire may cause the PVC coating to release harmful emissions which could pose a potential health hazard. Therefore, PVC use is not recommended in areas exposed to sustained temperatures above 200°F. If exposed to fire, particularly in closed areas, users should be aware and observe proper caution.

#### BOIL TEST

Acceptable conduit coating bonds shall be confirmed if there is no disbondment after a minimum average of 200 hours in boiling water or exposure to steam vapor at one atmosphere. The periodic increments between bond tests shall not exceed 5 hours for the first 25 hours, then it may be lengthened by mutual consent. The RN1 Bond Test and the Standard Method for Measuring Adhesion by Tape Test shall be utilized.

#### Exterior Adhesion

A 6" length of conduit test specimen shall be placed in boiling water. The specimen shall be periodically removed, cooled to ambient temperature and immediately tested according to the bond test (RN1). When the PVC coating separates from the substrate, the boil time to failure in hours shall be recorded. ASTM D870 describes this test method for accelerated testing of coating adhesive bonds.

#### Interior Adhesion

A 6" conduit test specimen shall be cut in half longitudinally and placed in boiling water or directly above boiling water with the urethane surface facing down. The specimen shall be periodically removed, cooled to ambient temperature and tested in accordance with the Standard Method of Adhesion by Tape Test (ASTM D3359). When the coating disbonds, the time to failure in hours shall be recorded.

#### HEAT/HUMIDITY TEST

Acceptable conduit coating bonds shall be confirmed by a minimum average of 30 days in the Heat and Humidity Test. The periodic increment between bond tests shall not exceed 5 days for the first 30 days, then may be lengthened by mutual consent. The RN1 Bond Test and the Standard Method for Measuring Adhesion by Tape Test shall be utilized.

**Exterior Adhesion**

Conduit specimens shall be placed in a heat and humidity environment where the temperature is maintained at 150°F (66°C) and 95% relative humidity. The specimens shall be periodically removed and a bond test (RN1) performed. When the PVC coating separates from the substrate, the exposure time to failure in days shall be recorded. ASTM D1151, D1735, D2247 AND D4585 are the basis for this accelerated method of evaluating adhesive bonding.

**Interior Adhesion**

The conditions for interior adhesion testing of conduit specimens are the same as those for external adhesion.

ASTM D3359 is used to determine adhesive failure.

**CHEMICAL RESISTANCE TEST**

No trace of the internal coating shall be visible on a white cloth following six wipes over the coating which has been wetted with acetone (ASTM D1308).

**POLYURETHANE**

The supplier shall confirm that the internal coating which meets the above condition is a polyurethane. Kruppsmetal™ has used the American Society for Testing and Materials (ASTM) standards to provide comparable and consistent test data. A list of ASTM standards referenced in the Kruppsmetal PVC Coated Conduit Specification appears below.

**ASTM D149**

Test Methods for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies

**ASTM D638**

Test Method for Tensile Properties of Plastics

**ASTM D746**

Test Method for Brittleness Temperature of Plastics and Elastomers by Impact

**ASTM D870**

Method for Water Immersion Test of Organic Coatings on Steel

**ASTM D1151**

Test Method for Effect of Moisture and Temperature on Adhesive Bonds

**ASTM D1735**

Method for Water Fog Testing of Organic Coatings

**ASTM D2240**

Test Method for Rubber Property-Durometer Hardness

**ASTM D2247**

Method of Testing Coated Metal Specimens at 100% Relative Humidity

**ASTM D3359**

Method for Measuring Adhesion by Tape Test

**ASTM D4585**

Testing Water Resistance of Coatings Using Controlled Condensation

**ASTM G23**

Recommended Practice for Operating Light-and-Water-Exposure Apparatus (Carbon-Arc Type) for Exposure of Non-Metallic Materials

**ASTM D1308**

Effect of Chemicals on Clear and Pigmented Organic Finishes



**Urethane Interior Coating Chemical Resistance Chart**

SOLUTIONS	CONC.	TEMP.	RECOMMENDED	
			EXPOSURE	
			FUMES	
	<b>Acetic Acid</b>	<b>10%</b>	<b>120</b>	<b>NO</b>
	<b>Acid Copper Plating Sol.</b>		<b>160</b>	<b>YES</b>
	Alkaline Cleaners		160	YES
	Aluminum Chloride	Sat'd	160	YES
	Aluminum Sulfate	Sat'd	160	YES
	Alums	Sat'd	160	YES
	Ammonium Chloride	Sat'd	160	YES
	Ammonium Hydroxide	28%	120	YES
	Ammonium Hydroxide	10%	120	YES
	Ammonium Sulfate	Sat'd	160	YES
	Ammonium Thiocyanate	Sat'd	160	YES
	Amyl Alcohol	Any	90	YES
	Arsenic Acids	Any	150	YES
	Barium Sulfide	Sat'd	160	YES
	Black Liquor	Sat'd	90	YES
	Benzoic Acid	Sat'd	160	YES
	Brass Plating Solution	Any	160	YES
	Bromine Water	Sat'd	120	YES
	Butyl Alcohol	Any	90	YES
	Cadmium Plating Sol.	Any	150	YES
	Cadmium Bisulfate	Any	150	YES
	Calcium Chloride	Sat'd	160	YES
	Calcium Hypochlorite	Sat'd	120	YES
	Carbonic Acid	Sat'd	160	YES
	Casein	Any	90	YES
	Castor Oil	Any	90	YES
	Caustic Soda	35%	120	YES
	Caustic Soda	10%	150	YES
	Caustic Potash	35%	120	YES
	Caustic Potash	10%	150	YES
	Chlorine Water	Sat'd	90	YES
	Chromium Plating Sol.	Any	150	YES
	Citric Acid	Sat'd	160	YES
	Copper Chloride	Sat'd	160	YES
	Copper Cyanide Plating Sol.	Any	160	YES
	Any	180	YES	YES
	Sat'd	160	YES	YES
	Copper Sulfate	Sat'd	160	YES
	Coconut Oil	Sat'd	90	YES
	Cottonseed Oil	Sat'd	90	YES
	Disodium Phosphate	Sat'd	160	YES
	Ethyl Alcohol	Any	90	YES
	Ethylene Glycol	Any	90	YES
	Ferric Chloride	45%	120	YES
	Ferrous Sulfate	Sat'd	150	YES
	Fluoboric Acid	Any	150	YES

**(High Speed)  
(with Alkali  
Cyanides)**



SOLUTIONS	CONC.	TEMP.	RECOMMENDED EXPOSURE	
			FUMES	
			120	NO
	<b>Acetic Acid</b>	<b>10%</b>	<b>120</b>	<b>NO</b>
	<b>Acid Copper Plating Sol.</b>		<b>160</b>	<b>YES</b>
	Formaldehyde	37%	120	YES
	Formic Acid	85%	100	NO
	Gallic Acid	Sat'd	150	YES
	Glucose	Any	150	YES
	Glycerine	Any	90	YES
	Gold Plating Solution	Any	150	YES
	Hydrochloric Acid	10%	120	YES
	Hydrochloric Acid	21.50%	120	YES
	Hydrochloric Acid	37.50%	120	YES
	Hydrochloric Acid	37.50%	90	YES
	Hydrofluoric Acid	4%	140	YES
	Hydrofluoric Acid	10%	120	YES
	Hydrofluoric Acid	48%	120	YES
	Hydrogen Peroxide	30%	120	YES
	Hydrogen Sulfide	Sat'd	120	YES
	Hydroquinone	Any	90	YES
	Indium Plating Solution	Any	150	YES
	Malic Acid	Any	75°	YES
	Methyl Alcohol	Any	75°	YES
	Mineral Oils	Any	75°	YES
	Nickel Acetate	Sat'd	75°	YES
	Nickel Plating Solution	Any	75°	YES
	Nickel Salts	Sat'd	75°	YES
	Nitric Acid	35%	75°	YES
	Nitric Acid	40%	75°	YES
	Nitric Acid	60%	75°	YES
	Nitric/Hydrofluoric Acid	15%/4%	75°	YES
	Nitric Acid/Sodium Dichromate			
	Water 16%/13%/71%	75°	YES	YES
	Oleic Acid	Any	75°	YES
	Oxalic Acid	Any	75°	YES
	Phenol	Sat'd	75°	YES
	Phosphoric Acid	75%	75°	YES
	Phosphoric Acid	85%	75°	YES
	Potassium Acid Sulfate	Sat'd	75°	YES
	Potassium Antimonate	Sat'd	75°	YES
	Potassium Bisulfite	Sat'd	75°	YES
	Potassium Chloride	Sat'd	75°	YES
	Potassium Cuprocyanide	Sat'd	75°	YES
	Potassium Cyanide	Sat'd	75°	YES
	Potassium Dichromate	Sat'd	75°	YES
	Potassium Hypochlorate	Sat'd	75°	YES
	Potassium Sulfide	Sat'd	75°	YES
	Potassium Thiosulfate	Sat'd	75°	YES
	Propyl Alcohol	Sat'd	75°	YES
	Rhodium Plating Solution	Sat'd	75°	YES

Extract from Steel Tube Institute organization of North America



SOLUTIONS	CONC.	TEMP.	RECOMMENDED EXPOSURE	
			FUMES	
			120	NO
	<b>Acetic Acid</b>	<b>10%</b>	<b>120</b>	<b>NO</b>
	<b>Acid Copper Plating Sol.</b>		<b>160</b>	<b>YES</b>
	Silver Plating Solution	Sat'd	75°	YES
	Soaps	Any	75°	YES
	Sodium Acid Sulfate	Sat'd	75°	YES
	Sodium Antimonate	Sat'd	75°	YES
	Sodium Bicarbonate	Sat'd	75°	YES
	Sodium Bisulfite	Sat'd	75°	YES
	Sodium Chloride	Sat'd	75°	YES
	Sodium Cyanide	Sat'd	75°	YES
	Sodium Dichromate	Sat'd	75°	YES
	Sodium Hydroxide	10%	75°	YES
	Sodium Hydroxide	35%	75°	YES
	Sodium Hydroxide	73%	75°	YES
	Sodium Hypochlorite	Sat'd	75°	YES
	Sodium Hypochlorite	15%	75°	YES
	Sodium Sulfide	Sat'd	75°	YES
	Sodium Thiosulfate	Sat'd	75°	YES
	Sulfuric Acid	15%	75°	YES
	Sulfuric Acid	50%	75°	YES
	Sulfuric Acid	70%	75°	YES
	Sulfuric Acid	98%	75°	YES
	Sulfurous Acid	2%	75°	YES
	Sulfurous Acid	4.00%	75°	YES
	Tannic Acid	Sat'd	75°	YES
	Tartaric Acid	Sat'd	75°	YES
	Tin Chloride	Sat'd	75°	YES
	Tin Plating Solution	Sat'd	75°	YES
	Triethanolamine	Sat'd	75°	YES
	Trisodium Phosphate	Sat'd	75°	YES
	White Liquor	Sat'd	75°	YES
	Zinc Plating Solution	Sat'd	75°	YES
	Zinc Sulfate	Sat'd	75°	YES



## Installation Practices for PVC-Coated Conduit and Fittings

There are three types of PVC-coated conduit; couplings are supplied separately.

1. Primary PVC coating over bare steel which is a listed rigid conduit for environmentally suitable locations.
2. A PVC coating over listed galvanized steel conduit. This is a supplementary coating intended for added protection in severely corrosive locations.
3. A primary PVC coating over a supplementary coating of zinc. This is also intended for severely corrosive locations.

These PVC-coated raceways are generally installed as a system, which means the fittings, conduit bodies, straps, hangers, boxes, etc., are also coated. There are, however, installations where only a coated elbow is used in a galvanized conduit run, such as where emerging from the soil or concrete.

(NOTE: Manufacturers' instructions are very important when installing PVC-coated products and systems, and special tools are generally required.)

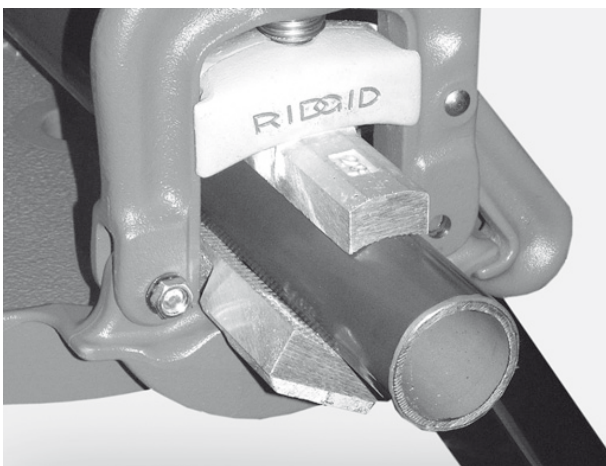


Figure 14: Commercial yoke vise used to protect the PVC coating of PVC-coated conduit.

### 6.1 Tools

To minimize installation damage to the PVC coatings, use tools specially designed for PVC-coated conduit or standard tools that have been appropriately modified for installing PVC-coated conduit. Standard tools which have not been modified could damage the coatings and shall not be used to install PVC-coated conduit. For repairing damage to the PVC coating see Section 6.6.

### 6.2 Clamping (Vising) PVC-Coated Conduit

Various manufacturers offer modified jaws for use in standard vises to protect the coating (see Figure 14).

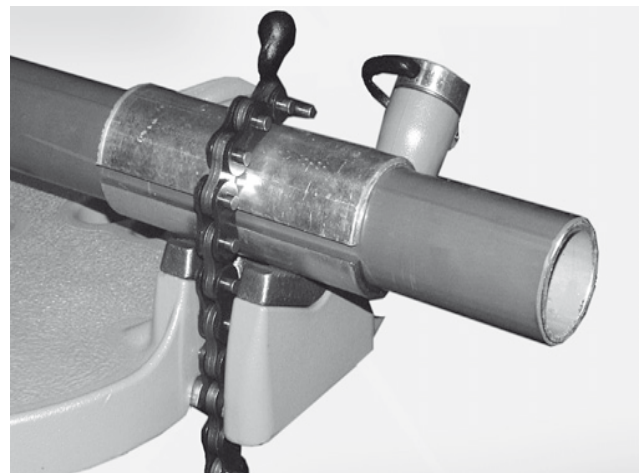


Figure 15: Field-fabricated half shell clamps used with chain vise to protect PVC-Coated conduit.



Figure 16: Utility knife used to apply "pencil-cuts" to PVC coating to allow the conduit easier entrance into the cutting die.

When using either a “jaw type” or a chain type” vise, the PVC-coated conduit can also be protected by half-shell clamps. These are available as a manufactured clamp or can be made in the field from RMC as follows.

### 6.2.1 Clamping sleeves made from steel RMC

a) Make two half-shell pieces by first cutting two 6-inch pieces of standard conduit one trade size larger than the PVC-coated conduit to be clamped.

b) Use a band saw to cut the 6-inch conduit sections lengthwise. Make the cut slightly off center. This creates two half shells, one smaller than the other.

c) Discard the larger pieces and use the two smaller pieces to protect the conduit in the vise. Deburr any sharp edges. Properly made clamping sleeves will have a gap between the two pieces when positioned on the conduit (see Figure 15)

d) Where proper tooling for making a sleeve is not available, protect the PVC coating in the vise by wrapping the area to be clamped with sandpaper, emery cloth or cardboard. The coarse side of emery cloth or sandpaper should face the PVC coating.

(NOTE: This is the least desirable method and should be avoided by planning ahead.

### 6.3 Cutting and Threading PVC-Coated Conduit

For full cutting and threading instructions for PVC following provides general guidance.

#### 6.3.1 Cutting and reaming

Cutting with a saw is the preferred method. However, a roller cutter is acceptable providing the conduit is properly clamped. See Section 4.1 for conduit cutting and threading guidelines.

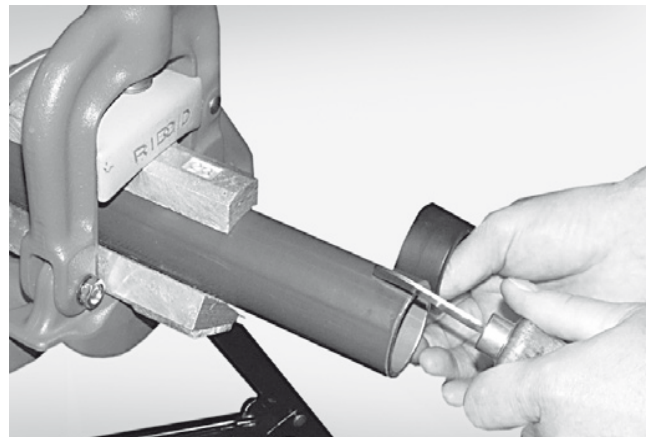


Figure 17: Before threading PVC-coated conduit, make a series of cuts along the axis of the conduit to break-up threading chip.

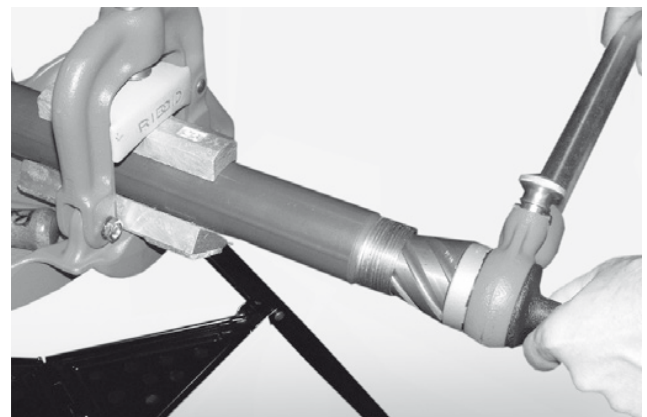


Figure 18: Using a reamer to remove rough edges of cut PVC-coated conduit.

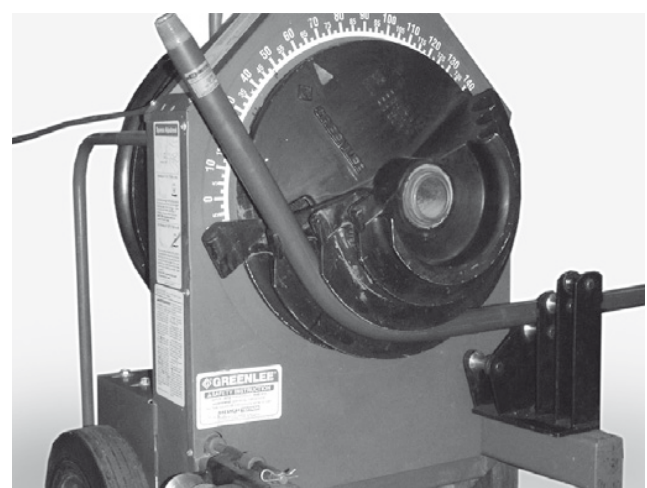


Figure 19: Bender with special shoes required for bending PVC-coated conduit.

### 6.3.2 Hand threaders (manual and motorized)

a) If PVC-coated conduit is cut with a hacksaw or a band saw, and a hand-threader is used, trim the coating at an angle all the way around the conduit before threading. This is sometimes called pencil cut or bevel cut and enables the die teeth on the threader to engage the conduit (see Figure 16). Be sure to follow the instructions in 6.2.1 for clamping conduit, and ensure that the conduit is securely held in the vise.

b) A standard die head must be modified (machined) for use with PVC-coated conduit. To make this modification, the guide sleeve must be bored to allow the coated conduit to enter the die. The inside diameter must be increased by 110 mils (0.11 inch).

(NOTE: The PVC coating shall not be removed to allow use of standard non-machined die heads.)

### 6.3.3 Rotating machines

a) Rotating machines with jaws that cut through the PVC coating shall not be used.

b) Long strips of metal or PVC from the threading can foul the die head and collapse the conduit. To avoid this and permit removal of PVC in small pieces, make a series of longitudinal cuts in the PVC



Figure 20: Application of UL listed electrically conductive corrosion protection compound on field-cut threads.

coating (i.e., along the conduit) in the area to be threaded. The thread protector can be used as a length guide for the cuts (see Figure 17).

c) Following the cutting operation, use a reamer to remove rough edges (see Figure 18).

### 6.3.4 Thread protection

The NEC requires in 300.6 that where corrosion protection is necessary and the conduit is threaded in the field, the thread shall be coated with an approved electrically-conductive, corrosion resistant compound (see Figure 20).

Coatings for this purpose, listed under UL category "FOIZ" are available. Zinc-rich paint or other coatings acceptable to the AHJ may be used.

(NOTE: Corrosion protection is provided on factory-cut threads at time of manufacturing.) 6.4 Bending PVC-Coated Conduit Manufactured elbows are available in a variety of radii. For field-bending, do the following:

#### 6.4.1 Hand bending of small conduit sizes

To bend PVC-coated conduit, use an EMT bender one trade size larger than the conduit being bent. This is to avoid damaging the coating. For example, to bend trade size 3/4 PVC-coated conduit, use a trade size 1 EMT bender.

#### 6.4.2 Bending coated conduit

a) A bender with shoes made specifically to bend PVC-coated conduit is preferred. Otherwise, for trade sizes 1/2 through 1-1/2, use an electric bender (see Figure 19) with EMT shoes one size larger than the PVC-coated conduit. A hand bender can also be used to bend the smaller trade sizes.

b) Trade sizes 2 and larger should be bent with a hydraulic bender.

c) Do not use lubricants on bending shoes.

### **6.4.3 Hydraulic benders**

a) Most manufacturers of hydraulic benders offer special shoes for PVC-coated conduit. Use these special shoes when possible.

b) If regular shoes are used, their sides must be modified to allow for the coating thickness. Some installers have done this by grinding or milling. Such modification is not recommended as it can create a safety hazard.

## **6.5 Installing PVC-Coated Conduit**

### **6.5.1 Pipe wrenches and pliers**

PVC-coated conduit requires special wrenches to protect the coating. Pipe wrenches specially designed with fine teeth are available for use with PVC-coated conduit. Strap wrenches can also be used. Slip-joint pliers of the Channel-Lock™ type, specially equipped with wide jaws, are also available to protect the coating.

(NOTE: For PVC-coated conduit, wrench sizes are the same. However, the jaw of the wrench must be specially designed for PVC-coated conduit. If not available, a strap wrench should be used.) Do not use ordinary slip-joint pliers or standard pipe wrenches with PVC-coated conduit.

### **6.5.2 Sleeves on couplings and fittings**

a) Sleeves on PVC-coated conduit couplings and fittings are provided to insure continuous coating protection. Protection is added because the coating is separate, not continuous, between a section and fitting. This provides protection and makes the coating more resistant to corrosion penetration, but the coating is not continuous.

b) To make the sleeve softer in cold weather applications, soak the coupling or fitting in warm water.

c) To make installation easier, silicon sprays can be applied to the inside diameter of the sleeve.

### **6.5.3 Threadless fittings**

Threadless fittings shall not be used with PVC-coated RMC or IMC.

### **6.5.4 Engagement of threads**

Since the threads are not visible because they are covered by PVC sleeves, take extra care to be sure that the threads are fully engaged and made up wrenchtight.

### **6.6 Patching Damaged Areas**

Even when following recommended practices, the PVC coating is sometimes damaged during installation. This destroys the coating protection and provides for entry of corrosive elements. Damaged areas shall be patched, following the raceway manufacturers' instructions.

### **6.7 Equipment Grounding and Bonding**

General considerations for equipment grounding using steel conduit are covered in Section 4.7. When expansion joints are used in PVC-coated conduit systems, it is recommended that an external bonding jumper be used. Generally, this will require removing a portion of the PVC coating from the conduit where the jumper will be attached, installing the jumper, then repairing the surrounding coating with touch up compound provided by the manufacturer. Specific instructions from the PVC-coated conduit manufacturer should be followed for proper installation.

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