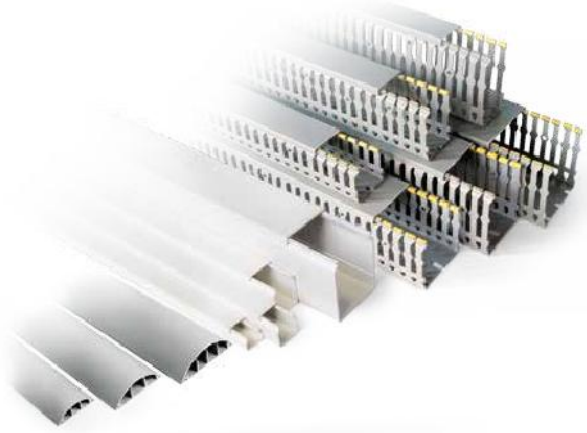


# Wiring Duct Systems And Components



As part of the business development efforts, Raad Manufacturing Co. is now in a position to offer high quality "WIRING DUCTS" to customers.

These series of wiring ducts, feature as an excellent assembly and are ideal for any type of power and control panels preferably for control panels where performance remains unaltered over time even under the heaviest operating conditions.

The reliability and durability of these products is guaranteed by a very severe selection of raw materials employed for their production and rigorous process controls.

Correct installation by qualified staff, as well as proper use and periodical maintenance contribute to the safety and safeguarding of people and property.

- Note:

The word "duct" utilized in this catalog, if any, is used as a popular expression in industries, and the word "trunking" shall be considered instead as a right word, in accordance with definitions in the related standards.

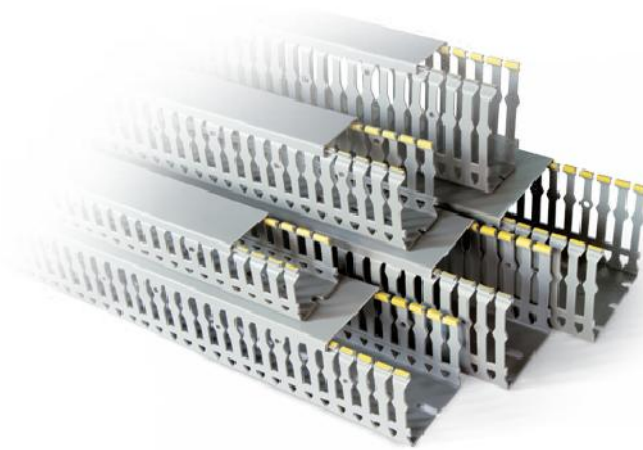
## Construction Specifications



- Slotted wiring duct for installation in cabinets based on standards EN 50085-1+A1 and EN-50085-2-3 (IEC 61084-1+A1).
- The base perforation of the wiring duct allows mounting on the panel or on Din mounting rails.
- Duct material as Rigid PVC, self-extinguishing (non-flame propagating) and resistant to abnormal heat and fire up to 960°C (glow-wire test) in conforming with IEC/EN 60695-2-11 standards.
- Product without Lead (Pb) in accordance with RoHS requirements.
- Technical characteristics of PVC duct as shown in Table 5.
- Complementary construction details as illustrated in Figures 1 to 5.
- Duct dimensional details, as shown in Figures 6 and 7.
- Nominal sizes and dimensions as shown in Table 1.
- The thickness of wall, bottom and cover as shown in Table 4.
- Standard length as 2 meters.

## OPERATING INSTRUCTIONS

- The maximum application (operating) temperature as +60°C in accordance with IEC/EN standards.
- The minimum storage/ transport temperature as -45°C.
- The minimum installation/ application temperature as -25°C.
- The number of conductors must not exceed the recommended values, considering 60% stuffing coefficient (Table 2).
- Suitable for small sized wires employed in electric and electronic control panels.
- The deformation of horizontal duct walls under recommended conductor loading has been subjected to limited investigation. The acceptability of deformation under more rigorous conditions such as load bearing cover or required mechanical spacing must be evaluated in the end-use investigation.



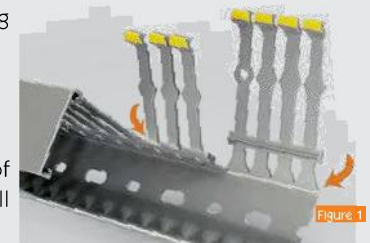
## Slotted Wiring Ducts

Type: RWD  

- High quality products conforming to international standards.
- Designed to meet the needs of panel builders regarding to advanced and time-saving panel assembling.
- Complying with international certificates KEMA, CE.

### Figure 1

- Two predetermined break lines for breaking off and removal of sidewall finger segments only as well as removal of sidewall finger and base segments.



### Figure 2

- The possibility of making different distinct levels, by using special pins inside the holes contrived in the duct fingers. It is mentionable that ducts with the height up to 40 (mm), have only one hole in the middle, while for duct height including 60 (mm) and more, two holes provide the above-mentioned possibility.



### Figure 3

- Provided with a soft yellow PVC strip for handling purposes to avoid hand-accidents during the cabling as well as making the cover very steady.



**Figure 4**

- Non-slip covers design of minimum encumbrance and maximum grip.



Figure 4

**Figure 5**

- Burr-free edges.



Figure 5

**Table 1 - Nominal Sizes and Dimensions**

Duct Nominal size (WxH)mm	Dimensions (mm)						Qty. in Carton	Total Length in carton	Ordering No.
	W	H	E	F	G	φ			
25 x 40	25	40	6.5	5.9	12.8	4.5	30	60	6110105008
40 x 40	40	40	6.5	5.9	12.8	4.5	30	40	6110108008
60 x 40	60	40	6.5	5.9	12.8	4.5	16	32	6110112008
25 x 60	25	60	6.5	6	15.7	4.5	20	40	6110105012
40 x 60	40	60	6.5	6	15.7	4.5	15	36	6110108012
60 x 60	60	60	6.5	6	15.7	4.5	12	24	6110112012
80 x 60	80	60	6.5	6	15.7	4.5	10	20	6110116012
100 x 60	100	60	6.5	6	15.7	4.5	5	12	6110190012
40 x 80	40	80	6.5	6	19.8	4.5	14	28	6110108016
60 x 80	60	80	6.5	6	19.8	4.5	8	16	6110119016
80 x 80	80	80	6.5	6	19.8	4.5	5	16	6110116016
100 x 80	100	80	6.5	6	19.8	4.5	4	8	6110120016
100 x 100	100	100	6.5	6	19.8	4.5	4	8	6110190090

**Figure 6**

- Duct Base Dimensional Details

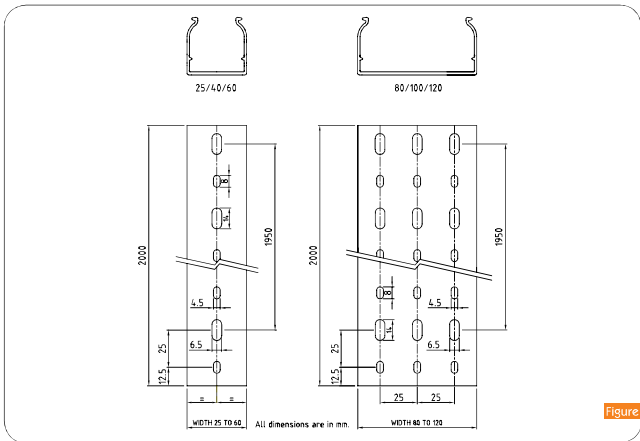


Figure 6

**Table 2**

Recommended maximum number of wires to be used per wiring duct based on 60 % fill capacity (Wire Fill Capacity)

Duct Nominal size (WxH)mm	Section mm <sup>2</sup>	Nominal Cross-Section of Conductors			
		2.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	1 mm <sup>2</sup>	
H 40	25 x 40	520	35	51	78
	40 x 40	1360	65	91	129
	60 x 40	1970	95	134	188
H 60	25 x 60	1190	57	83	119
	40 x 60	2040	98	141	192
	60 x 60	3060	148	214	291
	80 x 60	4150	200	288	391
	100 x 60	5950	254	364	491
H 80	40 x 80	2700	130	187	255
	60 x 80	4140	200	289	392
	80 x 80	5660	272	393	531
	100 x 80	7606	355	498	709
H 100	100 x 100	6920	430	619	819

- WxH (Width x Height)
- Each standard length is 2 meters.
- For dimensional details see Figure 7.
- Standard unit as duct complete with cover.

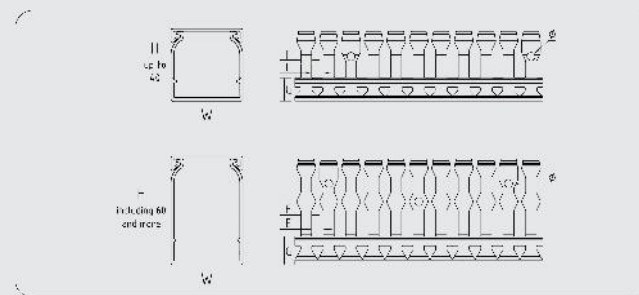
- For comparison of standard cross-sections between AWG and metric sizes, refer to Table 3 (see IEC 60947-7-1, Table 1)

**Table 3 - Standard cross-sections of round copper conductors**

Metric size ISO mm <sup>2</sup>	Comparison between AWG and metric sizes	
	Size AWG	Equivalent metric area mm <sup>2</sup>
0.2	24	0.205
0.31	22	0.324
0.5	20	0.519
0.75	18	0.82
1	-	-
1.5	16	1.3
2.5	14	2.1
4	12	3.3
6	10	5.3

**Figure 7**

- Dimensional Details



**Table 4** - Wall, Bottom and Cover Thickness (mm)

	Duct Nominal Size (WxH) mm	Walls (Tolerance ±0.3 mm)	Bottom (Tolerance ±0.3 mm)	Cover (Tolerance ±0.2 mm)
H 40	25 x 40	1.6±0.1	2.0±0.1	1.35±0.05
	40 x 40	1.6±0.1	2.0±0.2	1.35±0.05
	60 x 40	1.6±0.1	1.8±0.2	1.35±0.05
H 60	25 x 60	1.6±0.1	2.0±0.1	1.35±0.05
	40 x 60	1.5±0.1	2.0±0.2	1.35±0.05
	60 x 60	1.85±0.1	2.0±0.1	1.35±0.05
	80 x 60	1.85±0.1	2.1±0.1	1.5±0.05
	100 x 60	1.6±0.2	2.0±0.2	1.5±0.05
H 80	40 x 80	1.9±0.1	2.0±0.1	1.35±0.05
	60 x 80	1.85±0.1	2.1±0.1	1.35±0.05
	80 x 80	1.9±0.1	2.1±0.1	1.5±0.05
	100 x 80	1.9±0.1	2.0±0.1	1.5±0.05
H 100	100 x 100	1.9±0.1	2.1±0.1	1.5±0.05

**Table 5** - Technical characteristics of material

Properties	Standard	Unit	PVC
Density	UNE EN ISO 1183	gr/cm <sup>3</sup>	1.60
Tensile Strength	UNE EN ISO 527	MPa	≥40
Break Strain	UNE EN ISO 527	%	≥100
Hardness Shore D	UNE EN ISO 868	-	79
Temperature VICAT A 5kg	UNE EN ISO 306	°C	80

## CERTIFICATES

