

## V90 PVC Heavy Duty Flexible Cord 0.6/1kV - 0.50mm<sup>2</sup> to 120mm<sup>2</sup>







## Description

Heavy Duty V90 PVC Flexible Cords are robust, high-stress electrical supply cables rated at 0.6/1kV, specifically engineered for demanding applications that require both heavy-duty mechanical protection and a higher thermal endurance threshold. This range features plain annealed flexible stranded copper conductors designed to handle continuous movement and vibration, insulated with a thick wall of V-90 Polyvinyl Chloride (PVC) compound and protected by a robust 5V-90 PVC outer sheath, allowing the assembly to safely withstand continuous operating temperatures up to 90°C. Manufactured in multicore configurations from single-core up to 5-core varieties, the range regularly incorporates a green/yellow earth core and fully complies with the structural requirements of Australian / New Zealand standards AS/NZS 3191 and AS/NZS 1125. They serve as an ideal choice for high-stress industrial machinery, commercial kitchen equipment, and heavy power tools operating near heat sources.

These cables are suited for installation in demanding internal environments, as well as sheltered or conduit-protected areas where severe mechanical stress, regular handling, and structural friction are common. Due to their heavy-duty construction, they offer an exceptional degree of protection compared to light or ordinary alternatives, while providing the primary advantage of elevated heat resistance for environments prone to thermal buildup or close proximity to heating plant equipment. The flexible PVC outer sheath is formulated to endure standard abrasion and repeated physical impact, though they are still not advised for unprotected permanent outdoor use or extreme weather exposure. For environments prone to intense chemical exposure, submersion, or permanent outdoor placement, alternative heavy-duty rubber-sheathed cable variants should be specified instead.

For safe installation, the cable must be handled carefully to prevent tight kinks, maintaining a minimum bending radius of six times the overall cable diameter during flexing. Installers should always use appropriate heavy-duty protective bushings, industrial glands, or cord grip fittings when feeding the cable through enclosures or equipment chassis to eliminate any potential for structural chafing. Because these cords are rated at a higher 0.6/1kV threshold, standard wiring regulations allow them to be used as installation wiring if properly fixed and supported. However, as these are designated as flexible cords, standard electrical safety regulations require that they only be used to connect temporary or portable equipment and must never be utilized as a permanent substitute for the fixed wiring within a building structure.

## Key Features



**Voltage Rating**  
600/1000 Volts



**Minimum Bending Radius**  
6 x overall diameter



**Temperature Limits**  
Maximum operating temperature: +90°C

## Core Colours

- 1 Core - Black White Blue or Red
- 2 Cores - Brown Blue
- 3 Cores - Brown Blue Green Yellow
- 4 Cores - Brown Blue White Green Yellow
- 5 Cores - Brown Blue White Orange Green Yellow

## Standards

- AS/NZS 1125
- AS/NZS 5000.1
- AS/NZS 3191

## Construction

- **Conductor:** Stranded copper conductor
- **Insulation:** Polyvinyl Chloride (PVC)
- **Outer Sheath:** Polyvinyl Chloride (PVC)
- **Sheath Colour:** Black or Orange

## QA Lab

### Cleveland Cable Test & Training Lab

Our state-of-the-art cable testing facility ensures that every cable meets the highest standards of quality and compliance through continuous, rigorous testing. Where applicable, cables are independently tested and certified by BASEC to ensure full compliance.



### CPR

Cleveland Cable Company is committed to compliance with the Construction Products Regulation (CPR). Where applicable, all cables manufactured after 1st July 2017 have been assessed in accordance with CPR requirements, with full supporting documentation available.



## Our Sustainability Commitment

We are committed to the journey to Net Zero as a business partner, an employer and a community member.

By thinking and acting sustainably, we deliver excellent customer service while reducing carbon emissions in collaboration with our customers and suppliers.



### ecovadis

Cleveland Cable Company has been independently assessed by EcoVadis, a globally recognised provider of business sustainability ratings. Our score places us among the top 35% of companies evaluated worldwide, reflecting our strong commitment to environmental, social, and ethical performance

## ecovadis

## V90 PVC Heavy Duty Flexible Cord 0.6/1kV - 0.50mm<sup>2</sup> to 120mm<sup>2</sup> - Dimensions

| Reference        | Conductor Size (mm <sup>2</sup> ) | No Of Cores | Insulation Thickness (mm) | Sheath Thickness (mm) | Overall Diameter(mm) | Weight(Kg/Km) |
|------------------|-----------------------------------|-------------|---------------------------|-----------------------|----------------------|---------------|
| V90HEAVY1X/5RNS  | 0.50                              | 1           | 0.80                      | N/A                   | 2.60                 | 1.1           |
| V90HEAVY1X/75RNS | 0.75                              | 1           | 0.80                      | N/A                   | 2.80                 | 1.4           |
| V90HEAVY1X/75R   | 0.75                              | 1           | 0.80                      | 1.30                  | 5.40                 | 4             |
| V90HEAVY2X/75R   | 0.75                              | 2           | 0.80                      | 1.30                  | 8.10                 | 8.5           |
| V90HEAVY3X/75R   | 0.75                              | 3           | 0.80                      | 1.40                  | 8.70                 | 10            |
| V90HEAVY4X/75R   | 0.75                              | 4           | 0.80                      | 1.50                  | 9.70                 | 13            |
| V90HEAVY5X/75R   | 0.75                              | 5           | 0.80                      | 1.60                  | 10.80                | 15            |
| V90HEAVY1X1RNS   | 1                                 | 1           | 0.80                      | N/A                   | 2.90                 | 1.7           |
| V90HEAVY1X1R     | 1                                 | 1           | 0.80                      | 1.30                  | 5.60                 | 4.5           |
| V90HEAVY2X1R     | 1                                 | 2           | 0.80                      | 1.30                  | 8.50                 | 9.5           |
| V90HEAVY3X1R     | 1                                 | 3           | 0.80                      | 1.40                  | 9.20                 | 11            |
| V90HEAVY4X1R     | 1                                 | 4           | 0.80                      | 1.50                  | 10.10                | 15            |
| V90HEAVY5X1R     | 1                                 | 5           | 0.80                      | 1.60                  | 11.10                | 18            |
| V90HEAVY1X1/5RNS | 1.5                               | 1           | 0.80                      | N/A                   | 3.20                 | 2.1           |
| V90HEAVY1X1/5R   | 1.5                               | 1           | 0.80                      | 1.40                  | 6.10                 | 5.5           |
| V90HEAVY2X1/5R   | 1.5                               | 2           | 0.80                      | 1.50                  | 9.40                 | 12            |
| V90HEAVY3X1/5R   | 1.5                               | 3           | 0.80                      | 1.60                  | 10.10                | 15            |
| V90HEAVY4X1/5R   | 1.5                               | 4           | 0.80                      | 1.70                  | 11.20                | 20            |
| V90HEAVY5X1/5R   | 1.5                               | 5           | 0.80                      | 1.80                  | 12.40                | 22            |
| V90HEAVY1X2/5RNS | 2.5                               | 1           | 0.90                      | N/A                   | 3.80                 | 3.4           |
| V90HEAVY1X2/5R   | 2.5                               | 1           | 0.90                      | 1.40                  | 6.80                 | 7             |
| V90HEAVY2X2/5R   | 2.5                               | 2           | 0.90                      | 1.70                  | 11.20                | 17            |
| V90HEAVY3X2/5R   | 2.5                               | 3           | 0.90                      | 1.80                  | 12.00                | 22            |
| V90HEAVY4X2/5R   | 2.5                               | 4           | 0.90                      | 1.90                  | 13.10                | 25            |
| V90HEAVY5X2/5R   | 2.5                               | 5           | 0.90                      | 2.00                  | 14.60                | 32            |
| V90HEAVY1X4RNS   | 4                                 | 1           | 1.00                      | N/A                   | 4.60                 | 5.5           |
| V90HEAVY1X4R     | 4                                 | 1           | 1.00                      | 1.50                  | 7.60                 | 9.5           |
| V90HEAVY2X4R     | 4                                 | 2           | 1.00                      | 1.80                  | 13.00                | 25            |
| V90HEAVY3X4R     | 4                                 | 3           | 1.00                      | 1.90                  | 13.60                | 32            |
| V90HEAVY4X4R     | 4                                 | 4           | 1.00                      | 2.00                  | 15.20                | 40            |
| V90HEAVY5X4R     | 4                                 | 5           | 1.00                      | 2.20                  | 17.20                | 50            |
| V90HEAVY3X6R     | 6                                 | 3           | 1.00                      | 2.90                  | 16.00                | 45            |
| V90HEAVY4X6R     | 6                                 | 4           | 1.00                      | 3.00                  | 17.50                | 55            |
| V90HEAVY3X10R    | 10                                | 3           | 1.00                      | 3.10                  | 20.40                | 70            |
| V90HEAVY4X10R    | 10                                | 4           | 1.00                      | 3.30                  | 22.30                | 85            |
| V90HEAVY3X16R    | 16                                | 3           | 1.00                      | 3.30                  | 24.00                | 90            |
| V90HEAVY4X16R    | 16                                | 4           | 1.00                      | 3.50                  | 26.00                | 125           |

| Reference      | Conductor Size (mm <sup>2</sup> ) | No Of Cores | Insulation Thickness (mm) | Sheath Thickness (mm) | Overall Diameter(mm) | Weight(Kg/Km) |
|----------------|-----------------------------------|-------------|---------------------------|-----------------------|----------------------|---------------|
| V90HEAVY3X25R  | 25                                | 3           | 1.20                      | 3.70                  | 29.20                | 140           |
| V90HEAVY4X25R  | 25                                | 4           | 1.20                      | 3.90                  | 32.00                | 190           |
| V90HEAVY3X35R  | 35                                | 3           | 1.20                      | 3.90                  | 32.50                | 185           |
| V90HEAVY4X35R  | 35                                | 4           | 1.20                      | 4.20                  | 35.50                | 250           |
| V90HEAVY3X50R  | 50                                | 3           | 1.40                      | 4.30                  | 37.40                | 245           |
| V90HEAVY4X50R  | 50                                | 4           | 1.40                      | 4.70                  | 41.00                | 330           |
| V90HEAVY4X70R  | 70                                | 4           | 1.40                      | 5.10                  | 48.00                | 460           |
| V90HEAVY4X95R  | 95                                | 4           | 1.60                      | 5.70                  | 52.50                | 585           |
| V90HEAVY4X120R | 120                               | 4           | 1.60                      | 6.10                  | 58.50                | 740           |

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