

CAM AND GROOVE COUPLINGS
Features:

- Design Standard: EN 14420-7
- Connection Type: Screw End / Hose Shank
- Working Pressure: Up to 250 PSI
- Material: Aluminum / Stainless Steel / Brass
- Gasket Material: NBR (Other materials available upon request)
- Size: 1/2" – 4" (DN15 – DN100)



Cam and groove fittings are used to build connection between hoses and pipes. Cam-lock fittings are used in liquid applications or dry bulk applications, but not to be used for air or steam applications. It is available in aluminium material, stainless steel material, and brass material to suit application in various sectors.

There are two parts of cam-lock fittings, male adaptor and female coupler. To make connection, first pull the female coupler lever above the cam handle. Then simply slide the adaptor into coupler with normal hand pressure. Close the coupler by press down the levers. It will lock the adaptor when the levers are closed. When adaptor connected to coupler, it builds connection for hoses or pipes.

To disconnect adaptor from coupler, make sure the connection of cam-lock fitting is depressurized. By pulling up the lever above the cam handle, the adaptor can then be removed from the coupler. The coupler can be closed by press down the lever. It can also connect to dust plug when coupler is not in use to protect it from damage. The adaptor can connect to dust cap when it is not in use.

Maximum Allowable Working Pressure Table (PSI)

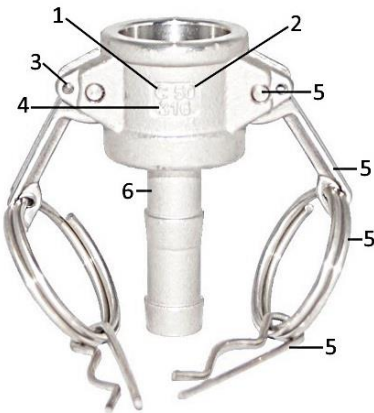
| INCH | 1/2" | 3/4" - 2" | 2 1/2" | 3" | 4" |
|-----------------|------|-----------|--------|-----|-----|
| Aluminium | 150 | 250 | 150 | 125 | 100 |
| Stainless Steel | 150 | 250 | 225 | 200 | 100 |
| Brass | 150 | 250 | 150 | 125 | 100 |

The pressure rating above is rated at ambient temperature. It means that the pressure rating is affected by the ambient temperature and material as well. The temperature de-rating factors are as below table.

Temperature De-rating Table

| Temperature (°F) | Temperature (°C) | Aluminium | Stainless Steel | Brass |
|------------------|------------------|-----------|-----------------|-------|
| 100 | 37.80 | 1.00 | 1.00 | 1.00 |
| 150 | 65.60 | 1.00 | 1.00 | 1.00 |
| 200 | 93.30 | 1.00 | 1.00 | 1.00 |
| 250 | 121.10 | 0.81 | 1.00 | 1.00 |
| 300 | 148.90 | - | 1.00 | 0.97 |
| 350 | 176.70 | - | 1.00 | 0.95 |
| 400 | 204.40 | - | 1.00 | 0.92 |
| 450 | 232.20 | - | 1.00 | 0.90 |
| 500 | 260.00 | - | 1.00 | - |

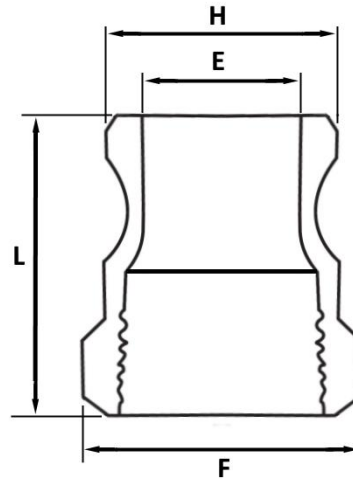
Parts:



1. Cam and groove coupling type marking
2. Cam and groove coupling diameter marking
3. Hole for safety pin
4. Material specification marking
5. Safety pin, ring, handles, and pin
6. Hose shank

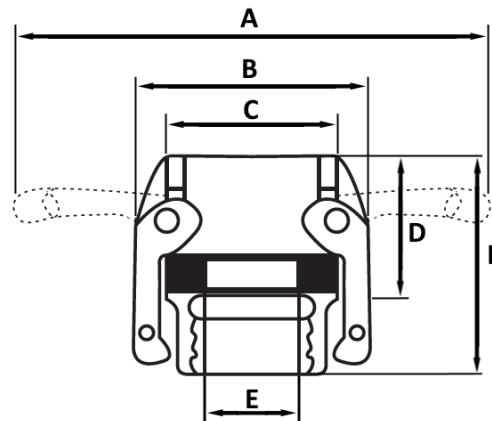
NOTE: When ordering couplers, it is the responsibility of the end user to specify the gasket material, based on his knowledge of the solvent or corrosive characteristics and the temperature of the vapor liquid with which the gaskets will be in contact. Other available gasket material include Neo-prene, pure gum, butyl, Teflon, Viton, E.P.T., Thiokol or any other material to meet specifications.

TYPE A: MALE ADAPTER x FEMALE THREAD



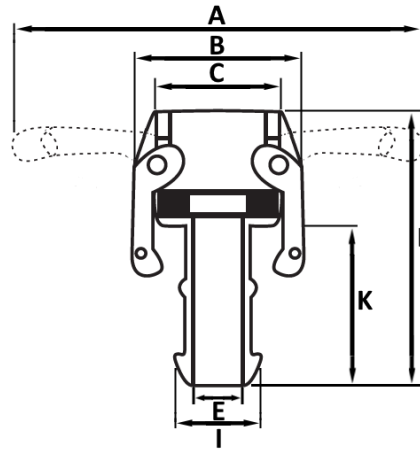
| Type A | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" | 2 1/2" | 3" | 4" |
|--------|-------|-------|-------|--------|--------|-------|--------|------|-------|
| E | 16.5 | 22.85 | 25.8 | 35.14 | 42.8 | 52.98 | 60.3 | 76.3 | 104.2 |
| F | 25.6 | 31.1 | 38.45 | 47.9 | 55.9 | 65.98 | 79.5 | 94.1 | 122 |
| H | 23.7 | 32.07 | 36.85 | 45 | 53.36 | 62.76 | 75.7 | 91.6 | 119.4 |
| L | 36.36 | 34.4 | 42 | 50.5 | 50 | 55.9 | 73 | 67.3 | 68.7 |

TYPE B: FEMALE COUPLER x MALE THREAD



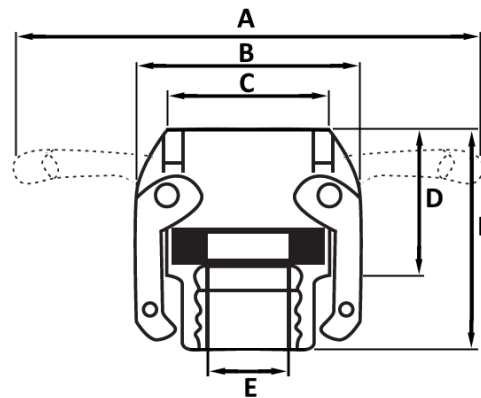
| Type B | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" | 2 1/2" | 3" | 4" |
|--------|-------|-------|-------|--------|--------|-------|--------|--------|-------|
| A | 110 | 120 | 130 | 185 | 195 | 195 | 215 | 250 | 280 |
| B | 52.85 | 59.1 | 68 | 77.7 | 88 | 97.15 | 109.8 | 135.74 | 165 |
| C | 32.85 | 40 | 45.7 | 53.85 | 63.15 | 73.5 | 87 | 102.75 | 132.6 |
| D | 28 | 29.8 | 35.66 | 43.8 | 43.3 | 49.35 | 53.47 | 53 | 54.4 |
| E | 14.25 | 19.85 | 26 | 34 | 39 | 50.9 | 62.6 | 75.7 | 101.6 |
| L | 43 | 45.6 | 54.2 | 63.5 | 66.7 | 72.6 | 84.6 | 87.34 | 89.4 |

TYPE C: FEMALE COUPLER x HOSE SHANK



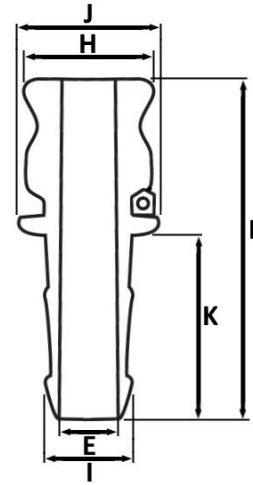
| Type C | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" | 2 1/2" | 3" | 4" |
|--------|-------|------|-------|--------|--------|-------|--------|-------|-------|
| A | 108 | 120 | 135 | 185 | 190 | 200 | 215 | 250 | 280 |
| B | 52.05 | 58.8 | 68.6 | 77.5 | 87.8 | 97 | 110 | 136.2 | 163 |
| C | 24.42 | 40.3 | 45.36 | 54.15 | 63.26 | 72.8 | 87.3 | 102.8 | 134.2 |
| E | 8.35 | 15.4 | 20 | 27.18 | 34.35 | 46.65 | 59.8 | 69.6 | 92.87 |
| I | 13.74 | 20.2 | 20.8 | 33.3 | 40.2 | 53.4 | 67.5 | 78.7 | 104.4 |
| K | 40.7 | 49.7 | 58.5 | 61.2 | 65.66 | 70.2 | 79.82 | 89.5 | 97.5 |
| L | 69.2 | 80.1 | 94.4 | 105.4 | 109.8 | 118.7 | 133 | 142.6 | 151 |

TYPE D: FEMALE COUPLER x FEMALE THREAD



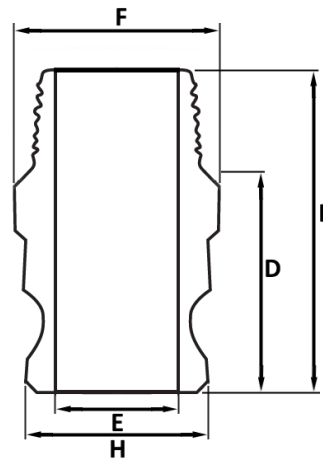
| Type D | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" | 2 1/2" | 3" | 4" |
|--------|-------|-------|------|--------|--------|-------|--------|-------|-------|
| A | 110 | 120 | 130 | 185 | 190 | 200 | 215 | 250 | 280 |
| B | 52.7 | 59.6 | 68.1 | 78.3 | 87.4 | 100 | 111.78 | 129.5 | 160 |
| C | 32.8 | 40.16 | 45.7 | 54.1 | 63.3 | 73.28 | 87.9 | 103.4 | 135.8 |
| D | 28.3 | 30 | 35.8 | 43.8 | 43.7 | 49 | 52.64 | 52.2 | 54.6 |
| E | 18.76 | 23.6 | 29.5 | 38.4 | 44.4 | 56.3 | 68.2 | 84.5 | 108.8 |
| L | 43.1 | 44.5 | 54.5 | 64.6 | 64.8 | 70.4 | 80.1 | 82.3 | 85.6 |

TYPE E: MALE ADAPTER x HOSE SHANK



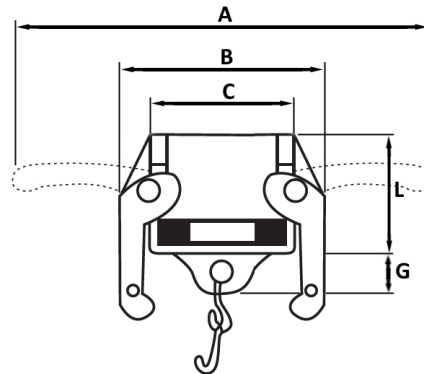
| Type E | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" | 2 1/2" | 3" | 4" |
|--------|-------|-------|-------|--------|--------|-------|--------|-------|-------|
| E | 8.18 | 15.1 | 21.24 | 27 | 33.82 | 45.32 | 60.5 | 69.2 | 93.6 |
| H | 23.78 | 32.1 | 36.77 | 45.1 | 53.33 | 62.88 | 75.5 | 91.6 | 119.5 |
| I | 13.5 | 20 | 27.1 | 32.9 | 39.83 | 53.45 | 61.5 | 78.2 | 103.7 |
| J | 24.78 | 34 | 39 | 48.4 | 55.12 | 66.2 | 80.2 | 92.4 | 121.5 |
| K | 39.8 | 50 | 58.4 | 60.37 | 62.2 | 69.8 | 80 | 90 | 98.1 |
| L | 73.2 | 87.65 | 97.1 | 112.36 | 114 | 131.4 | 140.7 | 153.4 | 161 |

TYPE F: MALE ADAPTER x MALE THREAD



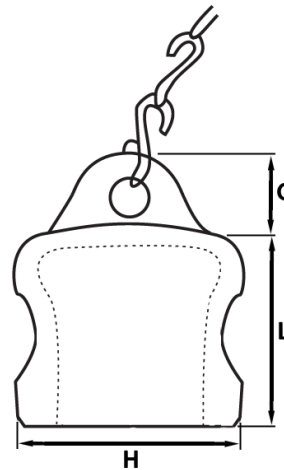
| Type F | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" | 2 1/2" | 3" | 4" |
|--------|------|------|------|--------|--------|------|--------|------|-------|
| D | 33.3 | 32.1 | 38.5 | 46.92 | 49.37 | 54.3 | 57 | 62.6 | 63.4 |
| E | 16.5 | 23.4 | 27 | 34.2 | 43.95 | 51.4 | 64.3 | 78.5 | 105.3 |
| F | 22 | 26.9 | 38.4 | 47.07 | 55.65 | 65.4 | 77.5 | 93.9 | 122.3 |
| H | 23.8 | 32 | 36.7 | 45.2 | 53.1 | 63 | 75.8 | 91.4 | 119.6 |
| L | 48.4 | 46.3 | 56.1 | 66.4 | 70.4 | 76.3 | 83.8 | 89.8 | 92.7 |

TYPE DC: DUST CAP



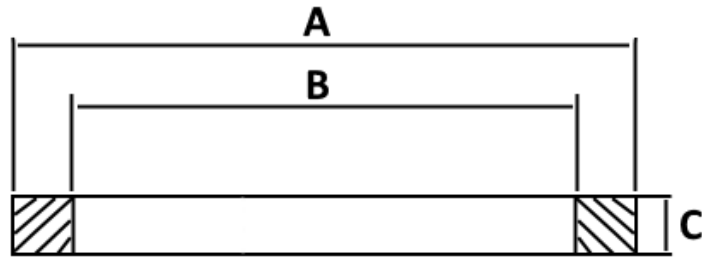
| DC | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" | 2 1/2" | 3" | 4" |
|----|-------|-------|------|--------|--------|-------|--------|-------|-------|
| A | 110 | 120 | 130 | 185 | 190 | 200 | 215 | 250 | 280 |
| B | 52.4 | 59 | 68 | 77.2 | 86.32 | 97.77 | 109.3 | 138 | 166 |
| C | 32.8 | 40.1 | 45.6 | 53.9 | 62.9 | 72.7 | 86.5 | 104.1 | 133.4 |
| G | 7.1 | 11.38 | 11.5 | 12.7 | 11.9 | 14.37 | 10.8 | 15 | 15.9 |
| L | 29.25 | 29.5 | 36.2 | 43.77 | 62 | 49.33 | 53.34 | 53 | 56 |

TYPE DP: DUST PLUG



| DP | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" | 2 1/2" | 3" | 4" |
|----|------|-------|-------|--------|--------|------|--------|------|-------|
| G | 8.7 | 11.36 | 7.3 | 15.2 | 15 | 14.6 | 12.8 | 15.8 | 16.1 |
| H | 23.8 | 32 | 36.7 | 45.1 | 53.2 | 63 | 75.5 | 91.5 | 119.5 |
| L | 25 | 24.6 | 32.43 | 37.4 | 37.5 | 45.9 | 46 | 43.6 | 43.67 |

Cam and Groove Seal (NBR)



| Size | A | B | C |
|--------|--------|--------|------|
| 1/2" | 26.00 | 17.00 | 4.00 |
| 3/4" | 35.00 | 22.00 | 5.54 |
| 1" | 40.00 | 27.00 | 6.35 |
| 1 1/4" | 49.00 | 35.00 | 6.35 |
| 1 1/2" | 56.00 | 41.00 | 6.35 |
| 2" | 67.00 | 51.00 | 6.35 |
| 2 1/2" | 79.00 | 60.00 | 6.35 |
| 3" | 91.00 | 76.00 | 6.35 |
| 4" | 124.00 | 102.00 | 6.35 |

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Catalogue Version: 0517