

Quick Disconnect Shutoff Couplings

Koolance quick disconnects (QDC) are specially designed fittings which automatically shut-off coolant flow upon disconnection. The flow path is reestablished when the QDC couplings are reconnected. Quick disconnects are very useful for areas in a cooling or plumbing system that are altered and moved frequently. They can also increase convenience when draining a system.



QDC shutoffs work by having an internal valve that self-seals and opens as needed. Both male and female fittings contain a "plunger" that is spring-activated. When connected, the valves on both sides remain open to allow coolant to pass through. When detached, each side immediately closes.



Why Are There Different Types?

Koolance has several (patent-pending) generations, styles, and sizes of quick disconnects, so it can be confusing as to which is needed for a given application. There are seven series of QDC: VLV, VL2, VL3, VL4, VL2N, VL3N, and VL4N.

NOTE: Different series are not physically compatible with one another! For example, a "VL3" fitting will not fit a "VL3N" fitting. Likewise, "VL3N" will not fit "VL4N".



Koolance QDC Series

Koolance manufactures quick disconnect couplings for different size profiles. "VL2" and "VL2N" are the smallest and most compact. Logically, they are also more restrictive than VL3/N or VL4/N. For computer cooling with 3/8" (10mm) or 1/2" (13mm) ID tubing, VL3N are the most recommended. VL4N is intended for other industrial applications; it is larger and supports less common tubing and thread sizes.

With its 3rd generation, Koolance has added the "No-Spill", or "Dry-Break" feature. This means very little coolant is freed upon disconnection. The insides of the fittings may be wet, but there is generally not enough liquid to form a drop on either side. As another benefit, Koolance's no-spills are less flow restrictive than the previous generations!

Which Quick Disconnects Do I Need?

QDC in CPU-360 Block



You will need one male and one female fitting for any hose you wish to disconnect. To detach two hoses (inlet/outlet) going to a water block or pump, you would need two male and two female QDC. So long as Koolance fittings are selected from the same series, any male will connect to any female fitting.

QDC can be placed "inline" (in the middle of a hose run), or attach directly to a component like a water block or radiator. For direct connections, threaded QDC are used on the component side.



For example, you could select two VL3N-MG (male, threaded) fittings to be inserted into a CPU water block. On the hose-side, you would need two VL3N-Fxxx (where "xxx" matches your desired nozzle style and hose size). Similarly, you could select VL3N-FG (female, threaded) for the component side, and VL3N-Mxxx for the tubing side. It makes no difference which direction the coolant flows between Male and Female sides.