



**Drinking Water Protection
At its highest level**

Hygienic water is a key factor of our competence

Drinking water is among our most important assets. It is in daily use to drink, in the kitchen and as a medium for washing and cleaning. In order that it remains pure and free from contamination, the water supply system must be protected from any external influence.

Here, you can rely on many years of competence and experience from Honeywell - security regarding a safe and hygienic water supply system, being subject to a large number of factors. A major consideration is the prevention of in-system contamination from external, unclean sources, in accordance with EN 1717.

A practically orientated approach concerning the component elements required and EN 1717 is offered by the Honeywell category compass, which describes the fluid categories and assists in the selection of the appropriate product.



Use the Honeywell Category Compass: Simple and an easy guide

- The colours indicate the various categories
- The arrow assists in orientation
- Basic information concerning product selection
- Allowing you to select the best water quality and hygienic guarantee

Simple and unproblematic

The EN 1717 defines fluids into five categories, according to their potential danger to humans, which can occur from a water supply system, and dictates the form of protection required to retain drinking water quality.

Via their individual component parts Honeywell offer a partnership that assures protection against all fluid contamination categories.











We have assumed the responsibility to take on the challenge of pure water protection via our range of safety components in accordance with modern requirements.

The EN 1717 and what it requires

- Since its newest publication under the name of "Protection of Drinking Water from contamination in drinking water installations and general requirements of the system in the protection against back-flow".
- For Drinking Water, definite standards are laid down, for human consumption and conform to Water Category 1.
- Water that no longer achieves the standards of Drinking Water are categorised according to their potential danger to humans. They will fall into categories 2 to 5.
- The EN 1717 describes eight families of safety components and the various types therein:
 - Family A Air Gap
 - Family B Controllable disconnection
 - Family C Non controllable disconnection
 - Family D Atmospheric venting principle
 - Family E Anti-pollution check-valves
 - Family G Controllable mechanical disconnection
 - Family H Disconnection at the outlet
 - Family L Pressurized air inlet valve opening under vacuum

The EN 1717 in practice

The EN 1717 divides running fluids into five categories, according to their potential danger by human consumption – the higher the danger, the higher the category number.

Fluid Categories	Examples for applications	What are you supposed to do
1 Water to be used for human consumption, coming directly from a potable water distribution system.	 	Water in this category requires no treatment.
2 Fluid presenting no human health hazard. Fluid recognized as being fit for human consumption, including water taken from a potable water distribution system, which can have undergone a change in taste, odour, colour or temperature (heating or cooling).	 	Category 2 requires, at least, the installation of a non-return valve with a sampling arrangement.
3 Fluid representing some human health hazard due to the presence of one or more harmful substances.	 	Here a direct controlled mechanical disconnecter (Type GA) must be installed, or a backflow preventer (Type CA).
4 Fluid presenting a human health hazard due to the presence of one or more toxic or very toxic substances, or one or more radioactive, mutagenic or carcinogenic substances.	 	A through-flow controlled, mechanical disconnecter (Type GP) or a backflow preventer (Type BA) must be installed.
5 Fluid presenting a human health hazard due to the presence of microbiological or viral elements.	 	The category requires an unrestricted air gap exhaust (Type AA or Type AB).





Category 2



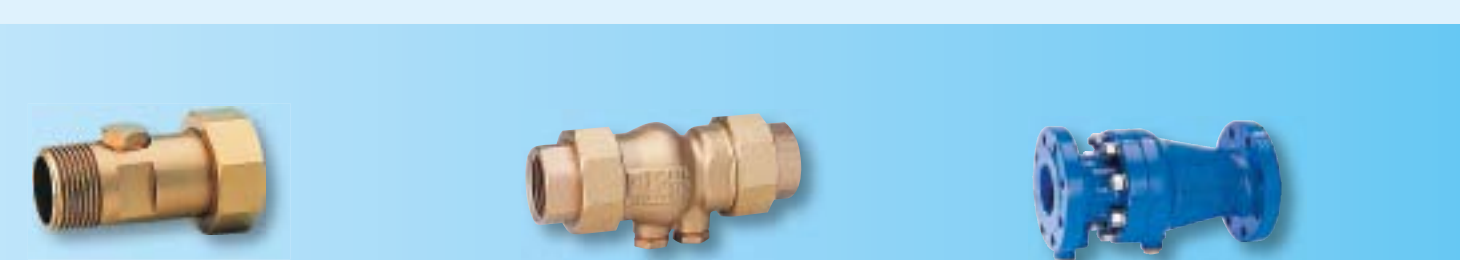
Category Requirements

Category 2 fluids present no health hazards but are of importance due to possible changes in aroma, taste, temperature or colouring, as opposed to category 1. Therefore, category 2 minimally requires the fitting of a non-return valve with a sampling arrangement (Type EA). Fluid wastes such as tea, coffee, juices etc. also belong to category 2, together with salt water or prepared water for disinfection etc.

Applications

- House water inlet
- Drinking Water warming systems
- House water inlet for blocks of flats
- Individual protection from automated drinks machines, coffee machines etc.
- Drinking Water systems for offices, schools etc.

The Honeywell solution:



- RV277**
 - Prime installation of a brass, robust, universal non-return valve
 - System insertion of a non-return valve from high quality plastic
- RV281**
 - Our valued, noise approved, non-return valve, against reverse pressure, backflow and back suction
 - For water pressured air and other median
- RV283P**
 - Powder coated, flanged, non-return valve
 - For a higher flow rate by reduced pressure loss



Category 3



Category Requirements

Fluids in category 3 can cause a relatively mild health danger due to the presence of one, or more, hazardous substances, and the system must be protected by the use of a backflow preventer (Type CA) or a mechanical disconnecter (Type GA). Category 3 fluids will include domestic bath water, heating system water (minus inhibitor) and automatic dish washer discharge.

Applications

- Topping-up of heating systems (minus Inhibitors)
- Desinfection systems in large kitchens
- Automatic topping-up of industrial equipment e.g. cooling systems
- Cleaning and rinsing equipment for drinking glasses

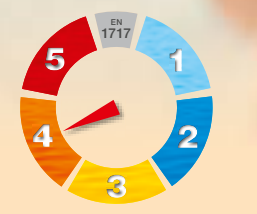
The Honeywell solution:



- CA295**
 - A compact backflow preventer
 - The proven cartridge art
- R295**
 - Mechanical disconnecter (Type 1)
 - Offering a mechanical cut-off following a loss of operating pressure
- NK300T-ACA**
 - Electronic topping-up combinations with backflow preventers (Type CA)
 - Fully automatic filling of water circulating heating systems (minus inhibitors)
 - Electronic pressure control, with cut-off by leakage
 - Also available with backflow preventer (Type BA) which can deal with water category 4 (NK300T-ABA)



Category 4



Category Requirements

Fluids containing poisons, radioactive, mutagenic or carcinogenic material represent a major hazard to humans and are attributed to category 4. Category 4 may be dealt with via a mechanical disconnecter (Type GB) or backflow preventer (Type BA). Examples of category 4 will include: Heating water with additives, swimming and plunge pools with automatic water treatment plants, where disinfectants have been used and the discharge water from high pressure cleaning equipment with additives.

Applications

- Water supply for chemical laboratories in schools, photographic laboratories
- Automated, topping-up equipment for heating and cooling plants
- Stand-pipe supply for beer tents, garden parties etc
- Concerning automated equipment, including washing machines and dishwashers

The Honeywell solution:



- BA295STN**
 - The later installation of a backflow preventer to protect the exit tap
 - To protect system exits, internal and external together with filling valves
- BA295**
 - Backflow preventer with pressure sensitive release valve
 - Valued cartridge system construction
 - Ease of servicing
- R295HP-F**
 - Pressure sensitive, powder coated, flanged mechanical disconnecter (Type 2)
 - Fully automatic recognition and compliance with working pressures
- BA300**
 - A backflow preventer, that on replacement, the non-return valve housing accepts
 - Allowing for a reduction in servicing costs, via its unique design and double seals



Category 5



Category Requirements

The highest requisites for safety are required in category 5, due to the considerable danger of human health hazard. The possibility of bacterial, viral transference is considerable, from water from public swimming or plunge pools. Also in the category is included rain water and discharged fire extinguishers.

Applications

- Rain water collection points
- Fire extinguisher equipment
- The pipes of water treatment plants
- Agricultural: Reference the drinking water supply for livestock














The Honeywell solution:

CBU144 / CBU145

Honeywell Compact Booster Unit - single pump CBU144, double pump CBU145

- Safety device designed to separate Drinking Water from fluids up to category 5, in accordance with EN 1717 (e.g. Fire extinguisher use after DIN 14462 and DIN 1988-600) with an air gap exhaust system (Type AB) and vertical, high pressure pumps
- Modular production allows a separation of the component parts for ease of transport and installation in restricted spaces
- Both CBUs are fully automatic, fully wired devices

Overview: Backflow prevention devices

													
	RV277	RV281	RV283P	CA295	NK300T-ACA	R295	BA295STN	BA295	BA298I-F	BA300	R295HP-F	NK300T-ABA	CBU144/145
Protection up to liquid category 2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Protection up to liquid category 3				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Protection up to liquid category 4							✓	✓	✓	✓	✓	✓	✓
Protection up to liquid category 5													✓
Connection type: Threaded	✓	✓		✓	✓	✓	✓	✓				✓	
Connection type: Flanged			✓						✓	✓	✓		✓
Potable water application	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		
Heating water application					✓							✓	
For domestic application	✓	✓		✓	✓		✓	✓				✓	
For commercial application	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
For industrial application	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
Material: Red Bronze						✓		✓					
Material: Brass	✓	✓		✓	✓		✓					✓	
Material: Stainless Steel									✓				
Material: Grey Cast Iron			✓							✓	✓		
Retrofit softening unit					✓							✓	
Electronic control					✓							✓	
Family according to EN 1717	EA	EA	EA	CA	CA	GA	BA	BA	BA	BA	GB	BA	AB

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