

# New Cleaning System for A/C and Refrigeration



COST EFFECTIVE, ENVIRONMENTALLY RESPONSIBLE  
CLEANING FOR A/C AND REFRIGERATION

## Genesolv<sup>®</sup> S-TZ + EkoFlush

Ensure the highest standard of service

**Honeywell**

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**EKOTEZ<sup>®</sup>**



# New Cleaning System for Air-Conditioning and Refrigeration

Genesolv® S-TZ and EkoFlush provide a cost-effective and environmentally responsible solution for flushing air-conditioning and refrigeration equipment. Combining the superior performance of Honeywell's Genesolv® S-TZ solvent, and a newly designed machine from Ekotez, this solution allows technicians to provide safe and effective first-class service to their customers.

## Your benefits

### Working to the highest service standard

Flushing of equipment after a compressor burnout, when retrofitting, or as preventive maintenance is considered essential to ensure best practice and high quality. After a compressor failure, metal particles and dirt from burned oil can remain in the equipment. When restarting the equipment, these particles and dirt may damage the new compressor, likely leading to a repeat failure or lower operating performance.

### Easy handling

EkoFlush is fully automatic: the technician simply connects the flushing unit to the equipment with the hoses supplied. Then, he connects the solvent cylinder, and starts up the machine. The flushing runs automatically. On completion it can be disconnected just as easily. The machine comes as a larger workshop version and an easy-to-transport portable version.

### Safe use

Honeywell's Genesolv® S-TZ solvent is a non-flammable, non-toxic and nearly odourless solvent. The fully automatic cleaning process means that service personnel do not have to handle contaminated cleaning fluids. Moreover, the solvent is compatible with most common construction materials and plastics.

### Environmentally responsible

Honeywell's Genesolv® S-TZ is based on a high-performing hydrofluorocarbon (HFC), Honeywell R-245fa. An improvement over previous cleaning fluids, such as R-141b, Genesolv® S-TZ is non-ozone depleting. Importantly, in the flushing process, no waste solvent is produced. The solvent is recovered within the machine and the purified solvent returned into the cylinder to be used over and over again. Oil, particles and dirt removed from the air-conditioning and refrigeration equipment should be handled and disposed of according to good service practice.

### Effective cleaning

This method combines the cleaning effectiveness of a superior solvent, Honeywell's Genesolv® S-TZ, and a special cleaning process. Firstly, the solvent dissolves oil left over in the equipment. The unit's special flushing procedure ensures that even difficult contamination is cleaned out. Using high-pressure, up to 8 bar, particles and soot are forcefully flushed out. A special pulsing operation applies additional abrasive degreasing action to remove soot and dirt from crevices and corners. Due to its low boiling point the solvent can easily be recovered from the equipment and leaves it dry and clean.

### Cost-efficient

Since Honeywell Genesolv® S-TZ solvent is recycled and can be used over and over again, the relative solvent costs are low. Only little solvent is lost through dissolution in oil, or when the system is not disconnected carefully. Good service practice ensures very cost-efficient flushing and initial investment in the unit is quickly repaid. This solution compares favourably to other flushing techniques in which solvent is wasted and higher costs incurred.

As the unit is fully automatic, it enables better utilisation of the service technician's time and allowing tasks to be undertaken simultaneously. The technician has to resume his work with EkoFlush only when the cleaning process is finished, thus reducing overall service time.<sup>1</sup>

1) Important notice: While the technician can perform other tasks simultaneously during the cleaning procedure, for safety reasons the machine has to be supervised at all times when in use.

## Genesolv® S-TZ

- Excellent solvency with new generation refrigerant oils
- Safe, non-toxic, non-ozone depleting, almost odourless and non-flammable
- Quick drying due to a low boiling point
- Compatible with most common materials

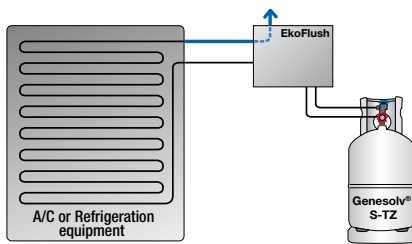
### Technical Specifications

Composition:

|   |           |
|---|-----------|
| 1,1,1,3,3-pentafluoro propane             | 87% (w/w) |
| trans-1,2-dichloro ethylene               | 13% (w/w) |
| Boiling Point (°C)                        | 15        |
| Liquid Density (g/cm <sup>3</sup> @ 20°C) | 1.34      |
| Vapour Pressure (kPa @ 20°C)              | 127       |
| (kPa @ 50°C)                              | 347       |
| Flash Point                               | None      |
| Vapour Flame Limits                       | None      |

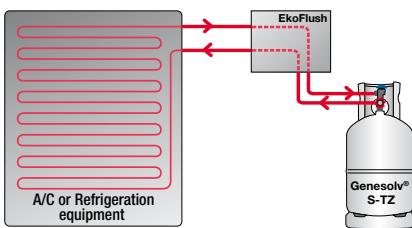


## How does the cleaning solution work?



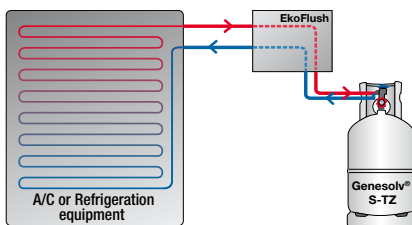
### Evacuation phase

When the equipment to be cleaned is attached to the machine and the cylinder of solvent is safely installed, a single push button starts the operation. Firstly EkoFlush evacuates the equipment to remove air. Once sufficient vacuum has been reached, the unit automatically begins the cleaning process.



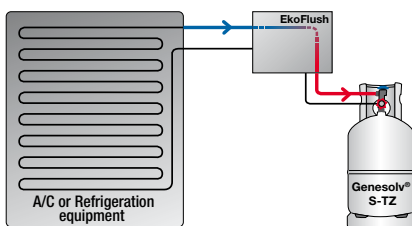
### Flushing and recycling of solvent

With high nitrogen pressure (6 to 8 bar) solvent is pushed into the system. The high pressure and speed of operation ensure that soot and oil are removed even from difficult corners. The full volume of the equipment is filled with solvent. Then, the solvent is pushed out of the equipment into the unit's distillation chamber, and distilled off. It is compressed and liquefied, and finally the purified and clean material is returned into the original cylinder. Distillation continues until all solvent is recycled.



### Purging

This step involves blowing nitrogen at 6 to 8 bar through the equipment to remove any remaining liquid solvent. This is repeated several times until the equipment is clean and dry.



### Cleaning

The last traces of solvent vapour are removed through evacuation. The oil, particles, and dirt can finally be drained off from the machine.

Usually, a single flushing cycle is sufficient to achieve superior cleaning quality. In the case of mineral oils, additional flushing cycles should be applied for optimum results.

#### Legend

- = Vapour, Gas
- = Liquid Solvent

## EkoFlush K570

- Workshop units for use in larger service and repair shops, and automotive garages
- This unit can conveniently be used for systems up to 20 L volume, larger volumes can be handled but require longer service times

### Technical Specifications

|   |                     |
|---|---------------------|
| Recommended volume/size of component (dm <sup>3</sup> ) | 12                  |
| Connection with the flushed device                      | 3/8" SAE (5/8" UNF) |
| Power supply (V, Hz)                                    | 230/50              |
| Maximum power input (W)                                 | 1350                |
| Dimensions (H x W x D) (mm)                             | 570 x 605 x 950     |
| Weight (kg)   | 54                  |

(Optional accessory: Universal connectors for up to 18 mm. Additional nitrogen cylinder needed to pressurize the solvent.)



## EkoFlush K560

- Portable unit can be easily transported, for use on rooftop or other installed equipment at the customer's premises.
- Best suited for use on smaller sized equipment up to 10 L volume

### Technical Specifications

|   |                      |
|---|----------------------|
| Recommended volume/size of component (dm <sup>3</sup> ) | 5                    |
| Connection with the flushed device                      | 1/4" SAE (7/16" UNF) |
| Power supply (V, Hz)                                    | 230/50               |
| Maximum power input (W)                                 | 1100                 |
| Dimensions (H x W x D) (mm)                             | 475 x 260 x 490      |
| Weight (kg)   | 26                   |

(Comes with a cart for easy transportation. Optional accessory: Universal connectors for up to 18 mm. Additional nitrogen cylinder needed to pressurize the solvent.)



## Find out More

Contact Ekotez or Honeywell for a list of approved distributors, or visit [www.honeywellrefrigerants.com/flush](http://www.honeywellrefrigerants.com/flush) or [www.ekotez.cz](http://www.ekotez.cz)

### Ekotez spol s.r.o.

Koněvova 47  
130 00 Prague 3  
Czech Republic  
Tel.: +420 22-258 2291  
Fax: +420 22-258 6265  
[www.ekotez.cz](http://www.ekotez.cz)

### Honeywell Chemicals

Northern & Central Europe  
Haasrode Research Park,  
Grauwmeer 1  
B-3001 Heverlee (Leuven)  
Belgium  
Tel. : +32 16-391 278  
Fax : +32 16-391 277  
[www.honeywell.com](http://www.honeywell.com)

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