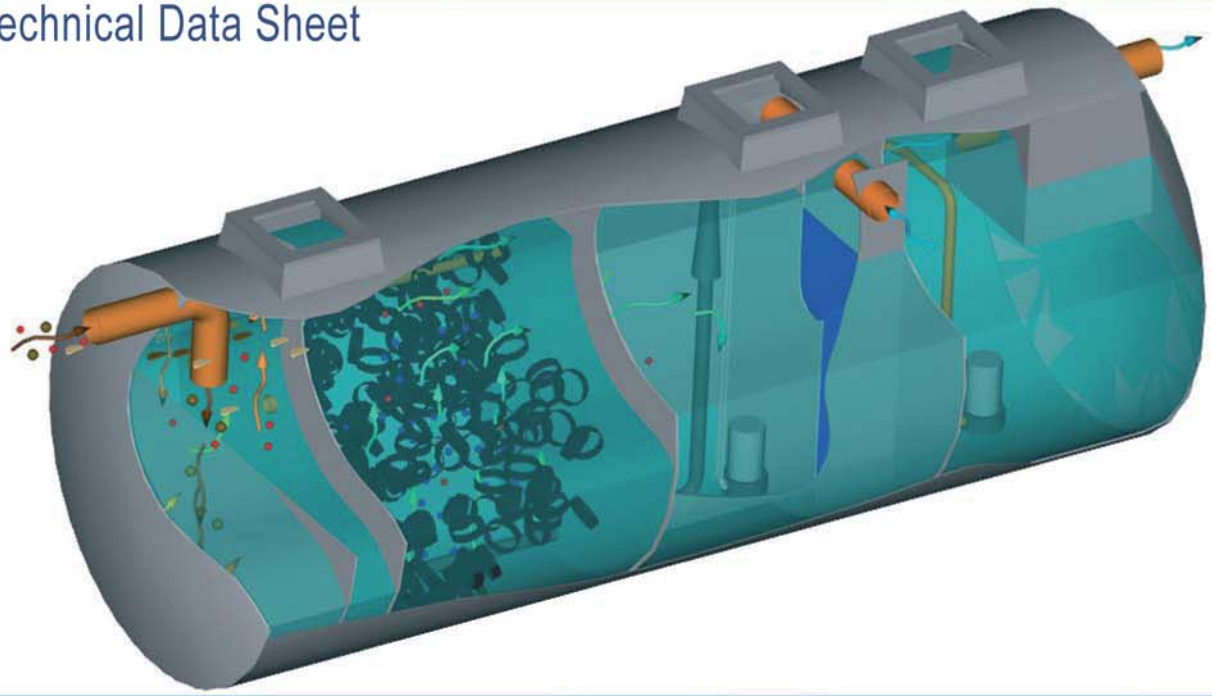
manzi
IMPIANTI DEPURAZIONE ACQUE

# COMBINED BIOLOGICAL SYSTEM WITH REUSE Mod. DCARF

## Technical Data Sheet



## Description

**DEPURCOMPACT mod. DCARF is made of FRP (Fiberglass Reinforced Polyester). It is a treatment system with a combined biological process for treating industrial wastewater, particularly that of car wash facilities. The system features an activated sludge total oxidation process with both adhered and dispersed biomasses. DCARF has three 600x600 mm inspection windows. The oxygenation system is obtained by means of submersible electric pumps with Venturi ejectors and outdoor air inlet pipe. It comprises a primary sedimentation and oil separating sector, a biological reactor with bacterial bed and polypropylene filling vessels with no less than 180 m2/m3 specific surface area, a secondary sedimentation sector, a treated water storage sector allowing reuse and a sampling pit. It is also equipped with a filter pack to ensure effluents with suspended solids within the limits in the tables established by Italian Law Decree D. Lgs 152/06.**

## Technical Specifications

| model DCARF | mod. | | 0.3 | 0.5 | 1.0 | 1.5 | 2.0 | 3.0 | 4.0 | 5.0 | 6.0 | 7.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **internal diameter** | **D** | **m** | **1.20** | **1.60** | **2.00** | **2.00** | **2.00** | **2.40** | **2.40** | **2.40** | **2.40** | **2.40** |
| **length** | **L** | **m** | **3.10** | **4.60** | **4.30** | **5.80** | **6.20** | **5.00** | **5.80** | **6.80** | **8.00** | **8.80** |
| sludge trap - oil separator | A | m | 0.50 | 1.20 | 0.90 | 0.90 | 0.90 | 0.80 | 0.90 | 1.00 | 1.30 | 1.30 |
| biological oxidation | B | m | 0.90 | 0.90 | 0.80 | 1.30 | 1.30 | 1.40 | 1.60 | 2.00 | 2.40 | 2.70 |
| secondary settling | C | m | 1.00 | 1.00 | 1.40 | 1.80 | 2.20 | 1.50 | 2.00 | 2.50 | 3.00 | 3.50 |
| storage | D | m | 0.70 | 1.50 | 1.20 | 1.80 | 1.80 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 |
| sludge trap / oil separator volume | | m3 | 0.53 | 2.00 | 2.54 | 2.54 | 2.52 | 3.23 | 3.53 | 4.04 | 5.04 | 5.01 |
| oxidation volume | | m3 | 0.46 | 0.77 | 1.55 | 2.32 | 3.09 | 4.64 | 6.19 | 7.73 | 9.28 | 10.83 |
| settling volume | | m3 | 0.75 | 1.26 | 2.50 | 3.00 | 4.00 | 4.50 | 6.00 | 7.50 | 9.00 | 10.50 |
| storage volume | | m3 | 0.70 | 3.00 | 3.50 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| inlet height | H in | m | 1.08 | 1.40 | 1.80 | 1.80 | 1.80 | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 |
| outlet height | H out | m | 0.95 | 1.30 | 1.70 | 1.70 | 1.70 | 2.10 | 2.10 | 2.10 | 2.10 | 2.10 |
| maximum flow rate | | m3/h | 0.30 | 0.50 | 1.00 | 1.50 | 2.00 | 3.00 | 4.00 | 5.00 | 6.00 | 7.00 |
| diameter of IN - OUT manifolds | | mm | 125 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| number of oxid. + recirc. pumps | | N° | 1+1 | 2+1 | 2+1 | 2+1 | 2+1 | 2+1 | 2+1 | 2+1 | 2+1 | 2+1 |