

## CASE STUDY



### Precision cleaning of fittings

Machine: EGAclean 4100  
Industrial sector: Chipless metal forming / 125



- Industry:** Fittings
- Cleaning problem:** Replacement of a chlorinated solvent (Trichloroethylene) machine by a more environmentally friendly machine
- Soiling:** Cooling lubricants, mineral oil and vegetable oil
- Solution:** Degreasing under vacuum with non-chlorinated AIII hydrocarbon
- |          |                                   |      |        |
|----------|-----------------------------------|------|--------|
| Phase 1: | Immerse cleaning with ultrasonics | 70°C | 3 min. |
| Phase 2: | Vapour phase                      | 90°C | 3 min. |
| Phase 3: | Vacuum drying                     | 60°C | 3 min. |
- Approx. cycle time: 9 min.
- Requested quality:** Intermediate and final cleaning
- Return on investment:** The machine complies with legal requirements (EU). The cleaning quality has been improved and the operating costs have been reduced, especially regarding the solvent and personnel. The chlorinated solvent machine used more than 5000 kg of Trichloroethylene per year. The EGAclean 4100 uses 600 kg of non-chlorinated AIII hydrocarbon. A first cleaning machine was put into operation in 2001, a second followed in 2003.