



**TRANSOR**  
FILTER GMBH®



## ***Transor Compact Filter***

***Filter of a new generation***



**More than 25 years "experience for the future"**



**TRANSOR Filter GmbH** was established 1981. The **TRANSOR** edge filter principle soon became the synonym for media free fine filtration. EDM (spark erosion) processes and the manufacturing of tools, especially carbide tools along with other precision machining demand filtration degrees of coolants which cannot be achieved by conventional filtering systems.



In our facility Usingen near Frankfurt/Main we construct, build and put into service more than 300 filter systems per anno.



From here we co-ordinate the cooperation with our partner companies worldwide.

## **The Edge Filter Principle**

**TRANSOR Units** work on basis of the edge filter principle. Contaminations in grinding oils are captured on the surface of several thousands of special filter discs, which are stacked spring loaded on top of each other. Unlike in other systems no consumable filter media is utilized. Maintenance and operating costs are reduced to the absolute minimum. The self cleaning (back flushing) of the filters is initiated fully automatic. The removed material (sludge) is discharged by various methods either manually or automatically.

Based on more than 25 years user specific experience the concept consequently was advanced further. The newly developed **TRANSOR Compact Filter TCF** utilizes edge filter elements with a unique multi channel geometry. This enables the construction of small and compact systems and lower operative filter volumes at higher flow rates. Along with high filtration degrees the **TCF** system also offers long lifetime cycles of the elements.

## **TRANSOR – Filtration without compromise**

With the new **TCF** series **TRANSOR** again revolutionizes the fine filtration of metal working coolants, especially grinding oils. Coolants have to be filtered to a high degree in order to permanently fulfil their important functions in the machining process. High precision machining like grinding, honing or EDM require utmost cleanliness of the coolants, to achieve work results like better surfaces, closer tolerances, superior surface finish, less wear and cleaner environment. **TRANSOR TCF-filter systems** safeguard the reliable supply of fine filtered and temperature controlled clean oil to the machines.

This is achieved with fully automatic systems on small "foot print areas" with minimum service and maintenance requirements.



- ◆ **Edge filter with multi channel geometry**
- ◆ **No consumable filter media**
- ◆ **Fully automatic self cleaning (back flushable)**
- ◆ **Uninterrupted continuous full flow filtration**
- ◆ **Life time of elements several years**
- ◆ **Short duration of self cleaning process/ reduced consumption of pressurized air**
- ◆ **Reduced oil volume for self cleaning**
- ◆ **Compact construction**
- ◆ **Optional automated sludge removal**
- ◆ **Standardized systems with flow capacities 70-280 l/min.**
- ◆ **Modular and redundant build up**



# TRANSOR Compact Filter TCF



The **TCF** series of filter systems are fully automatic media free working units for the fine filtration of low viscosity metal working oils. Beyond other processes they are utilized in the production and re-grinding of all kinds of carbide tools. The filtered material can be discharged by various optional methods and can be either sold or recycled.

## Filter capacity

The modular construction, a big clean oil storage capacity and the reduced self cleaning time enable uninterrupted, continuous and reliable supply of coolant to the machine

## TCF-technic

### The heart of the system

The newly developed elements are based on a multi channel geometry and operate without consumable filter media. Filtration efficiency of 3µm nominal and a life time of several years are achieved. This means less maintenance and disposal costs. The low pressure filtration method ensures highest flow rates on smallest foot print areas.

The **TCF** element housings do not require pressure test procedures acc. to pressure vessel regulations and codes.



## Sludge collection

The sludge treatment and removal is achieved primarily by sedimentation method. This can be done either manually with filter bags or fully automatic with screw or drag conveyors.



## Simple operation through fully automatic mode

A modern touch panel ensures full control of the working cycles. The clearly organized built-up of all pneumatic and electrical components simplifies operation and service.

## Designation codes

Example: TCF-II-1-70-A/SK

- |     |   |
|-----|---|
| TCF | Transor Compact Filter                              |
| II  | Number of filter groups                             |
| 1   | Number of filter elements per group                 |
| 70  | Nominal filter flow capacity                        |
| A   | Automatic   |
| SK  | Sludge case with manual discharge                   |
| or  |   |
| KF  | Sludge discharge with drag conveyor /auto discharge |

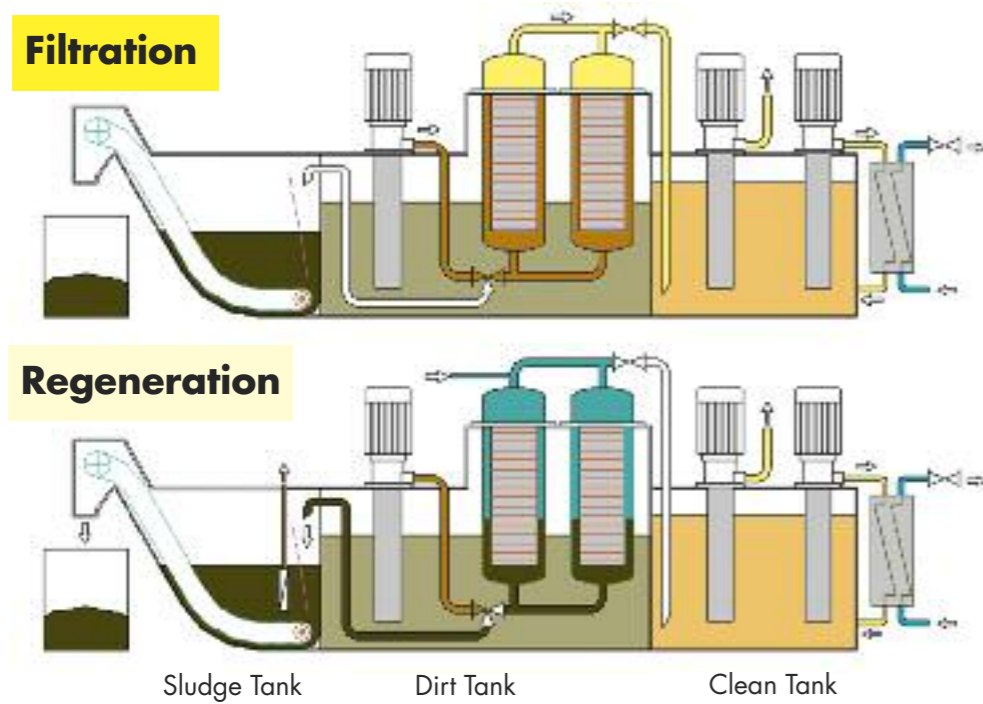
## The construction

The compact construction of the **TCF** units requires little valuable floor space and can be used for up to 4 machines (70-280 l/min.), depending on individual requirements. The system can easily be moved and handled. Easy access for maintenance and sludge removal.

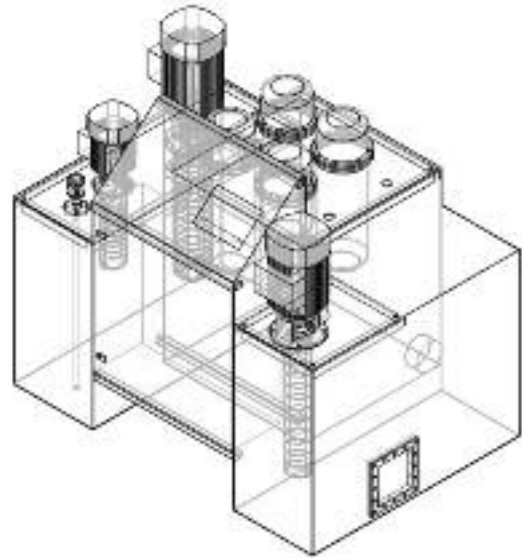




## The principle



## TCF individual units for single machines



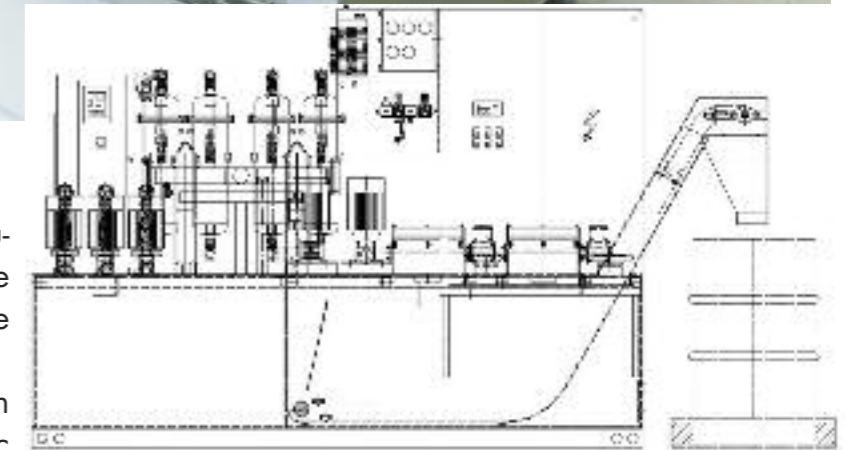
Especially for single supply of coolant to 1 to 4 machines there are highly standardised constructions with capacities from 70-280 l/min. The units are compatible with all types of known grinding machines. The removal of sludge material can be done manually or optionally fully automatic with miniaturised drag conveyors.

For the filtration of non water based coolants (low viscosity oil)

### Technical data

Model	Flow rate (l/min) *	Capacity (l)	Number of filter towers	Sludge treatment	Dimensions length x width x height (mm)
TCF II-1-70-A/SK	70	500	2	Manually	1400x900x1100
TCF II-1-70-A/KF	70	500	2	Drag conveyor	1400x900x1100
TCF II-2-150-A/SK	150	500	4	Manually	1400x900x1100
TCF II-2-150-A/KF	150	500	4	Drag conveyor	1400x900x1100
TCF III-2-210-A/SK	210	800	6	Manually	1400x1300x1100
TCF III-2-210-A/KF	210	800	6	Drag conveyor	1400x1300x1100

## Island solutions for groups of machines



By utilizing so called "island solutions", groups of machines can be connected to one filter unit. These "small centralized systems" are offering concepts which can be adopted to customer specific requirements. Filter flow capacities from 300-1000 l/min., centralized machine supply stations and specific cooling systems are being offered.

Contact us enabling us to jointly find a solution for your specific requirement.

### Technical data

Model	Flow rate (l/min) *	Capacity (l)	Number of Filtertürme	Sludge treatment	Dimensions length x width x height (mm)
TCF II-4-300-A/KF	300	2000	8+2	Drag conveyor	2000x1800x2100
TCF III-4-450-A/KF	450	2500	2+2	Drag conveyor	2500x1800x2100
TCF IV-4-600-A/KF	600	3500	6+2	Drag conveyor	3000x2000x2100
TCF V-4-750-A/KF	750	4000	20+4	Drag conveyor	3500x2000x2100
TCF V-6-1000-A/KF	1000	6000	24+4	Drag conveyor	5000x2200x2100
Options (exemplary)		other capacities possible		centrifuge or screw conveyor also possible	other dimensions possible

\*Flow rates relate to oil viscosity of approx. 6 cst @40°  
Reference dirt load capacity : carbide, max. 100 mg/l.



## Centralized Systems



For the supply of coolant to complex machine parks **TRANSOR** individually designs and offers centralized systems from 1000 to more than 5000 l/min. Submerged or semisubmerged constructions including the complete piping as turn key jobs are possible.



## Modular filters as "add on" of existing filter systems

**TRANSOR's TCF** technology is available as modules for upgrading existing filter systems with a fine filter stage. Units of 70-280 l/min. flow capacity can be added as stand alone units or be integrated into existing circuits. Controls and sludge treatment can be arranged according to customer specific requirements.



## The "Classical" Transor

All units, parts and accessories for our numerous "classical" **TRANSOR** systems are available unchanged. Several thousands of these systems continue to provide reliable service to customer and machines.

## Options



**Comprehensive accessory options complete the TRANSOR systems. For example:**

### Interface/communications

We have extensive experience with the demands of all known machine manufacturers. This ensures competent realisation of all necessary electrical, hydraulic and pneumatic interface requirements.



### Pre-Filtration

Pre-filtration removes particles in order to relieve the fine filtration stage. We offer various systems:

- Efficient conventional magnetic drum filters for ferrous particles
- Super strong neodym magnetic devices for high demanding pre filter operations
- Woven cloth/bag filters as non ferrous pre -filtration



### Machine supply

We offer a wide range of well known pump types and makes with all necessary flows and pressure ratings

- Single supply pumps
- Central supply pump systems
- Central supply pump systems with energy saving frequency control



### Cooling

We provide high precision permanent cooling options, independent of the filtration method

- Compact direct cooling as add on unit with 4-25 KW capacity and precision of 0,1 Kelvin
- Water cooling system, especially for higher capacities with up to 150 KW or more for centralized cooling, also for remote placement
- Plate heat exchangers to retrofit existing cooling systems



### Oil mist separator

We provide various sizes and makes:

- mechanical separators
- electrostatic separators

### Service and maintenance

We perform all service and maintenance works on site.



# TRANSOR filter systems and your environment remains clean



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