

HYDAC Solutions for Water Filtration

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What do we want to show?

- **Introduction to HYDAC**
- **Water filtration solutions**
- **Use cases in mining applications**
- **Q & A**



Who are we?

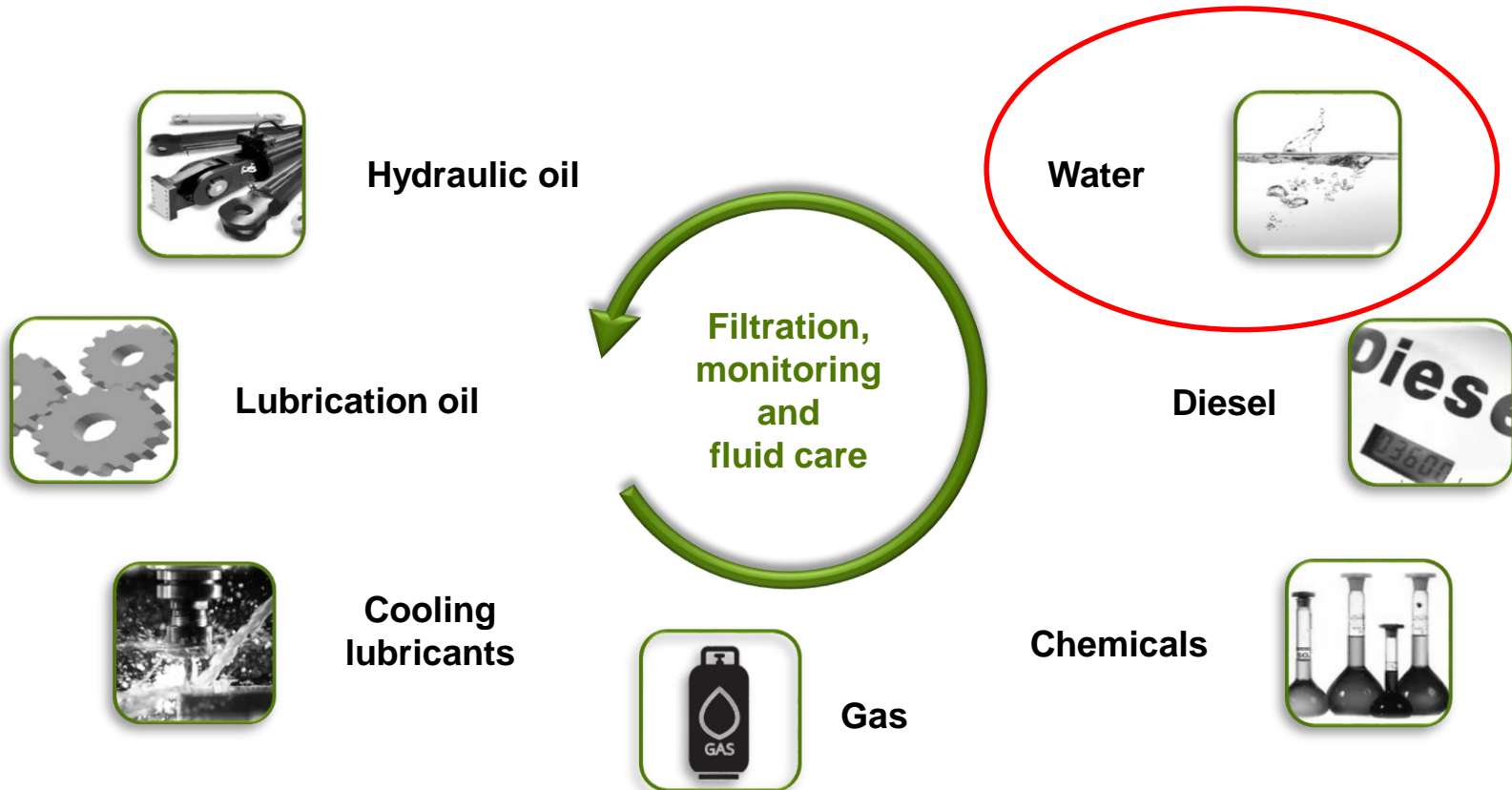
Components, systems and service in the areas of

- Hydraulics
- Lubrication
- Filtration/Fluid care
- Cooling
- Electronics
- Condition Monitoring
- And more

... for an almost limitless range of applications in stationary and mobile machines



Filtration and fluid care



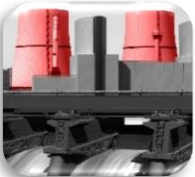
Where can you find HYDAC water filters?



Industry and Mining



Fresh water treatment and irrigation



Power generation



Waste/sewage water treatment

Typical applications:

- Filtration of process and used water
- Protection of all nozzles
- River and well water purification
- Protection of pumps, membranes, UV systems etc.
- Cooling water and seal water filtration
- Water hydraulics
- Filtration of waste water for secondary use, e.g. process water for preparation of flocculants
- And more

What can we offer?

Automatic back-flushing filters

Coarse & fine filtration: 10.000 - 15 μ m



Inline and screen basket filters

Finest filtration: 15 - 1 μ m



Filter systems and skid solutions

Customized



Mining use cases for HYDAC water filters



Mining use cases for HYDAC water filters

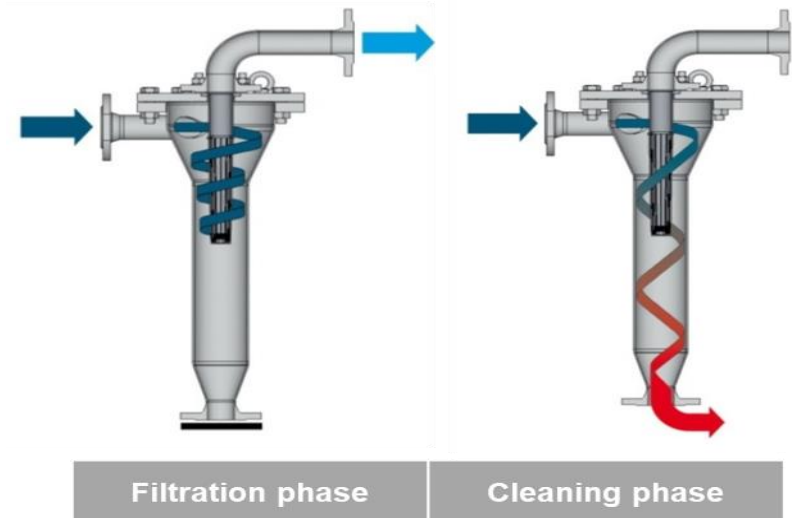
**ATF filtration skid
for pre-filtration
prior to reverse
osmosis (RO)
system in Newmont
Mine (Ghana)**

- 5 x ATF 3.5
- Supply of turn key skid
- Built at HYDAC South Africa



Automatic back-flushing filter ATF

- Two stage system, combining centrifugal separator and inline filter
- Filtration 100 to 3000µm
- No contamination transfer to the clean side
- Continuous filtration & permanent self-cleaning
- No pressure loss
- Wide variety in quality of untreated water
- Handle heavy contamination loads
- Easy service and low maintenance



Mining use cases for HYDAC water filters

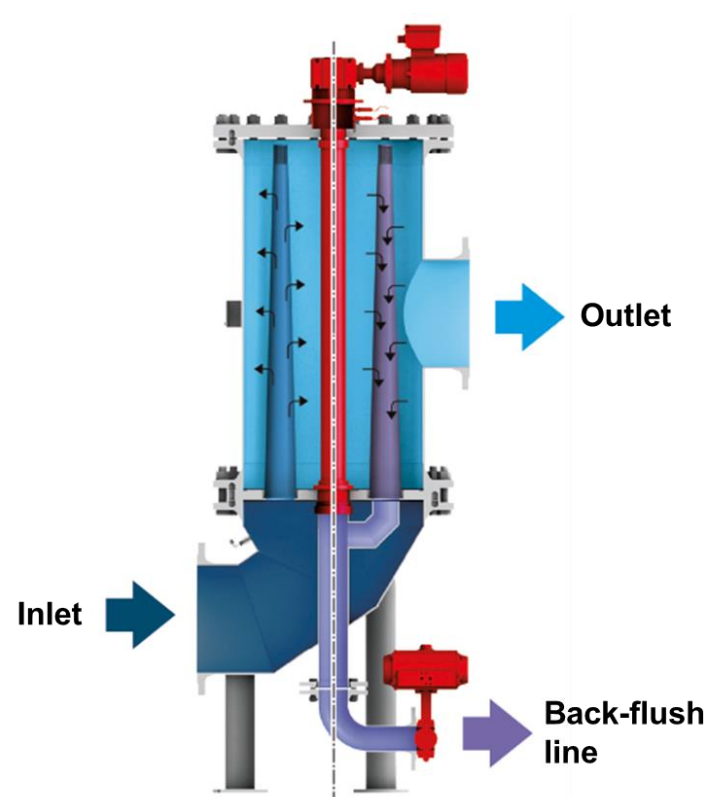
Cooling water filtration for furnaces in a mine site using HYDAC RF3 automatic back-flushing filters

- 16 x RF3 filters
- The filters are fitted with 100µm elements



Automatic back-flushing filter RF3

- Self cleaning Automatic Filter – automatically back flushes at pre-set differential pressure
- Separation of solid particles from low viscosity fluids
- Conical filter elements 25 to 3000µm elements for maximum efficiency.
- Superflush coating – minimizes adhesive particles adhering to the element and reduces biofouling.
- Reduces water loss
- Low Maintenance



Mining use cases for HYDAC water filters



Coal Mining

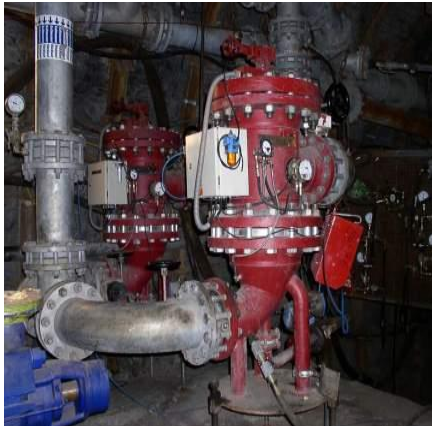
Treatment of mining water or service water for shield nozzling or nozzling of long wall shearers in order to avoid firedamp



- approx. 40 pieces at DSK
- RF2-2-PT (DN100) (4")
- pneumatic version only
- housing rubber coated
- pressure max. 40 bar (580 PSI)
- filtration rate 100 / 200 µm

Mining use cases for HYDAC water filters

Filter Installation underground



Function

Treatment of fresh water

Protection of evaporators and heat exchangers



Refrigerating Plant Underground



- Execution matches requirements for mining
- ATEX-Approval
- Filtration rate 100 μm
- Operating pressure 25 - 30 bar (363 – 435 PSI)
- Rubber coated housing

2x RF3-2-PTZ (DN200)*

2x RF3-2.5-EPT (DN250)

Mining use cases for HYDAC water filters



Coal Mining
HBL

Filtration of
cooling water
for oil/water
heat
exchangers

Protection
of the spray
nozzles of
the pick of a
part cut
machine



Backflushing Filter RF2
RF2-1-PU-0-1-N-2-1-KN-4-
BO-Z-S50-1

Filtration rate: 50 μm



■ Mining use cases for HYDAC water filters

Two-stage, change-over back-flushing filter for sprinkling in continuous miner

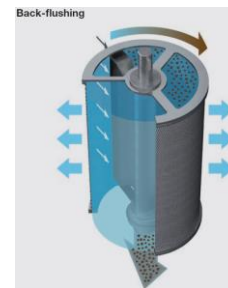
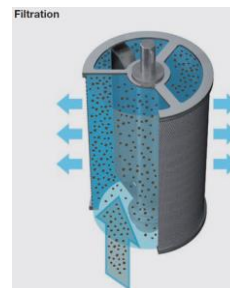
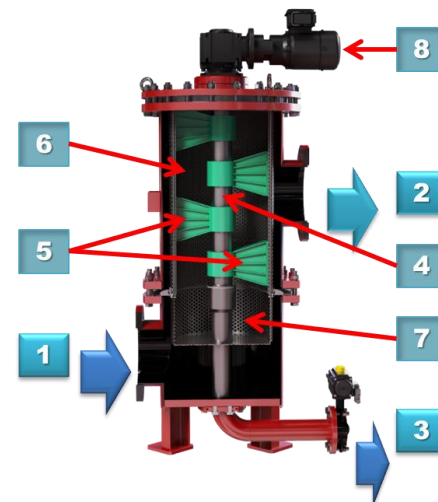


NEW: RF14

- Basket based self cleaning automatic filter
- Use as pre-filtration in water treatment systems
- Filtration rating 10 to 90µm
- High cleaning efficiency
- Effective cleaning of the fine filter fabric
- Up 33% of filter area cleaned per flush
- Low flushing water loss
- Low maintenance
- Up 33% of filter area cleaned per flush



No.	Component
1	Filter inlet
2	Filter outlet (clean side)
3	Back-flush line
4	Flush mast
5	Cleaning nozzles (cleaning heads)
6	Filter element
7	Protection screen (optional)
8	Gear motor (with optional position indication)



Use of HYDAC water filters in...



Coal cutting machines



Pump stations



Conveyors



Tunneling machines



Transportation systems



Any questions? We are happy to
talk to you about water filtration!

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