Reduce-Reuse-Recycle

Coolant and Oil Saving Solutions

The Problem

- **Coolant drag out into swarf bin on machining centres with conveyors**
- **Wastage of coolant**
- **Cost of disposal**
- **Environmental impact**

Customers always expect cost down

"New cost down" will be the ***sustainability*** and how we can achieve this for the future climate

The Solution

- **Coolant and Oil Savers**

The Coolant Saver

Application Area – Soluble Coolant oil
Neat oil if pump pressure good (not for sliding head)

Part No. 144-1000

How does it Work?

- Powered by machine pump
- Flow through unique nozzle system creates sideway suction
- Venturi Effect
- Good coolant reclaimed as soon as it lands in swarf bin

How does it Work?

Attach video or use link

Installation

- Instruction Manual supplied with unit
- Machine Downtime less than 15 minutes
- Install video available on YouTube channel
- Support available
- No electrical just basic plumbing into pumps

FULL INSTALLATION VIDEOS NOW AVAILABLE

Wogaard Video Channel
https://www.youtube.com/user/WOGAARD/videos

Additional Fittings

Coolant saver kit

- **½" and ¾" Straight and T Fittings**
- **3 Metres PU hose/ 1.5Metres 12mm Hose**

ADDITIONAL FITTING KITS

Typ. machines DMG,HERMLE,HELLER, STARRAG , GROB
M30(L22) Hyd swivel T-KIT

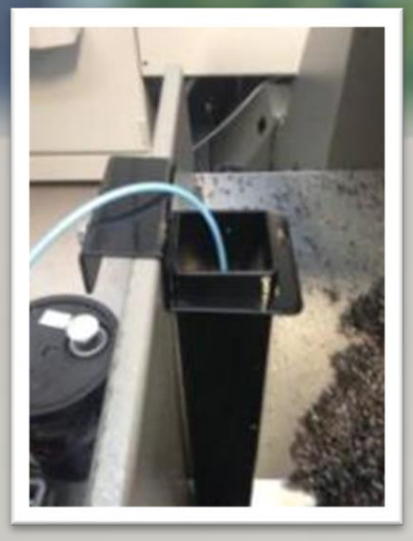
250/400mm Height available

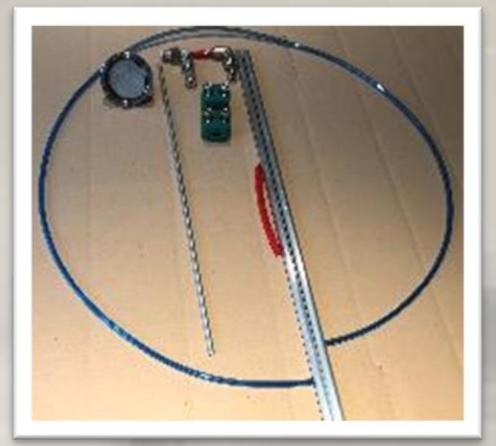
Fitting kits for waist mounted pumps
Typically used when metal pipe work runs from pump to below sump level
Kit enables unit to be installed above Tank

* T off from hose connection with hydraulic fitting
1/2' pipe fitting - 400mm height + elbow fittings

- Vacuum Hose can be extended to approx. 10meters with the use of additional 6mm PU Hose

Vacuum Protector options





Vacuum head can be removed quickly from swarf bin when emptying

- **660mm and 750mm Height versions available**
- **Adjustable Clamp**
- **Steel fabrication – Plascoat black**
- **Scallops/Castellations at bottom**

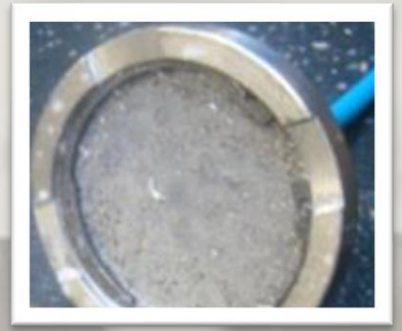
NEW

Fixed Vacuum to swarf kit available

- **Kit available with Vacuum head for additional bins**
- **Adjustable Height to suit many swarf bin types**

Vacuum Head

- Stainless Steel Head with metal filter mesh
- Non return Valve No flow back of coolant when machine stopped
- Low maintenance requirements



The Oil Saver

Part No. 145-1000

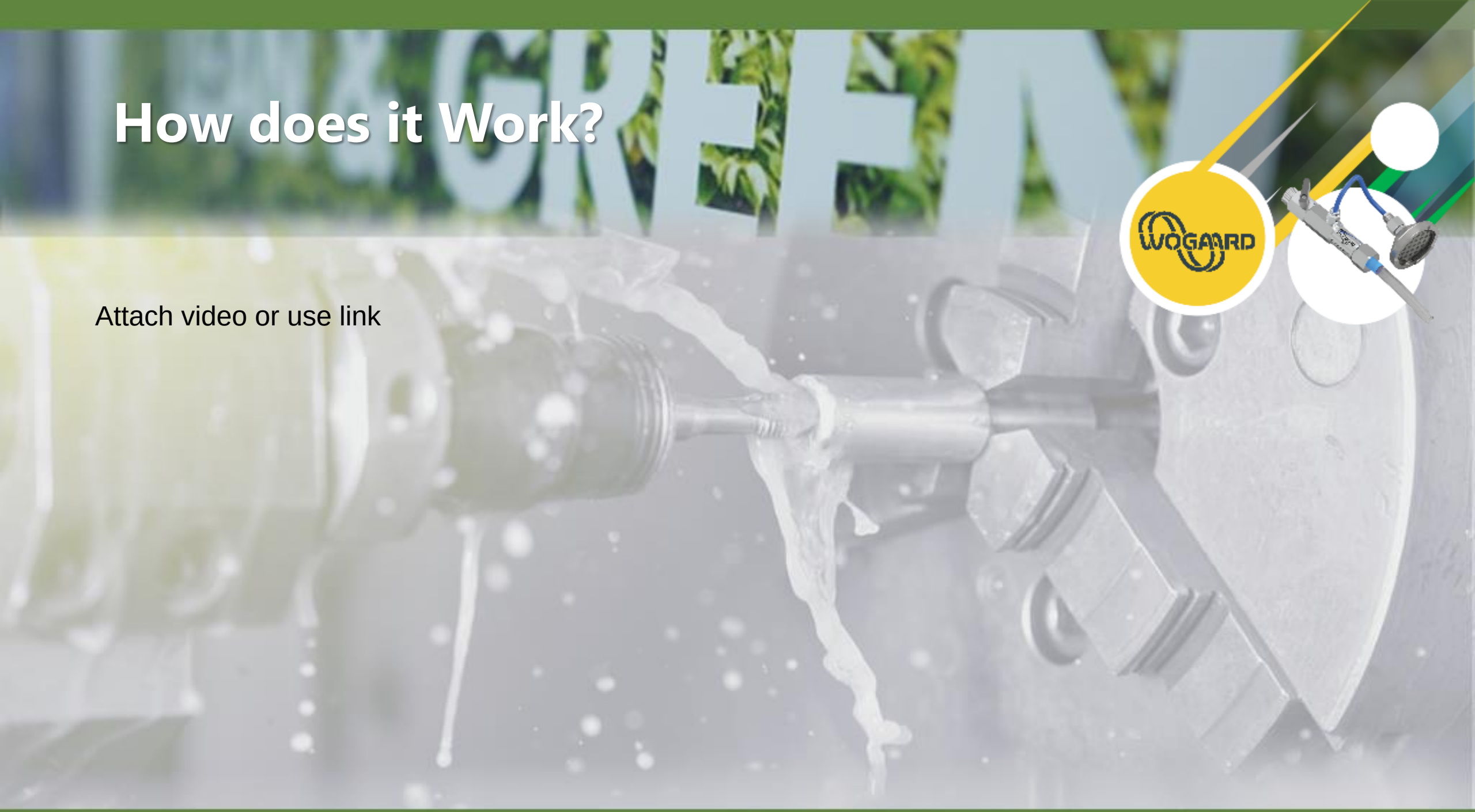
Application Area – Sliding Head machine typically with low rated pumps

Designed for High Viscosity neat oil up to and including 22cs (23-32cs pending pump flow)

Only 0.1 bar to activate suction

How does it Work?

Attach video or use link



Oil Saver

- Similar in operation to coolant saver
- Designed to vacuum High Viscosity oil up to and including 22cs with low rated pumps (eg sliding head – Swiss Style lathes)
- Easy clean out mechanism if small debris in oil from sliding head

Oil saver kit

- 1” Straight and T Fittings typical for sliding head machine (Citizen/Star)
- 3 Metres PU hose/ 1 Metres 12mm Hose

Installation Examples

Attach video or use link

Many Case Studies

Aerospace/Automotive/sub contractors facilities

Still using Taps?

- Health and safety hazard
  - Trip hazard
  - Slip hazard if coolant overflows
- Manpower to handle
- Coolant hanging around
- Unsightly
- Slow and does not drain all

After Tap drain still much coolant left in bin.
Example shows Forklift tipping bin and draining many more litres of coolant after tap drain

- Resource intensive
- How much are you loosing

Savings Calculator

Savings Calculator

Coolant Saver

Data Input

Monthly cutting fluid expense:	1000	£ / month
Price of concentrated cutting oil:	5	£ / Litre
Oil / water mix ratio:	6.0	%
Cost of having wasted cutting fluid collected:	0.20	£ / Litre
How many litres of cutting fluid are collected / disposed of in a year:	15000	Litres / year

Calculate

Results

Your annual cutting fluid consumption is:	40.000	Litres / year
Your annual cutting fluid expenses:	12.000	£ / year
Annual expenses for disposal / collection:	3.000	£ / year
Estimated annual savings total:	6.000	£ / year
Equal to:	50,0%	

Please note! Savings on collection / disposal makes up **50%** of the total savings

Available on Excel

Cost saving report

Justification report for multipe installation

Savings Calculator

Coolant Saver

Reduce
Reuse
Recycle

Data Input

Monthly cutting fluid expense:	7,275	€/month
Price of concentrated cutting oil:	4.85	€/Litre
Oil / water mix ratio:	7.0	%
Cost of having wasted cutting fluid collected:	0.10	€/Litre
How many litres of cutting fluid are collected / disposed of in a year:	91,000	Litres/year

Results

Your annual cutting fluid consumption is:	257,143	Litres/year
Your annual cutting fluid expenses	87,300	€/year
Annual expenses for disposal / collection	9,100	€/year
Estimated annual savings total	31,996	€/year
Equal to:	36.7%	%
Savings on collection / disposal makes up	28%	%

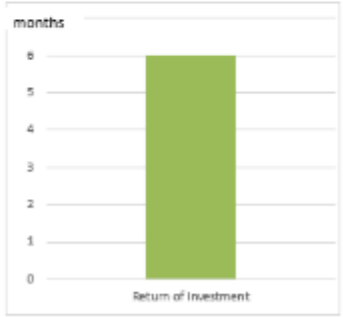
* Notes:
The default values in the form input fields are an average taken from a number of small- to medium-sized machine-shops. These numbers can be used as a guide, if you don't have your own numbers at hand.
This form assumes that all of your cnc-machines are equipped with automatic chip-conveyors, and you put a Wogaard Coolant Saver on all machines. When this is not the case, you can apply the savings percentage on a single machine basis, i.e. if you put a Wogaard Coolant Saver on a particular machine, then the estimated savings for that machine is x%.

Customer	
Date	
No of Machines with conveyor	35
Neat Coolant Usage	1500litres/month(neat)
Diluted Coolant usage (7%)	21428 Litres/month
Disposal	7583Litres/month
	Based on 10 Litres per Chip Bin and 35 chip bins emptied a day

Annual Cost Saving with Wogaard Coolant saver

€ 31,996.00

Return of Investment	6 Months	
Cost of Unit	€ 464.00	35 machines
Total (35 machines)	€ 16,240.00	

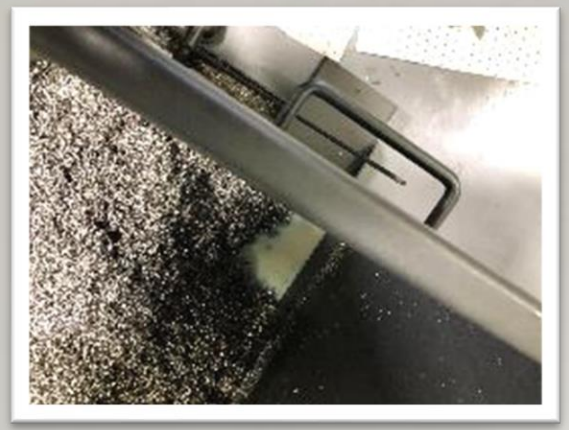


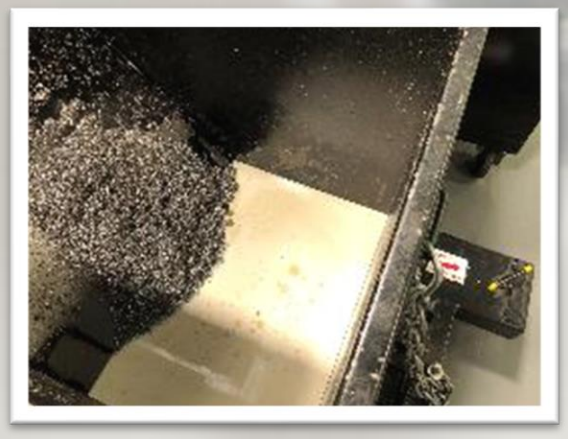
Basic Information required

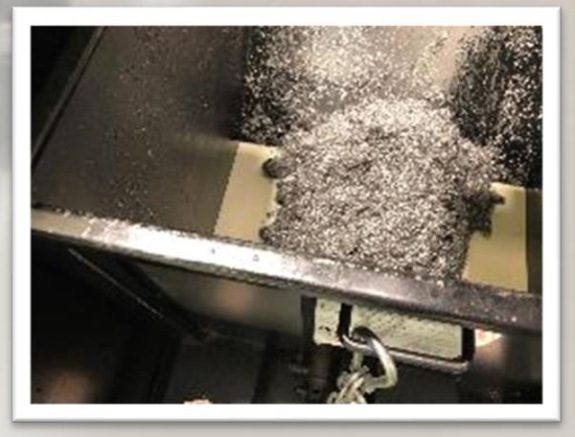
- Number of machines with conveyors
- Coolant usage litres per month
- Price per Litre
- Coolant concentration
- Disposal information if available

Site observation examples

Various pictures taken at site surveys



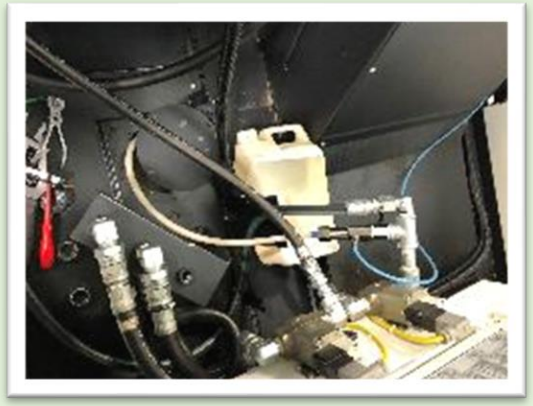




Site Trial

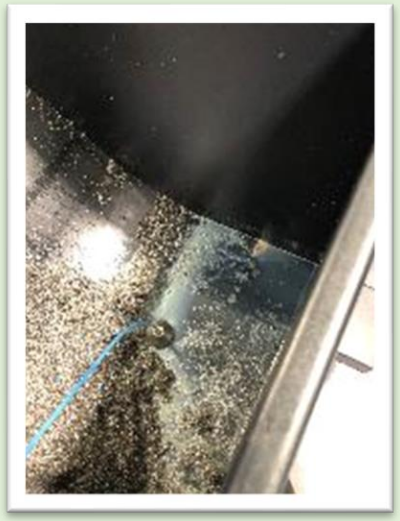
Coolant saver can be quickly tested and savings instant!

Before install 20+ litres would be vacuumed out daily and not reused



Unit installed on Mazak

installed 30 mins



After unit installed works automatically when machine is operational

From high wastage litres to millilitres wastage

With vacuum protector

The Benefits

- **Install in less than 30 minutes and reap additional benefits:**
  - Man Power Reduction, Higher Swarf Value, Improved Housekeeping, Health and Safety…

Sustainability / Environment

Impact on environmental - Good coolant WASTED that can be re-used

Coolant has to be separated and processed.

- **Reduce consumption of cutting fluid.**
- **Reduce consumption of water.**
- **Reduce emissions* from machining operations.**
- **Reduce the amount of cutting fluid waste-water collected and disposed of.**
- **Put an end to cutting fluid leaking from larger chip containers, creating potential health & safety issues.**

On the road to ISO14001, you can reduce consumption of cutting fluid and water; reduce the amount of waste fluid collected and disposed of; and, end fluid leaks that create potential health & safety issues

Questions?

Think Green!

www.Wogaard.com