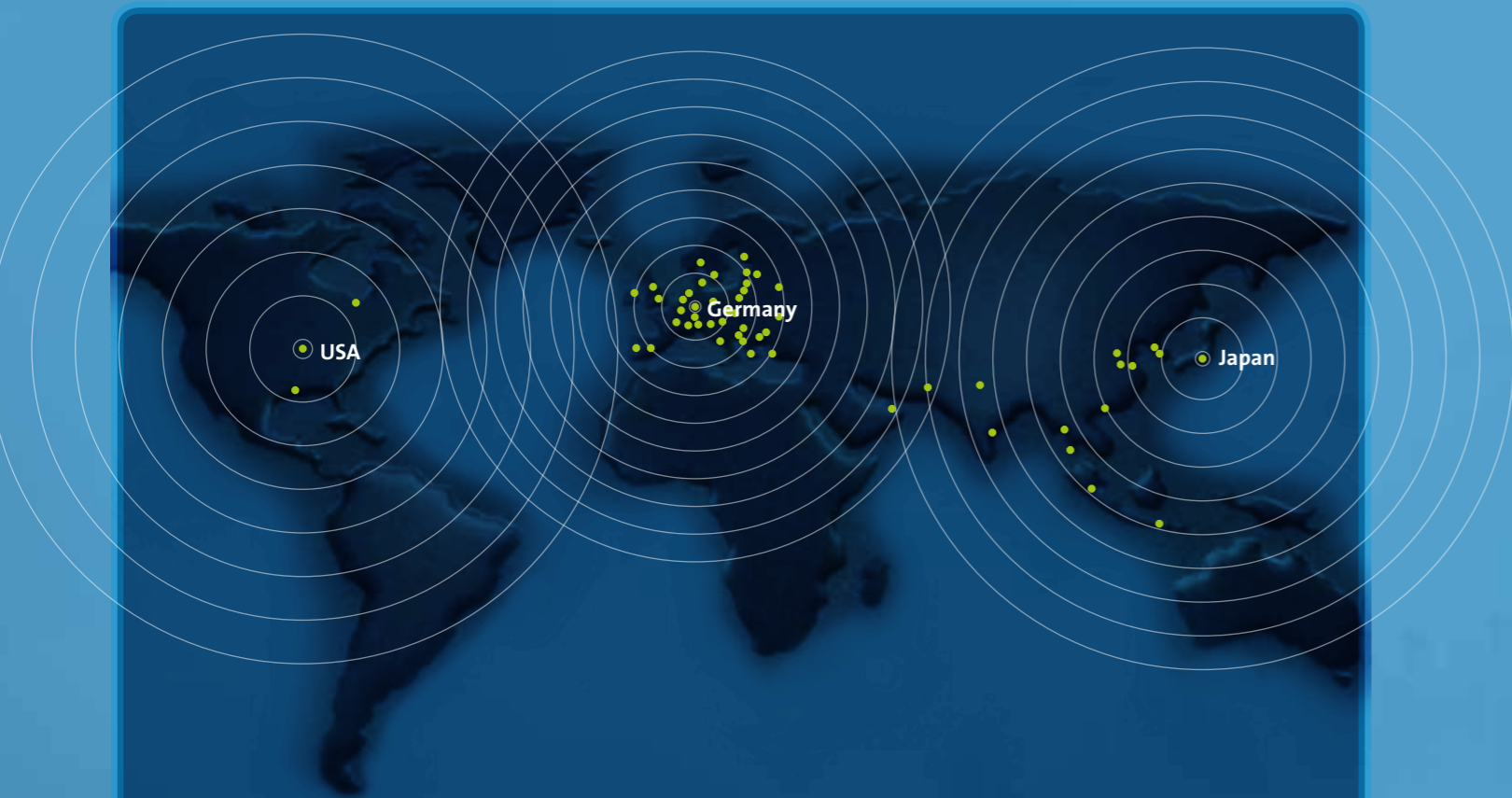


# PRECISION AND FLEXIBILITY WHERE IT REALLY MATTERS



# PUSH THE BOUNDARIES IN YOUR INDUSTRY

Are you looking for a pump solution that is as reliable as it is efficient? Grundfos' thoroughly tested range of pumps targeted at the machining industry is built on more than 60 years of experience within the pump business and specifically developed to operate flawlessly in even the

most demanding applications. Having provided industrial solutions for decades, we understand the challenges you face and are dedicated to using our expertise to optimise your production line. No matter where in the world you are.



Grundfos is the leading global manufacturer of pumps – a position we have earned through commitment and an urge to constantly push the boundaries for pump technology. This has provided us with unsurpassed know-how and a product range which is second to none. Specifically for the machining industry we offer pumps for:

- Cooling
- Filtration
- Part washing
- Machine tools

So whatever your industrial application needs, we have a solution we have a solution that will meet your expectations – and hopefully even exceed them.

### Dedicated global competences

In addition to our extensive global presence, Grundfos has established Machining Industry Competence Centres around the world, offering easy access to application specialists who are dedicated to your specific industrial area. This allows you the benefit of having just one contact person for your entire pump portfolio. This person will have detailed knowledge about your applications and your requirements and will be able to work closely with you on development projects. Should you decide to move your production abroad, we “move” with you, offering you expert advice all over the world in the language of your choice.

### Energy challenge

Together with Grundfos you can lead the way by switching to energy-efficient pumps. These pumps feature existing technology and can make a significant difference in reducing carbon emissions. And they offer immediate financial dividends. This is how we meet the energy challenge

### BENEFIT FROM A DEDICATED GLOBAL SUPPLIER

#### Competences

As a global player we are always close at hand with expert know-how – through our dedicated Machining Industry Competence Centres or one of our 80 sales and service companies around the world.

#### Energy

Energy efficiency is a focus area in everything we do at Grundfos. Our new iSOLUTION range is testimony to that as are the online tools we offer, e.g. the Design Tool.

#### Wide product range

Grundfos offers one of the most complete product ranges on the market, allowing you to have just one supplier for all your pump requirements.

# MAKING SURE YOUR SYSTEM IS UP TO SPEED

## iSOLUTIONS

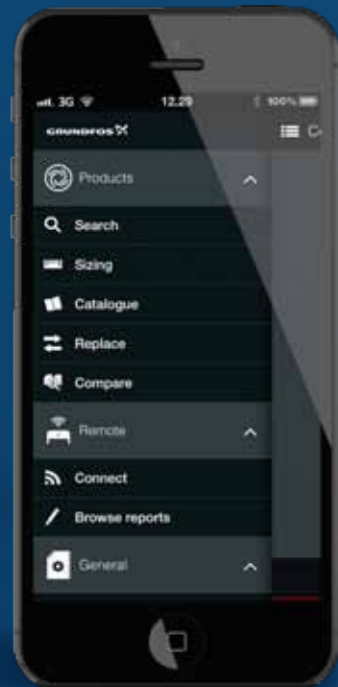
### Accelerate system performance and efficiency

iSOLUTION is the collective name for Grundfos' wide range of electronically controlled pumps and represents the ultimate in energy efficiency and intelligent control. Upgraded with the latest motor technology with variable frequency converters controlled by Grundfos sensors drives the innovative iSOLUTIONs are ideal in variable load operations as well as in applications where a high degree of process control is important.

Everything is easily programmed and commissioned with Grundfos GO from your iPhone or Android phone.

### Specifically for the machining industry, the iSOLUTION range offers the following benefits:

- One pump for several duty points
- Lower heat input into cooling lubricant
- Increased cooling efficiency
- Increased process safety
- Reduced operating costs



## PUMP AUDIT

### View replacement benefits before you buy

A pump audit is a valuable tool to find out whether you are wasting energy and money on an inefficiently operating system. The audit quickly determines if and where energy losses are occurring – and provides you with suggestions as to what can be done to remedy the situation, leading to:

- Energy savings
- Optimisation of pump set-up
- Reduced carbon emissions

In short, a pump audit is your guarantee that you will in fact benefit from replacing the existing pumps.

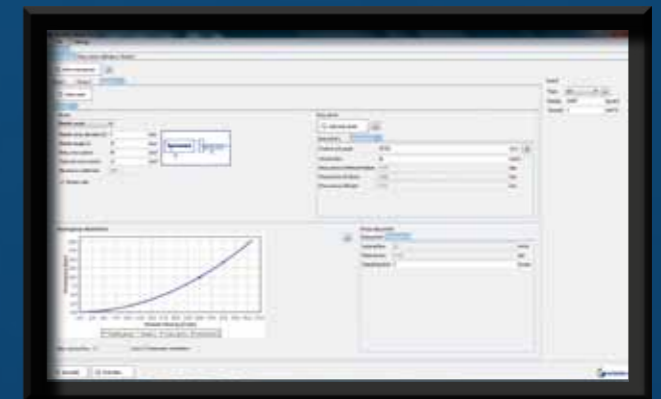


## DESIGN TOOL

### Grundfos Design Tool – making pump decisions easy

The Grundfos Design Tool enables professional and optimum configuration of a coolant system in a simple and understandable manner. In just a few minutes and through four easy steps the tool will guide you to better pump efficiency based on your system design, the nozzles, the valves and the pipes. The result is cost-efficient system operation – which may be further improved by choosing a Grundfos iSOLUTION if replacement is required.

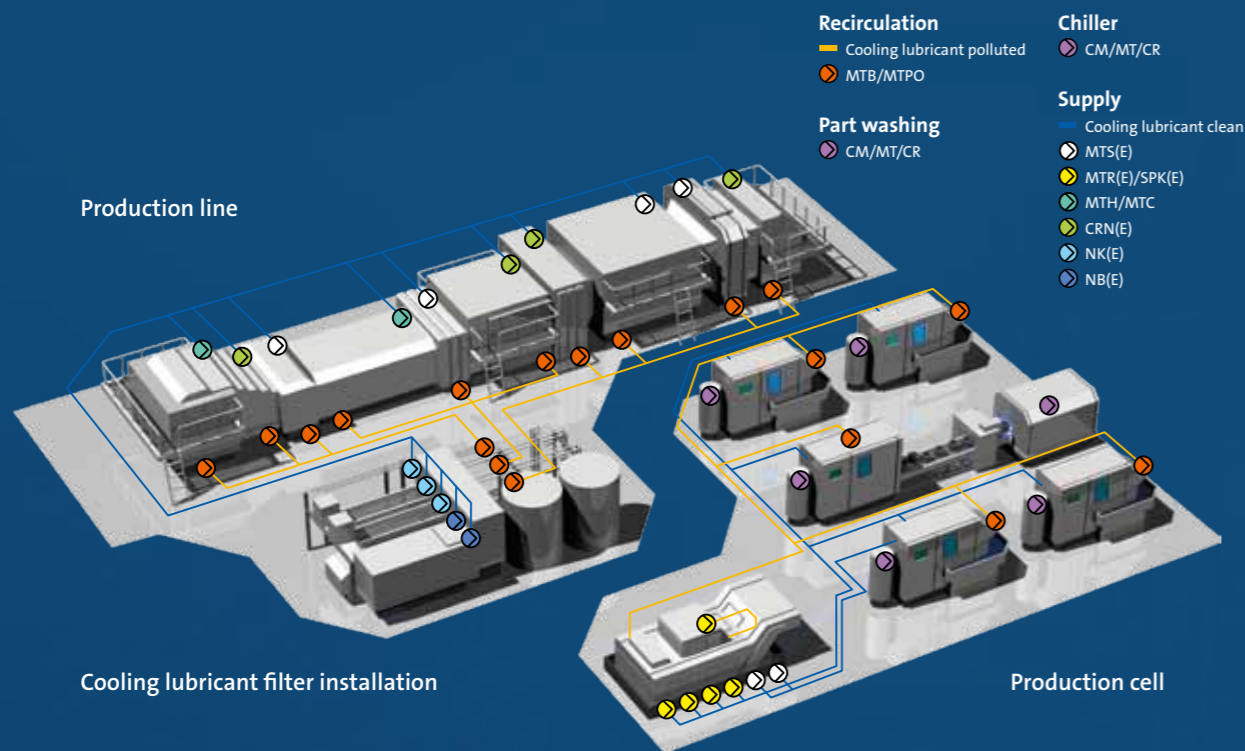
Go to <http://machining.grundfos.com> for a user-friendly guide to the Design Tool.



# ADVANCED SOLUTIONS FOR DEMANDING ENVIRONMENTS

Every application in the machining industry can be covered by a robust Grundfos product. Whether you are looking for a pump to be part of the actual production process or it is required for disposal purposes, we are able to provide you with a choice of top-of-the-line solutions. In addition to our

impressive range of high-quality pumps, we offer a wide array of motors, speed controls and monitors which will efficiently optimise your processes – and your energy consumption.



## Filtration

Reliable filtration is crucial in high-quality machine tool applications, prolonging the life of the tool as well as preventing the chips from damaging surfaces or tolerances. Pumps suitable for this application: MTA and MTB.

## Machine tool

Grundfos' range of high-pressure pumps offers unsurpassed accuracy and stability eliminating interference with the delicate interferences with the delicate machining processes. Equally important, the high efficiency of the pump ensures a remarkably low heat input into the cooling lubricant. Integrated frequency converters can be optionally supplied for increased efficiency and system flexibility. Pumps suitable for machine tool applications: MTH, MTS, MTR and SPK.

## Part washer

Suitable for media with increased viscosity and corrosiveness as well as for high solids content, the Grundfos recirculation pumps are ideal for cooling lubricant supply during lathing and parts cleaning. Particularly, the compact immersible pumps offer system benefits as they are integrated in the tank. Pumps suitable for this application are MTR and NB.

## Chiller

The reliable and thoroughly tested range of pumps for chiller offers a particularly diverse application spectrum. It covers cooling water circuits, washing plants, industrial circulation systems as well as general pressure increase applications. All pumps can be supplied with an e-motor to increase efficiency and control any process perfectly. Pumps suitable for this application: CM, CR, MT & NB all available in stainless steel.



Application	Boring	Sawing	Milling	Grinding	Spark erosion	Wire cutting	Turning	Chilling	Part washing	Filtration
CM(E)						■		■	■	



Application	Boring	Sawing	Milling	Grinding	Spark erosion	Wire cutting	Turning	Chilling	Part washing	Filtration
NB(E)/NK(E)			■	■	■			■	■	■



Application	Boring	Sawing	Milling	Grinding	Spark erosion	Wire cutting	Turning	Chilling	Part washing	Filtration
MTA	■	■	■							■



Application	Boring	Sawing	Milling	Grinding	Spark erosion	Wire cutting	Turning	Chilling	Part washing	Filtration
MTH	■		■	■	■	■	■	■	■	



Application	Boring	Sawing	Milling	Grinding	Spark erosion	Wire cutting	Turning	Chilling	Part washing	Filtration
CR(E)			■	■	■	■	■	■	■	



Application	Boring	Sawing	Milling	Grinding	Spark erosion	Wire cutting	Turning	Chilling	Part washing	Filtration
MTR(E)	■		■	■	■	■	■	■	■	■



Application	Boring	Sawing	Milling	Grinding	Spark erosion	Wire cutting	Turning	Chilling	Part washing	Filtration
MTS	■		■	■			■			



Application	Boring	Sawing	Milling	Grinding	Spark erosion	Wire cutting	Turning	Chilling	Part washing	Filtration
SPK(E)	■		■	■	■	■	■	■	■	■

All pumps are available with frequency converters that are particularly suitable in applications where a high degree of process control is important.

## GRUNDFOS

### Benefit from a multitude of Grundfos strengths

#### Global presence

- If you move, your regional contact person remains the same, allowing you to continue the dialogue in your local language.

#### Close relationships

- You have one contact person for your entire pump portfolio.

#### Professional support

- You receive world-class service, know-how, technical support and logistics.

#### Innovative solutions

- Our in-depth knowledge about your applications and requirements ensures outstanding solutions.

Go to [grundfos.com](http://grundfos.com) for more information  
– or to <http://machining.grundfos.com> for specific information  
on Grundfos and the machining industry.

#### Sign up

Sign up for Grundfos' dedicated machining industry newsletter  
at <http://machining.grundfos.com>