



Commercial Building Services

Grundfos MIXIT

An all-in-one solution for mixing loops in commercial buildings

A smart solution for you

GRUNDFOS 

Possibility in every drop

MIXIT makes it easy to build the optimal mixing loop

The Grundfos MIXIT solution combines all components of a traditional mixing loop into an all-in-one solution and helps reduce installation and commissioning time by up to 50%.

The solution only requires two components – the Grundfos MIXIT unit and a Grundfos MAGNA3 pump or a Grundfos TPE3 pump, which makes it fast and easy for installers to build the optimal mixing loop.

MIXIT integrates the temperature controller, the 2-way or 3-way valve, the actuator, the balancing valve and the sensors into one single plug-and-play component, making selection, installation and commissioning much easier. And thanks to its built-in temperature controller,

the mixing loop can operate during the construction phase – even before system integration is complete. If you're looking to optimise the energy efficiency of your building, MIXIT is the perfect solution, providing up to 25% energy savings through improved commissioning and balancing, and up to 15% energy savings through real-time, remote monitoring capabilities.

Designed for multiple heating and cooling applications, it can be used in both non-pressurised 3-way applications and pressurised 2-way applications. It also supports local, stand-alone operation through an outdoor temperature sensor, while the built-in connectivity links the solution to Grundfos BuildingConnect and other building management systems.

Now you can increase your building's energy efficiency

Incorrect commissioning of a building's HVAC systems can waste as much as 25% of all energy. And 33% of all buildings are commissioned incorrectly. That means there's a quite significant potential for energy savings. But how does it work?

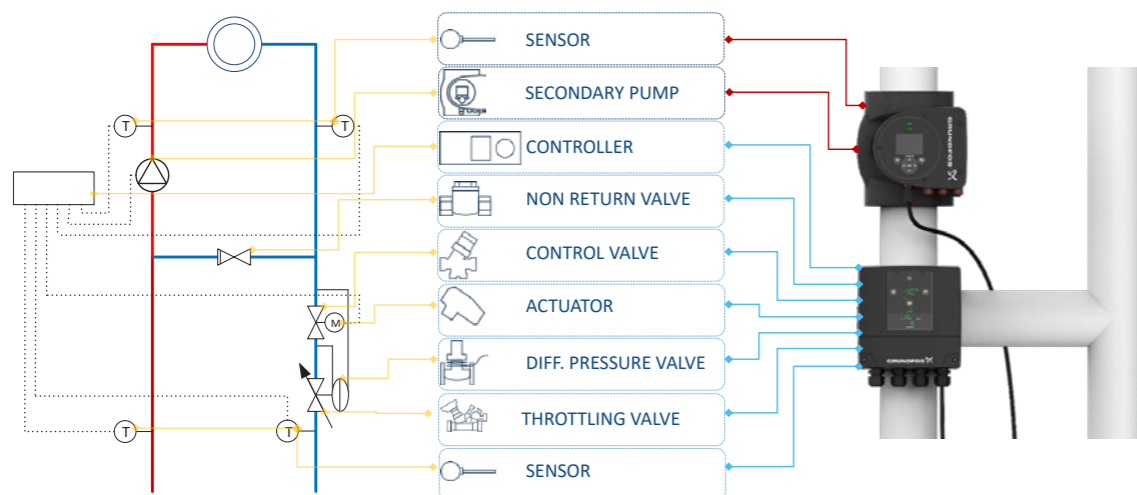
The most cost-effective way to reduce energy

Commissioning and balancing is the single most cost-effective strategy for reducing energy – and with MIXIT, commissioning is faster, easier and more reliable.

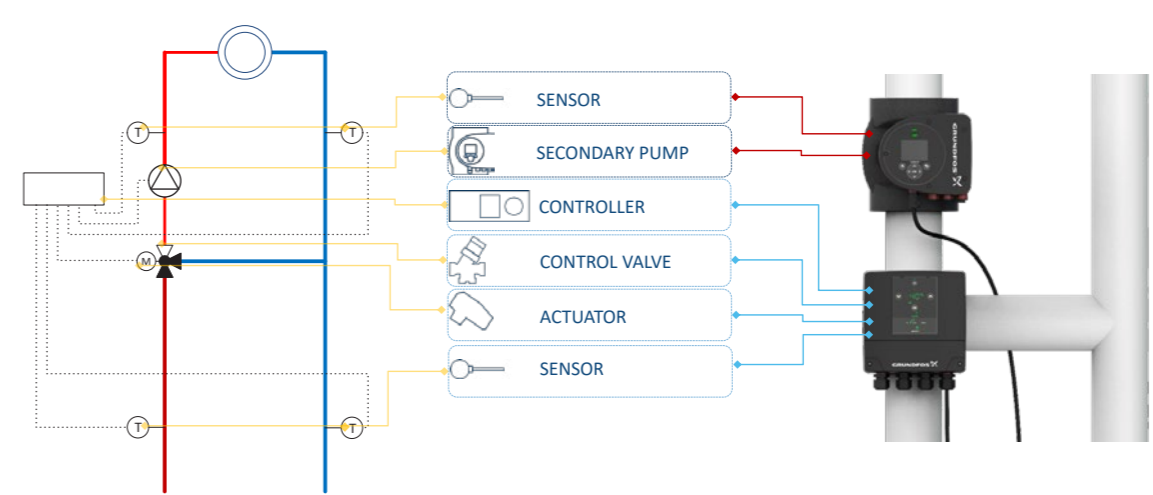
Commissioning of traditional mixing loops is complex and time-consuming, with as many as 12 components connected. If just one isn't commissioned correctly, the system's performance will be affected.

Grundfos MIXIT simplifies commissioning by combining the traditional 8-12 components into an all-in-one solution. You get faster and more efficient commissioning, and all components automatically adjust and balance to the system's demands, enabling up to 25% energy savings in your building's HVAC systems.

TWO-WAY MIXING LOOP



THREE-WAY MIXING LOOP



Real-time, remote monitoring elevates energy efficiency

If you want to increase your energy-saving potential, you can monitor your HVAC system and get complete transparency of the system's energy consumption – and save up to 15% energy.

The MIXIT solution comes with a built-in energy monitoring feature that offers real-time consumption data so you can quickly and easily find out where your system is wasting energy. You can easily access the data through the Grundfos GO app or by connecting MIXIT to the Grundfos BuildingConnect system or another building management system (BMS).

Thanks to an integrated fieldbus, MIXIT can easily be incorporated into BMS systems with an IP or the RS485 connection. MIXIT supports the BACnet and Modbus protocols.

Connecting to Grundfos BuildingConnect or a BMS also makes it possible to access real-time, remote monitoring, including alarm and warning notifications, so you can stay up to date on your system from the office or on the go. Here, you'll find a comprehensive performance overview for the complete mixing loop with more than 100 additional data points on your overall operations, including energy consumption in individual zones, supply temperature, flow, power and valve position. This also makes it easy to identify opportunities for further improvement. Below is an example of key MIXIT and MAGNA3 data points that you can monitor.

A combined solution that saves energy

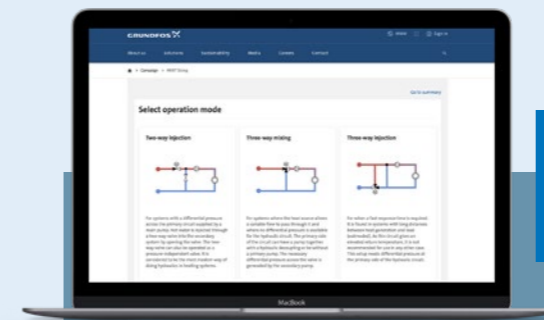
That means MIXIT and Grundfos BuildingConnect can save you up to 25% energy with commissioning and balancing, and up to 15% with real-time remote monitoring. At the same time, you get complete control over your operations and full transparency of your HVAC system's energy consumption.

MIXIT				P-GKP1-MAGNA 3			
Valve position	36	%	✓ 🔍	Energy	86	kWh	✓ 🔍
Flow	2,6	m³/h	✓ 🔍	Flow	4,2	m³/h	✓ 🔍
Warning code	0		✓ 🔍	Warning code	0		✓ 🔍
Alarm code	0		✓ 🔍	Alarm code	0		✓ 🔍
Setpoint temp.	46	°C	✓ 🔍	Speed %	39	%	✓ 🔍
Supply temp.	68	°C	✓ 🔍				
Status	Ready ✓ 🔍						

Supply temp.	68	°C	? 🔍	Flow	2,6	m³/h	? 🔍
Return temp.	34	°C	? 🔍	Energy	86	kWh	? 🔍

Tools that make your work easier

At Grundfos, we always strive to make life as easy as possible for our customers and partners. Below you can find a couple of tools that can help you find the right MIXIT unit and provide information about how to integrate into SCADA and BMS systems.

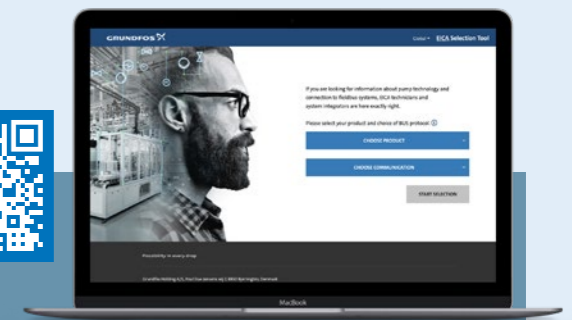


Use our new sizing tool to find the right MIXIT unit

With the new MIXIT online sizing tool, we've made it easy for you to size and select the right MIXIT unit for your next project. All you need to do is type in your system details to get the most suitable MIXIT solution – and perfect system integration in your building.

The tool lets you choose between three options: Two way-injection, three-way mixing and three-way injection. Each system is suited to different needs, such as the pressure you're working with, the possibility of variable flow or when you require a fast response time. Whatever you need, we have a MIXIT solution that will make life easier for you right away.

www.grundfos.com/campaign/mixit-sizing



EICA – the easy way to ensure seamless integration

With the The Grundfos EICA (Electrical Instrumentation Control Automation) tool gives technicians all the information they need to use data communication for pump integration in SCADA and BMS systems.

To use the tool, simply select the relevant product and the relevant BUS protocol type. The page will then display all the information you need to handle your projects efficiently.

www.grundfos-eica.com/

GRUNDFOS MIXIT IN SHORT



HIGH PERFORMANCE

Flawless interaction between system components and built-in flow sensor



ONE POINT OF CONTACT

You only need to call one supplier for service and support



ALL-IN-ONE SOLUTION

Merged from 8-12 components into one preassembled and factory-tested solution



INCREASED EFFICIENCY

Saving 50% of the installation and commissioning time



MORE DATA, MORE CONTROL

+100 data points available, 100% offsite optimisation



EASY SETUP

Access additional settings in Grundfos GO Remote

MULTIPLE APPLICATION SUPPORT

- Heating, cooling & combined heating and cooling
- MAGNA3 and TPE3 support, including double pump support

USER-FRIENDLY

- The simple MIXIT interface has basic information on temperature, supply, flow, return and setpoint, warnings/alarms, and valve openings
- Bluetooth connectivity enables easy integration with Grundfos GO Remote
- An overview in Grundfos GO Remote displays important data points
- Setups and commissioning wizards in Grundfos GO Remote provide an easy, user-friendly experience

ADVANCED VALVE AND CONTROLLER

- Built-in 2-way and 3-way valves
- KVS 6.3-40, settable KVS 1/10
- Pressure-independent 5-250 kPa*
- Built-in temperature controller with weather compensation
- Scheduling and warm weather shutdown
- Four advanced balancing limiters*
- Energy monitoring*



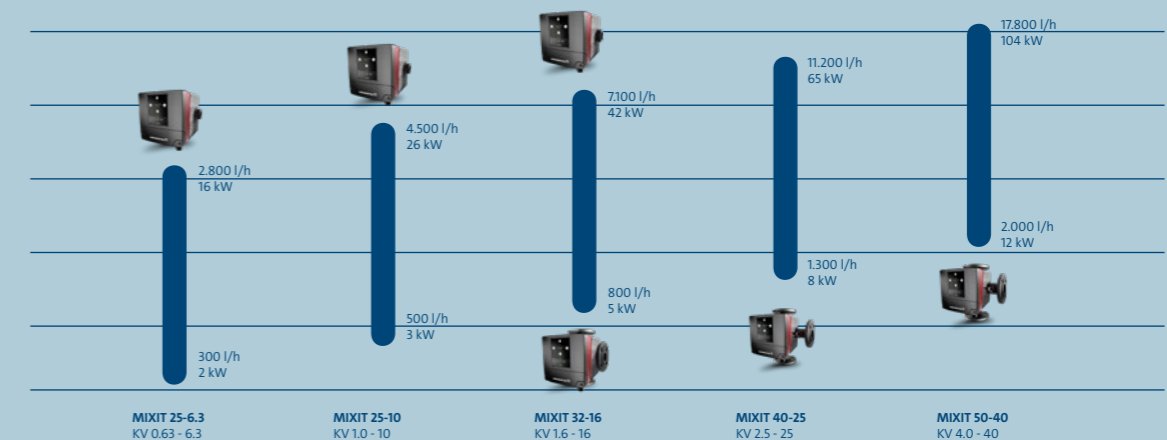
CONNECTIVITY AND UPGRADES

- Free built-in monitoring solution with the possibility to upgrade to Grundfos BuildingConnect Professional
- Built-in fieldbus (BACnet MS/TP & IP + MODBUS RTU & TCP) available as an upgrade

* DYNAMIC functionality

PERFORMANCE AND FLOW AREA: $\Delta T = 5^{\circ}K^*$

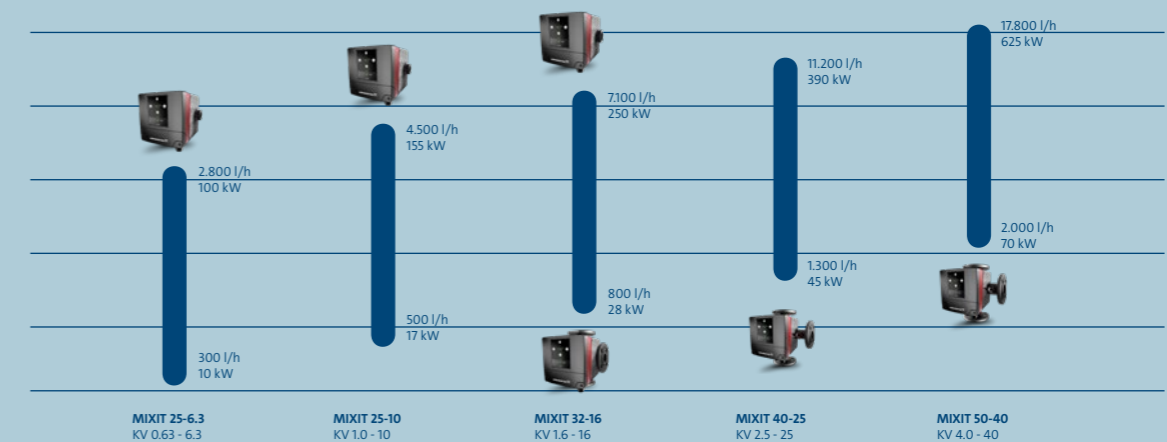
Flow @ $\Delta p_{v100} = 20 \text{ kPa}$
Power @ $\Delta T = 5^{\circ}K$



* Example for chiller/heat pump

PERFORMANCE AND FLOW AREA: $\Delta T = 30^{\circ}K^*$

Flow @ $\Delta p_{v100} = 20 \text{ kPa}$
Power @ $\Delta T = 30^{\circ}K$



* Example for boiler/district heating

MIXIT VARIANTS AND UPGRADES

	MIXIT	MIXIT DYNAMIC	DYNAMIC UPGRADE	CONNECT UPGRADE
STANDARD FUNCTIONS				
Temperature control	•	•		
Underfloor overheat protection	•	•		
Coil preheat and frost protection	•	•		
Frost protection	•	•		
Pump control modes	•	•		
Outdoor temperature compensation	•	•		
Eco functions				
Eco schedule and warm-weather shutdown	•	•		
Pressure independence		•	•	
Energy monitor		•	•	
Balancing limiters		•	•	
MONITORING AND CONTROL				
Grundfos BuildingConnect Free Monitoring	•	•	•	
Grundfos BuildingConnect Professional				•
Fieldbus Inegration (BACnet and Modbus)				•

All existing features of physical products remain unchanged with Dynamic and Connect upgrades.

Grundfos is one of the world's leading suppliers of solutions across the full range of pump applications – all the way from water supply to wastewater discharge. We think beyond the pump, and our goal is to provide you with intelligent solutions that achieve a higher level of performance in your systems. This approach has made us a preferred partner for contractors, consulting engineers and installers looking to build the most sustainable and efficient buildings and systems in the world.

To learn more, go to www.grundfos.com