

# DRYDEN AQUA INTEGRATED SYSTEM

DA-SY = DRYDEN AQUA INTEGRATED SYSTEM  
Biologically instead of chemically

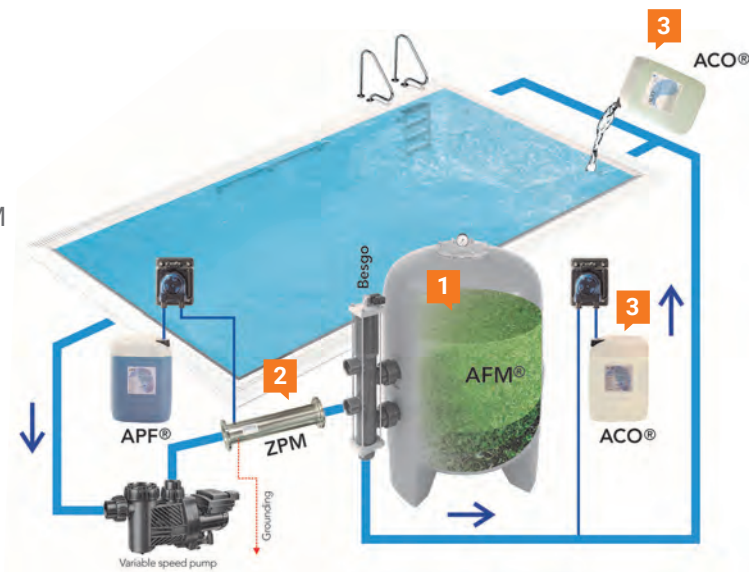
Traditional water treatment tries to prevent the spread of pathogens by using even more or stronger disinfectants. However, the spread of pathogens is a biological problem and therefore needs biological solutions: Instead of using even more or stronger disinfectants, our partner (Dryden Aqua) and we are designing a swimming pool system where pathogens cannot spread in the first place: **prevention instead of killing!**

DA-SY® consists of three integrated steps:

- 1 Filtration with AFM®
- 2 Coagulation and flocculation with APF® and ZPM
- 3 Catalytic oxidation with ACO®



Scan QR code and find out more about the principle in our video.



## Step 1: Filtration with AFM®

AFM® stands for Activated Filter Material; it is a revolutionary filter material made from green glass and has been developed by Dr Howard Dryden. AFM® can filter 30–50% more organic substances from pool water than quartz or glass sand. AFM® also has more catalytic and oxidising properties to protect it from bacterial colonisation. Using AFM®, no biofilm can form in the filter bed, meaning—no harmful trichloramine, no smell of chlorine, lower chlorine consumption and virtually no pathogens such as legionella. AFM® produces healthy air and crystal-clear water.

AFM® is successfully used worldwide in more than 100.000 public and private swimming pools.

## Step 2: Optimum coagulation and flocculation with APF® and ZPM

AFM® can achieve a nominal filter fineness of 4µm at a filtration speed of 20m/h. Using additional optimised coagulation and flocculation from APF® (All Poly Flocc) and ZPM (Zeta Potential Mixer), you will undercut your nominal filter sharpness of 0.1µm since ZPM in particular generates a turbulent environment, improving the mixing of chemicals with swimming pool water. This will also filter a large amount of dissolved substances. They make up approx. 80% of your chlorine requirements.

Lower chlorine consumption also means fewer disinfection by-products (DBPs).

## Step 3: Increased oxidation with ACO®

Certain pathogens and biofilm-protected bacteria colonies are enormously chlorine-resistant. ACO® is used as an oxidation catalyst and a chlorine stabiliser in open-air swimming pools, significantly increasing the sun's natural disinfection properties and protecting chlorine from photo-oxidation.

You can dose it by pump or manually.

**1. No grounds**  
Thanks to our bio-resistant filter material AFM®, bacteria have no grounds for development.

**2. No food**  
With perfected coagulation, flocculation and AFM® filtration, we deprive bacteria of their food and stop them from growing.

**3. Less chlorine, fewer disinfection by-products (DBPs):**  
DA-SY® filters the maximum amount of substances to reduce chlorine requirements to the absolute minimum. Less chlorine also means fewer hazardous disinfection by-products (DBPs) can form.



Water treatment Integrated parts Pool heating Dehumidification Pool cleaning Pool + accessories PVC fittings + pipes



## Your local retailer

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**WATER TREATMENT  
FILTER TECHNOLOGY**  
BERLIN<sup>3</sup> | BÜHNE<sup>3</sup> | DRESDEN<sup>3</sup>

www.behncke.com



## SO CLEAN. WITH BEHNCKE FILTER TECHNOLOGY

### The BEHNCKE quality guarantee

BEHNCKE filter tanks are made in Germany for quality you can rely on. High-quality raw materials, precise workmanship, consistent in-house quality management and compliance with ISO-certified standards form the BEHNCKE quality guarantee. Our filters are particularly durable. With appropriate care and maintenance, they will serve you for many years.

### Our filter series consists of three high-quality tanks

DRESDEN<sup>3</sup> is the reliable BEHNCKE all-rounder. This model and the other filter models, BÜHNE<sup>3</sup> and BERLIN<sup>3</sup> can achieve perfect filtration for your personal swimming pleasure. Thanks to their highly efficient glass filter material, they all contribute to maximum bathing pleasure with minimal chemical use.



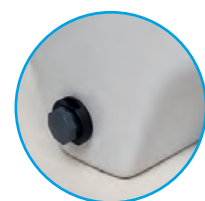
## THE NEW GENERATION. WHAT ARE THE ADVANTAGES?



Acrylic glass lid with high quality manometer



larger opening with a diameter of 300 mm



emptying of the container on the side of the foot

## DRESDEN<sup>3</sup> Filter tanks and systems



### DURABILITY AND SAFETY

The DRESDEN<sup>3</sup> filter technology effectively minimises the energy and water consumption of your pool system—as well as the need for chemical disinfection.

Just like all other filters, the DRESDEN<sup>3</sup> is manufactured with precision to ensure long-term operational safety. Besides this, it is also very user-friendly. Certified according to DIN-EN 16713, it is just perfect for daily use in private swimming pools. Crystal clear water with optimum energy consumption: DRESDEN<sup>3</sup> meets all the requirements of modern swimming pool filters.

#### DRESDEN<sup>3</sup> – easy handling:

- » Easy emptying of your filter, e.g. for winter storage, thanks to a drain cock with a GARDENA® hose coupling
- » Large service hatch at the top Ø 300 mm at all filters

## BÜHNE<sup>3</sup> Filter tanks and systems



### THE SOPHISTICATED SPACE MIRACLE

Equipped with a higher filter bed, the BÜHNE<sup>3</sup> tank is the entry level model of premium class water treatment.

The products in the BÜHNE<sup>3</sup> series impress in every aspect: power, functional safety and efficiency. When compared to the DRESDEN<sup>3</sup> series, this mid-range model provides great value for money with useful technical extra features. A typical BEHNCKE filter “made in Germany”!

#### BÜHNE<sup>3</sup> – clever extra features

- » Narrow tank base with a low height of just 1.25 m
- » With large lateral service hatch
- » Carrying out maintenance work and replacing the high-efficiency glass filter material is made very easy
- » Large service hatch at the top Ø 300 mm at all filters
- » With a large lateral service hatch of Ø 220 mm

## BERLIN<sup>3</sup> Filter tanks and systems



### FOR THE MOST STRINGENT REQUIREMENTS

The filter solution for the most stringent requirements

The innovative BEHNCKE functional filter technology with a high filter bed reduces not only energy consumption but also the use of chemicals. Especially in combination with highly efficient glass filter material, this filter achieves maximum results—for healthy and clean water. BERLIN<sup>3</sup> is the first choice for exacting swimming pool owners.

#### BERLIN<sup>3</sup> – premium meets optimum

- » Particularly high filter bed for better filtration results, in particular when using AFM® filter material
- » Thanks to a large service hatch at the top and an additional lateral service hatch, BERLIN<sup>3</sup> is particularly easy maintenance.
- » Large service hatch at the top of Ø 300 mm
- » Large lateral service hatch of Ø 220 mm

## SPECIFICATIONS Filter tanks and systems

### High-layer-filter tank DRESDEN<sup>3</sup>

Size and height	Ø 400 x 810 mm	Ø 500 x 810 mm	Ø 600 x 915 mm	Ø 750 x 1240 mm
Outer diameter	Ø 430 mm	Ø 525 mm	Ø 625 mm	Ø 780 mm
Connection *	D 50 / 1 1/2"	D 50 / 1 1/2"	D 50 / 1 1/2"	D 63 / 2"
Filter surface	0,13 m <sup>2</sup>	0,20 m <sup>2</sup>	0,28 m <sup>2</sup>	0,45 m <sup>2</sup>
Weight (approx.)	19 kg	21 kg	25 kg	51 kg

\* Supplied connection fitting with adhesive sleeves

### High-layer filter system DRESDEN<sup>3</sup>

Size x volume flow*	Ø 400 mm x 6 m <sup>3</sup> /h	Ø 500 mm x 10 m <sup>3</sup> /h	Ø 500 mm x 10 m <sup>3</sup> /h	Ø 600 mm x 14 m <sup>3</sup> /h	Ø 600 mm x 14 m <sup>3</sup> /h	Ø 750 mm x 25 m <sup>3</sup> /h	Ø 750 mm x 25 m <sup>3</sup> /h
Voltage	230 Volt	230 Volt	400 Volt	230 Volt	400 Volt	230 Volt	400 Volt
Power (P1)	0,45 kW	0,65 kW	0,63 kW	0,97 kW	0,75 kW	1,85 kW	1,62 kW

\* Volume flow was calculated using a pump output of 5mWS, considering DIN EN 16713 with of a flow rate of ≤ 50m/h. Information: In=indoor pool, pool recirculation of 6h; Au=outdoor pool, pool recirculation of 4h. The system dimensions differ from the container dimensions.

### High-layer-filter tank BÜHNE<sup>3</sup>

Size and height	Ø 500 x 1120 mm	Ø 600 x 1130 mm	Ø 750 x 1240 mm
Outer diameter	Ø 525 mm	Ø 625 mm	Ø 780 mm
Connection *	D 50 / 1 1/2"	D 50 / 1 1/2"	D 63 / 2"
Filter surface	0,20 m <sup>2</sup>	0,28 m <sup>2</sup>	0,45 m <sup>2</sup>
Weight (approx.)	38 kg	43 kg	55 kg

\* Supplied connection fitting with adhesive sleeves

### High-layer filter system BÜHNE<sup>3</sup>

Size x volume flow*	Ø 500 mm x 10 m <sup>3</sup> /h	Ø 500 mm x 10 m <sup>3</sup> /h	Ø 600 mm x 14 m <sup>3</sup> /h	Ø 600 mm x 14 m <sup>3</sup> /h	Ø 750 mm x 25 m <sup>3</sup> /h	Ø 750 mm x 25 m <sup>3</sup> /h
Voltage	230 Volt	400 Volt	230 Volt	400 Volt	230 Volt	400 Volt
Power (P1)	0,65 kW	0,63 kW	0,97 kW	0,75 kW	1,85 kW	1,62 kW

\* Volume flow was calculated using a pump output of 5mWS, considering DIN EN 16713 with of a flow rate of ≤ 50m/h. Information: In=indoor pool, pool recirculation of 6h; Au=outdoor pool, pool recirculation of 4h. The system dimensions differ from the container dimensions.

### High-layer-filter tank BERLIN<sup>3</sup>

Size and height	Ø 500 x 1480 mm	Ø 600 x 1450 mm	Ø 750 x 1500 mm
Outer diameter	Ø 525 mm	Ø 625 mm	Ø 780 mm
Connection *	D 50 / 1 1/2"	D 63 / 2"	D 63 / 2"
Filter surface	0,20 m <sup>2</sup>	0,28 m <sup>2</sup>	0,45 m <sup>2</sup>
Weight (approx.)	42 kg	44 kg	61 kg

\* Supplied connection fitting with adhesive sleeves

### High-layer-filter system BERLIN<sup>3</sup>

Size x volume flow*	Ø 500 mm x 10 m <sup>3</sup> /h	Ø 500 mm x 10 m <sup>3</sup> /h	Ø 600 mm x 14 m <sup>3</sup> /h	Ø 600 mm x 14 m <sup>3</sup> /h	Ø 750 mm x 25 m <sup>3</sup> /h
Voltage	230 Volt	400 Volt	230 Volt	400 Volt	400 Volt
Power (P1)	0,69 kW	0,63 kW	0,87 kW	0,75 kW	1,62 kW

\* Volume flow was calculated using a pump output of 5mWS, considering DIN EN 16713 with of a flow rate of ≤ 50m/h. Information: In=indoor pool, pool recirculation of 6h; Au=outdoor pool, pool recirculation of 4h. The system dimensions differ from the container dimensions.