# ELECTRIC DEWATERING PUMP SOLUTIONS











For over 50 years, Sykes has set the benchmark in dewatering pump technology.

We've also consistently engineered high-performance electric motor-driven pump sets to deliver reliable, efficient solutions for a wide range of applications from mines to municipalities.

Now, we're helping you cut carbon even further, without cutting performance.

Our expanded range of electric motor options deliver the same rugged durability and the same flow as our diesel-powered solutions, just with cleaner energy and fewer emissions.

Underground, above ground, or anywhere water gets in the way, Sykes pumps deliver future-proof solutions that support low-carbon operations.

#### Powering progress with electric pump solutions

Whether your project demands precision, flexibility, or eco-conscious engineering, our versatile range of electric motor-driven pump sets are ready to deliver. Designed to reliably meet diverse site requirements across mining, oil and gas, quarries, industrial, and municipal sites, our electric options include:

- Direct-On-Line (DOL) starter
- Soft Starter (SS)
- Variable Frequency Drives (VFD)

Each configuration is built to accommodate a broad range of flow and head combinations, ensuring optimal performance within the pump's design capabilities.

#### More ways to power up

All Sykes pumps can be configured to accommodate your site's specific needs.

#### ► Standard build

A standard build pump end is coupled to our electric motor with a galvanised sub frame making this configuration suitable for various applications.



#### ► Heavy duty mining specification

In-built discharge pipework makes this smart arrangement ideal for additional sensors to be included in the unit.



#### ► Electric complete with VFD

Heavy duty, bespoke engineered pump set complete with VFD allows this pump to operate from 30-80 Hz, delivering ultimate flexibility.

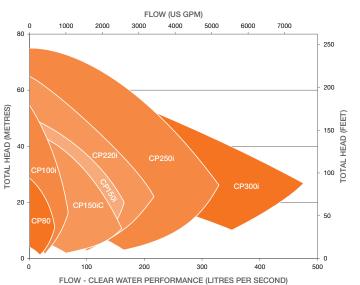


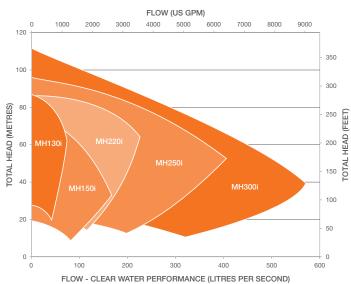
#### Technical data

Capable of operating from 30Hz to 80Hz, our range of dewatering pumps can have their operating window extended by choosing our electric pump configurations.

# **CP TOMBSTONE CURVE**

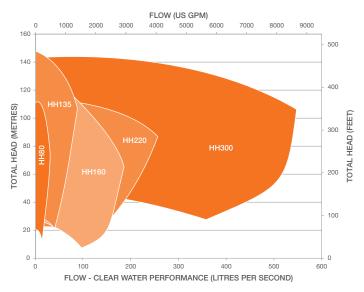
# **MH TOMBSTONE CURVE**

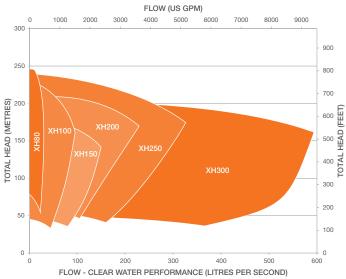




#### **HH TOMBSTONE CURVE**

## **XH TOMBSTONE CURVE**





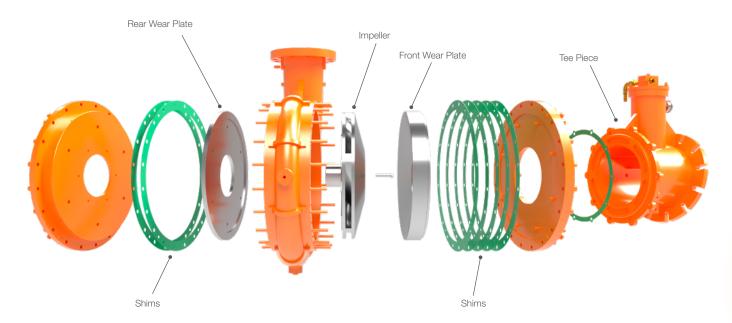


#### Materials of construction

All of our pumps are built to last, with internal components fabricated from SS316 (A351 [ASTM]) and external components cast from SG Iron 400/12 or 370/17 (A536 or 60-40-18 [ASTM]), depending on the model. They can also be manufactured in higher-grade materials of construction upon request, such as full 316 stainless steel, CD4MCU, chromium steel, SAF 2205, and SAF 2507. For further details, please refer to our specification sheet for the particular model.

#### Sykes unparalleled wear plate system

To keep your pump working at optimal hydraulic efficiency our innovative wear plate adjustment system is fast, efficient, and simple delivering minimum downtime, reduced labour costs, and minimised production losses.



# **SYKES WEAR PLATE SYSTEM**

# **COMPETITOR WEAR RING SYSTEM**



UNINTERRUPTED PRODUCTION



rast right Simple right Efficient





Wear plate clearance does not need to be adjusted often.



It's fast & easy to adjust clearance between impeller & front wear plate.

A gradual decline \ in hydraulic efficiency delivers a smaller loss.



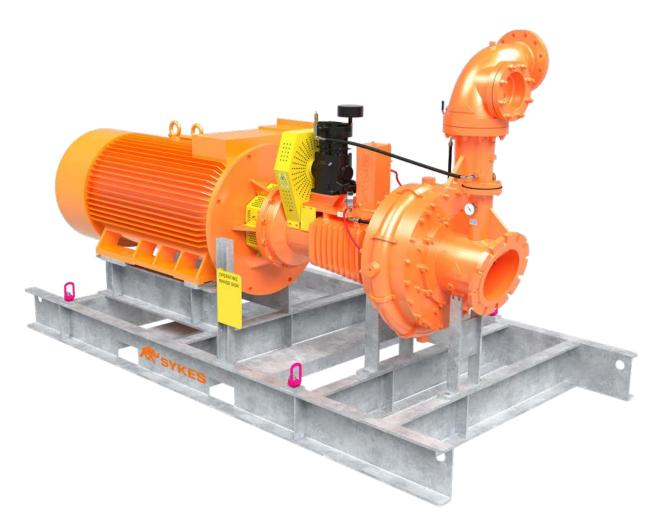
back in action. This means significantly less downtime, lower labour costs and increased overall efficiency.







Replacing wear rings means significantly more downtime and higher labour costs which equals unnecessary production losses.



#### **Product specifications**

The following inclusions come as standard on all of our electric pumps sets:

- Sykes automatic priming pump end
- Sykes SS5 compressor driven off pump shaft
- Mechanical seal oil lubricated hard faced capable of running dry for extended periods
- Ball or flap type non-return valve
- 4 pole 415/3/50 Hz electric motor
- SAE pump/motor adaptor housing
- Centa a type flexible coupling
- Galvanised standard duty sled c/w fork tynes
- 4 x lift eyes
- Operating range sign
- Guard
- Manual pouch

#### Optional extras

Please contact us to discuss these optional extras:

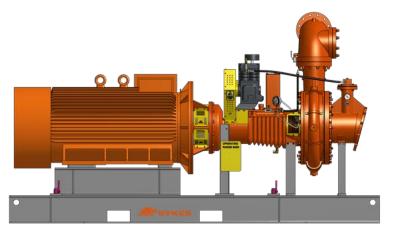
- Additional operational, mobility and safety extras such as: suction and discharge couplings, strainers. These can all be selected and fitted to our Electric Range (ER) pump units.
- Our High Head (HH) and Extra High Head (XH) pump ranges can be provided with gland seal and auto-greaser lubrication systems (HH80, HH135-mech seal only).
- Our ER build configuration can use any site approved electric mining motor.
- Other pump materials of construction are also available upon request: full 316 stainless steel, CD4MCU, chromium steel, SAF 2205 and SAF 2507.
- ER pumps are Direct-On-Line (DOL) as standard but Soft Starter and VFD available upon request.
- ER pumps are supplied on a standard galvanised skid but can be customised with heavy duty skids, trailers, and pontoon-mounted arrangements.

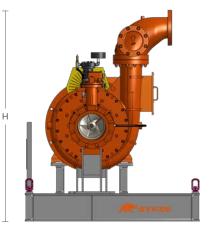
# Cut carbon without cutting performance

The Direct-On-Line (DOL) and Soft Starter (SS) options allow the pump to operate cost effectively at 1480 RPM with a 4 pole motor. The Variable Frequency Drive (VFD) allows the pump to operate at multiple speeds across the range of the curve from 30Hz to 80Hz.

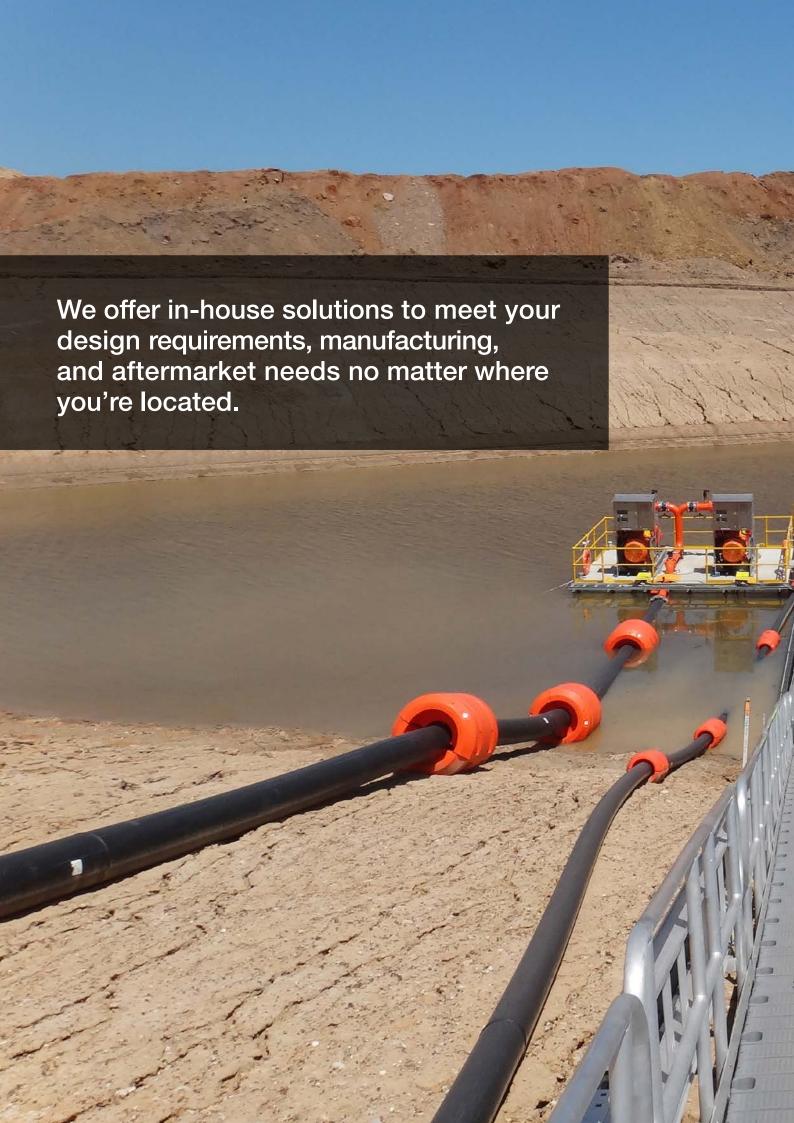
MODEL	Motor power DOL (4 pole 50Hz)	Motor power for full curve VFD (50 HZ)	Max RPM allowed	L x W x H (m)	Weight (kg) max RPM motor
CP80i-ER	7.5	15	2400	1.7 x 1.13 x 1.13	600
CP100i-ER	7.5	30	2400	2.0 x 1.18 x 1.37	940
CP150iC-ER	15	45	2200	2.0 x 1.43 x 1.37	1160
CP150i-ER	30	75	2200	2.3 x 1.43 x 1.37	1345
CP220i-ER	37	90	2000	2.3 x 1.5 x 1.42	1670
CP250i-ER	75	185	1800	2.8 x 1.6 x 1.6	2910
CP300i-ER	90 (6 pole)	220	1300	3.5 x 1.78 x 1.55	4170
CP310-ER	160	250	1700	3.20 x 1.78 x 1.72	3495
MH130i	55	75	1600	1.95 x 1.5 x 1.56	1256
MH150i	75	110	1600	2.5 x 1.48 x 1.57	1875
MH220i	110	185	1800	3.3 x 1.57 x 1.66	3015
MH250	160	315	1850	3.0 x 1.67 x 1.68	3385
MH300i	250	355	1700	3.45 x 1.87 x 1.86	4430
HH80-ER	15	55	2400	1.95 x 1.2 x 1.21	970
HH135-ER	75	160	2000	2.6 x 1.43 x 1.60	2300
HH160i-ER	90	185	2000	3.2 x 1.5 x 1.56	3000
HH220i-ER	132	355	2100	3.5 x 1.6 x 1.7	3800
HH300-ER	630	710	1600	4 x 1.93 x 1.82	6900
XH100-ER	110	185	1800	3.1 x 1.42 x 1.41	3000
XH150-ER	185	315	1800	3.35 x 1.61 x 1.76	3870
XH200-ER	355	630	1750	4 x 1.82 x 2.05	6100
XH250-ER	450	710	1850	4 x 1.88 x 2.8	6600
XH300-ER	710	850	1600	4.3 x 2.03 x 1.91	8300

Note: Final weight and dimensions will depend on completed specifications and options, subject to manufacturing tolerances.



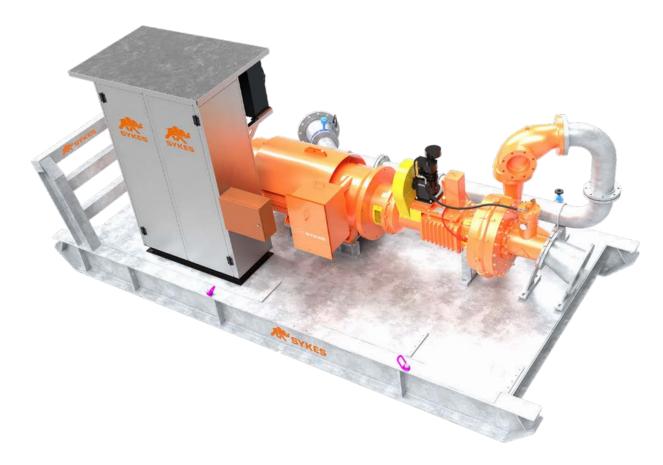


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#### **Engineered solutions**

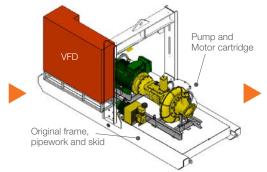
Whatever the need, we deliver customised and innovative solutions that meet and exceed your targets and expectations. We can provide you with additional electrical equipment, such as Soft Starters or VFDs, and other smart solutions to get the best performance from your pump. Pumps can be manufactured and engineered to suit your site's needs, including mounting on skids, trailers or pontoons, offering flexibility and accessibility to your pump for operation and maintenance.

#### ► Conversion kits from diesel to electric

We offer engineered solutions to convert your diesel engine dewatering pumps into electric-motor-run solutions. If a VFD or Soft Starter is required to run the pump, this can be supplied.



Original Sykes diesel powered unit



Sykes engineered retrofit drawing



Sykes unit converted to electric power

#### ► Containerised units

Extreme weather conditions like dust storms, snow, and heat, can significantly impact pump performance. Installation in a containerised unit not only protects the pump while in operation, but also provides extra security.



#### ► Pontoon mounted units with walkways

Pontoon mounted units assist with consistent suction lift, and ensure that the system's Net Positive Suction Head available (NPSHa) is greater than the Net Positive Suction Head required (NPSHr), thereby reducing potential for cavitation.

The installation of walkways provide easy and safe pump access from shore for service and inspection.



# **SELF-PRIMING SYSTEMS**



#### Compressor prime

Features a twin cylinder air compressor which passes a jet of compressed air through a venturi-type jet and nozzle to evacuate air from the pump casing and suction line. It makes sure priming is fast, positive and continuous, even under 'snore' conditions. The standard priming system has minimal moving parts which greatly reduces maintenance requirements.



#### Anti-spit prime

The new anti-spit technology mounts on top of the pump's priming tee and stops water from discharging out of the nozzle after priming the pump. This means that sewage bypass, contaminated water, and harsh chemicals no longer discharge to the ground and surrounding environment.



## Diaphragm prime

Features a high-capacity diaphragm pump that evacuates air from the pump casing and suction line. A robust, float-driven positive seal arrangement prevents carry-over to the environment.



#### Vacuum prime

A high-capacity vacuum pump in combination with a robust primary tank floatation system. It evacuates air from the pump casing and suction line, resulting in a fast and effective priming and repriming set-up. The vacuum prime is ideal for wellpoint dewatering and long suction conditions.

# **SYKES SERVICE**

With every one of our products supported by our dedicated, highly trained service teams, we consistently deliver optimised productivity, slashed project downtime, and improved workplace safety.

Our fully equipped service centres provide tailored service solutions to every one of our customers. Ranging from routine service and maintenance to urgent repairs, our fully equipped vehicles are ready to be dispatched to carry out on-site servicing and repairs quickly and efficiently.

Our highly experienced service team can provide service solutions for not only Sykes pump equipment, but also other branded pumps. This includes general service, minor and major overhauls, as well as retrofit and upgrades.

We offer a range of preventive maintenance and service options. Please contact your Sykes representative for a service quote for your site:

- Commissioning Service
- 250 Hour Service three monthly maintenance check to ensure optimal pump performance and to support pump longevity
- 500 Hour Service six monthly maintenance plan that includes all elements of the three monthly service plus additional tests and inspections
- 1000 Hour Service the twelve monthly service is our most comprehensive preventive maintenance and service program
- Extended Service Contract covers replacement costs and labour for major components

# **SYKES COMMISSIONING**

We deliver systems that are designed and installed to meet your exact operational requirements.

The professional installation and commissioning of pumps is the first step towards smooth ongoing operations. Our trained pump technicians will arrive on-site to perform the pump commissioning checks and guarantee that the pump has been installed and started-up as specified to reduce the risk of breakdown following installation.

# SYKES SPARES KITS

We offer a range of spares kits to address any accidental breakdowns throughout the life of your pump. We offer:

- Recommended operational spares kits for all pump models
- Major wear part kits for all pump models
- Service kits for different service intervals
- Customised spares kits tailored to your operation

# **TRAINING**

Our experienced service experts design and deliver customised on-site training programs. Contact the Sykes service team for a quote.





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