

Applications and Products







Pumping Solutions







Competence

SIHI has been providing high quality, liquid and gas, pumping solutions for almost 100 years.

Award winning solutions reinforce the Company-wide vision of liquid pumps, vacuum pumps, compressors and engineered systems for a better future.

Markets

Extensive application knowledge combined with a highly respected product range, within SIHI, provides our customers with total confidence.

Chemical, industrial, energy, and environmental markets all benefit from SIHI solutions.

Worldwide

Greater than 1600 employees are strategically located in excess of 60 countries in which to serve our customers.

Our partners can feel secure knowing that support is within easy reach.

More than a pump...

Ongoing innovation underpins customer satisfaction, continual improvement, and ensures that the strong SIHI client base benefits from the latest proven technology.

Senior-level project management, communication, and product excellence from the SIHI team results in simple and timely integration of any engineered systems.

Liquid Technology

- + End-suction centrifugal pumps
- + Side channel self-priming pumps
- + Multi-stage centrifugal pumps
- + Pitot tube pumps
- + Vertical centrifugal pumps
- + Hygienic pumps
- + Mixers

Vacuum Technology

- + Vacuum pumps
- + Compressors
- + Lobular (Roots) blowers
- + Gas and steam ejectors
- + Dry vacuum pumps

Engineered Systems Technology

- + Vacuum systems
- + Compressor systems
- + Membrane recovery systems
- + Liquid systems







Flexible options

- + Variable speed drive
- + Condition monitoring SIHI^{detect}
- + Seal-less
- + Engineered sealant systems
- + Distributed Control System (DCS)

+ ..

Reducing Life-Cycle Costs ...

Capital Investment

- + Highly efficient manufacture+ Lean process culture
- + Staff development
- о запа в о того р ттогто

Reducing Power Consumption

- + Enhanced hydraulic efficiencies
- + High efficiency motors

Improving Reliability

- + Robust construction
- + Quality manufacture
- + Low NPSH

Simplifying Maintenance and Operation

+ Ergonomic design

+ Quality sealing

+ ISO/DIN/ASME standards

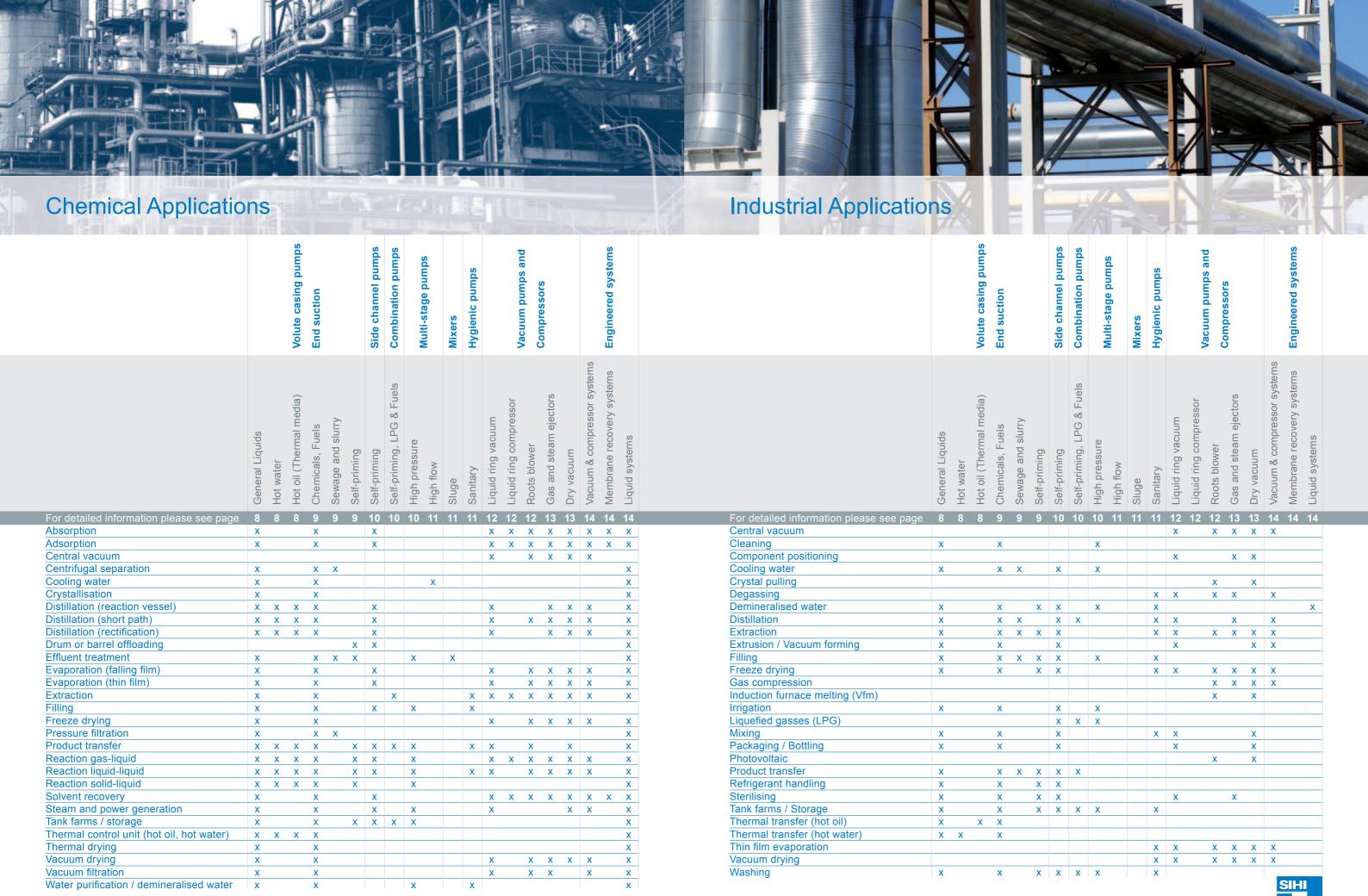
Support the Global Market

+ Global Service network

Preserving the environment

- + Ecological responsibility
- + Reduced effluent and waste



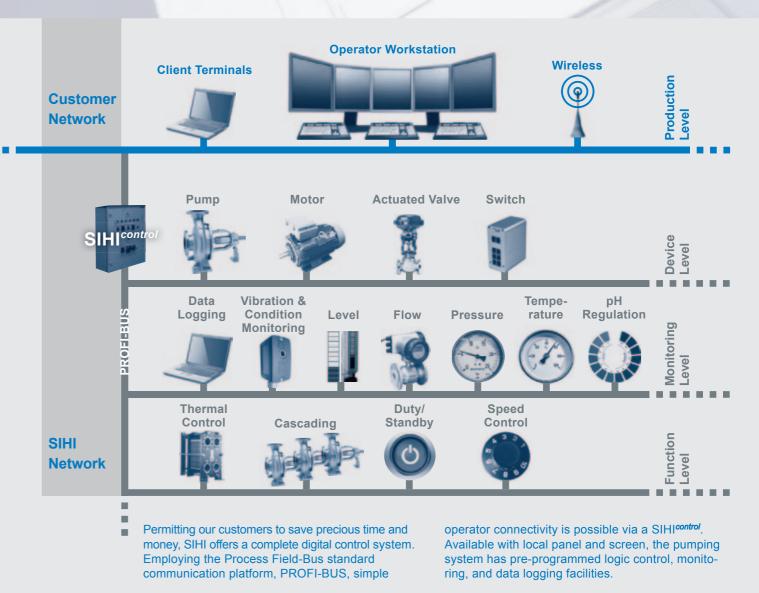




Energy & Environmental Applications

			Volute casing pumps	End suction			Side channel pumps	Combination pumps		Mutti-stage pumps	Mixers	Hygienic pumps		Vec samina milliosV					Engineered systems	
	General Liquids	Hot water	Hot oil (Thermal media)	Chemicals, Fuels	Sewage and slurry	Self-priming	Self-priming	Self-priming, LPG & Fuels	High pressure	High flow	Sluge	Sanitary	Liquid ring vacuum	Liquid ring compressor	Roots blower	Gas and steam ejectors	Dry vacuum	Vacuum & compressor systems	Membrane recovery systems	Liquid systems
For detailed information please see page	8	8	8	9	9	9	10	10	10	11	11	11	12	12	12	13	13	14	14	14
For detailed information please see page Boiler feed	8	8	8	9	9	9	10 X	10	-	11	11	11	12	12	12	13	13	14	14	14
Boiler feed	8 X	8	8	9	9	9		10	10 x		11	11	12	12	12	13	13	14	14	14
For detailed information please see page Boiler feed Cleaning Cooling water		8	8	9	9	9		10	-	11 x	11	11	12	12	12	13	13	14	14	14
Boiler feed Cleaning	X	8	8	9	9	9		10	-		11	11	12	12	12	13	13	14	14	14
Boiler feed Cleaning Cooling water Condensate Condenser evaporation	X	8	8	9	9	9	X	10	X		11	11	12 x	12	12	13 x	13	14	14	14
Boiler feed Cleaning Cooling water Condensate Condenser evaporation De-scaling (Metal)	X	8	8	9	9	9	X	10	X		11	11		12	12		13	14	14	14
Boiler feed Cleaning Cooling water Condensate Condenser evaporation De-scaling (Metal) Drainage	X	8	8	9 X	9 X	9	X	10	X		11	11		12	12		13	14	14	14
Boiler feed Cleaning Cooling water Condensate Condenser evaporation De-scaling (Metal) Drainage Irrigation	X X X	8	8			9	X	10	X		11	11		12	12		13	14	14	14
Boiler feed Cleaning Cooling water Condensate Condenser evaporation De-scaling (Metal) Drainage Irrigation Pressure boosting	X X X	8	8	X		9	X	10	X	X	11	11		12	12		13	14	14	14
Boiler feed Cleaning Cooling water Condensate Condenser evaporation De-scaling (Metal) Drainage Irrigation Pressure boosting Product transfer	X X X	8	8	X		9	X	10	X X	X	11	11		12	12 X		13	14	14	14
Boiler feed Cleaning Cooling water Condensate Condenser evaporation De-scaling (Metal) Drainage Irrigation Pressure boosting Product transfer Reverse osmosis	X X X	8	8	X	X	9	X		X X X	X	11	11	X	12				14	14	14
Boiler feed Cleaning Cooling water Condensate Condenser evaporation De-scaling (Metal) Drainage Irrigation Pressure boosting Product transfer Reverse osmosis Sludge Mixing	X X X X	8	8	X X	X	9	X X X		X X X X	X	11 x	11	X	12 x				14	14	
Boiler feed Cleaning Cooling water Condensate Condenser evaporation De-scaling (Metal) Drainage Irrigation Pressure boosting Product transfer Reverse osmosis Sludge Mixing Solvent recovery	X X X X X	8	8	X X	X	9	X X X		X X X X	X		11	X					14	14 X	14
Boiler feed Cleaning Cooling water Condensate Condenser evaporation De-scaling (Metal) Drainage Irrigation Pressure boosting Product transfer Reverse osmosis Sludge Mixing Solvent recovery System priming	x x x x x x x x x x	8	8	x x x	X	9 x	X X X X	X	X X X X	X		11	X	X	X	X	X			
Boiler feed Cleaning Cooling water Condensate Condenser evaporation De-scaling (Metal) Drainage Irrigation Pressure boosting Product transfer Reverse osmosis Sludge Mixing Solvent recovery System priming Tank farms / storage	x x x x x x x x x x x x x x x x x x x	8		x x x	X		X X X X		X X X X	X		11	X	X	X	X	X			x
Boiler feed Cleaning Cooling water Condensate Condenser evaporation De-scaling (Metal) Drainage Irrigation Pressure boosting Product transfer Reverse osmosis Sludge Mixing Solvent recovery System priming Tank farms / storage Thermal media (hot oil)	x x x x x x x x x x x x x x x x x x x		8 x	x x x x	X		X X X X	X	X X X X	X		11	X	X	X	X	X			x
Boiler feed Cleaning Cooling water Condensate Condenser evaporation De-scaling (Metal) Drainage Irrigation Pressure boosting Product transfer Reverse osmosis Sludge Mixing Solvent recovery System priming Tank farms / storage Thermal media (hot oil) Thermal transfer (hot water)	x x x x x x x x x x x x x x x x x x x	8 x		x x x	X		X X X X	X	X X X X	X		11	X	X	X	X	X		X	x
Boiler feed Cleaning Cooling water Condensate Condenser evaporation De-scaling (Metal) Drainage Irrigation Pressure boosting Product transfer Reverse osmosis Sludge Mixing Solvent recovery System priming Tank farms / storage Thermal media (hot oil)	x x x x x x x x x x x x x x x x x x x			x x x x	X		X X X X	X	X X X X	X		11	X	X	X	X	X			x

From concept to integration



Reduce Life Cycle Cost with SIHI

La Capital Cost
Lenergy (Power)
Lene





Hot water

Flow rate

Pressure

Speed

Temperature

Features

+ Uncooled seals

+ High efficiency

Configuration

+ Horizontal

+ Bare shaft

Standards

Priming

+ Flooded

Materials

SIHI Type

ZHN. ZDN. ZEN

EN 733, EN 22858

Shaft Sealing

+ Mechanical seal

Nodular cast iron, cast steel

+ Secondary vapour separator

Head

Performance

600 m³/h

95 m

230 °C

40 bar

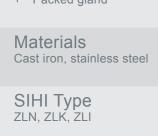
3600 rpm

Volute casing pumps – End suction

Volute casing pumps - End suction

General Liquids Performance 1800 m³/h Flow rate Head 140 m 170 °C Temperature 16 bar Pressure 3600 rpm Speed Features + High efficiency + Modular design + Highly reliable Configuration + Horizontal or vertical

+ Bare shaft or close coupled Standards EN 733, ISO 9908 Priming + Flooded Shaft Sealing + Mechanical seal + Packed gland







Hot oil (Thermal media)

1000 m³/h

95 m

350 °C

16 bar

3600 rpm

Performance

Flow rate

Pressure

Speed

Temperature

Features:

+ Uncooled seals

+ High efficiency

Configuration

Standards

EN 733

Priming

+ Flooded

Shaft Sealing

+ Mechanical seal

Nodular cast iron, cast steel

+ Radial lip seal

Materials

+ Horizontal or vertical

+ Secondary containment

+ Bare shaft or close coupled

Head





Features + High efficiency + Highly reliable + Modular design Configuration

Performance

Chemicals and Fuels

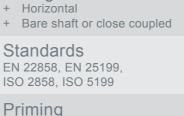
2200 m³/h

150 m

400 °C

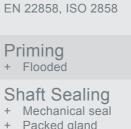
16 bar

3600 rpm





Materials
Cast iron, nodular cast iron, cast steel, stainless steel, special alloys
SIHI Type



Sewage and slurry

800 m³/h

100 m

120 °C

10 bar

3600 rpm

Performance

Flow rate

Pressure

Speed

Temperature

Features

+ Free flow impeller

+ Non-clogging

+ High efficiency

Configuration

+ Horizontal

+ Bare shaft

Standards

Head

Shaft Sealing
+ Mechanical seal
+ Packed gland
_
Materials
Matchala



DBS



Self-priming

Performano	e
Flow rate	300 m ³
Head	90 m
Temperature	120 °C
Pressure	16 bar
Speed	3000 rp

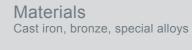
Features						
+	Gas handling					
+	Solids handling					
+	Highly reliable					

С	onfiguratio
	Horizontal
+	Bare shaft

Standards	
EN 733	

Priming + Self-priming
Shaft Sealin

Sh	naft Sealing
+	Mechanical seal















Side channel pumps Combination pumps Multi-stage pumps

Self-priming Self-priming, LPG & Fuels High flow High pressure Sludge Sanitary Performance Performance Performance Performance Performance Performance Flow rate Flow rate 350 m³/h Flow rate 450 m³/h Flow rate 100000 m³/h Flow rate 7200 m³/h Flow rate 200 m³/h Digester vol. 22000 m³ 354 m Head 200 m Head 1600 m Head 150 m Head 85 m Head 10 bar Pressure 180 °C 120 °C Temperature 180 °C Temperature 80 °C Temperature 130 °C Temperature Temperature 1500 rpm Speed Pressure 40 bar Pressure 40 bar Pressure 160 bar Pressure 16 bar Pressure 16 bar Speed 3600 rpm Speed 3600 rpm Speed 3600 rpm Speed 1800 rpm Speed 3000 rpm Features Features Features Features Features Features + Low NPSH + High efficiency + High efficiency + Non-clogging + Highly reliable + High efficiency + High reliable + Patented balancing device + Variable pitch blades + Reverse flow + Solids handling + Modular design + Secondary containment + Modular design + Low NPSH + Highly reliable + Low maintenance + Surface roughness < 3.2 μm Configuration Configuration Configuration Configuration Configuration Configuration + Vertical + Horizontal or vertical + Horizontal + Horizontal + Vertical + Horizontal + Close coupled + Bare shaft or close coupled + Bare shaft + Bare shaft + Bare shaft or close coupled + Close coupled Standards Standards Standards Standards Standards Standards EN 25199, ISO 5199 Food great standard 3A1 EN 734 ANSI or ISO ANSI or ISO Priming Priming Priming Priming Priming Priming + Flooded + Self-priming, gas handling + Flooded, self-priming + Flooded + Flooded + Flooded or self-priming **Shaft Sealing** Shaft Sealing Shaft Sealing **Shaft Sealing** Shaft Sealing **Shaft Sealing** + Mechanical seal + Mechanical seal + Lip seal system + Mechanical seal + Mechanical seal + Mechanical seal + Packed gland + Packed gland + Packed gland + Packed gland + Magnetic coupling + Magnetic coupling Materials Materials Materials Materials Materials Materials Cast iron, nodular cast iron, Cast iron, nodular cast iron, bronze, Cast iron, nodular cast iron, Cast iron Cast iron AISI 316L stainless steel bronze, stainless steel, special alloys stainless steel bronze, stainless steel, special alloys SIHI Type SIHI Type SIHI Type SIHI Type SIHI Type SIHI Type



CEB, SC

AOH, AKH, ASH, AKL, AKV, CEH,



UEA, TKH



MSL, MSM, MSC, MSH



RA, RK, ŘŤ



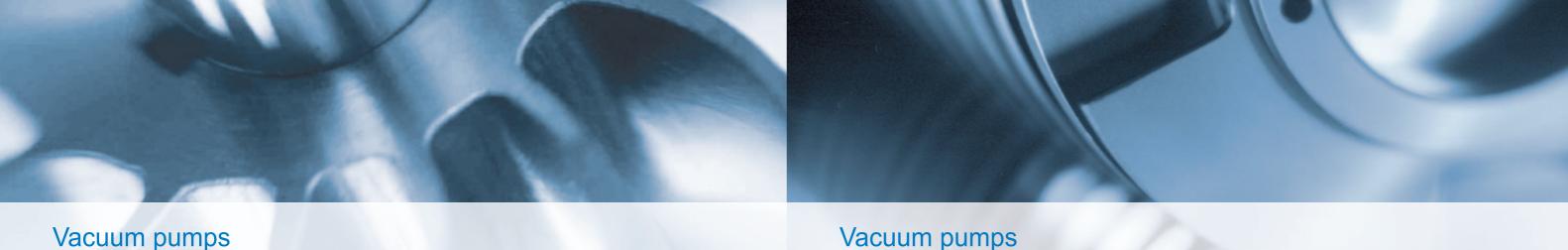
Pitot tube pumps



NHK, SHK

Hygienic pumps





Vacuum pumps

Roots blower Liquid ring vacuum Liquid ring compressors

Performance Suction capacity 15000 m³/h Operating pressure 33 mbar Temperature 200 °C Speed 3600 rpm

Performance Suction capacity Operating pressure 11 bar Temperature Speed

15000 m³/h 200 °C 3600 rpm

Performance Suction capacity Operating pressure 1 mbar Temperature

14000 m³/h 60 °C 3600 rpm

Gas and steam ejectors

Performance Suction capacity

7500 m³/h 4 mbar 200 °C

Dry vacuum industrial

Performance Suction capacity Operating pressure Temperature

1500 m³/h 0.001 mbar 135 °C

Dry vacuum chemical

Performance Suction capacity Operating pressure Temperature

1000 m³/h 0.01 mbar 135 °C

Features

- + Modular design
- + Highly reliable
- + Cavitation protection

Configuration

- + Horizontal
- + Bare shaft or close coupled

Standards ANSI or ISO

Priming

Vacuum

Shaft Sealing

- + Mechanical seal
- + Packed gland
- + Magnetic coupling

Materials

Cast iron, bronze, stainless steel, special alloys

SIHI Type LEM, LEMS, LEMS, LEH, LOH, LPHX, LPH, SL

Features

- + Highly reliable
- + Cool operation
- + Low maintenance

Configuration

- + Horizontal
- + Bare shaft

Standards ANSI or ISO

Priming

Vacuum

Shaft Sealing

- + Mechanical seal
- + Packed gland

Materials Cast iron, bronze,

stainless steel, special alloys

SIHI Type LOH, LPHX, LPH, KPH, KSH, KPH

Speed

Features

- + Low leakage rate
- + Highly reliable

- + Horizontal

Standards ANSI or ISO

Priming

Shaft Sealing

+ Low maintenance

- Configuration

+ Close coupled

Vacuum

+ Mechanical seal

Materials Nodular cast iron

SIHI Type WNM

Operating pressure Temperature

+ No moving parts

+ Low maintenance

+ Highly reliable

Configuration

Shaft Sealing

Grey cast iron, stainless steel,

Standards

ANSI or ISO

Priming

Vacuum

+ none

Materials

special alloys

SIHI Type

GVP, GOV

+ Horizontal or vertical

Features

Features

- + No effluent
- + Simply service
- + Very quiet

Configuration

+ Vertical

Standards ANSI or ISO

Priming Vacuum

Shaft Sealing

+ Hermetically sealed

Materials Nodular cast iron

SIHI Type Dry V, S

Features

- + No effluent
- + Simply service
- + Very quiet

Configuration

+ Vertical

Standards ANSI or ISO

Priming Vacuum

Shaft Sealing

+ Hermetically sealed

Materials Nodular cast iron

SIHI Type Dry M, H















H-Version





Engineered systems

Liquid systems Vacuum & Membrane recovery Compressor systems systems Performance Performance Performance Suction capacity 15000 m³/h Suction capacity on request Capacity on request Discharge pressure: Operating pressure 99 % 0.1 mbar Recovery rate on request Discharge pressure Outlet concentrations European 9 bar clean air regulations Features Features Features + Simple integration + Regeneration free + Simple integration + Simple & compact + Project managed + Project managed + Highly reliable + High recovery rates + Highly reliable Configuration Configuration Configuration + On request + On request + On request Standards Standards Standards ANSI, ISO, EN, DIN, Client choice Client choice NACE Shaft Sealing Shaft Sealing Shaft Sealing + Mechanical seal + Mechanical seal + Mechanical seal + Packed gland + Packed gland + Packed gland + Magnetic coupling + Magnetic coupling + Magnetic coupling Materials Materials Materials Client choice Client choice Client choice SIHI Type SIHI Type SIHI Type PL, PLN, PK, PLG, LPM, PKM, PKLM, UNIP

Your process partner Committed to engineering excellence

Understanding the process

- + 100 years of experience
- + Staff trained to communicate at all levels
- + Deep application knowledge
- ... Solutions with minimal customer effort

Optimum product range

- + Unique process can be treated with simplicity
- + Reduced cost of design, manufacture, and documentation
- + Predictable site testing and commissioning
- ... Customised solutions for standard capital costs

Design

- + Advanced design tools
- + Highest level of machine efficiency
- + Long lasting reliability
- ... Reduced energy, maintenance, and environmental costs

Manufacturing

- + Centre of excellence structure
- + High level of skill and competence
- + Ongoing people and process development
- ... Reduced integration costs

Testing & Documentation

- + Factory and Site Acceptance Tests
- + Certified documentation
- + Witnessed customised testing
- ... Reduced validation and commissioning costs

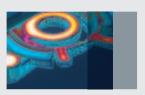
Quality assurance

- + Total Quality Management
- + ISO900
- + Rigorous health and safety culture
- ... Long term security

Aftermarket – a local approach

- + Dedication to process uptime
- + Locally positioned service & technical centres
- + Easy access to support, on a worldwide level
- ... Highest level of customer care





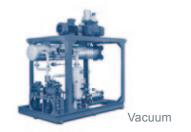




Competence Centre

- + Centralised design, purchasing, production, compliance, and local support
- + De-centralised (local) quotation and project management teams











SIHI^{detect} – Condition Based Monitoring

Detect wear before damage occurs

- + Cavitation and process turbulence
- + Simple to connect
- + LED display
- + Available Ex
- + All rotating machinery
- + DCS integration and continual monitoring

Noise and Vibration analysis allows this compact device to diagnose the (often hidden) symptoms of longer term damage even before vibration occurs.





For further address details please visit: www.SIHI.com

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Alliance Member

Partner of the Engineering Industry Sustainability Initiative







