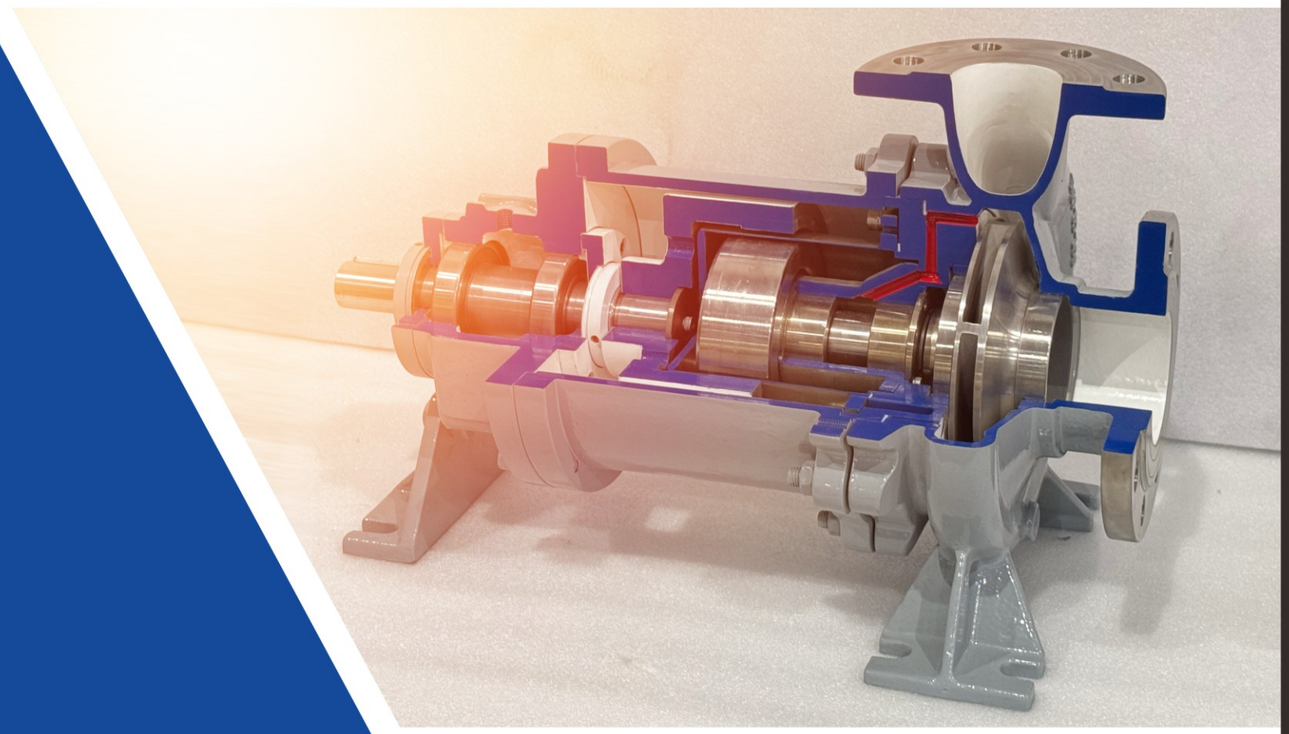
HANISOME RUICHEN PUMP

HANISOME RUICHEN PUMP



MAGNETIC PUMP BROCHURE

ZHEJIANG RUICHEN PUMP TECHNOLOGY CO., LTD.

Office address: 203-5, Building 30, Hangzhou Bay New Economic Park, Jiaxing Port District, Jiaxing, Zhejiang,China

Production address: Plant no.5, Binhai Pioneer Park, Jiaxing Port District, Jiaxing, Zhejiang,China

Landline: 0573-85531362

Fax: +86 0573-85531062

Mobile/Wechat: +86 18157321655

Email: ruichen@zjrcpump.com

Website: https://zjrcpump.com

ZHEJIANG RUICHEN PUMP TECHNOLOGY CO., LTD.

HANISOME
RUICHEN PUMP

HANISOME RUICHEN PUMP

CONTENTS

ORGANIZATIONAL STRUCTURE

Mission: Dedicated to provide first-class products and technical services for global petrochemical equipment.

Vision: Committed to be an expert for global petrochemical equipment technology solution.

COMPANY PROFILE

Zhejiang Ruichen Pump Technology Co., Ltd.,focus on provide high-end fluid equipment solutions for the global market, covering the R & D, production and remanufacturing technical services of high-speed centrifugal pumps, high-speed centrifugal compressors and magnetic pumps. With excellent product quality and strong technical research and development strength, Ruichen Pump has established a good reputation in the industry. The company own R&D team composed of technical experts with more than 20 years' industry experience, and has established strategic cooperation with the Metal Research Institute of China Science Academy, and set up academician expert workstation and postdoctoral research workstation, providing solid academic support for technological innovation. Through developed 32 kinds of metal powder with high performance and 128 kinds of additive remanufacturing process, we not only significantly extend the lifetime of the equipment, but also take product quality to new height.

Ruichen Pump consistently adhered to the development concept of "innovation-driven", actively explored new technologies and business modes, and committed to provide the efficient and reliable technical supports and customized solutions for customers. Look into the future, we will continue to take technological innovation as the guild, deepen the field of high-end fluid equipment, and work together with global customers to jointly promote the industry development, to be your trustful ideal partner.

DESIGN AND RESEARCH

Driven by professional technology and innovation, provider of high-performance, highly reliable fluid equipment solutions for customers.

Professional Team

Own a R&D team for 20 years' experience with strong design ability on product & hydraulic power.

Advanced Tools

Adopt advanced design software, CAD, Pro/E, SolidWorks and etr, for make sure to the design precision and efficiency.

Standard Certification

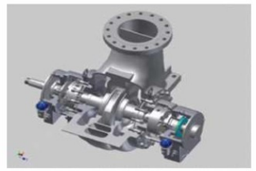
Products strictly conform to API610, DIN, ANSI, ISO, GB and other international and domestic standards, to ensure every equipment can satisfy the diverse demand from global customers.

Customized Service

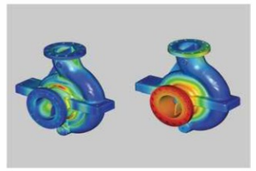
With consideration of user requirements, to provide customized remodel design service, tailor-made efficient solutions.

Sustainable Innovation

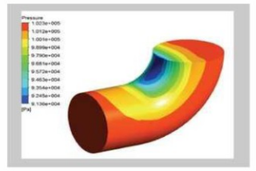
Join with professional colleges, sustainably promote product research and technical innovation and ensure technical leadership.



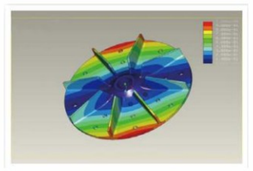
3D Drawing



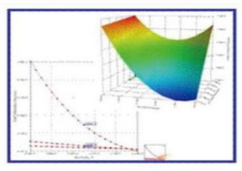
FEA



Fluids Analysis

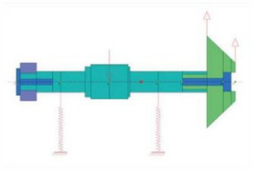


Ansys

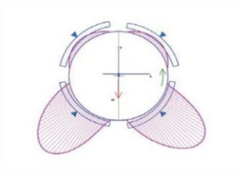


CFD

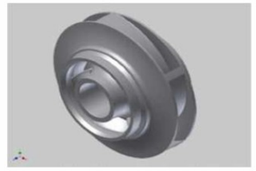
Fluids Analysis



Calculation Model



Tilt Pad Bearing Analysis



3D Cartography

INTELLIGENT MANUFACTURING BASE

Ruichen Pump workshop integrates advanced equipment, informative management to stiff quality control, and committed to provide fluid equipment high performance and reliability to customers. Workshop covered an area of 5000㎡on total, equipped with 20 tons of the max. lift capacity and max. lift height 8.5mtr.

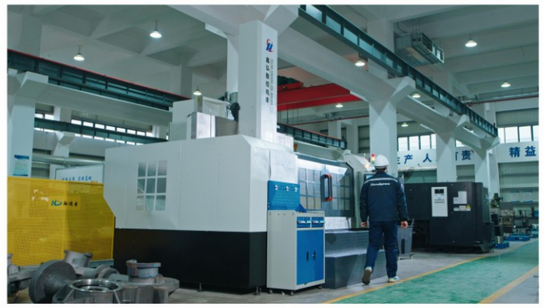
★Advanced Fabrication Facilities★

●Five-axis fabrication center	●Four- axis fabrication center	●Pentahedral fabrication center	●VMC(vertical machining centre)
●DC-VBM	●Vertical lathe	●Boring machine	●Gantry milling machine

★Advanced Inspection And Testing Equipment★

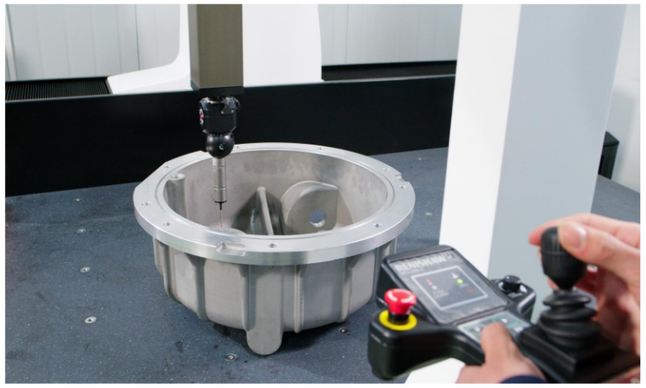
●Three coordinate inspection device	●Full speed dynamic balance machine	●3D scan&survey instrument
●High speed pump test platform	●Compressor test platform	

INTELLIGENT MANUFACTURING BASE



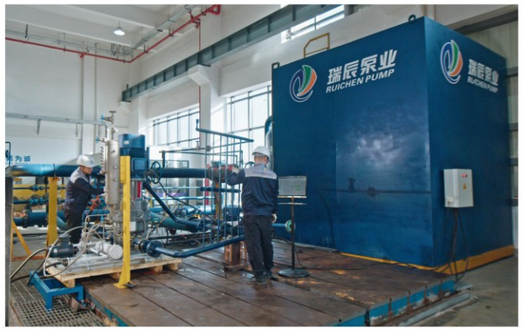
INSPECTION AND DETECTION

- Consistently stick to the inspection principle as "Quality First, Strive For Perfect".
- Target as "Zero Defect", through the advanced detection devices and perfect quality management system, to provide customers with trustworthy products and services.



TEST PLATFORM -- HIGH-SPEED PUMP INTEGRATED TEST PLATFORM

High-speed pump comprehensive test platform specification: Max. Capacity: 410 m3 / h, Max. Head: 3020 m, Max. Power 630 kw, NPSH Test Range: 0.5 m ~ 5 m. There are 2 work stations (1 horizontal high-speed pump, 1 vertical high-speed pump work station): accuracy requirements: international standard ISO9906-2000 and national standard GB/T3216-2005 specified in Class 1 /B.



TEST PLATFORM -- COMPRESSOR COMPREHENSIVE TEST PLATFORM

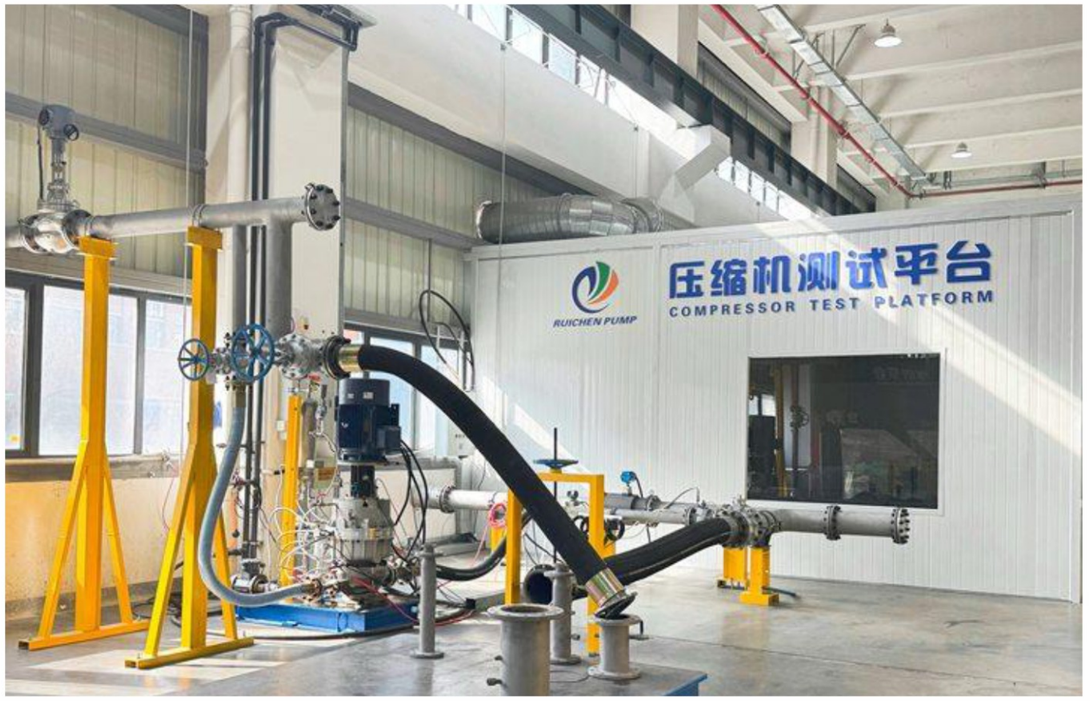
Compressor comprehensive test platform design and test standard.
National standards: JB/T 3165-1999 (refer to ASME PTC 10-1997).
The flow measurement standards: GB/T 2624.

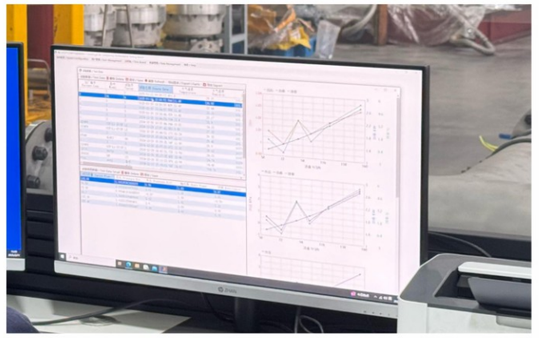
The compressor test stand is suitable for the compressor performance test within input power no more than 630kW and inlet volume flow within 600-20000m³/h (norm temp. and pressure air), and the pressure ratio range does not exceed the specified power under the specified flow rate. The specific test range indicates on below chart:

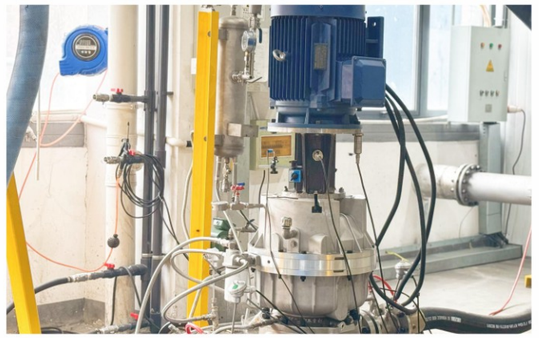
Item	Unit	Parameter
Inlet pressure(AP)	bara	0~1.0
Outlet pressure(AP)	bara	0.4~9.0
Capacity	m³/h	600~20000
Inlet temp.	℃	-15~45
Outlet temp.	℃	30~150
Shell vibration	m m/s	0.11~11.2

Item RCY-M3 (Lf2180)	Unit	Parameter
Flow	am³/hr	10200
Max. operation pressure	bar	100
Max. speed	rpm	32000
Temp range	℃	-130~260
Max. power	KW	596
Bearing axis diameter	mm	38.1-50.8
Intake flange	in	4~10″
Discharge flange	in	3~10″
Flange standard	#	300、600

Item RCY-M5 (LF2240)	Unit	Parameter
Flow	am³/hr	17000
Max. operation pressure	bar	350
Max. speed	rpm	42000
Temp range	℃	-160~260
Max. power	KW	7500
Intake flange	in	3~14″
Discharge flange	in	2~12″
Flange standard	#	150、300、600



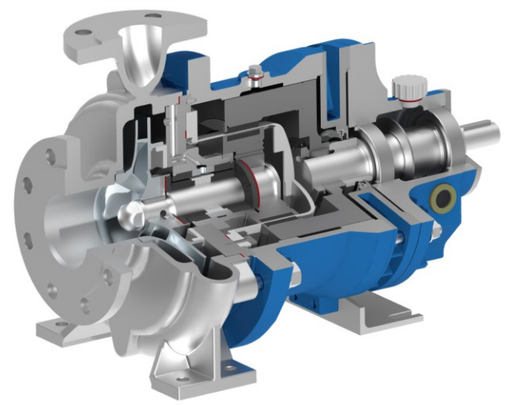




PRODUCT INTRODUCTION

RCM-NV SERIES

Compliance by DIN EN ISO 2858 and DIN EN ISO 15783 standard



MAX. FLOW RATE:
3.500 M³/H
15,410 USGPM

TEMPERATURE RANGE:
-200 °C to +450 °C
-328°F to +842°F

MAX. DELIVERY HEAD:
220 M L.C.
722 FT

MAX. PRESSURE RATING:
PN 400
5802 PSI

•DESIGN

- Horizontal centrifugal pump, process design
- Hydraulic performance and dimensions according to DIN EN ISO 2858
- Design based on DIN EN ISO 15783
- Permanent & synchronous magnet drive
  - Maintenance-free
  - Separation of liquid chamber and atmosphere by means of containment shell
- Pressurized partial flush flow (cooling of eddy current losses / lubrication of journal bearings)
- Materials: steel, stainless steel, duplex steel, nickel-based materials, titanium
- Bearing bracket with anti-friction bearings; oil-lubricated or greased-for-life
- Product-lubricated journal bearings; made of silicon carbide (SSiC) or customized materials
- Rub zones as per standard for increased safety

•PUMPING OF

- Acids
- Aggressive, explosive, toxic, high-temperature and foul-smelling liquids
- Coolant
- Dyes and coatings
- Heat-conducting liquid
- Hot water
- Hydrocarbon
- Liquid gas
- Liquid contains solid
- Lyes
- Molten sulfur
- Refrigerant
- Saline solution
- Sea water
- Solvent
- Valuable liquids
- And many more

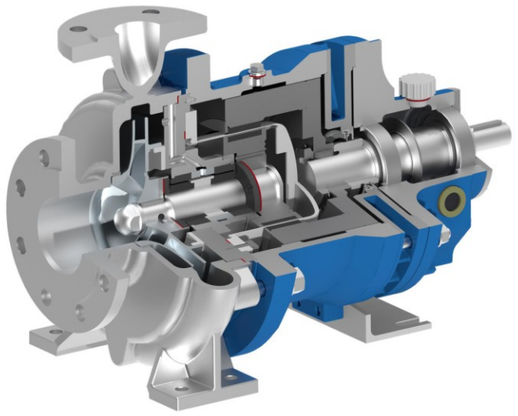
•OPTIONS

- Double volute casing design in case of larger sizes
- Centerline mounting (Oh2)
- Various containment shell executions (metallic / non-metallic, single / double shell)
- Energy efficient design
- Various design options when pumping critical liquids (e.g. liquids containing solids) and for interrupted suction flow (dry run)
- High viscosity optimized design
- Semi-open and open impeller
- Inducer to significantly improve pump's NPSH
- Thermal barrier
- Various heating designs
- Secondary control / secondary control system / secondary containment system acc. API 685
- Temperature protection system
- Back pull out-unit
- Magnet drive acc. API 685
- Bearing bracket with regreaseable or oil mist lubricated anti-friction bearings
- Oil sump bottle for bearing housing
- Close-coupled design (SLM NVB)
- Vertical dry mounted arrangement
- Retrofit

PRODUCT INTRODUCTION

RCM-AV SERIES

ACCORDING ASME B73.3



MAX. FLOW RATE:
200 M³/H
881 USGPM

MAX. DELIVERY HEAD:
155 M L.C.
509 FT

TEMPERATURE RANGE:
-200 °C to +450 °C
-328 °F tu +842 °F

MAX. PRESSURE RATING:
PN 400
5802 PSI

•DESIGN

- Horizontal centrifugal pump, process design
- Hydraulic performance and dimensions according to ASME B73.3
- Permanent & synchronous magnet drive
  – Maintenance-free
  –Separation of liquid chamber and atmosphere by means of containment shell
- Pressurized partial flush flow (cooling of eddy current losses / lubrication of journal bearings)
- Materials: steel, stainless steel, duplex steel, nickel-based materials, titanium
- Bearing bracket with anti-friction bearings, oil-lubricated or greased-for-life
- Product-lubricated journal bearings; made of silicon carbide (SSiC) or customized materials
- Rub zones as per standard for increased safety

•PUMPING OF

- Acids
- Aggressive, explosive, toxic, hot and malodorous liquids
- Coolants
- Dyes and paints
- Heat transfer liquids
- Hot water
- Hydrocarbons
- Liquid gases
- Liquids containing solids
- Lyes
- Molten sulfur
- Refrigerants
- Salt solutions
- Sea water
- Solvents
- Valuable liquids
- And many more

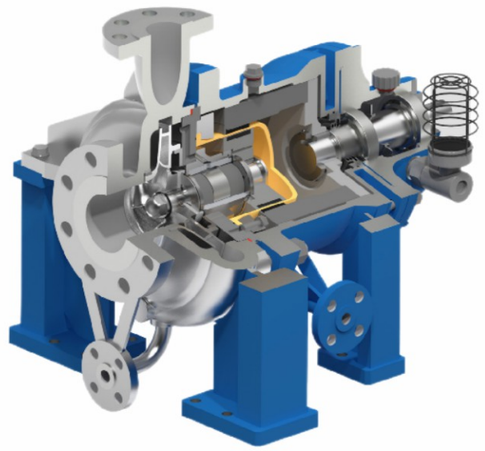
•OPTIONS

- Centerline mounting (Oh2)
- Various containment shell executions (metallic / non-metallic, single / double shell)
- Energy efficient design
- Various design options when pumping critical liquids (e.g. liquids containing solids) and for interrupted suction flow (dry run)
- High viscosity optimized design
- Semi-open and open impeller
- Inducer to significantly improve pump's NPSH
- Thermal barrier
- Various heating designs
- Secondary control / secondary control system / secondary containment system acc. API 685
- Temperature protection system
- Back pull out-unit
- Magnet drive acc. API 685
- Bearing bracket with regreaseable or oil mist lubricated anti-friction bearings
- Oil sump bottle for bearing housing
- Close-coupled design (SLM AVB)
- Vertical dry mounted arrangement
- Retrofit

PRODUCT INTRODUCTION

RCM-AP SERIES

ACCORDING API 685



MAX. FLOW RATE:
3.500 M³/H
15,410 USGPM

TEMPERATURE RANGE:
-200 °C to+450 °C
-328 °F to +842 °F

MAX. DELIVERY HEAD:
220 M L.C.
722 FT

MAX. PRESSURE RATING:
PN 400
5802 PSI

•DESIGN

- •Horizontal centrifugal pump, process design
- •Technical design according to API 685
- •Flanges according to ANSI/ASME B16,5, class 150, class 300
- •Permanent & synchronous magnet drive
- – Maintenance-free
- – Separation of liquid chamber and atmosphere by means of containment shell
- •Pressurized partial flush flow (cooling of eddy current losses / lubrication of journal bearings)
- •Materials: steel, stainless steel, duplex steel, nickel-based materials, titanium
- •Bearing bracket with oil-lubricated anti-friction bearings
- •Product-lubricated journal bearings; made of silicon carbide (SSiC) or customized materials
- •Rub zones as per standard for increased safety

•PUMPING OF

- •Acids
- •Aggressive, explosive, toxic, hot and malodorous liquids
- •Coolants
- •Dyes and paints
- •Heat transfer liquids
- •Hot water
- •Hydrocarbons
- •Liquid gases
- •Liquids containing solids
- •Lyes
- •Molten sulfur
- •Salt solutions
- •Sea water
- •Solvents
- •Valuable liquids
- •And many more

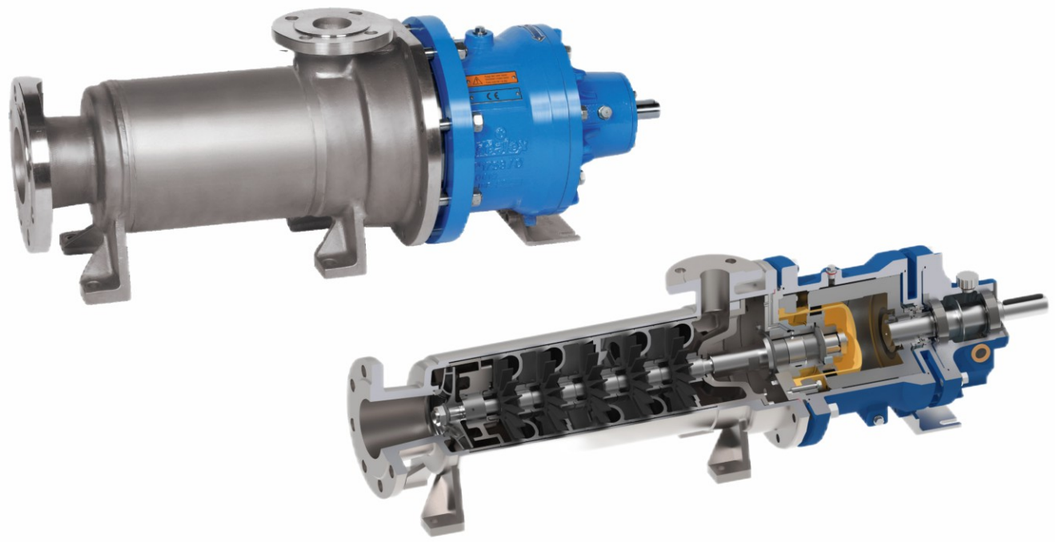
•OPTIONS

- •Double volute casing design in case of larger sizes
- •Centerline mounting (OH2)(required as per API 685 for temperatures above 175 °C, especially for impellers larger than 200 mm / 8")
- •Various containment shell executions (metallic / non-metallic, single / double shell)
- •Energy efficient design
- •Various design options when pumping critical liquids (e.g. liquids containing solids) and for interrupted suction flow (dry run)
- •High viscosity optimized design
- •Semi-open and open impeller
- •Inducer to significantly improve pump's NPSH
- •Thermal barrier
- •Various heating designs
- •Secondary control / secondary control system / secondary containment system acc. API 685
- •Temperature protection system
- •Back pull out-unit
- •Bearing bracket with greased-for-life, regreaseable or oil mist lubricated anti-friction bearings
- •Oil sump bottle for bearing housing
- •Close-coupled design (SLM APC)
- •Vertical dry mounted arrangement
- •Retrofit

PRODUCT INTRODUCTION

RCM-SV SERIES

FOLLOWING DIN EN ISO 15783



MAX. FLOW RATE:
42 M³/H
185 USGPM

TEMPERATURE RANGE:
-120 °C to +250 °C
-184 °F to + 482 °F

MAX. DELIVERY HEAD:
470 M L.C.
1542 FT

MAX. PRESSURE RATING:
PN 40
5802 PSI

•DESIGN

- •Horizontal side channel pump, process design
- •Magnet drive based on DIN EN ISO 15783
- •Maximum number of stages: 8
- • Vanes made of duplex, with DLC coating
- • Self-priming
- •Barrel casing (just only two gaskets for sealing)
- •For handling of gas loaded liquids
- •Low-NPSH first stage for improved suction performance
- •Permanent & synchronous magnet drive
  – Maintenance-free
  – Separation of liquid chamber and atmosphere by means of containment shell
- •Pressurized partial flush flow (cooling of eddy current losses / lubrication of journal bearings)
- •Materials: steel, stainless steel, duplex steel, nickel-based materials
- •Bearing bracket with anti-friction bearings, oil-lubricated or greased-for-life
- •Product-lubricated journal bearings; made of silicon carbide (SSiC) or customized materials
- •Rub zones as per standard for increased safety

•OPTIONS

- •Centerline mounting (Oh2)
- •Various containment shell executions (metallic / non-metallic, single / double shell)
- •Energy efficient design
- •Various design options when pumping critical liquids (e.g. liquids containing solids) and for interrupted suction flow (dry run)
- •Heavy duty design for improved solid resistance
- •Thermal barrier
- •Various heating designs
- •Secondary control / secondary control system / secondary containment system acc. API 685
- •Temperature protection system
- •Magnet drive acc. API 685
- •Bearing bracket with regreaseable or oil mist lubricated anti-friction bearings
- •Oil sump bottle for bearing housing
- •Close-coupled design (SLM SVB)
- •Retrofit

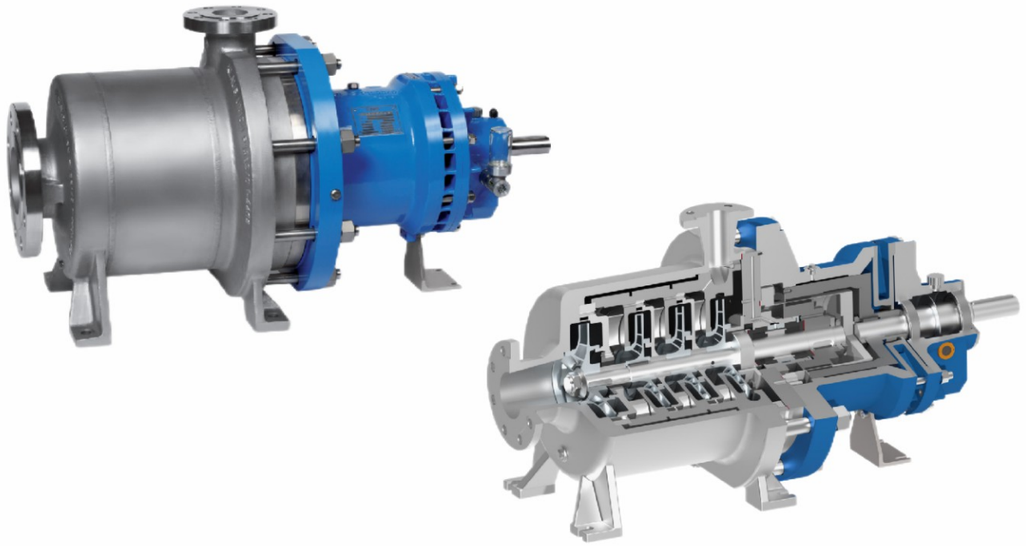
•PUMPING OF

- •Acids
- •Aggressive, explosive, toxic, hot and malodorous liquids
- •Coolants
- •Hydrocarbons
- •Liquid gases
- •Lyes
- •Refrigerants
- •Sea water
- •Solvents
- •Valuable liquids
- •And many more

PRODUCT INTRODUCTION

RCM-AV SERIES

ACCORDING ASME B73.3



MAX. FLOW RATE:
300 M³/H
1,321 USGPM

TEMPERATURE RANGE:
-200 °C 至 to 450 °C
-328 °F 至 to 842 °F

MAX. DELIVERY HEAD:
2.200 M L.C.
7,218 FT

MAX. PRESSURE RATING:
PN 250
3,626 PSI

•DESIGN

- •Horizontal side channel pump, process design
- •Magnet drive based on DIN EN ISO 15783
- •Maximum number of stages: 8
- •Vanes made of duplex, with DLC coating
- •Self-priming
- •Barrel casing (just only two gaskets for sealing)
- •For handling of gas loaded liquids
- •Low-NPSH first stage for improved suction performance
- •Permanent & synchronous magnet drive
  – Maintenance-free
  – Separation of liquid chamber and atmosphere by means of containment shell
- •Pressurized partial flush flow (cooling of eddy current losses / lubrication of journal bearings)
- •Materials: steel, stainless steel, duplex steel, nickel-based materials
- •Bearing bracket with anti-friction bearings, oil-lubricated or greased-for-life
- •Product-lubricated journal bearings; made of silicon carbide (SSiC) or customized materials
- •Rub zones as per standard for increased safety

•OPTIONS

- •Centerline mounting (Oh2)
- •Various containment shell executions (metallic / non-metallic, single / double shell)
- •Energy efficient design
- •Various design options when pumping critical liquids (e.g. liquids containing solids) and for interrupted suction flow (dry run)
- •Heavy duty design for improved solid resistance
- •Thermal barrier
- •Various heating designs
- •Secondary control / secondary control system / secondary containment system acc. API 685
- •Temperature protection system
- •Magnet drive acc. API 685
- •Bearing bracket with regreaseable or oil mist lubricated anti-friction bearings
- •Oil sump bottle for bearing housing
- •Close-coupled design (SLM SVB)
- •Retrofit

•PUMPING OF

- •Acids
- •Aggressive, explosive, toxic, hot and malodorous liquids
- •Coolants
- •Hydrocarbons
- •Liquid gases
- •Lyes
- •Refrigerants
- •Sea water
- •Solvents
- •Valuable liquids
- •And many more

MAGNETIC PUMP ACCESSORIES

QUALIFICATION HONOR

PARTNER (DOMESTIC)

中国石油化工集团有限公司 SINOPEC
中国石油
中国海油 CNOOC
中化 sinochem 中国中化集团有限公司 Sinochem Group Co., Ltd.
WANHUA
Transfar 传化智联
HOSHINE
鸿基石化 HONG JI PETROCHEMICAL
三房巷集团 SANFAME GROUP
LOTTE 乐天
LONGCHEN
新和成控股集团有限公司 NHU HOLDING GROUP CO., LTD
丹森科技 DANSON TECHNOLOGY
宁波金海晨光化学股份有限公司 Ningbo Jinhai ChenguangChemical Corporation
三江化工 SANJIANG CHEMICAL
CENWAY 信汇
金发
卫星石化
CABOT
桐昆集团股份有限公司 TONGKUN GROUP
中国石化工程建设公司 SINOPEC ENGINEERING INCORPORATION
LPEC
中国联合工程有限公司 China United Engineering Corporation Limited
BLUESTAR 中国蓝星
鑫海集团 XinHai Group
延长石油 YANCHANG PETROLEUM
中国华能 CHINA HUANENG
中国寰球工程有限公司 CHINA HUANQIU CONTRACTING & ENGINEERING CO.,LTD.
JUSHI
重庆国际复合材料股份有限公司 CPIC
中国华电集团公司 CHINAHUADIANCORPORATION
神华集团 SHENHUAAGROUP
浙江嘉化能源化工股份有限公司 Zhejiang Jiahua Energy Chemical Industry Co., Ltd.
新风鸣集团 XIN FENG MING GROUP
东华能源 Oriental Energy
京博控股 CHAMBROAD HOLDING

PARTNER (OVERSEAS)

СИБУР
АЗОТ
ИРКУТСКАЯ НЕФТЯНАЯ КОМПАНИЯ
НОВАТЭК
ГАЗПРОМ ИНТЕРНЭШНЛ
AKPOH