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# Каталог продукции SULZER

# О компании

Sulzer is a global partner offering reliable and sustainable solutions for performance-critical applications. Our innovative solutions add value and strengthen the competitive position of our customers.

Vision, Strategic Priorities, and Values

The Sulzer vision and strategic priorities define our overall direction. The Sulzer values act as an inner compass, guiding all our activities. They define who we are and how we conduct ourselves.

#### Information

Vision

Our customers recognize us for our leading technologies and services, delivering innovative and sustainable solutions.

Strategic priorities

All strategic priorities are oriented toward our customers with a focus on value creation and profitable growth

- Technology leadership •
- Outstanding services
- Continuous operational improvements •
- Collaborative advantage

Values

- Operational Excellence: We continuously strive to be faster and better.
- Customer Partnership: Together, we win.
- Committed People:
   We build on the strengths and diversity of our people

# Продукция

# Статические смесители SMX SULZER

The SMX plus static mixer is the reference for homogenization and dispersing tasks in laminar flow. Even challenging mixing applications such as dosing a small amount of low- viscous additive into a high-viscous main stream can be performed very efficiently.



# **Key characteristics**

The SMX plus static mixer is the new revolutionary generation of static mixers featuring half the pressure drop of the SMX mixer. As a result, significant cost savings can be achieved through reduced mixer and pipe diameters, or by using smaller pumps. The SMX plus mixer will therefore most probably replace the SMX mixer in the near future.

# Customer benefits of the SMX type

- Excellent mixing and dispersing even with widely differing fluid viscosities
- Compact designs
- Reduced product degradation due to very short residence time
- Mixing of sensitive products under minimal shear stress
- No deposits and blockages due to excellent cross-mixing

# The SMX plus mixer additionally offers:

- 50% lower pressure drop compared to a standard SMX mixer
- Cost savings through smaller mixer, piping and pumps

Shear sensitive fluids such as polymers are mixed under very gentle process conditions. Dispersing of gases and liquids in high-viscous fluids is possible down to the smallest droplets with very narrow size distribution.

# Technical specification SMX plus static mixer

Diameter

from 15 mm – 200 mm

stainless steel 1.4404

#### Standard material

Special materials

available upon request

### **Technical specification SMX static mixer**

Diameter

from 3.2 mm – 200 mm

Standard material

316 stainless steel

Standard housings for SMX and SMX plus mixers are in accordance with DIN or ANSI code. Design and fabrication to other codes such as ASME or AD2000 are also possible.

# Статические смесители SMV SULZER

The Sulzer SMV static mixer is ideal for applications that require a distributive and homogeneous mixing and blending action in the turbulent flow regime.

# **Key characteristics**

The Sulzer SMV mixing elements consist of intersecting corrugated plates and channels that encourage rapid mixing in combination with plug flow progression. Any number of additives can be mixed at the same time within the mixing zone.

# Major advantages

- High mixing efficiency combined with large turn-down processing capabilities
- Short mixing length
- Low energy requirements
- Zero maintenance

References covering more than thirty five years of equipment supply demonstrate the quality and popularity of the equipment being offered.

#### **Customer benefits**

- Fast and complete reaction, absorption or extraction due to high mass transfer area
- Constant and reproducible product qualities
- Fast mass transfer due to continuous renewal of the interface surface area
- Minimum space requirement of mixer and disperser



### Applications

Typical uses for the Sulzer SMV static mixer are applications requiring dispersive mixing or mass transfer in the turbulent flow regime. This occurs typically between immiscible phases where an interfacial tension exists. Examples are oil/water or gas/liquid systems. Higher shear forces are required for this dispersion task.

#### **Technical specification**

Diameter

from 8 mm – 250 mm

Standard material

316 stainless steel, PP, PTFE, PVDF

# Статические смесители SMI, KVM SULZER

The Sulzer static mixers type SMI and KVM are ideal for liquid-liquid mixing in the turbulent flow regime. These mixers can also be used for mixing gases.



#### **Key characteristics**

The geometry of both mixer types has been optimized with the help of CFD

simulation. The mixing elements create large counter rotating vortices and ensure efficient mixing over the entire cross section of the pipe. The static mixer type SMI is mainly sold in Europe and Asia, whereas the KVM type is the standard product for the North and South American market.

The **SMI mixer** has an open structure, which eliminates the risk of clogging. Its key characteristics are:

- Appropriate dosing options
- Simple construction
- Low pressure drop
- Efficient mixing within a short distance

Static Mixer SMI for universal turbulent mixing tasks

The **KVM mixer** features a pressure drop of only 11" of water column at 5 ft/sec. It can mix additives introduced upstream of the mixer or mix additives injected directly in front of the first mixing element. In order to allow the injection of multiple additives, the KVM mixer can also be supplied with multiple injection port connections. The KVM mixer allows mixing of additives without a sparger.

Static Mixer KVM for liquid liquid mixing in the turbulent flow regime

#### **Customer benefits**

- Low energy consumption due to small pressure drop
- Excellent mixing
- Fast and cost-efficient solutions due to standardized design
- Efficient mixing of additives injected upstream
- Multiple additive feed possible
- Wide variety of materials available, also for highly corrosive fluids

### Technical specification static mixer type SMI

Diameter	from 25 mm - 250 mm
Standard material	stainless steel, carbon steel
Flanges	acc. to DIN 2501, ANSI B 16.5 or other standards

Special executions in other materials, or for installation in rectangular or square conduits are available on request.

### Technical specification static mixer type KVM

Diameter	from 2" - 48", larger diameters on request
Standard	316L SS with 150 flanges
Other materials	PP, FRP, PVC, other materials on request

# Статические смесители CompaX SULZER

The Sulzer CompaX static mixer is your most efficient and economic choice for admixing additives in the turbulent flow regime. Thanks to its low pressure drop, it significantly saves you pump energy, therefore offering both economical and ecological benefits.



# **Key characteristics**

The Sulzer CompaX static mixer consists of a highly efficient mixing device with an integrated dosing point. The additive is fed into the zone where there is a strong turbulent flow. Fluids, additives, and gases are reliably and effectively mixed over a very short distance.

#### Additive dosing

For larger pipe diameters, you can admix up to 6 additives using only one mixing element.

#### **Pressure drop**

The pressure drop of a Sulzer CompaX mixer is approx. 8 times lower compared to orifice-type static mixers. For low-viscous fluids, it is typically 10 - 100 mbar. This results in significant savings on pump energy, which pays off economically as well as ecologically. You will not experience any clogging problems with this mixer thanks to the open-wing geometry and the additive dosing location.

# **Customer benefits**

- Efficient mixing (CoV</= 0.05)
- Lowest possible pressure drop
- Short installation length: only approx. 0.3 pipe diameters
- Optimized dosing point for additive mixing, no injection lances required
- No clogging
- Robust construction
- Low installation cost, easy to fit
- Excellent price/performance ratio

# Applications

The Sulzer CompaX static mixer can deal with mixing ratios from 1:5 up to more than 1:10 000. Typical applications can be found in the chemical industry as well as in water or wastewater treatment. In this industry, the CompaX mixer can be used, for example, to admix flocculation agents or for pH adjustment.

Sulzer static mixer type CompaX in FRP for seawater desalination

Technical specification				
Diameter	from 25 mm - 2000 mm / 1" - 80"			
Standard material	316 stainless steel, 316/316 L stainless steel Polypropylene (PP) 250 - 2000 mm / 10" - 80" Fiber-Reinforced Plastic (FRP)			
Special materials	PVC, PTFE, SS-ETFE coated, available upon request			

The mixer is installed in the pipe, mounted between two flanges (DIN 2633 or ANSI B16.5).

Technical specification static mixer type SMI

Diameter from 25 mm - 250 mm

Special executions in other materials, or for installation in rectangular or square conduits are available on request.

Technical specification static mixer type KVM

# Теплообменники SMR SULZER

The Sulzer Mixer Reactor (SMR) is a tube bundle heat exchanger that allows high-effective cooling or heating of viscous media. The SMR heat exchanger is your first choice if you wish to combine effective mixing with controlled heat transfer.



# Functionality

The SMR reactor consists of a series of specially configured tube bundles. They are positioned perpendicular to each other, which enhances radial mixing across volume highly packed with heat transfer surface area. Water, steam, thermal oil, or other special cooling media can be used as heat transfer fluid. Each bundle can be designed to feature different mixing and heat transfer effects in order to meet stringent process requirements.

- Excellent plug flow behavior and narrow residence time distribution
- Well-defined mixing and small reaction volume due to high driving forces for reaction
- Low shear thus gentle product treatment
- No hot spots and no dead zones
- High flexibility with regard to operation and down-turn
- Fast product transition and fast change of process conditions
- Safety and environmental friendliness inherent to the design
- No rotating parts and minimal maintenance costs

Diameter	from 80 – 1600 mm, larger units upon request
Length	determined by process requirements and requested performance, ranges from 1 m for a compact heat exchanger up to 20 m for a full reactor tower
Standard material	Stainless steel / carbon steel
Special surface coatings	on request (i.e. for food applications)
Design	Welded mono-block is common Flanged design is recommended if process routine requests periodic removal and disposition of bundles

#### **Technical specification**

# Теплообменники SMXL Multitube SULZER

In addition to the monotube SMXL, we also offer a multitube mixer-heat exchanger, which offers improved heating or cooling of viscous media at high throughputs. It is the perfect alternative when the flow is too high to be handled in a monotube.



# Functionality

The main stream is divided into several partial pipe streams with the same operation mode as the monotube design. In contrast to a monotube heat exchanger, the SMXL Multitube heat exchanger has no restrictions with regard to product throughput or heat to be transferred.

# Applications

The multitube mixer heat exchanger type SMXL is used mainly for heating and partly for cooling applications especially for heat-sensitive and/or viscous products. A special application is preheating of a polymer solution, where part of the product starts to evaporate already in the heat exchanger, for example prior to entering the devolatilization vessel.

# **Customer benefits**

- Increased heat transfer coefficient for highly viscous products
- Narrow residence time distribution
- Low shear rate
- Gentle treatment due to short residence time
- Quick change from one product grade to another

# **Technical specification**

Tube diameter	DN 10 – DN 32
Length	up to 5 meters
Standard material	mixing elements: 1.4574 housing: stainless steel or carbon steel
Design pressure	up to 250 bar
Design temperature	up to 350 °C
Eveny decign is tailer made to match	customer specification. The mixing elements can be fixed

Every design is tailor-made to match customer specification. The mixing elements can be fixed within the pipe wall, or installed as a removable mixing element assembly.

# Теплообменники SMXL Monotube SULZER

The SMXL monotube heat exchanger is the simplest version of a static mixer / heat exchanger. It can be used as a heat exchanger or reactor for applications requiring continuous mixing. The result is significantly increased heat transfer and a narrow residence time distribution.

### Functionality

The product stream flows through the inner pipe. The heat carrier medium

for cooling or heating the product circulates between the inner and outer pipe. The inner pipe through which the product flows is filled with static mixing elements, creating a radial mixing effect. The result is considerably increased heat transfer and a narrow residence time distribution. A continuous renewal of the thermal boundary layer on the piping wall prevents thermal damage of heat-sensitive products.

### Applications

The monotube SMXL mixer heat exchanger is used for pilot units or small industrial plants for cooling, heating, and temperature-controlled reaction applications. The flow is usually laminar or the products to be handled are mostly of medium or high viscosity.

### **Customer benefits**

- High heat transfer coefficient (approx. 4 times better than that of an empty pipe)
- High degree of plug flow
- Gentle treatment due to short residence time
- Narrow residence time distribution
- Quick change from one product grade to another
- Self-cleaning behavior

#### **Technical specification**

Diameter	DN 10 – DN 50
Length	up to 5 meters
Standard material	stainless steel 1.4574
Design pressure	up to 250 bar
Design temperature	up to 350 °C



# Стоматологические системы MIXPAC SULZER

Sulzer Mixpac is proud of being the world's leading manufacturer and supplier of metering, mixing, and dispensing systems for reactive multicomponent dental material. We are constantly optimizing our systems in line with customer requirements to maintain our outstanding market and technology position. Please find an overview of our latest products here.

#### MIXPAC<sup>™</sup> 1CC SYRINGE- 360° Comfort

The Sulzer Mixpac 1CC SYRINGE is suitable for hygienic singleuse applications or multiple use of e.g. flowable composites. Due to the international standardized luer lock closure, different dispensing tips can be applied easily. The 1CC SYRINGE is available in black, white and transparent.

MIXPAC<sup>™</sup> 1CC SYRINGE

#### MIXPAC<sup>™</sup> S-DISPENSER II - Designed for your hands only

The new MIXPAC<sup>™</sup> dispenser with its aesthetic-elegant design is a precise and easy-to-use instrument which makes it a self-explanatory article of daily use.

The MIXPAC<sup>™</sup> S-DISPENSER II stands for:

- Elegant, innovative Design
- Medical look-and-feel
- Optimal results in functional and aesthetic aspects
- Simplified workflow
- Outstanding ergonomics
- Self explaining and fatigue-free handling
- Various customizing options

MIXPAC<sup>™</sup> S-DISPENSER II

#### MIXPAC<sup>™</sup> T-MIXER – Why waste more than 25% of material!

Revolutionary improvement of the well-established MIXPAC<sup>™</sup> dental mixers to the advantage of the user.

The new mixing technology provides less material waste and consistently high mixing quality. The changeover to the new T-MIXER is easy to implement: 100 % compatibility with the existing MIXPAC<sup>™</sup> systems is guaranteed – as before, all original accessories fit.

The MIXPAC T-MIXER was rated "excellent" by The Dental Advisor:

- 67% of consultants found the mixer to be better than conventional 2-K dental mixers
- 83% would change immediately to the new MIXPAC T-MIXER
- 87% would recommend the new MIXPAC T-MIXER to a colleague





MIXPAC<sup>™</sup> T-MIXER Portfolio

### MIXPAC COLIBRI™ Mixer with Needle

This product features mixers of the MIXPAC<sup>™</sup> L- and S-systems combined with a needle made of medical steel for endodontic application of two-component dental material. The bendable, turnable needle simplifies intraoral works and saves time. The rounded needle reduces the risk of iatrogenic injuries.

Your benefits

- A rounded needle made from medical stainless steel
- A freely bendable and rotating needle with a constant inner diameter
- Hygienic sterilizable individual packaging
- There is no risk of the needle falling into the patient's mouth
- Assembly of intraoral syringes is no longer necessary

# Стоматологические системы MIXPAC S-System SULZER

This outstanding application system opens up new opportunities for intraoral and extraoral applications. The diverse, high-quality portfolio offers high flexibility in formulating customers materials.

All components of the MIXPAC<sup>™</sup> S-System are compatible and proved over 10 years in the Dental industry. Tested products for ideal mixing results, clean room production for a high standard of hygiene and reliable technical solutions offer a high user comfort.

The Sulzer Mixpac application system consists of a dispenser, a cartridge with separate cylinders, pistons, a cap and a mixer which can be selected according to the formulation of the material.

# MIXPAC<sup>™</sup> - The Original

To be 100% sure that you are working with a premium product, check the tips for the MIXPAC<sup>™</sup> brand.

The shape and colors (yellow, green, blue, purple, pink, brown) of the mixing tips are protected by U.S. trademark registrations. The orange color element of the mixing tip is a brand of Sulzer Mixpac.

# MIXPAC<sup>™</sup> S-Dispenser II

# The MIXPAC<sup>™</sup> S-Dispenser II with its aesthetic-elegant design is a precise and easy-to-use instrument which makes it a selfexplanatory article of daily use.

Elegant, innovative Design, Medical look-and-feel, Optimal results in functional and aesthetic aspects, Simplified workflow, Outstanding ergonomic, Self explaining and fatigue-free handling, Various customizing options

# **MIXPAC™** Cartridges

Completely separated cylinders reduce undesirable diffusion between the two materials. This improves the storage stability of the fi lled products and maintains their quality. The black cartridges are particulary suitable for light sensitive materials.

Volumes	Ratios	Colors	Material	Pistons
18 ml	1:1	white	РР	O-Ring Pistons
25 ml	2:1	black	PBT	Lip Pistons
30 ml	4:1			
50 ml	10:1			
75 ml				

# **MIXPAC<sup>™</sup>** Mixers for S-System

The MIXPAC<sup>™</sup> portfolio consists of mixers with different diameters, numbers of mixing elements and shapes for the different requirements.

With the helix static mixing method the established and proved MIXPAC<sup>™</sup> S-Mixer achieves an excellent and steady mixing quality.

The MIXPAC<sup>™</sup> T-Mixer with the new mixing technology reduces waste material, provides an even more homogeneous mixing result and opens up oportunities in developing more complex materials.

With the flexible needle the Colibri<sup>™</sup> is ideal for precise intraoral placement of automixed materials such as dual-core composites, silicones and resin cements.





3.2	-	D-Type (for intraoral tips)	1:1/2:1	Light-sensitive materials
4.2	-	S-Type	4:1/10:1	Endodontics
5.4	12			New Technology (T)
6.5	14			
7.5	16			
S-System Advantages		Customer Benefits		
Separate outlets		Safe and clean operation • No cross-c	ontamination •	Multiple use
Coded closur	e cap	Safe and easy to use • No cross-conta	mination	
Pressure-resi design	stant	Precise dosing – accurate application High long-term stability	<ul> <li>Also suitable</li> </ul>	for high-viscosity materials •
Wide range o	of mixers	Optimal mixer for each two-compone	nt dental mate	rial

# Indipendent Research Group Awards MIXPAC<sup>™</sup> T-Mixer Highest Ratings

The independent US research institute, the Clinicians Report Foundation<sup>®</sup>, tested the MIXPAC<sup>™</sup> T-Mixer in the 2nd quarter 2015 and gave it the highest ratings. In particular, the experts highlighted the reduction in material waste while maintaining consistent mixing quality versus conventional products.

• An independent, non-profit, dental education and product testing foundation. *Clinicians Report*<sup>®</sup>, May, 2015. For the full report, click >here.

# Mixpac<sup>™</sup> - Intra Oral Tip (IOT)

- LOOK FOR the Yellow Shape for genuine products from Sulzer MIXPAC
- TM Notice: The Shape and Color of the nozzle is a trademark of Sulzer MIXPAC

# **Candy Colors**<sup>™</sup>

The Swiss original stands for innovation in application. For system solutions which lead in precision, safety and compatibility to provide maximum efficiency. Six colors distinguish the color

look – our Candy Colors<sup>™</sup>(Yellow, Teal, Blue, Pink, Brown and Purple). Mixpac's six brand values characterize premium quality.

# Стоматологические системы MIXPAC L-System SULZER

This compact automix application system opens up new opportunities for intraoral and extraoral applications. The diverse, high-quality portfolio offers high flexibility in formulating customers materials.

All components of the MIXPAC<sup>™</sup> L-System are compatible and proved over years in the Dental industry. Tested products for optimal mixing results, clean room production for a high standard of hygiene and reliable technical solutions offer a high user comfort.



The Sulzer Mixpac application system consists of the double syringe with separate cylinders, a plunger, pistons, a cap and a mixer which can be selected according to the formulation of the material.

# MIXPAC<sup>™</sup> - The Original

To be 100% sure that you are working with a premium product, check the tips for the MIXPAC<sup>™</sup> brand.

The shape and colors (yellow, green, blue, purple, pink, brown) of the mixing tips are protected by U.S. trademark registrations. The orange color element of the mixing tip is a brand of Sulzer Mixpac.

# **MIXPAC<sup>™</sup>** Dispenser

For easy and precise application of high-viscosity products, Sulzer has developed a dispenser for 5 ml and 10 ml cartridges. The dispenser allows fatigue-proof dispensing, a target and clean application and precise metering.

Dispenser for L-System: fatigue-proof and precise

# **MIXPAC<sup>™</sup>** Double Syringes

The separate cylinders of the ergonomic double syringe reduce diffusion between the contents. This improves the storage stability of the filled materials and maintains their quality. The black double syringes are particularly suitable for light-sensitive materials.

Volumes	Ratios	Colors	Material	Pistons
---------	--------	--------	----------	---------

2.5 ml	1:1	white	РР	Silicone Pistons
5 ml	4:1	transparent	PBT	PE Pistons
10 ml	10:1	black		

#### **MIXPAC<sup>™</sup>** Mixers for L-System

The MIXPAC<sup>™</sup> portfolio consists of mixers with different diameters, numbers of mixing elements and shapes for the different requirements.

With the helix static mixing method the established and proved MIXPAC<sup>™</sup> S-Mixer achieves an excellent and steady mixing quality.

The MIXPAC<sup>™</sup> T-Mixer with the new mixing technology reduces waste material, provides an even more homogeneous mixing result and opens up oportunities in developing more complex materials.

With the flexible needle the Colibri<sup>™</sup> is ideal for precise intraoral placement of automixed materials such as dual-core composites, silicones and resin cements.

Ø (mm)	Elements	Interface		Ratios	Specials
2.5	8	D-Type (fo	r intraoral tips)	1:1/2:1	Light-sensitive materials
3.2	10	S-Type		4:1/10:1	Bleaching
	12				Endodontics
	16				New Technology (T)
L-System	Advantages	5	Customer Benefit	S	
Separate	outlets		Safe and clean ope	eration • No cros	ss-contamination • Multiple use
Coded clo	osure cap		Safe and easy to u	se • No cross-co	ntamination
Rigid desi	gn		Precise dosing - m stability	ore accurate app	olication • Ergonomic • High long-term
Reusable	plunger		Environmentally fi	riendly • Saves s	pace and money

Wide range of mixers

Optimal mixer for each 2-component material

Individual configuration possible Supports material manufacturer branding

Complete system

High process safety

# Стоматологические системы MIXPAC BD-System SULZER

The Large Cartridge System complements the product family and sets new standards in the dynamic mixing of impression materials in a 380 ml dispenser.

This system is very easy to use, highly functional, and compatible with conventional 5:1 table-top mixers.



BD- System Advantages	Customer Benefits
Separate outlets	Safe and clean operation • No cross-contamination • Multiple use
Pressure-resistant design	Especially for high-viscosity materials • High long-term stability • Process safety through additional Bionettring
Compatibility	Usable with all conventional table top mixers

# Системы смешивания B-System SULZER

MIXPAC<sup>™</sup> B-system includes a double syringe with 25 mL volume and a cartridge system, using a manual dispenser, with 50 mL volume, available in different mixing ratios. The mixer assortment includes different mixing elements, lengths, diameters, mixer tips and other accessories.



Features include separated outlets to avoid cross-contamination, piston retention as required for air shipment, and a wide variety of mixers, and compatibility with A-system dispensers. Different ratios and materials are available.

Volumes	25 mL	50 mL	75 mL
Ratios	1:1	1:1, 2:1, 4:1, 10:1	10:1

Colors	nature, white	nature, white	nature
Materials	PP, PA 6	PP, PA 6, PBT	PBT
Product advantages	Your benefits		
Separated outlets	Leak-free connee Safe and clean	ction	
Defined positioning of cap	Safe and easy ha No cross-mixing	ndling	
Rigid construction	-	accurate application -viscosity compounds stability	
Integrated piston retention	Safely transporte Withstands varia	ed by air and sea tions in pressure and temperature	e
Wide variety of different mix	•	or each 2-K adhesive of mixers enabled with the Interf	ace Converter
Complete system	High process reli Little user effort Fatigue-free wor	required	

#### Dispensers

Dispenser: MIXPAC<sup>™</sup> B-system dispenser for cartridges with volumes between 50 and 75 mL, with different mixing ratios

#### Mixers:

Mixer: MIXPAC<sup>™</sup> B-system, collection of various mixers with different sizes for specific applications

Patented interface of B-system mixers with separate outlets to prevent cross-contamination

#### Interface Converter

Simply click the MIXPAC<sup>™</sup> Converter onto the standard B-System cartridges and ensure full compatibility with all mixers of the samller K-System.

MIXPAC<sup>™</sup> Converter B-K: for a extended variety of mixers

### Cartridges

Cartridges: MIXPAC<sup>™</sup> B-system cartridge 50 mL, mixing ratio 1:1 with closure cap; Plunger: MIXPAC<sup>™</sup> B-system plunger for syringes with 25 mL volume

#### **Mixer Accessories**

Luer lock adapters for needles

- Various mixers of different lengths with accessories such as fine dispensing tips
- Cartridges in PP, PA 6 and PBT with various volumes and mixing ratios
- Sulzer Mixpac offers dispensers for easy and exact application

# Системы смешивания F-System SULZER

MIXPAC<sup>™</sup> F-System offers a complete, compatible system with cartridges of 200 mL and 400 mL volumes, using a manual or pneumatic dispenser. The mixer assortment includes different mixing elements, lengths, diameters, mixer tips, and accessories. Its coded interface prevents cross-contamination.

#### Features

- Patented mixer interface with separated outlets to avoid cross-contamination
- Different materials (PP, PA 6, PBT)
- Pre-staged self-bleeding pistons for air-free filling
- Full range of mixers completed by ergonomic manual and pneumatic dispensers of professional quality

Volumes	200 mL	400 mL
Ratios	1:1, 2:1, 4:1, 10:1	1:1, 2:1, 4:1, 10:1



lors	nature, white	nature, white
aterials	PP, PA 6, PBT	PP, PA 6, PBT
Product adva	ntages	Your benefits
Separated out	lets	Leak-free connection Safe and clean
Defined positi	oning of cap	Safe and easy handling No cross-mixing
Rigid construc	tion	Precise metering – accurate application Suitable for high-viscosity compounds
Integrated pis	ton retention	Safely transported by air and sea Withstands variations in pressure and temperature
Wide range of	f different mixers	Optimal mixer for each 2-K adhesive
Complete syst	em	High process reliability Little user effort required Fatigue-free working

#### Dispensers

Besides the manual dispenser, F-System also offers a pneumatic dispenser for less needed pressure.

Pneumatic dispenser for F-System, air pressure offers fatigue-free operation

#### Mixers

Various mixers of the MIXPAC<sup>™</sup> and QUADRO<sup>™</sup> type for different applications with the 2-K F-System

Patented interface of F-system mixers with separate outlets to avoid cross-contamination

#### **Interface Converter**

Simply click the MIXPAC<sup>™</sup> Converter onto the standard F-System cartridges and ensure full compatibility with all mixers of the samller B-System.

MIXPAC<sup>™</sup> Converter: for a extended variety of mixers

### Cartridges

Cartridges with the volumes of 200 mL and 400 mL, available in various mixing ratios

# Системы смешивания DoubleSyringe GreenLine SULZER

The 25 mL DoubleSyringe GreenLine is the first of our regular products on a biopolymer basis. It is the sustainable version of the already tried-and-tested 25 mL DoubleSyringe B-System on the basis of wood fibers, a renewable resource.

This GreenLine version offers the same technical features as its full plastic version of the <u>MIXPAC B-System</u> including



- Separate outlets to avoid cross contamination
- Piston retention as required for air shipment
- Full variety of mixers

Volumes	25 mL
Ratios	1:1
Color	Natural brown

# Components of the 25 mL DoubleSyringe GreenLine:

# Cartridge 25 mL, 1:1:

- Up to 30 % on biopolymere basis
- Available in 1:1 mixing ratio
- Same technological features as PP / PA versions

25 mL DoubleSyringe GreenLine – cartridge on biopolymer basis

#### **Plunger:**

- Made of PP, inked in brown (to match the cartridge)
- Available in 1:1 mixing ratio
- Same technological features as PP / PA versions

25 mL DoubleSyringe GreenLine – plunger

#### **Closure Cap:**

- Made of PP (same cap as PP / PA version of 25 mL DoubleSyringe to keep the color code)
- Available in 1:1 mixing ratio for GreenLine version
- Same technological features as PP / PA versions

5 mL DoubleSyringe GreenLine – closure cap

#### **Mixers:**

• Fully compatible with all original mixing tips of the MIXPAC B-System

Product advantages:	Your Benefits:
Sustainable solution	Competitors advantage – one step ahead
Separated outlets	Leak free connection Safe and clean
Defined positioning of cap	Safe and easy handling No cross mixing
Rigid construction	Precise dosing therefore accurate application Suitable for high-viscosity compounds High, long-term stability
Integrated piston retention	Safely transported by air and sea Withstands variations in pressure and temperature

#### MIXPAC B-System mixer overview

Complete system

Optimal mixer for each 2-K adhesive

High process reliability Little user effort required Fatigue-free working

# Картриджи для Q-System SULZER

Sulzer offers Q-system coaxial cartridges for chemical anchoring and dowelling, with volumes of 75 to 380 mL with a 10:1 mixing ratio. All cartridges are available with the patented valve pistons. This system includes a range of optimal mixers for every application.



Q-system coaxial cartridges: overview of different variants

Fill volume – ratio	Description	Cartridge material	Piston type
150 mL – 1:1	Coaxial cartridge	PP white	valve piston closed piston
	Plunger to allow cartridges 150 mL – 1:1 to be used in a standard caulking gun	PP black	
150 mL – 10:1	Coaxial cartridge	PP natural	valve piston
		PA natural	weldable piston closed piston
			valve piston weldable piston closed piston
	Plunger to allow cartridges 150 mL – 10:1 to be used in a standard caulking gun	PP black	
150 mL – 10:1	Coaxial cartridge	PA natural	valve piston weldable piston closed piston

	Extruding system for cartridges with bayonet fitting: 75 mL– 10:1 and 150 mL – 10:1	PA GF, PBT, black	
310 mL – 10:1	Coaxial cartridge	PP white PA natural	valve piston weldable piston valve piston weldable Piston
380 mL – 10:1	Coaxial cartridge	PP natural	valve piston weldable
		PA natural	piston closed piston
			valve piston weldable piston closed piston
380 mL – 10:1	Coaxial cartridge with handle	PA natural	valve piston

# **Recommendations for dispensing guns**

Dispensing pressure for 2-component adhesives can be significant. Therefore we recommend the use of dispensing guns of industrial quality. Sulzer Mixpac offers a wide variety of dispensers, and our cartridges are compatible with a number of dispensing guns from various brands. For details, do not hesitate to contact us.

# Картриджи для J-System SULZER

Sulzer offers Q-system coaxial cartridges for chemical anchoring and dowelling, with volumes of 75 to 380 mL with a 10:1 mixing ratio. All cartridges are available with the patented valve pistons. This system includes a range of optimal mixers for every application.



Q-system coaxial cartridges: overview of different variants

Fill volume –	Description	Cartridge	Piston
ratio		material	type
150 mL – 1:1	Coaxial cartridge	PP white	valve piston closed piston

	Plunger to allow cartridges 150 mL – 1:1 to be used in a standard caulking gun	PP black	
150 mL – 10:1	Coaxial cartridge	PP natural PA natural	valve piston weldable piston closed piston valve piston
			weldable piston closed piston
	Plunger to allow cartridges 150 mL – 10:1 to be used in a standard caulking gun	PP black	
150 mL – 10:1	Coaxial cartridge	PA natural	valve piston weldable piston closed piston
	Extruding system for cartridges with bayonet fitting: 75	PA GF, PBT, black	
	mL– 10:1 and 150 mL – 10:1		
310 mL – 10:1	mL– 10:1 and 150 mL – 10:1 Coaxial cartridge	PP white PA natural	valve piston weldable piston valve piston weldable Piston
310 mL – 10:1 380 mL – 10:1			weldable piston valve piston weldable

Recommendations for dispensing guns

Dispensing pressure for 2-component adhesives can be significant. Therefore we recommend the use of dispensing guns of industrial quality. Sulzer Mixpac offers a wide variety of dispensers, and our cartridges are compatible with a number of dispensing guns from various brands. For details, do not hesitate to contact us.

# Миксеры для J-System, Q-System SULZER

Mixers of the J- and Q-systems for metering and mixing construction 2-component materials are available in various designs and lengths to meet the requirements of specific applications. Minimal pressure loss and precise metering at high dispensing rates are just a few benefits.

# **Mixers for anchoring**

Sulzer QUADRO<sup>™</sup> and helical mixers for chemical anchoring applications



Sulzer QUADRO<sup>™</sup> and helical mixers for chemical anchoring applications

We offer a special range of disposable static mixers for use in chemical anchoring where the adhesive must be dispensed into a hole or inaccessible places. These mixers are designed with a long nose. On some mixers, an extension tube can be added to make the outlet even longer.

# QUADRO<sup>™</sup> mixers with bell inlet

QUADRO<sup>™</sup> mixers with stepped outlet to be adjusted to specific requirements by cutting; QUADRO<sup>™</sup> mixer with integrated screw connection

A disposable mixer especially designed for use with 75 mL to 1500 mL cartridges; it can also be used for metering, mixing, or dispensing applications. Depending on the application in question, the stepped outlet can be adjusted by cutting.

If you are using the mixer on two-component machines and pressures above 25 bar (360psi), a Sulzer QUADRO<sup>™</sup> shroud must be used.

To dispense small quantities, the Sulzer needle adapter can be used. Another option is the QUADRO<sup>™</sup> 5.3/24PP with luer outlet. A range of disposable dispensing needles can be fitted onto its luer taper outlet.

Internal dimension	Number of elements	Outlet type
5.3	24	luer/step
7.5	24	step

8.7	24	step
8.7	24	step
10.7	24	step

#### QUADRO<sup>™</sup> mixer with screw connection

QUADRO<sup>™</sup> mixers with screw connection with a straight outlet allow high dosing rates; QUADRO<sup>™</sup> mixer with bell inlet: its stepped outlet can be easily adjusted to the specific application

The QUADRO<sup>™</sup> mixer with integrated screw connection is a disposable mixer specifically designed for use with 75 mL to 1500 mL cartridges.

The mixer has a single lead  $7/8" \times 9$  thread and can be screwed directly onto most cartridges without the need for a separate retaining nut.

The straight outlet allows high dosing rates. By adding a mixer extension onto the outlet, it is possible to apply resin to inaccessible places.

The outlet diameter	of the mixers with	n stepped outlets ca	n be adjusted by cutting.
The outlet diameter		i stepped outlets tu	in be adjusted by catting.

Internal dimension	Number of elements	Outlet type
8.7	20	straight
8.7	20	stepped
8.7	24	straight
8.7	24	stepped
10.7	16	straight
10.7	19	straight
10.7	24	straight

For detailed technical information, please contact your partner at Sulzer Mixpac.

# Системы покрытия MixCoat Spray SULZER

2-K coating repairs with ships, pipelines and steel constructions are usually done by hand. This leads to high labor costs and a huge amount of waste material. MixCoat<sup>™</sup> Spray offers a solution, being faster, cleaner and more economical.

"MixCoat<sup>™</sup> Spray" for faster, cleaner and more economical 2-K coating repair works:



The portable MixCoat<sup>™</sup> Spray system is ideal for 2-component coating repairs and maintenance jobs. This stand-alone system only requires an air connection. A dual-stage-trigger for the integrated air flow control allows the user to operate this system with only one hand, which makes MixCoat a unique, user friendly solution.

Animation on the functionality of the Sulzer MixCoat Spray system for 2-K protective coating repair jobs.

### MixCoat<sup>™</sup> Spray

#### Assortment:

Optional with Standard- or "Quick Lock" air connection

Compatible with all MIXPAC<sup>™</sup> F-System cartridges between 940mL and 1500 mL

Technical advantages	User Benefits
Lightweight design	Fatigue-free working
Integrated air-flow	User-friendly ease of use
Dual-stage-trigger	Exact handling of the air-flow with one hand

# Системы покрытия MixCoat Flex SULZER

2-K coating repair works are often complicated, especially with difficult to reach areas such as bilges in ships, pipelines and steel constructions. This leads to high labor costs and a huge amount of waste material. MixCoat<sup>™</sup> Spray offers a solution with maximum flexibility to reach all areas. This system reduces waste material and saves labor.



"MixCoat™ Flex" for flexible and economical 2-K coating repair and maintenance works:

This universal system for 2-K coatings offers various application methods. For difficult to reach

areas, MixCoat<sup>™</sup> Flex offers a real benefit. It is extremely robust, can be mounted on the wall or simply placed on the floor. This stand-alone system only requires an air connection.

Animation on the functionality of Sulzer MixCoat Flex system from Sulzer Mixpac for 2-K protective coating repair jobs

MixCoat Flex system is characterized by a flexible handling when applying the 2-K material.

The actuator is combined with a hose to guarantee maximum flexibility.

#### Assortment:

- Optional with Spray, Roller or Brush application
- Variable hose length
- Compatible with all MIXPAC<sup>™</sup> F-System cartridges between 940mL and 1500 mL
- Easy changing between various mixing ratios

Technical advantages	User Benefits	
Maximum flexibility	Easy access with difficult to reach areas	
	Shorter working times	
	Less waste material	
	Ecological and economical solution	
Spray, Brush and Roller	Easy use of different application options	
application	Optimal application, according to the situation	
	Shorter working times	
Robust design	Minimum maintenance needed	

# Картриджи MixCoat SULZER

For applications where large volumes of 2-K materials are dispensed at one time, Sulzer Mixpac offers cartridges with volumes between 940 and 1500 mL in various mixing ratios. The cartridges fit all MixCoat<sup>™</sup> application systems.



High Volume cartridges of MIXPAC<sup>™</sup> F-System

- Especially designed for the use with MixCoat<sup>™</sup> Systems
- Same technology as the well proven MIXPAC<sup>™</sup> F-System
- Separate outlets to avoid cross contamination

MIXPAC F-System cartridge with high volumes up to 1500 mL.

#### Volumes:

- 1500 mL, 1:1
- 1125 mL, 2:1
- 1000 mL, 3:1
- 940 mL, 4:1

### **User Benefits:**

- Precise metering consistent dispense
- Safe and fast filling of cartridges
- Safe storage and application of 2-K material up to +40°C
- Excellent mixing results
- No cross contamination

For more details please visit the MIXPAC<sup>™</sup> <u>F-System site</u> on our homepage.

# Диспенсер SULZER

Sulzer Mixpax's COX dispensers are the market-leading brand for handheld sealant and adhesive dispensers. In combination with Sulzer Mixpac's strong position as a technology leader and system provider, we offer a complete product range of mixing, dosing, and application systems.



COX sells quality manual, pneumatic, and cordless one- and two-component dispensers for industrial and construction applications under the brand COX.

This acquisition together with acquiring MK in 2013 strengthens the position of Sulzer's position as technology leader and one of the world leading solution providers in the area of mixing, dosing, and application systems.

# Центробежные насосы HPH, HPL SULZER

The HPH and HPL are multistage ring section pumps, designed for operation at two or four pole motor speed. They are suitable for pumping clear or slightly polluted water with abrasive particles.

#### **Main benefits**

- Split bearing housing for easy maintenance
- Robust construction for harsh mining conditions



• Condition monitoring capabilities

. ..

- Specialized wear coating for extended operating life
- Forged shaft ensures stability and prevents distortion

#### **Main applications**

- Mine dewatering
- Water transport

...

Energy recovery capabilities (reverse running as a turbine)

Key characteristics HPH	
Capacities	130 to 1,000 m <sup>3</sup> /h / 680 to 5,000 USgpm
Heads	120 to 1,800 m / 600 to 5,000 feet
Pressures	180 bar / 2,610 psi
Temperatures	up to 105°C / up to 220°F
Performance Range	
Key characteristics HPL	
Capacities	36 to 1,000 m <sup>3</sup> /h / 170 to 5,000 USgpm
Heads	40 to 400 m / 190 to 1,300 feet
Pressures	40 bar / 560 psi
Temperatures	up to 105°C / up to 220°F

### **Performance Range**

# Насосы самовсавыющие LD, ND SULZER

The MCD80 LD-185 is a low head pump with a maximum head of 29 meters (94 ft) and max flow of 144 m3/h (634 USgpm). Our self priming pumps are design with harsh environments in mind, heavy-duty construction, excellent L3/D4 ratio and the right materials of construction.

#### **Main benefits**

- Dry self prime and reprime
- Ductile iron volute with 316 SS impeller/wearplates standard



- Low fuel usage
- Reduced engine sizes
- Lower maintenance costs
- Suction lifts to 8.5 meters
- Replaceable wear parts

#### **Product information**

End suction, single stage, centrifugal pump, 3 vane, open impeller

Suction x discharge 80 x 80 mm / 3 x 3 in

Max flow	40 l/s / 634 USgpm /144 m³/h
Max head	29 m / 94 ft
Solids Handling	80 mm / 3,1 in
Dry weight	1000 kg / 2205 lbs
Flow @ BEP1	26 l/s / 410 USgpm / 95 m <sup>3</sup> /h
Pressure @ BEP2	21 m / 70 ft

Impeller Diameter 185 mm

The MCD100 LD-243 is a low head pump with a maximum head of 54 meters (175 ft) and max flow of 240 m3/h (1054 USgpm). Our self priming pumps are design with harsh environments in mind, heavy-duty construction, excellent L3/D4 ratio and the right materials of construction. Main benefits

- Dry self prime and reprime
- Ductile iron volute with 316 SS impeller/wearplates standard
- Low fuel usage
- Reduced engine sizes
- Lower maintenance costs
- Suction lifts to 8.5 meters
- Replaceable wear parts

Product information

End suction, single stage, centrifugal pump, 2 vane, open impeller

Suction x discharge100 x 100 mm / 4 x 4 inMax flow67 l/s / 1054 USgpm / 239 m³/hMax head54 m / 175 ftSolids Handling45 mm / 1,8 inDry weight1050 kg / 2315 lbsFlow @ BEP147 l/s / 745 USgpm / 170 m³/hPressure @ BEP233 m / 110 ft

Impeller Diameter 243 mm

The MCD150 LD-285 is a low head pump with a maximum head of 60 meters (197 ft) and max flow of 625 m3/h (2750 USgpm). Our self priming pumps are design with harsh environments in mind, heavy-duty construction, excellent L3/D4 ratio and the right materials of construction. Main benefits

- Dry self prime and reprime
- Ductile iron volute with 316 SS impeller/wearplates standard
- Low fuel usage
- Reduced engine sizes
- Lower maintenance costs
- Suction lifts to 8.5 meters
- Replaceable wear parts

Product information

End suction, single stage, centrifugal pump, 2 vane, open impeller

# Suction x discharge 150 x 150 mm / 6 x 6 in

Max flow	174 l/s / 2750 USgpm / 625 m³/h
Max head	60 m / 197 ft
Solids Handling	80 mm / 3,1 in
Dry weight	1510 kg / 3329 lbs
Flow @ BEP1	127 l/s / 2015 USgpm / 455 m <sup>3</sup> /h
Pressure @ BEP2	40 m / 130 ft

Impeller Diameter 285 mm

The MCD150 LD-255 has a max head of 33 meters (108 ft) and max flow of 507 m3/h (2232 USgpm). Our self priming pumps are design with harsh environments in mind, heavy-duty construction, excellent L3/D4 ratio and the right materials of construction.

Main benefits

- Dry self prime and reprime
- Ductile iron volute with 316 SS impeller/wearplates standard
- Low fuel usage
- Reduced engine sizes
- Lower maintenance costs
- Suction lifts to 8.5 meters
- Replaceable wear parts

Product information

End suction, single stage, centrifugal pump, 2 vane, open impeller

Suction x discharge 150 x 150 mm / 6 x 6 in

Max flow 141 l/s / 2232 USgpm / 507 m<sup>3</sup>/h

Max head	33 m / 108 ft
Solids Handling	80 mm / 3,1 in
Dry weight	1160 kg / 2557 lbs
Flow @ BEP1	90 l/s / 1425 USgpm / 325 m <sup>3</sup> /h
Pressure @ BEP2	22 m / 70 ft
Impeller Diameter	255 mm

The MCD220 LD-320 is a low head/medium flow pump with a maximum head of 54 meters (177 ft) and max flow of 732 m3/h (3221 USgpm). Our self priming pumps are design with harsh environments in mind, heavy-duty construction, excellent L3/D4 ratio and the right materials of construction.

Main benefits

- Dry self prime and reprime
- Ductile iron volute with 316 SS impeller/wearplates standard
- Low fuel usage
- Reduced engine sizes
- Lower maintenance costs
- Suction lifts to 8.5 meters
- Replaceable wear parts

Product information

End suction, single stage, centrifugal pump, 2 vane, open impeller

Suction x discharge 200 x 200 mm / 8 x 8 in

Max flow 203 l/s / 3221 USgpm / 732 m<sup>3</sup>/h

Max head 54 m / 177 ft

Solids Handling	80 mm / 3,1 in
Dry weight	1620 kg / 3571 lbs
Flow @ BEP1	150 l/s / 2380 USgpm / 540 m <sup>3</sup> /h
Pressure @ BEP2	30 m / 100 ft

Impeller Diameter 320 mm

The MCD250 LD-380 is a low head/high flow pump with a maximum head of 60 meters (197 ft) and max flow of 1094 m3/h (4818 USgpm). Our self priming pumps are design with harsh environments in mind, heavy-duty construction, excellent L3/D4 ratio and the right materials of construction.

Main benefits

- Dry self prime and reprime
- Ductile iron volute with 316 SS impeller/wearplates standard
- Low fuel usage
- Reduced engine sizes
- Lower maintenance costs
- Suction lifts to 8.5 meters
- Replaceable wear parts

Product information

End suction, single stage, centrifugal pump, 2 vane, semi- open impeller

Suction x discharge 250 x 200 mm / 10 x 8 in

Max flow 304 l/s / 4818 USgpm / 1094 m<sup>3</sup>/h

Max head 60 m / 197 ft

Solids Handling 60 mm / 2,4 in

 Dry weight
 51000 kg / 11023 lbs

 Flow @ BEP1
 225 l/s / 3565 USgpm / 810 m³/h

 Pressure @ BEP2
 36 m / 115 ft

Impeller Diameter 380 mm

The MCD300 LD-536G is a low head/high flow pump with a maximum head of 60 meters (195 ft) and max flow of 1595 m3/h (7022 USgpm). Our self priming pumps are design with harsh environments in mind, heavy-duty construction, excellent L3/D4 ratio and the right materials of construction.

Main benefits

- Dry self prime and reprime
- Ductile iron volute with 316 SS impeller/wearplates standard
- Low fuel usage
- Reduced engine sizes
- Lower maintenance costs
- Suction lifts to 8.5 meters
- Replaceable wear parts

Product information

End suction, single stage, centrifugal pump, 2 vane, open impeller

Suction x discharge 300 x 300 mm / 12 x 12 in

Max flow	443 l/s / 7022 USgpm / 1595 m <sup>3</sup> /h
Max head	60 m / 195 ft
Solids Handling	90 mm / 3,5 in
Dry weight	7370 kg / 16248 lbs
Flow @ BEP1 360 l/s / 5705 USgpm / 1295 m<sup>3</sup>/h

Pressure @ BEP2 33 m / 105 ft

Impeller Diameter 536 mm

The MCD130 LD-435 is a medium pump with a maximum head of 88 meters (289 ft) and max flow of 244 m3/h (1073 USgpm). Our self priming pumps are design with harsh environments in mind, heavy-duty construction, excellent L3/D4 ratio and the right materials of construction. Main benefits

- Dry self prime and reprime
- Ductile iron volute with 316 SS impeller/wearplates standard
- Low fuel usage
- Reduced engine sizes
- Lower maintenance costs
- Suction lifts to 8.5 meters
- Replaceable wear parts

Product information

End suction, single stage, centrifugal pump, 3 vane, semi-open impeller

Suction x discharge 150 x 150 mm / 6 x 6 in

Max flow	68 l/s / 1073 USgpm / 244 m <sup>3</sup> /h
Max head	88 m / 289 ft
Solids Handling	30 mm / 1,2 in
Dry weight	2000 kg / 4409 lbs
Flow @ BEP1	52 l/s / 825 USgpm / 185 m <sup>3</sup> /h
Pressure @ BEP2	75 m / 245 ft

Impeller Diameter 435 mm

The MCD150 LD-394 is a medium pump with a maximum head of 100 meters (328 ft) and max flow of 688 m3/h (3027 USgpm). Our self priming pumps are design with harsh environments in mind, heavy-duty construction, excellent L3/D4 ratio and the right materials of construction. Main benefits

- Dry self prime and reprime
- Ductile iron volute with 316 SS impeller/wearplates standard
- Low fuel usage
- Reduced engine sizes
- Lower maintenance costs
- Suction lifts to 8.5 meters
- Replaceable wear parts

#### Product information

End suction, single stage, centrifugal pump, 2 vane, semi-open impeller

Suction x discharge200 x 150 mm / 8 x 6 inMax flow191 l/s / 3027 USgpm / 688 m³/hMax head100 m / 328 ftSolids Handling50 mm / 2,0 inDry weight5600 kg / 12346 lbsFlow @ BEP1140 l/s / 2220 USgpm / 505 m³/hPressure @ BEP270 m / 230 ftImpeller Diameter394 mm

The MCD220 LD-395 is a medium head pump with a maximum head of 69 meters (226 ft) and max flow of 731 m3/h (3219 USgpm). Our self priming pumps are design with harsh

# environments in mind, heavy-duty construction, excellent L3/D4 ratio and the right materials of construction.

Main benefits

- Dry self prime and reprime
- Ductile iron volute with 316 SS impeller/wearplates standard
- Low fuel usage
- Reduced engine sizes
- Lower maintenance costs
- Suction lifts to 8.5 meters
- Replaceable wear parts

Product information

End suction, single stage, centrifugal pump, 4 vane, semi-open impeller

Suction x discharge	200 x 200 mm / 8 x 8 in
Max flow	203 l/s / 3219 USgpm / 731 m³/h
Max head	69 m / 226 ft
Solids Handling	50 mm / 2,2 in
Dry weight	5760 kg / 12699 lbs
Flow @ BEP1	171 l/s / 2710 USgpm / 615 m³/h
Pressure @ BEP2	58 m / 190 ft
Impeller Diameter	395 mm

The MC300 ND-490 is a medium head pump with a maximum head of 89 meters (292 ft) and max flow of 1908 m3/h (8401 USgpm). Our self priming pumps are design with harsh environments in mind, heavy-duty construction, excellent L3/D4 ratio and the right materials of construction.

Main benefits

- Dry self prime and reprime
- Ductile iron volute with 316 SS impeller/wearplates standard
- Low fuel usage
- Reduced engine sizes
- Lower maintenance costs
- Suction lifts to 8.5 meters
- Replaceable wear parts

Product information

End suction, single stage, centrifugal pump, 2 vane fully open impeller

Suction x discharge	300 x 300 mm / 12 x 12 in
Max flow	530 l/s / 8401 USgpm / 1908 m <sup>3</sup> /h
Max head	89 m / 292 ft
Solids Handling	90 mm / 3,5 in
Dry weight	10350 kg / 22818 lbs
Flow @ BEP1	400 l/s / 6340 USgpm / 1440 m <sup>3</sup> /h
Pressure @ BEP2	45 m / 150 ft

Impeller Diameter 490 mm

The MCD300 ND-510 has a max head of 105 meters (345 ft) and max flow of 1995 m3/h (8786 USgpm). Our self priming pumps are design with harsh environments in mind, heavy-duty construction, excellent L3/D4 ratio and the right materials of construction. Main benefits

- Dry self prime and reprime
- Ductile iron volute with 316 SS impeller/wearplates standard
- Low fuel usage

- Reduced engine sizes
- Lower maintenance costs
- Suction lifts to 8.5 meters
- Replaceable wear parts

Product information

End suction, single stage, centrifugal pump, 2 vane, fully open impeller

Suction x discharge 300 x 300 mm / 12 x 12 in

Max flow	554 l/s / 8786 USgpm / 1995 m³/h
Max head	105 m / 345 ft
Solids Handling	90 mm / 3,5 in
Dry weight	5550 kg / 12236 lbs
Flow @ BEP1	450 l/s / 7135 USgpm / 1620 m <sup>3</sup> /h
Pressure @ BEP2	55 m / 180 ft
Impeller Diameter	510 mm

The MCD80 HD-325 has a max head of 75 meters (245 ft) and max flow of 97 m3/h (428 USgpm). Our self priming pumps are design with harsh environments in mind, heavy-duty construction, excellent L3/D4 ratio and the right materials of construction.

Main benefits

- Dry self prime and reprime
- Ductile iron volute with 316 SS impeller/wearplates standard
- Low fuel usage
- Reduced engine sizes
- Lower maintenance costs
- Suction lifts to 8.5 meters
- Replaceable wear parts

**Product information** 

End suction, single stage, centrifugal pump, 3 vane, open impeller

Suction x discharge	80 x 80 mm / 3 x 3 in
Max flow	27 l/s / 428 USgpm / 97 m <sup>3</sup> /h
Max head	75 m / 245 ft
Solids Handling	25 mm / 1,0 in
Dry weight	1510 kg / 3329 lbs
Flow @ BEP1	21 l/s / 340 USgpm / 75 m <sup>3</sup> /h
Pressure @ BEP2	67 m / 220 ft

Impeller Diameter 325 mm

The MCD130 HD-465 has a max head of 134 meters (439 ft) and max flow of 300 m3/h (1322 USgpm). Our self priming pumps are design with harsh environments in mind, heavy-duty construction, excellent L3/D4 ratio and the right materials of construction. Main benefits

- Dry self prime and reprime
- Ductile iron volute with 316 SS impeller/wearplates standard
- Low fuel usage
- Reduced engine sizes
- Lower maintenance costs
- Suction lifts to 8.5 meters
- Replaceable wear parts

Product information

End suction, single stage, centrifugal pump, 3 vane, semi-open impeller

Suction x discharge150 x 150 mm / 6 x 6 inMax flow83 l/s / 1322 USgpm / 300 m³/hMax head134 m / 439 ftSolids Handling30 mm / 1,2 inDry weight5550 kg / 12236 lbsFlow @ BEP166 l/s / 1045 USgpm / 240 m³/hPressure @ BEP2112 m / 365 ft

Impeller Diameter 465 mm

The MCD160 HD-456 has a max head of 140 meters (460 ft) and max flow of 670 m3/h (2950 USgpm). Our self priming pumps are design with harsh environments in mind, heavy-duty construction, excellent L3/D4 ratio and the right materials of construction.

Main benefits

- Dry self prime and reprime
- Ductile iron volute with 316 SS impeller/wearplates standard
- Low fuel usage
- Reduced engine sizes
- Lower maintenance costs
- Suction lifts to 8.5 meters
- Replaceable wear parts

Product information

End suction, single stage, centrifugal pump, 2 vane, semi-open impeller

# Suction x discharge 200 x 150 mm / 8 x 6 in

Max flow	186 l/s / 2950 USgpm / 670 m <sup>3</sup> /h
Max head	140 m / 460 ft
Solids Handling	65 mm / 2,6 in
Dry weight	5600 kg / 12346 lbs
Flow @ BEP1	136 l/s / 2155 USgpm / 490 m <sup>3</sup> /h
Pressure @ BEP2	95 m / 310 ft

Impeller Diameter 456 mm

The MCD220 HD-432 has a max head of 114 meters (372 ft) and max flow of 924 m3/h (4070 USgpm). Our self priming pumps are design with harsh environments in mind, heavy-duty construction, excellent L3/D4 ratio and the right materials of construction.

Main benefits

- Dry self prime and reprime
- Ductile iron volute with 316 SS impeller/wearplates standard
- Low fuel usage
- Reduced engine sizes
- Lower maintenance costs
- Suction lifts to 8.5 meters
- Replaceable wear parts

Product information

End suction, single stage, centrifugal pump, 2 vane, semi-open impeller

Suction x discharge 200 x 200 mm / 8 x 8 in

Max flow 257 l/s / 4070 USgpm / 924 m<sup>3</sup>/h

Max head	114 m / 372 ft
Solids Handling	55 mm / 2,2 in
Dry weight	6630 kg / 14617 lbs
Flow @ BEP1	220 l/s / 3485 USgpm / 790 m <sup>3</sup> /h
Pressure @ BEP2	95 m / 310 ft
Impeller Diameter	432 mm

The MCD100 SD-560 has a max head of 185 meters (606 ft) and max flow of 294 m3/h (1297 ft). Our self priming pumps are design with harsh environments in mind, heavy-duty construction, excellent L3/D4 ratio and the right materials of construction.

Main benefits

- Dry self prime and reprime
- Ductile iron volute with 316 SS impeller/wearplates standard
- Low fuel usage
- Reduced engine sizes
- Lower maintenance costs
- Suction lifts to 8.5 meters
- Replaceable wear parts

Product information

End suction, single stage, centrifugal pump, 5 vane, closed impeller

Suction x discharge 150 x 100 mm / 6 x 4 in

Max flow 82 l/s / 1297 USgpm / 294 m<sup>3</sup>/h

Max head 185 m / 606 ft

Solids Handling 822 mm / 0,9 in

 Dry weight
 5870 kg / 12941 lbs

 Flow @ BEP1
 66 l/s / 1045 USgpm / 240 m³/h

 Pressure @ BEP2
 150 m / 500 ft

Impeller Diameter 560 mm

The MCD150 SD-560 has a max head of 184 meters (603 ft) and max flow of 539 m3/h (2374 ft). Our self priming pumps are design with harsh environments in mind, heavy-duty construction, excellent L3/D4 ratio and the right materials of construction.

Main benefits

- Dry self prime and reprime
- Ductile iron volute with 316 SS impeller/wearplates standard
- Low fuel usage
- Reduced engine sizes
- Lower maintenance costs
- Suction lifts to 8.5 meters
- Replaceable wear parts

**Product information** 

End suction, single stage, centrifugal pump, 5 vane, closed impeller

Suction x discharge 200 x 150 mm / 8 x 6 in

Max flow	150 l/s / 2374 USgpm / 539 m <sup>3</sup> /h
Max head	184 m / 603 ft
Solids Handling	43 mm / 1,7 in
Dry weight	6750 kg / 14881 lbs
Flow @ BEP1	125 l/s / 1980 USgpm / 450 m <sup>3</sup> /h

Pressure @ BEP2 154 m / 505 ft

Impeller Diameter 560 mm

The MCD200 SD-636 has a max head of 175 meters (574 ft) and max flow of 742 m3/h (3265 ft). Our self priming pumps are design with harsh environments in mind, heavy-duty construction, excellent L3/D4 ratio and the right materials of construction.

Main benefits

- Dry self prime and reprime
- Ductile iron volute with 316 SS impeller/wearplates standard
- Low fuel usage
- Reduced engine sizes
- Lower maintenance costs
- Suction lifts to 8.5 meters
- Replaceable wear parts

#### Product information

End suction, single stage, centrifugal pump, 5 vane, closed impeller

Suction x discharge 250 x 200 mm / 10 x 8 in

Max flow	206 l/s / 3265 USgpm / 742 m <sup>3</sup> /h
Max head	175 m / 574 ft
Solids Handling	31 mm / 1,2 in
Dry weight	9440 kg / 20812 lbs
Flow @ BEP1	184 l/s / 2915 USgpm / 660 m <sup>3</sup> /h
Pressure @ BEP2	153 m / 500 ft
Impeller Diameter	636 mm

### Шламовые насосы типа EMW SULZER

The EMW pump range has been designed considering historic field experience, coupled with the latest in fluid flow modeling technologies and finite element analysis, to create the latest in slurry pumping technology. The pump range offers high hydraulic efficiencies for optimized wear life performance in difficult solids handling applications.



- Extra high durability
- Minimized total cost of ownership
- Low energy consumption due to high efficiency
- Easy and quick installation and maintenance
- Low spare cost due to high standardization between EMW-M and EMW-R

#### **Main applications**

- Mining and mineral processing
- Aggregates (sand and gravel)
- Power (bottom ash, lime slurry for flue gas desulphurization(FGD))
- Food industry
- Waste water
- Chemical slurries

#### Main design features

- Wide range of high quality materials (metallic as well as rubber)
- Optimized high efficiency hydraulics ensure high efficiency and minimized wear in the largest operating range
- Heavy-duty bearings offer LB10 bearing life of more than 50,000 hours
- Vertical design with EMW-R and EMW-M hydraulics available
- Fast and effective maintenance due to easy assembly and dismantling of main pump parts

#### Key characteristics

Capacities	EMW-R: up to 1,450 m3/h / 6,385 USgpm
	EMW-M: up to 4,000 m3/h / 17,600 USgpm
Heads	EMW-R: up to 55 m / 180 ft EMW-M: up to 95 m / 312 ft
Pressures	EMW-R: up to 14 bar / 203 psi EMW-M: up to 16 bar / 232 psi



Temperatures	EMW-R: up to 110 °C / 230 °F EMW-M: up to 110 °C / 230 °F
Maximum speed of rotation	EMW-R: up to 2600 rpm EMW-M: up to 3000 rpm

## Смазочные системы API SULZER

The lube oil systems are custom engineered to meet the industry lubrication needs. Manufactured and tested as per Aramco specification 32-SAMSS-013, API 614, API 611, API 610, API 618 as well as manufacturer's standards.

#### Main benefits

- Reliable operating system
- Reducing expensive downtime of the rotating equipment.
- Highly efficient lubrication system

#### **Main applications**

- High pressure pumps
- Turbines
- Centrifugal compressors
- Oil engines
- Electric motors
- Oil & Gas industries
- Power industries

#### Main design features

- Compact reservoir design
- Optimal instrumentation to ensure reliable operation of equipment.
- High efficiency coolers

#### **Key characteristics**

Capacities	5 LPM to 2000 LPM
Filtration Rating	Down to 5 Microns
Material	Carbon steel and Stain less steel

#### По вопросам продаж и поддержки обращайтесь:

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