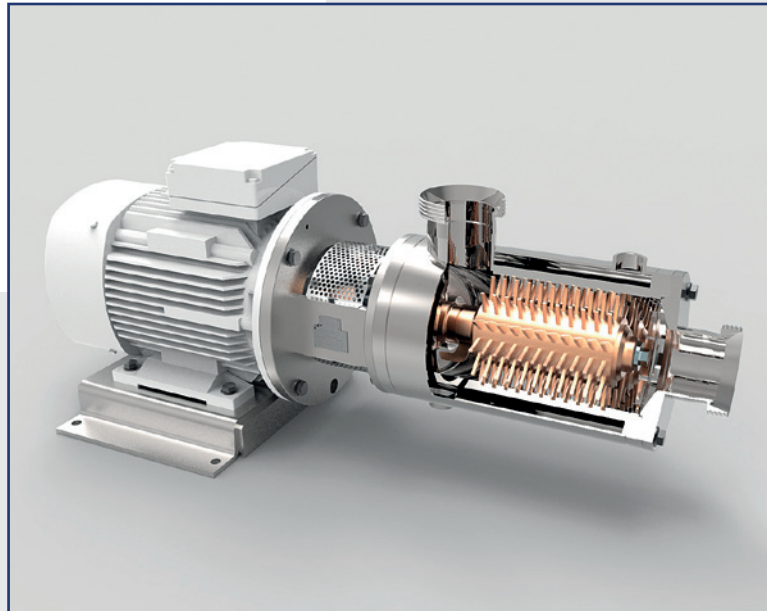


INDAG

Maschinenbau GmbH

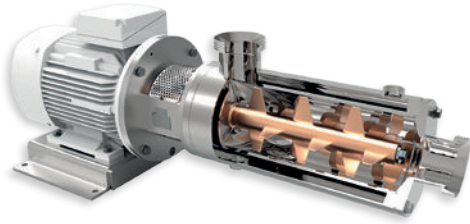
The FlowMix[®]-Company



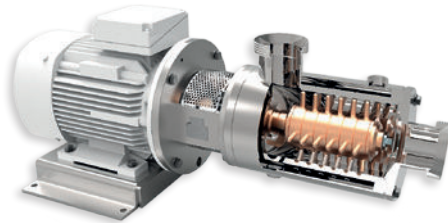
**Intensive inline mixer
Type DLM/S**

For challenging mixing applications

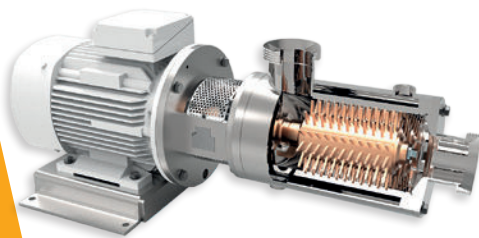
Mixer type DLM/M



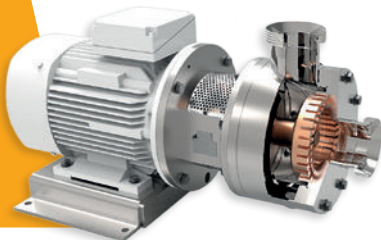
Mixer type DLM/P



Mixer type DLM/S



Mixer type DLM/H



Shear Rate



■ Function and application of DLM/S

INDAG intensive inline mixer type DLM/S is used for effective mixing, emulsifying, dispersing and aerating of fluids, solids and gases. Examples of applications are: mixing of egg yolk, oil and vinegar solution to create a premixture for mayonnaise production. Another example is aeration of marshmallows. In this case egg white, a sugar syrup and air is mixed to achieve a fine-pore foam. DLM/S mixers homogeneously mix caramel sugar syrup of glucose-fructose syrup with very small quantities of aroma and color. Process cheese is produced with DLM/S mixers by boiling up cheese with high pressure steam.

■ Technology of DLM/S

INDAG mixer type DLM/S consists of patented star shape mixing elements on rotor and in stator (mixer casing). Star shape design is extremely robust to allow mixing of highly viscous products (> 10,000,000 mPas). Mixing energy is introduced efficiently into product. It is possible (as an option) to heat or cool rotor and stator. INDAG mixer DLM/S is designed in a modular way. A single acting mechanical seal can be changed to double acting mechanical seal without change of mixer.

Positioning

Horizontal or vertical position of mixer is possible

Pressure levels

6 bar, 10 bar, 16 bar, 25 bar, 40 bar

Materials

1.4301 (AISI 304), 1.4404 (AISI 316 L)

Seals

Single acting mechanical seal; double acting mechanical seal; even in aseptic execution

Connections

Dairy connections according to DIN 11851, DIN 11864, Tri Clamp, SMS

Rotational speed

100 rpm to 1,800 rpm

Capacities

50l/h to 120,000l/h

Temperatures

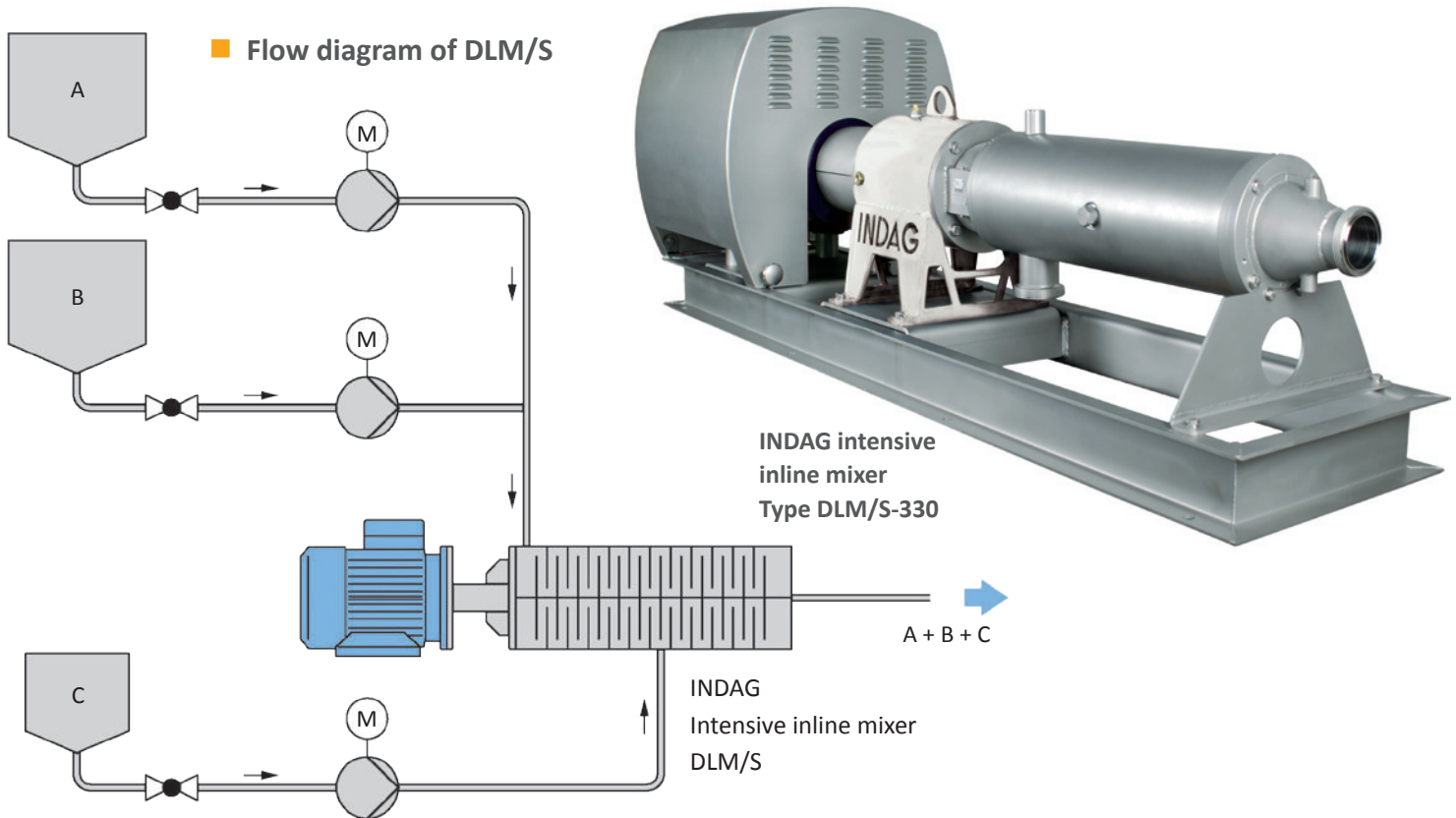
0 °C to 200 °C

Viscosities

1 mPas to 10,000,000 mPas

■ Advantages of DLM/S

- Very good self-cleaning during CIP-cleaning
- No pressure loss
- No blockage
- Very homogenous mixing result even for extreme concentration ratios
- Efficient introduction of mixing energy
- Mixing energy can be changed variable and adapted to product or capacity changes
- Execution with double jacket and further connections possible
- Suitable for highest viscosity



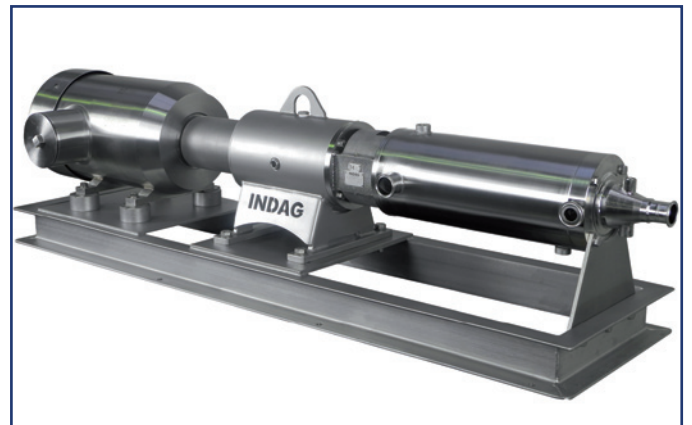
■ **Mixer capacities of DLM/S**

Type DLM/S ... HY*	unit	1	2	3	4	5	6
capacity*	l/h	100-2,000	200-5,000	500-10,000	1,000-20,000	3,000-60,000	6,000-120,000
connection	DN	40-80	50-100	65-150	80-200	100-250	125-300
optional	ASME	1.5"-3"	2"-4"	2.5"-6"	3"-8"	4"-10"	5"-12"
power*	kW	0.55-4	1.5-7.5	2.2-22	4-45	5.5-90	11-160
rotational speed*	1/min	200-3,600	200-3,600	200-1,800	200-1,800	200-1,500	1,500
mixing stages	5	DLM/S-105 KB	DLM/S-205 KB	DLM/S-305 KB	DLM/S-405 KB	DLM/S-505 KB	DLM/S-605 KB
compact version	10	DLM/S-110 KB	DLM/S-210 KB	DLM/S-310 KB	DLM/S-410 KB	DLM/S-510 KB	DLM/S-610 KB
mixing stages	10/15	DLM/S-110 LB	DLM/S-215 LB				
bearing block version	20		DLM/S-220 LB	DLM/S-320 LB	DLM/S-420 LB	DLM/S-520 LB	DLM/S-620 LB
	30			DLM/S-330 LB	DLM/S-430 LB	DLM/S-530 LB	DLM/S-630 LB

*depends on product. ** Type designation HY = food execution has been left out within the table.

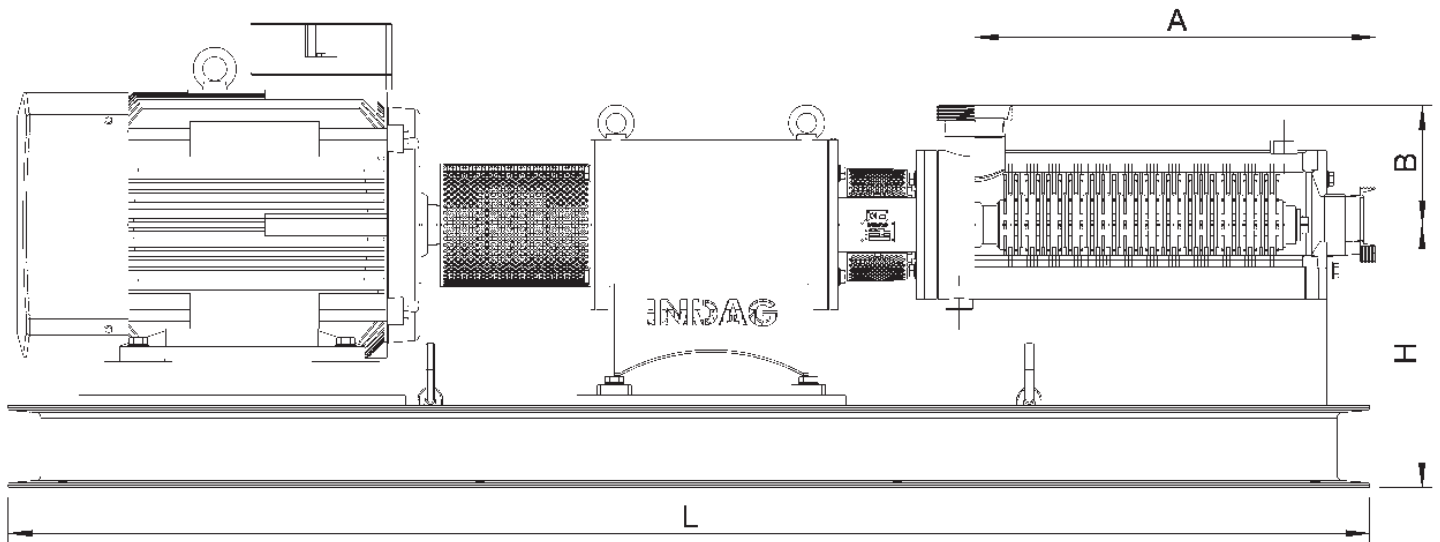


INDAG DLM/S open

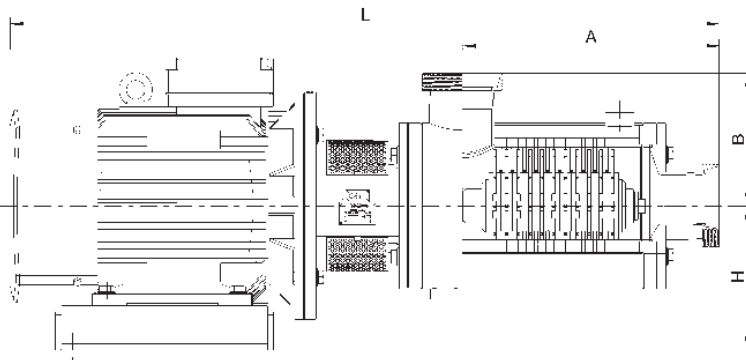


INDAG DLM/S in special execution with stainless steel drive

■ Dimension drawing of DLM/S (LB)



■ Dimension drawing of DLM/S (KB)



■ Dimension table of DLM/S

Type	unit	A	B	H*	L*
DLM/S-205 KB	mm	258	155	158	773
DLM/S-305 KB	mm	269	175	190	883
DLM/S-405 KB	mm	302	205	190	945
DLM/S-505 KB	mm	335	244	218	1004
DLM/S-605 KB	mm	Dimensions on request			
DLM/S-220 LB	mm	498	155	312	1700
DLM/S-320 LB	mm	509	175	385	2000
DLM/S-420 LB	mm	542	205	460	2100
DLM/S-520 LB	mm	575	244	460	2200
DLM/S-620 LB	mm	Dimensions on request			

* depends on the drive

Company profile

For over 60 years INDAG develops, designs and produces dynamical inline mixers and complete metering and mixing systems in Borsfleth, Germany.

INDAG products claim to meet highest requirements in quality and efficiency.

Product and service spectrum

Product spectrum includes: dynamic inline mixer type DLM/M, intensive inline mixer type DLM/P, intensive inline mixer type DLM/S, homogenizer type DLM/H, solid-liquid mixer type DLM/FS, complete systems type FlowMix for metering, mixing and aerating. Complete systems are equipped with PLC control and sensors for automatic and monitored production. Service spectrum includes commissioning and maintenance of mixers and complete systems.



INDAG

Maschinenbau GmbH

Ivenfleth 13
 D-25376 Borsfleth / GERMANY
 phone +49 4124 9876-0
 fax: +49 4124 9876-54
 e-mail: info@indag.de
 www.indag.com

NORTH AMERICAN PARTNER ORGANIZATION:

**NORTH AMERICAN PROCESS, INC.
 d/b/a INFINI-MIX Process Solutions**

811 EAST MAPLE STREET
 MORA, MN 55051
 (855) PROCESS (776-2377)
 678-614-5112
 www.WeMixStuff.com
 Sales@naprocess.com