

# Liquid ring vacuum pumps in compact design



**LEM 25 ... LEM 425**  
**LEL 90 ... LEL 250**

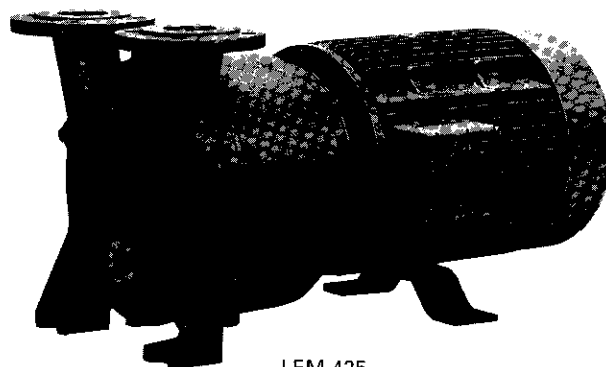
**Pressure range: 33 to 1013 mbar**  
**Suction capacity: 9 to 475 m<sup>3</sup>/h**

## CONSTRUCTION TYPE

SIHI liquid ring vacuum pumps are displacement pumps of uncomplicated and robust construction with the following particular features:

- non-polluting due to nearly isothermal compression
- oil-free, as no lubrication in the working chamber
- handling of nearly all gases and vapours
- small quantities of entrained liquid can be handled
- easy maintenance and reliable operation
- low noise and nearly free from vibration
- wide choice of material, therefore applicable nearly everywhere
- shaft not in contact with the medium
- protection against cavitation as standard
- incorporated dirt drain
- incorporated central drain
- no metallic contact of the rotating parts

The SIHI liquid ring vacuum pumps LEM/LEL are single-stage ones.



LEM 425

## NOTE

During operation the pump must continuously be supplied with service liquid, normally water, in order to eliminate the heat resulting from the gas compression and to replenish the liquid ring, because part of the liquid is leaving the pump together with the gas. This liquid can be separated from the gas in a liquid separator (see catalogue part A). It is possible to reuse the service liquid. The pumps are equipped with a device by which the contaminated service liquid can continuously be drained during operation (dirt drain), if necessary.

The direction of rotation is clockwise, when looking from the drive on the pump.

## APPLICATION

Handling and exhausting of dry and humid gases; entrained liquid can be handled during normal duty. The pumps are applied in all fields where a pressure of 33 to 900 mbar must be created by robust vacuum pumps.

## GENERAL TECHNICAL DATA

Pump type	unit	LEM 25	LEM 50	LEM 90 /LEL 90	LEM 125 /LEL 125	LEM 150 /LEL 150	LEM 250 /LEL 250	LEM 325	LEM 425
Speed	50 Hz	rpm		2800		1450		1450	
	60 Hz			3500		1750		1750	
Max. compression overpressure		bar		0.3		0.3 / 0.5		0.3 (0.5*)	
Max. admissible pressure difference		bar		1.1		1.1 / 1.5		1.1 (1.5*)	
Moment of inertial of the rotating pump parts and of the water filling		kg/m <sup>2</sup>		0.003	0.0095	0.035	0.053	0.069	0.097
Sound pressure level at a suction pressure of 80 mbar		dB(a)		68	69	65		70	72
Max. gas temperature	dry	°C		200		200		200	
	saturated	°C		100		100		100	
Service liquid									
max. admissible temperature		°C		80		80		80	
materials: 0A, 0B, 0R, 4B				40		-		-	
0F, 7C, 7R									
max. viscosity		mm <sup>2</sup> /s		4		4		4	
max. density		kg/m <sup>3</sup>		1.2		1.2		1.2	
volume of liquid up to shaft level		Liter		0.3	0.4	2.4	2.8	3.2	4.0
max. flow resistance of the heat exchanger		bar		0.2		0.2		0.2	

\* in case of E-motor in 60 Hz design or protection type EEx e II - T 3