

■■■■■ Pumps

KRAL

IMO-Regulations 2020

GUIDE

How to comply with the resulting
new sulfur requirements



What is Changing under the New Global Sulfur Cap?

Environment matters and concerns us all

To significantly reduce the amount of sulfur oxide emanating from ships, the International Maritime Organization (IMO) has set a global limit for sulfur in fuel oil on board ships of 0.5 % m/m (mass by mass) by 2020.

What does this mean for ships equipped with fuel pumps?

Ships will have to use fuel oil on board with a sulfur content of no more than 0.5 % m/m, against the current limit of 3.5 % m/m. Sulfur is important for the lubrication quality of fuels. Pumps will have to meet the challenge of handling fuels with low sulfur content, which means low viscosity and therefore decreased lubrication. Viscosity goes down to 1.1 cSt and fuel loses lubrications, which causes damage to the pump.

KRAL pumps are specially treated and able to handle low sulfur fuel oils. As a unique partner for global players, KRAL plays an important role in supplying pumps for vessel conversions from Heavy Fuel Oil (HFO) to Low Sulfur Fuel Oil (LSFO). Whether for the exchange of pumps only or complete conversions, KRAL can assist you.

More and more vessels around the world will be equipped with KRAL pumps to meet the latest IMO regulations.

**KRAL LOW SULFUR PUMPS WITH
MAGNETIC COUPLING ARE AN INNOVATIVE
CONTRIBUTION FOR COMPANIES MOVING
TOWARDS 'GREENSHIP TECHNOLOGY'**





DECIDE TODAY TO USE KRAL PUMPS,
WHICH ARE SUITABLE FOR LOW SULFUR
FUELS DOWN TO 1.1 CST!

AVOID COST-INTENSIVE REPLACEMENT
OF EXISTING PUMP EQUIPMENT – AVAIL
OF KRAL'S 1:1* EXCHANGE PROGRAM

*DUE TO VARIOUS ARRANGEMENTS, OUR PUMPS CAN GENERALLY BE EXCHANGED WITHOUT MAKING ANY CHANGES TO THE PIPING IN THE SYSTEM






screw-pumps.kral.at/en

Download Exchange List

- 10 pump competitors
- Over 140 pump types
- Detailed information

Choices of how to Comply with the New Sulfur Specifications

Ship owners need to decide if they want to continue to use Heavy Fuel Oil in conjunction with scrubbers or exhaust gas cleaning systems or switch to Low Sulfur Fuel Oil.

0.1 % and 0.5 % Sulfur Content	MDO (DMA, DMX) DMA (DMB)	HFO 3.5 % Scrubber Retrofit
		
<ul style="list-style-type: none"> ■ Fuel loses lubrication properties ■ Different quality of fuel per blend and supplier 	<ul style="list-style-type: none"> ■ Proven fuel and widely available ■ Viscosity goes down to 1.1 cSt with poorer lubricity 	<ul style="list-style-type: none"> ■ Cheaper fuel and quick return on of investments ■ Needs to handle high viscosity fuels without any leakage
<p>KRAL solution:</p> <p>Special surface treatment of screws and housing</p>	<p>KRAL solution:</p> <p>Every KRAL pump can handle these fuels</p>	<p>KRAL solution:</p> <p>Hermetically sealed magnetic coupling pumps</p>

Low Sulfur Pumps in Serial Production!

Faster delivery times with best-price guarantee

To optimize costs and delivery times for our customers, KRAL has expanded its portfolio with a serial production range for frequently used low sulfur pumps. Thanks to targeted standardization in the manufacturing of these pumps, the reliability and high quality for which KRAL is known can be offered while maintaining shorter delivery times and price advantages.

Download pump data

We have made the data of the pumps from the serial production range available to you under fast-delivery-low-sulfur-pumps.kral.at/en. Get the data to download to your computer!



Your download package includes:

- Operating data sheet
- 3D model
- Dimension sheet
- Product information sheet

**KRAL SCREW PUMPS ARE THE FIRST
CHOICE FOR HANDLING LOW
SULFUR FUELS AND PROVIDE OPTIMAL
OPERATIONAL RELIABILITY**