

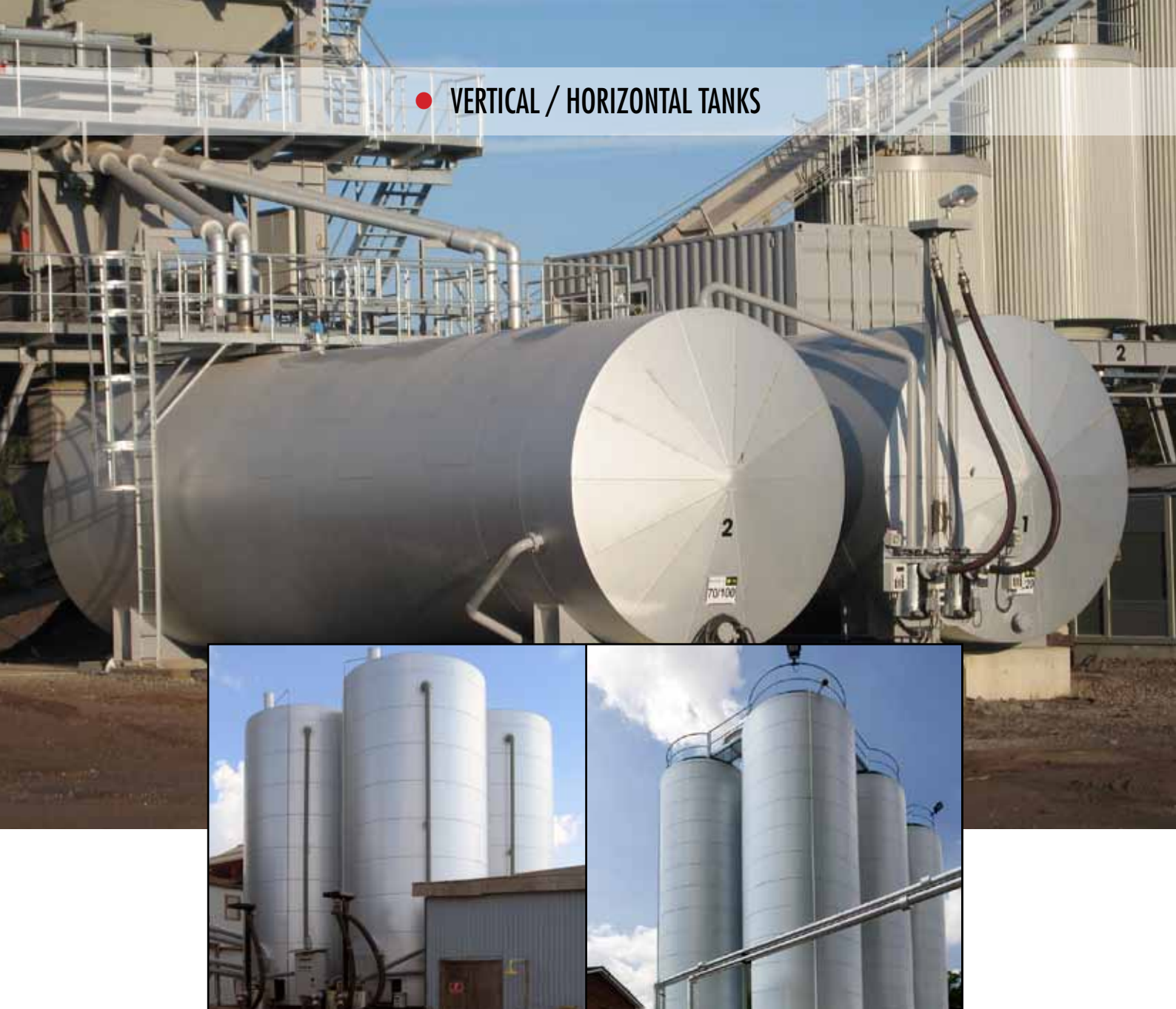
**YOUR RELIABLE PARTNER**



**GREEN** STORING  
WE THINK ENVIRONMENT

- ENERGY SAVING BITUMEN TANKS

## ● VERTICAL / HORIZONTAL TANKS



### KVM Bitumen systems

The **GREEN** way of storing bitumen is in a KVM bitumen tank! The KVM product programme comprises both vertical and horizontal bitumen tanks which are designed and manufactured according to Eurocode.

Years of experience and field tests at our customers' have given KVM a strong, environmentally right and energy saving product far ahead of the market standard for bitumen tanks. A safe working environment is essential to KVM. Our ongoing development gives you a well defined product including a list of proven safety features.

#### Volume in m<sup>3</sup> in KVM horizontal bitumen tanks

Size m <sup>3</sup> /Ø	Max. tank capacity	Available tank volume	UK safe working volume
50/2,9	48	43	38
70/3,2	67	60	54
95/3,2	91	81	73
110/3,2	107	95	86
135/3,2	131	117	105

The **SAFE** way to store bitumen is in a KVM bitumen tank. All tanks are pressure tested before shipment so any leakage is avoided. The KVM filling control system is e.g. fitted with an electrical "overfill" alarm and the discharge valve fitted at the bottom of the tank must be operated manually by means of hand tools to prevent any accidents.

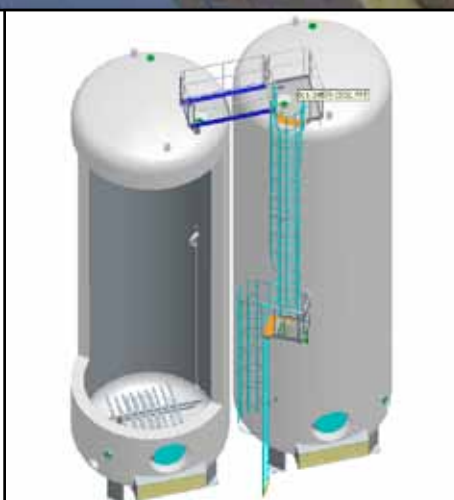
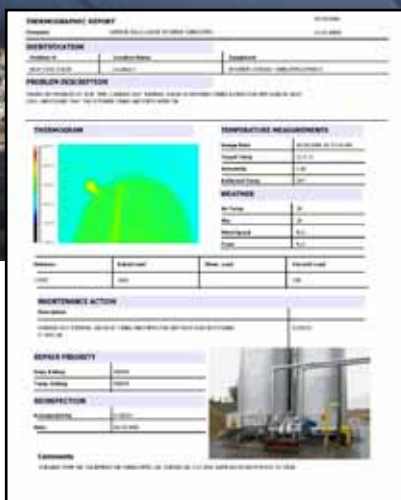
#### Standard delivery:

- Smooth low radiation surface of the tank.
- Maintenance free electrical heating system.
- Bottom discharge valve hand tool operated.

#### Volume in m<sup>3</sup> in KVM vertical bitumen tanks

Size m <sup>3</sup> /Ø	Max. tank capacity	Available tank volume	UK safe working volume
50/2,9	51	41	37
70/3,2	70	61	55
95/3,2	95	85	77
110/3,2	111	101	91
135/3,2	135	125	113

## ● INSULATION / ENERGY SAVING



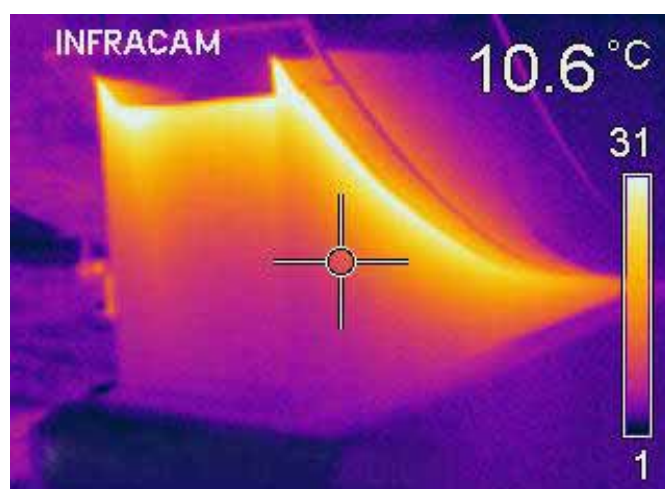
Thermo-graphic report

### No energy loss

Store the **GREEN** way in KVM bitumen tanks and save energy and money. There are good reasons that KVM bitumen tanks have a 300 mm thick insulation wrapped around the tank in 3 layers to prevent any thermal bridges. Temperature measurements in field tests prove that a 300 mm thick insulation is outstanding to maintain a constant temperature at power "stand by". Thermostatic controlled trace heating elements are fitted in the bottom of the bitumen tanks. The heating elements are easily accessible and maintenance free.

The lifting brackets are insulated at site after installation of the bitumen tank and the tank is sheeted with a smooth weather proof aluminium surface minimising the thermal loss. Thermal bridges can easily be spotted with thermal photo equipment and tests are made on a regular basis.

Heating	50/2,9	70/3,2	95/3,2	110/3,2	135/3,2
<b>Horizontal</b>					
Max. kW	33 kW	44 kW	55 kW	60,5 kW	66 kW
Elements	6	8	10	11	12
<b>Vertical</b>					
Max. kW	28 kW	40 kW	52 kW	60 kW	68 kW
Elements	7	10	13	15	17
Insulation	300 mm				





## ● CONTROL TEMPERATURE / LEVEL



Display for pump temperature and a panel with signal lamps which show "open" or "closed" position for the pneumatically operated valves for filling.

Bitumen filling system with one pump and manifold to serve more bitumen tanks.

### Available features for KVM bitumen tank:

- Continuous level measurement by pressure gauge.
- High level sensor.
- Temperature measurement with display.
- Timer controlled heating.
- Individual 2 step heating system.
- High level alarm activates a siren and stops the filling pump.
- One red lamp indicating ultimate high level.
- One yellow lamp indicating high level alarm.
- One display indicating safe working capacity.
- One green lamp indicating safe working capacity to accommodate a 30 m<sup>3</sup> load (28 ton).

## ● FILLING PUMPS / VALVES



### Filling systems

Bitumen deliveries have to be handled with care. High temperatures and sticky bitumen are a potentially hazardous combination so **SAFE** operation is the key.

The KVM **ODOUR FILTER** is designed to take away bitumen odour from the venting fumes by passing these through an active carbon unit.

The KVM **CLEAN FILL** station is designed to avoid any bitumen spillage and environmental issues during bitumen deliveries by pneumatic unloading of road tankers. A trace heated "spillage" reservoir is situated between the storage tank and the road tanker to collect the bitumen drain off from the connecting hose.

The KVM **SAFE** filling pump connecting the delivery truck with the KVM bitumen tank ensures a safe and fast discharge / filling sequence. The filling pump is trace heated and a single filling pump can serve more tanks. From the KVM control panel the required tank can be selected.

The KVM 4" bitumen filling manifold is fitted with the required numbers of pneumatically operated valves. One valve for each bitumen tank. The valves are trace heated and insulated and electrically wired into junction boxes.



## ● SUBMERGED BITUMEN PUMPS

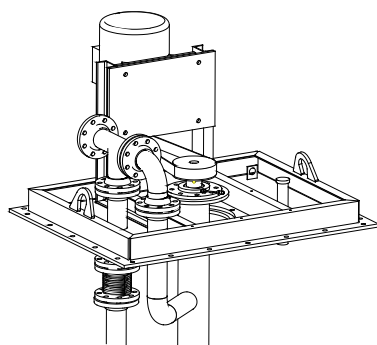


### Submerged pumps

The KVM submerged pump is a well-known and proven product where the pump is fitted submerged in the bitumen. Trace heating is not required and pump spillage problems are avoided.

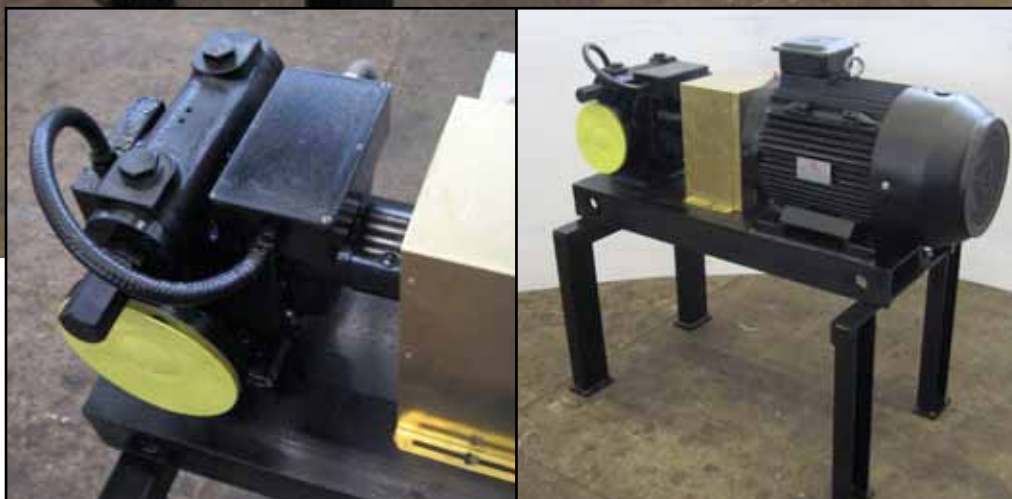
An integrated adjustable pressure relief valve is included. The pump drive is fitted on a frame which is flanged to the top of the bitumen tank.

The KVM submerged pumps are available for both vertical and horizontal bitumen tanks. The pumps can be used with a single trace heated and insulated bitumen dosing line or a double bitumen dosing line with or without insulation.



### Technical data

Bitumen pump type KVM 101			
Pump size	DN 100	Max. frequency	90 Hz
El - motor size	7,5 kW	Max. viscosity	1000 cSt
Electric voltage	400 VAC	Nominal viscosity	400 cSt
Ampere	15,5	Max. media temperature	200° C
Inlet dim.	DN 100 (4°)	Voltage heating	230 VAC
Outlet dim.	DN 100 (4°)	Max. running pressure	10 Bar
Nominal speed 50 Hz	518 o/min.	Safety valve setting	6 Bar
Max. speed 90 Hz	950 o/min.	Weight	290 kg
Nominal capacity	420 l/min.		



## Dosing pumps

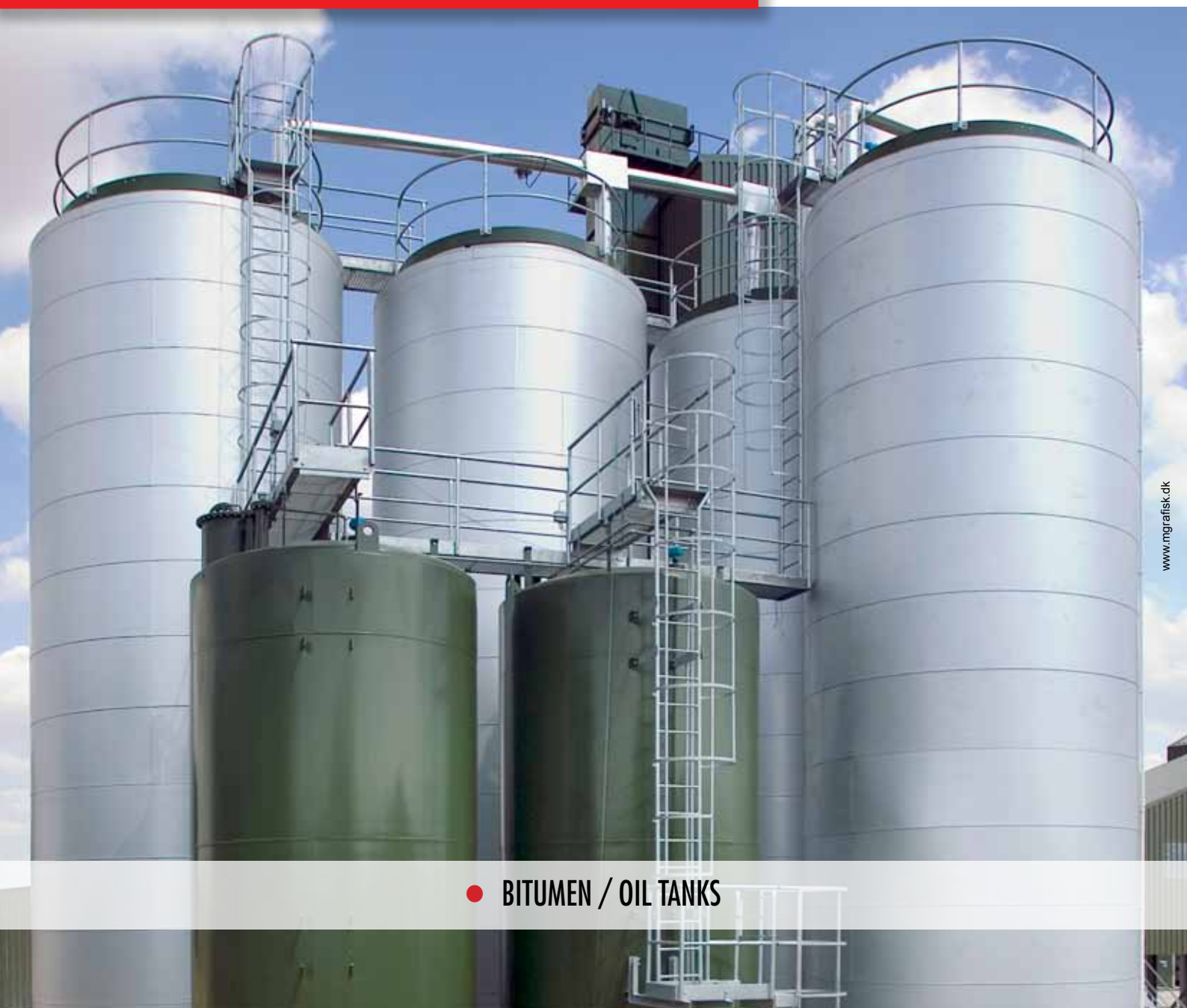
The KVM free standing bitumen pump is directly driven and the pump / motor unit is supported by a steel structure which is normally situated next to the bitumen tank. The pump is provided with trace heating and a thermostatic control unit. The pump shaft is furthermore sealed with mechanical sealings so any significant spillage is avoided.

The pump can serve more bitumen tanks via connecting pipe work and valves. The free standing pump can be used with a single trace heated and insulated bitumen dosing line or a double bitumen dosing line with or without insulation. The KVM standard dosing line is a 3" pipe and the standard insulation is 50 mm thick and sheeted with alu-zink plate.

Technical data	Dosing pumps		Filling pumps
Type	KVM HD 5	KVM HD 6	KVM HD 8
El - motor size	7,5 kW	15,0 kW	15,0 kW
Electric voltage	400 / 230 VAC	400 / 230 VAC	400 / 230 VAC
Power trace heating	1050 W	1050 W	1050 W
Nominal capacity	400 l/min.	617 l/min.	950 l/min.
Max. speed 50 Hz	960 RPM	960 RPM	960 RPM
Inlet / Outlet dim.	DN 65 ( 2,5" )	DN 80 ( 3,0" )	DN 100 ( 4,0" )
Max. viscosity	1000 cSt	1000 cSt	1000 cSt
Nominal viscosity	400 cSt	400 cSt	400 cSt
Shaft sealing	Triple lip seal cartridge	Triple lip seal cartridge	Triple lip seal cartridge
Max. running pressure	10 bar	10 bar	10 bar
Safety valve setting	6 bar	6 bar	6 bar
Weight	290 kg	350 kg	400 kg



**YOUR RELIABLE PARTNER**



● **BITUMEN / OIL TANKS**

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