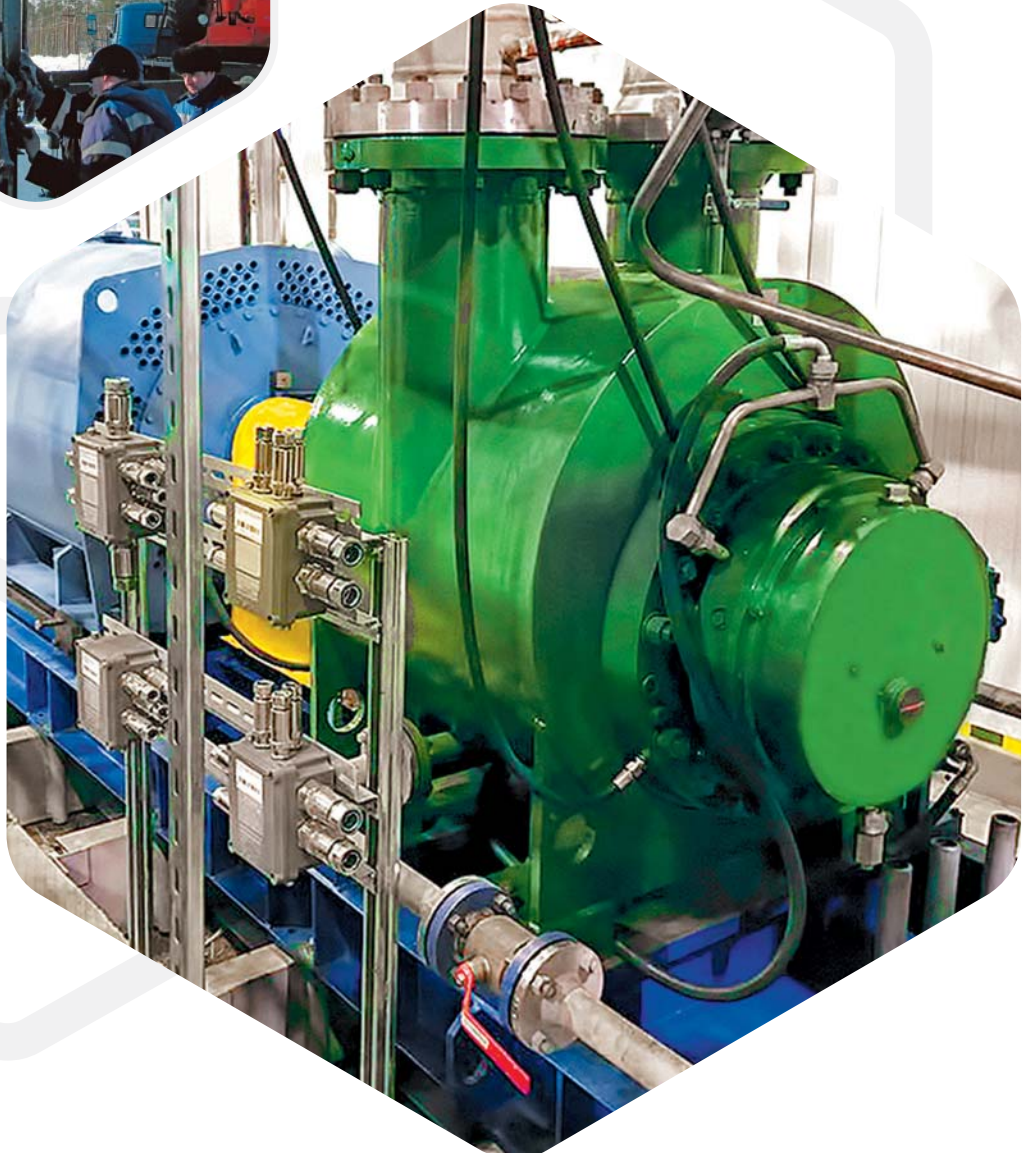




Engineering Flow Solutions

POSITIVE DISPLACEMENT PUMPS



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ROTARY SCREW PUMPS

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EVNOP

SUBMERSIBLE PROGRESSING CAVITY OIL EXTRACTION PUMPS

APPLICATION

EVNOP series pumps are intended for handling oil-containing formation fluid (a mixture of oil, water and associated petroleum gas) with temperature up to +110 °C, kinematic viscosity below $1 \times 10^{-3} \text{ m}^2/\text{s}$, water content in the formation fluid below 99%, free gas below 50%, maximum concentration of solid inclusions up to 0.8 g/l of mass, solids size up to 0.2 mm.

The pump design allows changing the flow rate in a wide range by varying the pump rotation speed. The pumps are capable to transfer highly viscous formation fluid with a high gas content without installing a gas separator prior the pump.

The start acceleration clutch can be optionally installed between the tread (hydraulic protector) and the electric motor.

EVNOP series pumps are applied as a replacement of traditional centrifugal and sucker rod pumps for extraction of heavy, highly viscous oil with a high content of mechanical impurities from low- and medium production wells, as well as highly watered ones.

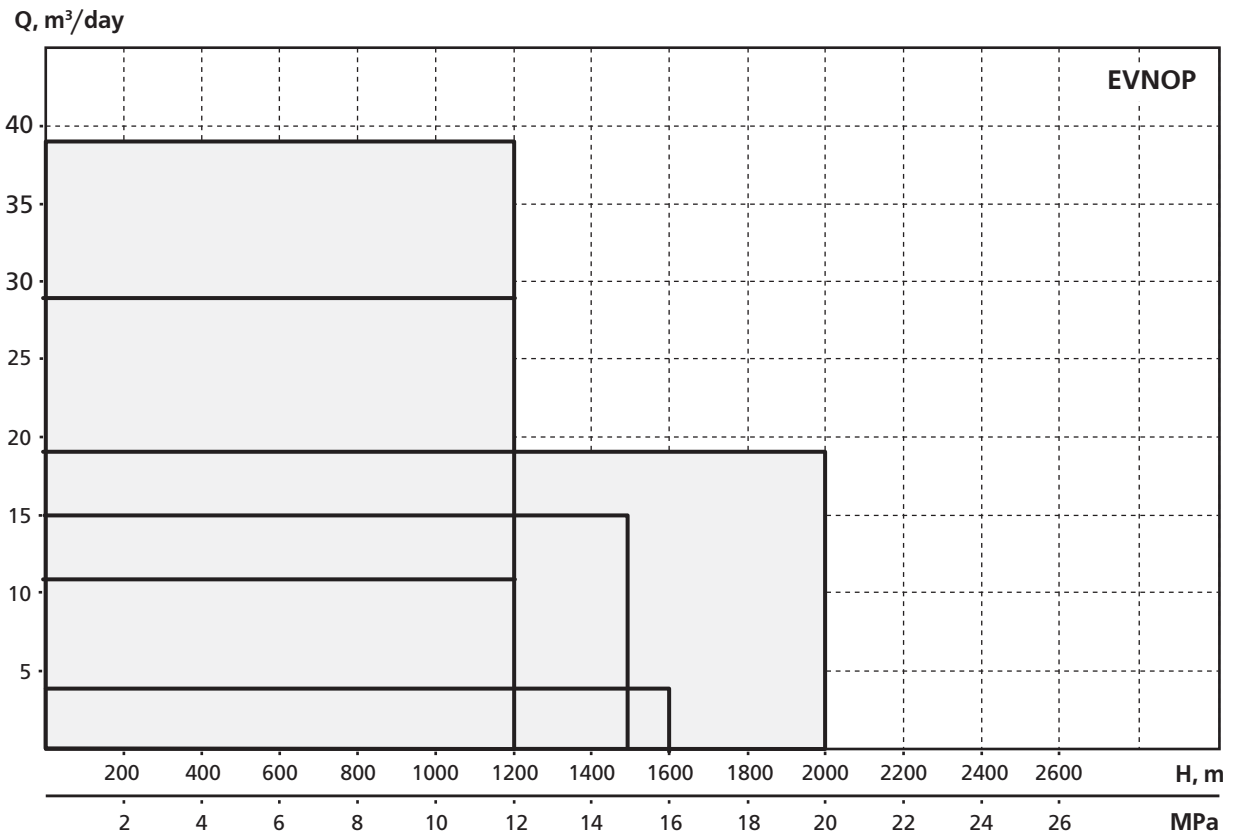


TECHNICAL DATA

Pump	Capacity range, m ³ /day	Head, m	Discharge pressure range, MPa, max	Pump power consumption (rated), kW	Rotation speed range, rpm	Pump weight, kg	Pump length, mm
EVNOP 5-4-1500	4.0 – 4.5	1500	4 – 15	1.2	100 – 600	170	6450
EVNOP 5-10-1200	10 – 11	1200	4 – 12	2.5	100 – 500	190	6150
EVNOP 5-12-1500	12 – 15.5	1500	4 – 15	3.4	750 – 1380	109	3175
EVNOP 5-20-1200	20 – 24	1200	4 – 12	5.4	750 – 1380	109	3175
EVNOP 5-20-1200	30 – 37	1200	4 – 12	7.1	750 – 1380	109	3175
EVNOP 5-16-2000	12 – 30	2000	4 – 20	6.2	400 – 1000	160	6110

* Pump overall dimensions are given in the operational manual

PERFORMANCE RANGE



VNO. PROGRESSING CAVITY HYDRAULIC UNITS FOR OIL EXTRACTION PUMPS

APPLICATION

The progressing cavity hydraulic units of the VNO series are intended for handling oil-containing reservoir fluid (a mixture of oil, water and associated petroleum gas) with temperature up to +110 °C, kinematic viscosity not more than $1 \times 10^{-4} \text{ m}^2/\text{s}$, water content in the reservoir fluid below 99%, free gas below 50%, maximum concentration of solid inclusions up to 0.8 g/l of mass and microhardness up to 55 HRC.

The VNO series hydraulic units are applied in the production wells equipped with the pumping units comprising a control and electric drive station located on the surface.

The hydraulic units of the VNO series are applied as a replacement for traditional centrifugal and sucker-rod pumps for extraction of oil-water mixtures within a wide viscosity range, with high content of sand and associated petroleum gas from medium and low production wells.

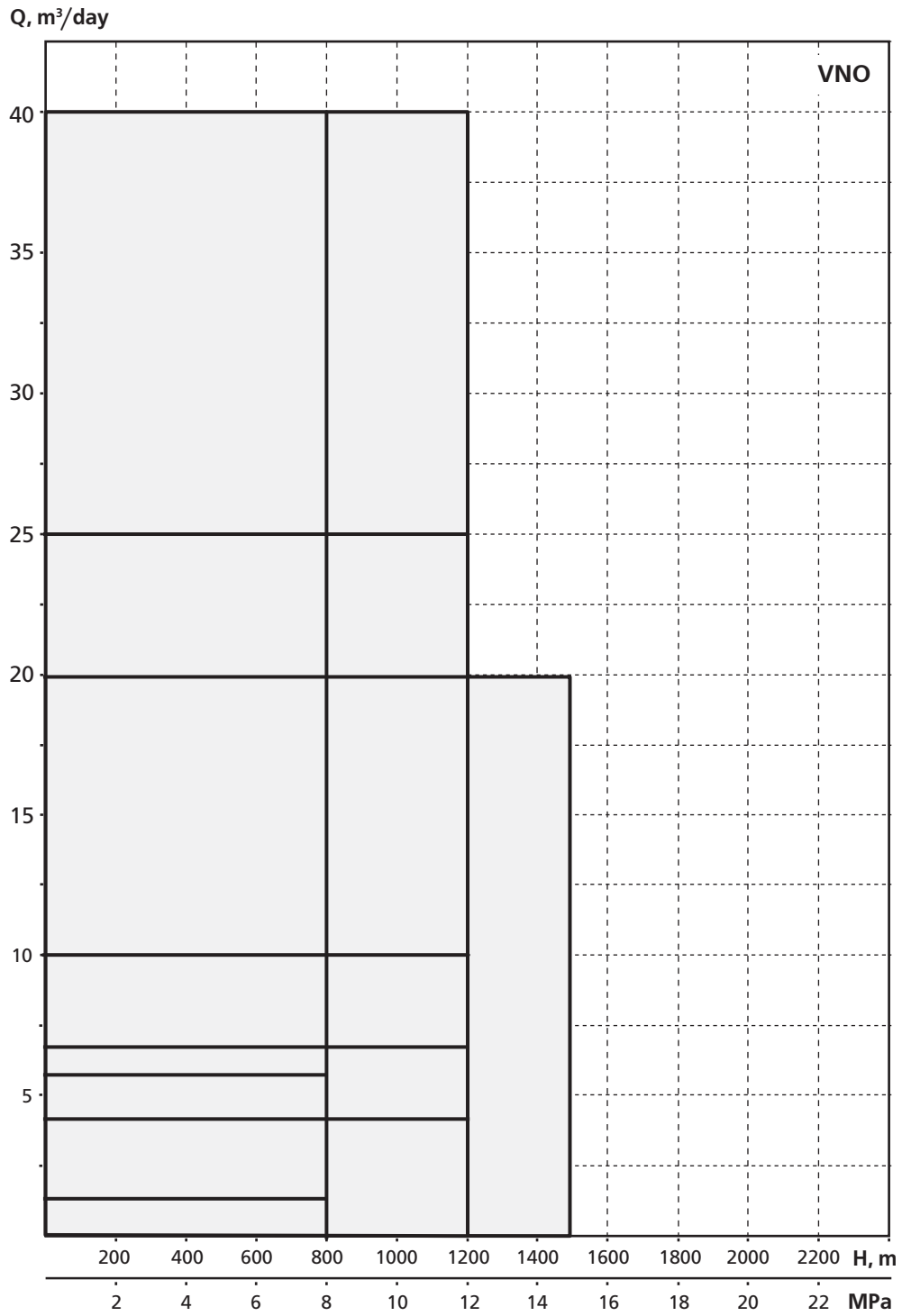


TECHNICAL DATA

Pump	Capacity (rated), m^3/day	Head, m	Pump power consumption (rated), kW	Rotation speed, rpm	Pump weight, kg
VNO 2-800	2	800	2	230	53
VNO 4-800	4	800	2.5	230	59
VNO 6-800	6	800	2.8	230	58
VNO 10-800	10	800	2.8	230	81
VNO 20-800	20	800	3.8	230	81
VNO 25-800	25	800	6	230	85
VNO 40-800	40	800	8	230	92
VNO 4-1200	4	1200	2.5	230	91
VNO 7-1200	7	1200	3.5	230	86
VNO 10-1200	10	1200	4	230	113
VNO 10-1500	20	1500	9	230	60
VNO 20-1200	20	1200	6	230	140
VNO 25-1200	25	1200	8	230	133
VNO 40-1200	40	1200	12	230	156

* Pump overall dimensions are given in the operational manual

PERFORMANCE RANGE



N1V

VERTICAL PROGRESSING CAVITY PUMPS

APPLICATION

N1V series vertical progressing cavity pumps are intended for handling raw oil, petroleum products, mineral and fuel oil, oil-water mixtures with solid impurities, with temperature from -15 °C to +50 °C and kinematic viscosity from 5 to 300 mm²/s, with maximum concentration of solid inclusions up to 5 % of mass, solids size up to 5 mm.

The pumping unit includes a pump and an electric drive (electric motor or gear-motor) mounted on a DN800 or DN700 cover for installation directly on a manhole of a reservoir. The units allow open air operation with temperatures down to to -60 °C without heated boxes.

The pumps are applied for supply marketable oil and petroleum products from drainage tanks to main, infield or process pipelines, supply raw, intermediate and marketable products from storage tanks to various processes, as well as for any systems containing reservoir-pipeline infrastructure.

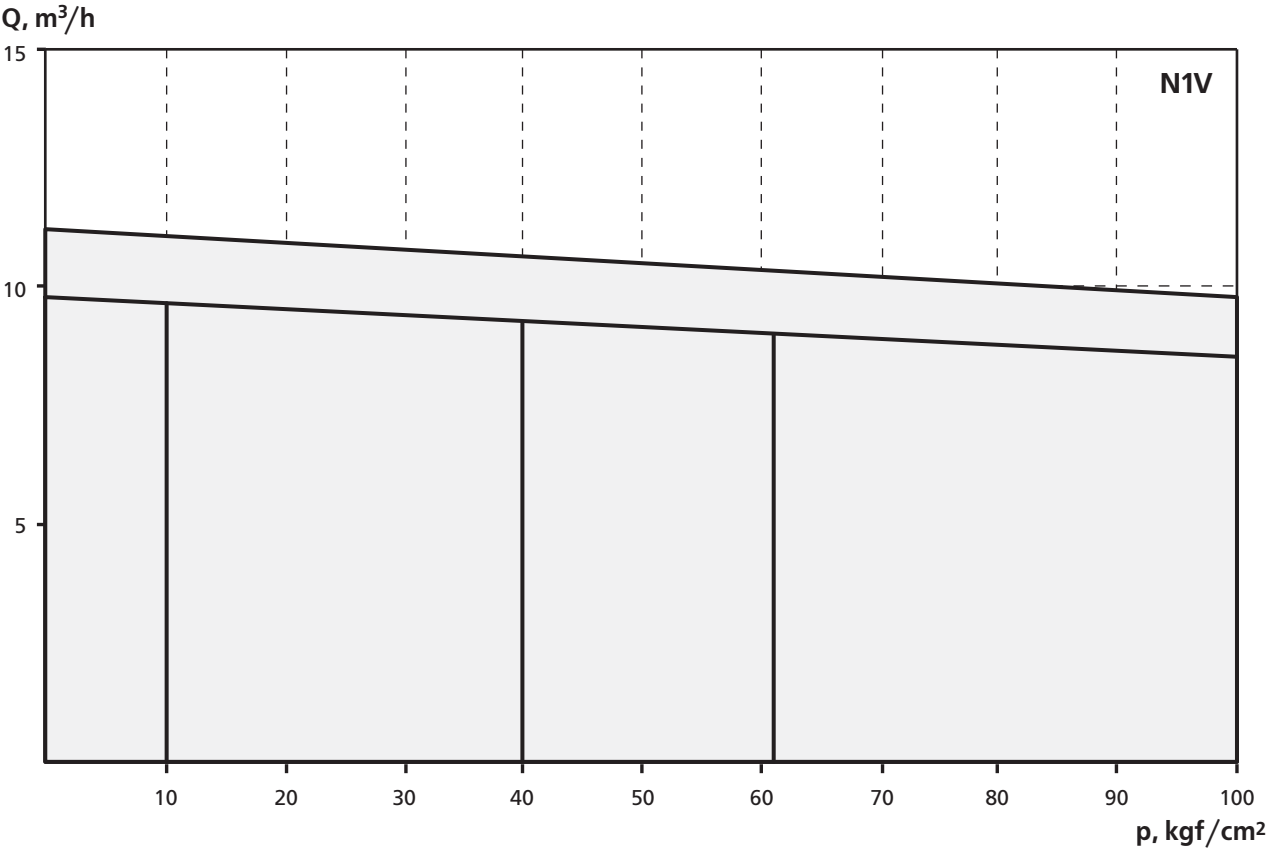


TECHNICAL DATA *

Pump	Min capacity, m ³ /h	Max discharge pressure, MPa	Rotation speed, rpm
N1V 14/80-9/10	9	1	1000
N1V 14/80-9/40	9	4	1000
N1V 14/80-9/63	9	6.3	1000
N1V 14/80-9/100	9	10	1000
N1V 60/100-10/100	10	10	300

* Unit weight and overall dimensions are given in the operational manual

PERFORMANCE RANGE



N1V

HORIZONTAL PROGRESSING CAVITY PUMPS

APPLICATION

N1V series horizontal progressing cavity pumps are intended for pumping clean or contaminated water, sewage, water with petroleum products, viscous fluids (including chemically active) with temperature up to +85 °C and kinematic viscosity up to 4600 cSt, maximum concentration of solids up to 5% of mass, solids size up to 2 mm.

The pumps are applied for removal sewage at industrial facilities, pumping return sludge at wastewater treatment plants, supplying mortar to explosive machines in the mining industry, handling water containing petroleum products, chemically active liquids in various processes.



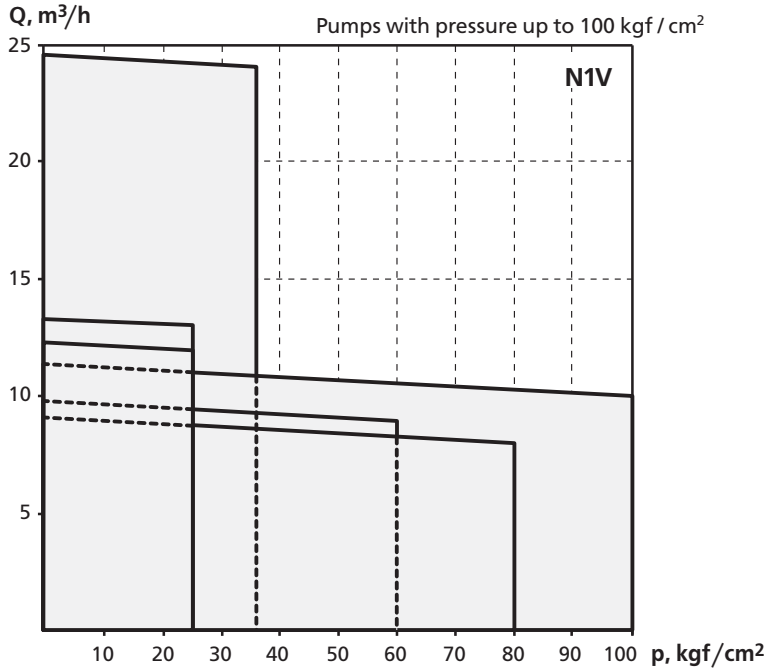
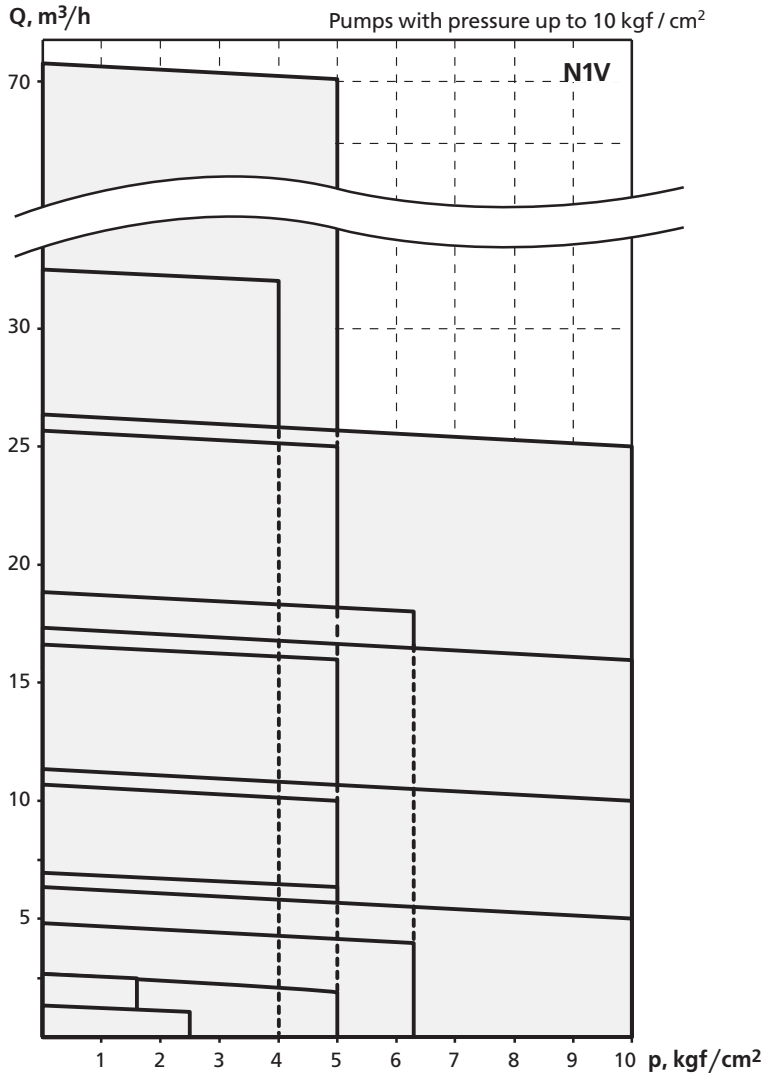
TECHNICAL DATA *

Pump	Capacity, (l/s) m ³ /h, min	Rotation speed, rpm	Pressure, MPa (kgf/cm ²)	Rated vacuum-metric suction height, m	Fluid viscosity*, mm ² /s (cSt)				
					up to 500	up to 1000	up to 3000	up to 10000	up to 25000
					Pump shaft max rotation speed, rpm				
N1V 1.6/5	0.33 (1.2)	1500	0.5 (5.0)	6	1500	1000	750	360	150
N1V 1.6/6.3	0.33 (1.2)	1000	0.63 (6.3)		1000	1000	750	360	150
N1V 1.6/16	0.33 (1.2)	1000	1.0 (10)		1000	1000	750	360	150
N1V 6/5	1.4 (5.0)	1500	0.5 (5.0)		1500	1000	750	360	150
N1V 6/10	1.4 (5.0)	1500	1.0 (10)		1500	1000	750	360	150
N1V 12/5	2.8 (10.0)	1500	0.5 (5.0)		1500	1000	750	360	150
N1V 12/10	2.8 (10.0)	1500	1.0 (10)		1500	1000	750	360	150
N1Vg 14/80	2.2 (8.0)	1000	8.0 (80)		1000	750	360	150	100
N1V 20/5	4.4 (16.0)	1500	0.5 (5.0)		1500	1000	750	360	150
N1V 20/10	4.4 (16.0)	1500	1.0 (10)		1500	1000	750	360	150
N1V 50/5	6.9 (25.0)	1000	0.5 (5.0)		1000	750	360	150	100
N1V 50/10	6.9 (25.0)	1000	1.0 (10)		1000	750	360	150	100
N1Vg 60/100	2.8 (10.0)	300	10 (100)		300	300	300	150	100
N1V 80/5	8.9 (32.0)	750	0.5 (5.0)		750	360	360	150	100
N1V 120/6.3	5.0 (18.0)	240	0.63 (6.3)		240	240	240	150	100
N1V 120/25	4.7 (17.0)	240	2.5 (25)		240	240	240	150	100
N1V 170/36	6.67 (24.0)	230	3.6 (36)		240	240	240	150	100
N1V 350/5	19.4 (70.0)	360	0.5 (5.0)		360	360	360	150	100

* Pump (unit) weight and overall dimensions are given in the operational manual

** With a fluid viscosity over 25,000 mm² / s (cSt), the pump speed must be agreed with the manufacturer

PERFORMANCE RANGE



1V, AN1V PROGRESSING CAVITY PUMPS FOR MARINE AND RIVER VESSELS

APPLICATION

1V and AN1V series progressing cavity pumps are intended for handling fresh or sea water contaminated with solids and petroleum products, with a temperature from -2 °C to +50 °C, and with maximum concentration of solids up to 5 % of mass, size up to 2 mm. Maximum oil content: below 40%.

The pumps are applied in the shipbuilding industry (marine and river vessels) for handling bilge water mixed with petroleum products, as well as for fuel and oil separation from sludge and wastes.

1V series pumps are manufactured in monoblock version with a flanged electric motor. Some pump sizes are available in stationary and portable versions.

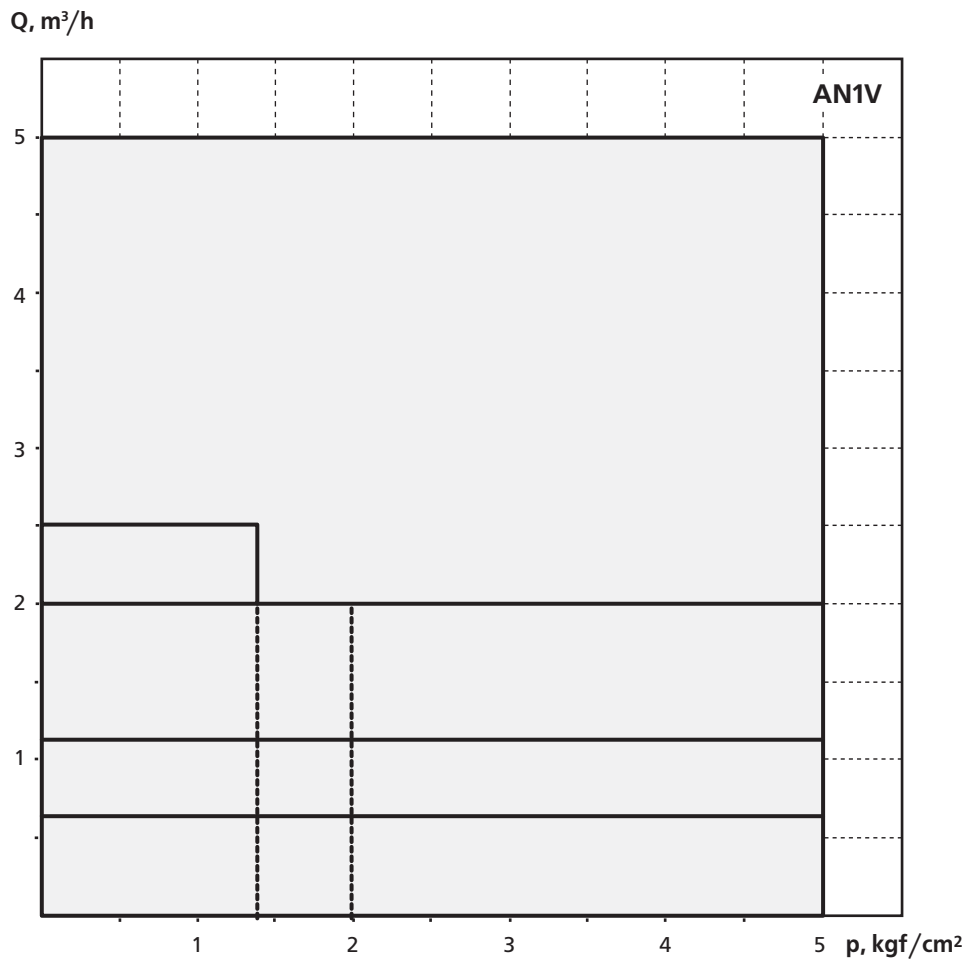


TECHNICAL DATA *

Pump	Capacity, m ³ /h, min	Discharge pressure, kgf/cm ² , max	Pump power, kW	Rotation speed, rpm	Rated vacuum-metric suction height, m
1V 1.6/5-1.5/2-6	2	2	0.7	3000	5
1V 1.6/5-1.5/2-8	2	2	0.7	3000	5
1V 1.6/5-1.5/2-12	2	2	0.7	3000	5
1V 1.6/5-1.5/2-14	2	2	0.7	3000	5
1V 1.6/5-1.5/2-22	2	2	0.7	3000	5
1V 1.6/5-2/2Б-13	2.5	1.4	0.4	3000	6
1V 1.6/5-2.5/2Б-2	2.5	1.5	0.5	3000	5
AN 1V 1.6/5-0.6/5B-3	0.6	5	0.6	1000	6
AN 1V 1.6/5-1.2/5B-3	1.2	5	0.8	1500	6
AN 1V 1.6/5-2/2K-3	2.5	1.4	0.4	3000	6
AN 1V 6/5-2/5K-3	2	5	1.2	750	6
AN 1V 6/5-5/5K-3	5	5	2.0	1500	6

* Pump (unit) weight and overall dimensions are given in the operational manual

PERFORMANCE RANGE



BURUN SH

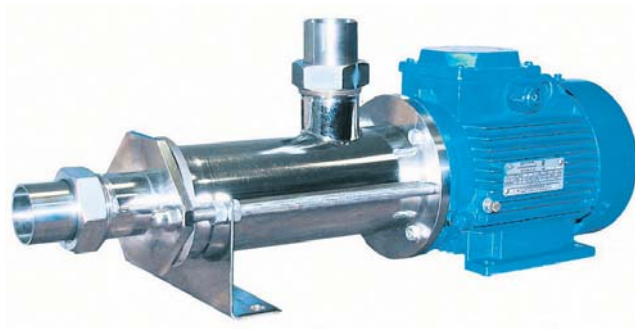
FOOD INDUSTRY PROGRESSING CAVITY PUMPS

APPLICATION

Burun SH series progressing cavity pumps are intended for handling water, various liquids and suspensions (including chemically active) with a viscosity up to 3000 mPa, temperature up to +35 °C during continuous operation and up to +70 °C with periodic operation (no more than 20 minutes per hour).

The pump flow path elements and the screw are made of stainless steel.

Burun SH series pumps are applied in the food, perfumery and chemical industry for handling milk, dough, sour cream, oil, creams, jams, honey, jams, chemically active products (paints, additives, detergents) as well as solutions and suspensions that do not allow mixing.

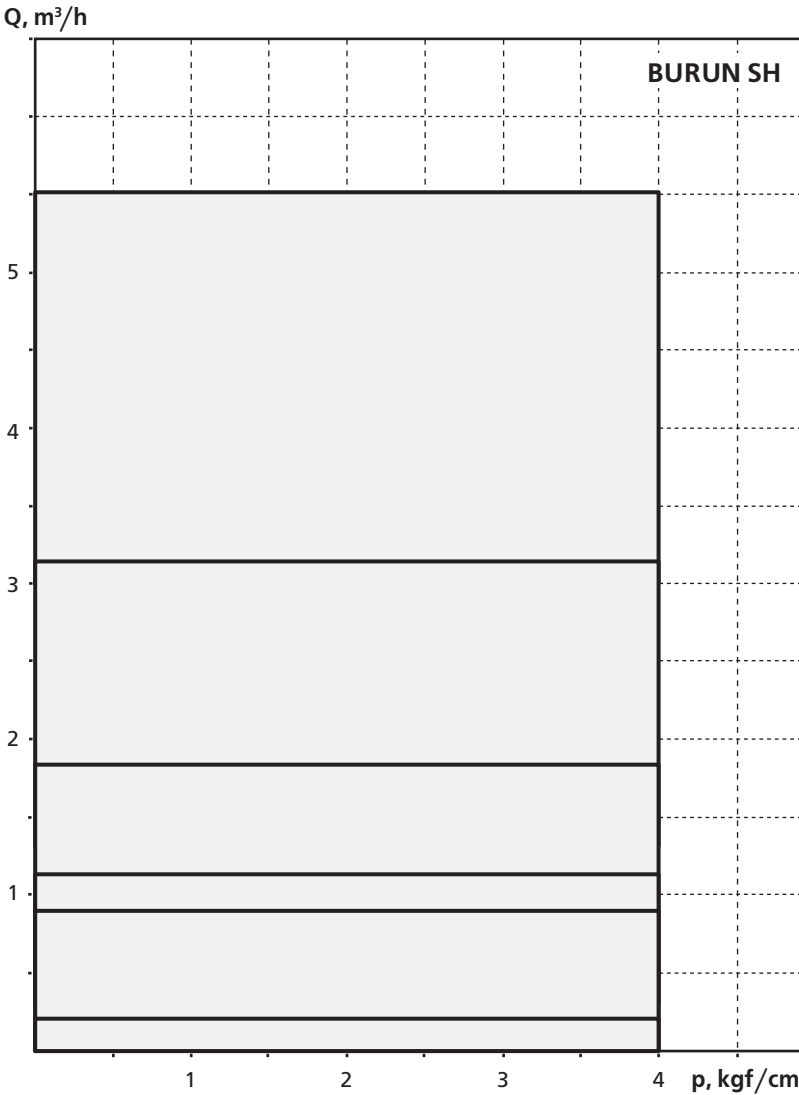


TECHNICAL DATA *

Pump	Capacity range, m ³ /h	Discharge pressure, kgf/cm ² , max	Electric motor power, kW	Rotation (range) speed, rpm	Weight, kg	Limit viscosity MPa*s max
BURUN SH 0.3/4-0.55/4	0.3 – 0.04	4	0.55	1500	12	2000
BURUN SH 0.3/4-M 0.55/4	0.3 – 0.04	4	0.55	1500	14	2000
BURUN SH 0.3/4-Ch 0.55/4	0.3 – 0.04	4	0.55	750 – 1500	14	2000
BURUN SH 0.3/4-ChM 0.55/4	0.3 – 0.04	4	0.55	750 – 1500	15	2000
BURUN SH 0.9/4-0.25/8	0.9 – 0.4	4	0.25	750	14	3000
BURUN SH 0.9/4-Ch 0.25/8	0.9 – 0.4	4	0.25	325 – 750	16	3000
BURUN SH 1.2/4-0.37/6	1.2 – 0.5	4	0.37	1000	12	3000
BURUN SH 1.2/4-Ch 0.37/6	1.2 – 0.5	4	0.37	500 – 1000	14	3000
BURUN SH 1.8/4-0.55/4	1.8 – 0.8	4	0.55	1500	12	2000
BURUN SH 1.8/4-M 0.75/4	1.8 – 0.8	4	0.75	1500	15	2000
BURUN SH 1.8/4-Ch 0.55/4	1.8 – 0.8	4	0.55	750 – 1500	14	2000
BURUN SH 1.8/4-ChM 0.75/4	1.8 – 0.8	4	0.75	750 – 1500	18	2000
BURUN SH 3.6/4-0.75/2	3.2 – 1.2	4	0.75	3000	13	1000
BURUN SH 3.6/4-0.75/4	3.2 – 2.3	4	0.75	1500	18	2000
BURUN SH 3.6/4-M 0.75/2	3.2 – 1.2	4	0.75	3000	15	1000
BURUN SH 3.6/4-M 0.75/4	3.2 – 2.3	4	0.75	1500	20	2000
BURUN SH 3.6/4-Ch 0.75/2	3.2 – 1.2	4	0.75	1500 – 3000	15	1000
BURUN SH 3.6/4-Ch 0.75/4	3.2 – 2.3	4	0.75	750 – 1500	20	2000
BURUN SH 3.6/4-ChM 0.75/2	3.2 – 1.2	4	0.75	1500 – 3000	17	1000
BURUN SH 3.6/4-ChM 0.75/4	3.2 – 2.3	4	0.75	750 – 1500	22	2000
BURUN SH 6/4-1.5/4	5.5 – 2.5	4	1.5	1500	21	2000
BURUN SH 6/4-Ch 1.5/4	5.5 – 2.5	4	1.5	750 – 1500	23	2000

* Unit weight and overall dimensions are given in the operational manual

PERFORMANCE RANGE



BURUN N1V

PROGRESSING CAVITY PUMPS FOR WATER AND UTILITIES

APPLICATION

Burun N1V series progressing cavity pumps are intended for handling process water and other fluids with viscosity up to 1500 MPa, with temperature up to +35 °C, maximum concentration of suspended particles up to 5% of mass, solids size up to 2 mm.

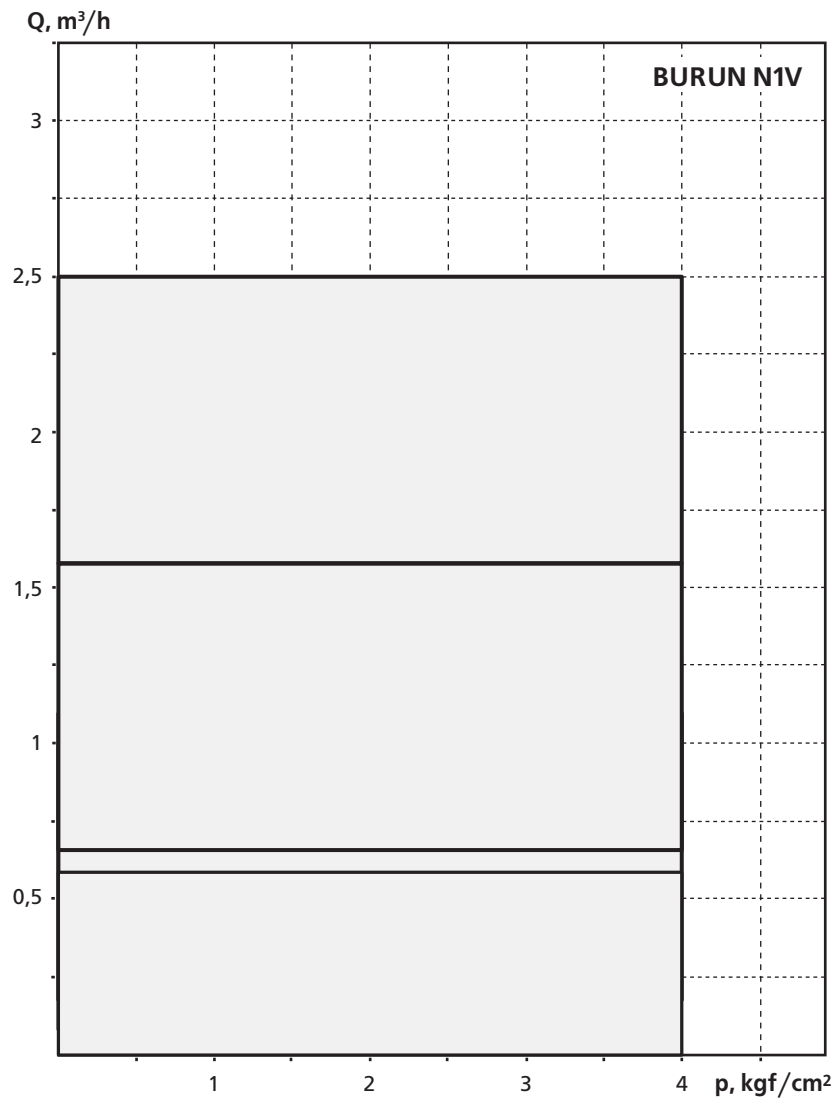
Burun H1B series pumps are applied for supply clean process (non-drinking) water at various industrial facilities or polluted sewage water removal at the water supply & sewage disposal plants. The pumps can be also applied for draining pits, sumps and trenches, sludge and dirt removal out of different tanks and reservoirs as well as in agriculture for irrigation.



TECHNICAL DATA *						
Pump	Capacity range, m ³ /h	Discharge pressure, kgf/cm ² , max	Electric motor power, kW	Rotation (range) speed, rpm	Weight, kg	Limit viscosity MPa*s max
BURUN N1V 2.5/4-0.75/4	1.5 – 2.5	4	0.75	1500	14	1500
BURUN N1V 2.5/4-M 0.75/4	1.5 – 2.5	4	0.75	1500	14.5	1500
BURUN N1V 2.5/4- 0.37/6	1.0 – 1.6	4	0.37	1000	13.5	1500
BURUN N1V 2.5/4- 0.25/8	0.7 – 1.2	4	0.25	750	14	1500
BURUN N1V 2.5/4-CH 0.75/4	1.5 – 2.5	4	0.75	750 – 1500	14	1500
BURUN N1V 2.5/4-CH 0.37/6	1.0 – 1.6	4	0.37	500 – 1000	13.5	1500
BURUN N1V 2.5/4-CH0.25/8	0.7 – 1.2	4	0.25	375 – 750	14	1500
BURUN N1V 2.5/4-CHM 0.75/4	1.5 – 2.5	4	0.75	750 – 1500	14	1500
BURUN N1V 2.5/4-CHM 0.37/6	1.0 – 1.6	4	0.37	500 – 1000	14	1500
BURUN N1V 2.5/4-CHM 0.25/8	0.7 – 1.2	4	0.25	375 – 750	14	1500

* Unit weight and overall dimensions are given in the operational manual

PERFORMANCE RANGE



BURUN PF

SUBMERSIBLE SEWAGE PROGRESSING CAVITY PUMPS

APPLICATION

BURUN® PF series submersible monoblock progressing cavity pumps are intended for handling waste water and other fluids with high content of mechanical and viscous impurities: up to 5% of mass, solids size up to 2 mm, viscosity up to 2000 mPa*s (cP), temperature up to +35 °C (shortly up to +70 °C).

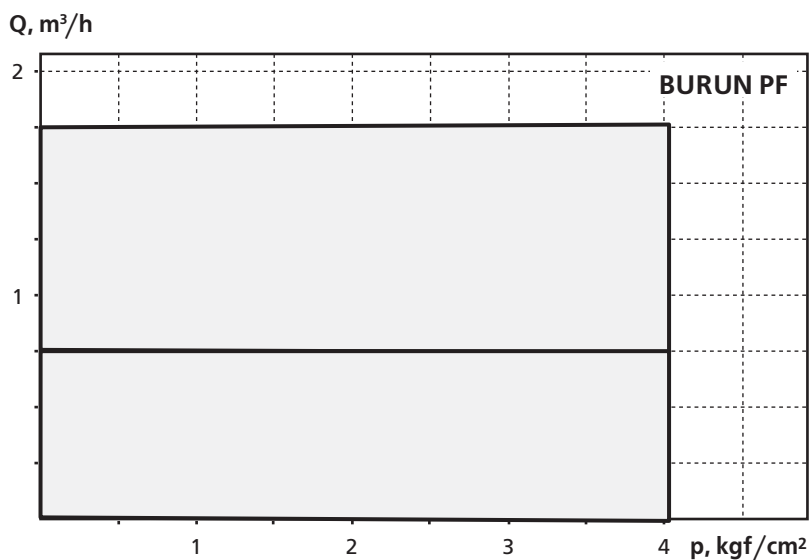
The pumps are applied for removal filtrated and storm water as well as sewage from sumps and pits, handling solutions and suspensions at process facilities of water & utilities, agricultural lands dewatering and other applications.



TECHNICAL DATA *						
Pump	Capacity range, m ³ /h	Discharge pressure range, kgf/cm ² , max	Electric motop power, kW	Rotation speed, rpm	Weight, kg	Limit viscosity MPa*s max
Burun PF 1.8/4-0.55/4	0.75 – 1.8	0 – 4	0.55	1500	16	2000
Burun PF 1.8/4-0.55/4	0.75 – 1.8	0 – 4	0.55	1500	16.5	2000

* Unit overall dimensions are given in the operational manual

PERFORMANCE RANGE



2VV MULTIPHASE TWIN-SCREW PUMPS

APPLICATION

2VV series twin-screw pumps are intended for handling oil, petroleum products, gas-oil-water mixtures and other fluids with temperature up to +100 °C, gas content up to 90% by volume and hydrogen sulfide in a gas up to 2%.

The pumps are fully compliant with API 676 standard requirements and supplied with single or double mechanical seals according to piping plans Plan 52, Plan 53, or Plan 54 (API 682).

The 2VV series pumps are applied in hydrocarbons recovery to reduce wellhead pressure, at remote fields with obstructed development, in high pressure processes in oil refining (up to 40 kg / cm²).



TECHNICAL DATA *

Pump	Capacity, m ³ /h, min	Discharge pressure, kgf/cm ² , max	Rotation speed, rpm	Seal type
A6 2VV 50/40	50	40	1450	TD
A6 2VV 80/25	80	25	1450	TD
A6 2VV 80/40	80	40	1450	TD
A6 2VV 125/40	125	40	1450	TD
A6 2VV 160/25	160	25	1450	TD
A6 2VV 450/35	450	35	1450	TD
A6 2VV 500/25	500	25	1450	TD
A8 2VV 9/40	9	40	1450	TV
A8 2VV 15/40	15	40	1450	TV
A8 2VV 22/40	22	40	1450	TV
A8 2VV 25/40	25	40	1450	TV
A8 2VV 50/40	50	40	1450	TV
A8 2VV 80/40	80	40	1450	TV
A8 2VV 125/40	125	40	1450	TV
A8 2VV 140/63	140	63	1450	TV
A8 2VV 200/40	200	40	1450	TV

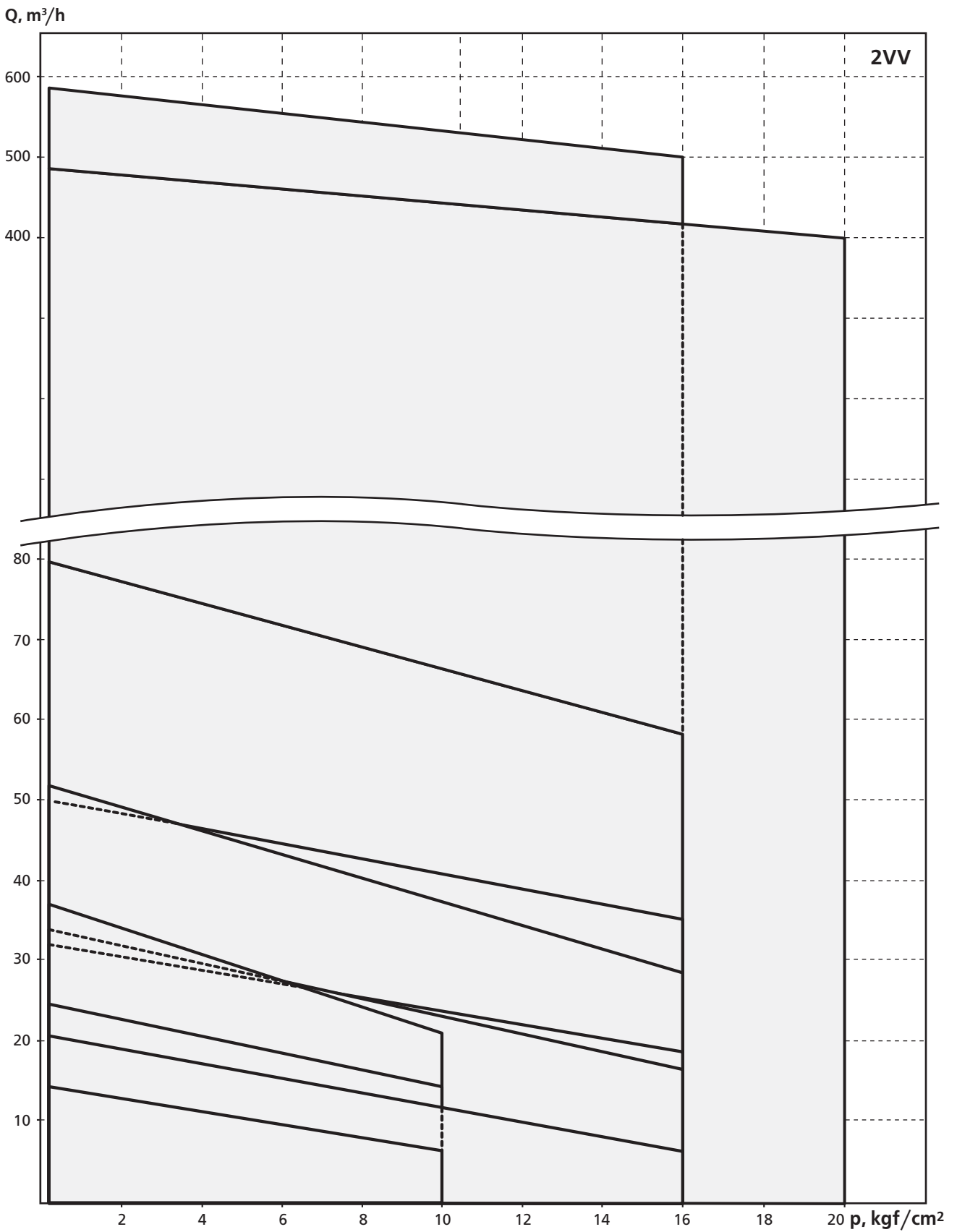
* Type of shaft seal installed in pumps: TV - mechanical seal with auxiliary seal, TD - double mechanical seal.

Max external leakage through the seal: 0.15 l / h. Rated pressure at the inlet to the pump is not more than 25 kgf / cm².

Pump (unit) weight and overall dimensions are given in the operational manual.

Pump performance is given for liquids with a viscosity of 75 cSt.

PERFORMANCE RANGE



2VV, 2VG GENERAL-PURPOSE TWIN-SCREW PUMPS

APPLICATION

2VV and 2VG series twin-screw pumps are intended for handling raw oil, fuel oil, mineral oil, diesel fuel, water with petroleum products, chemically active and highly viscous fluids with temperature from -15 °C to +200 °C.

2VG series pumps are equipped with a heating or cooling chamber for the heat carrier.

The pumps of the both series are applied in oil refining and petroleum chemistry processes, products transshipment at marine and rail transport, highly viscous liquids transfer at the industrial facilities.

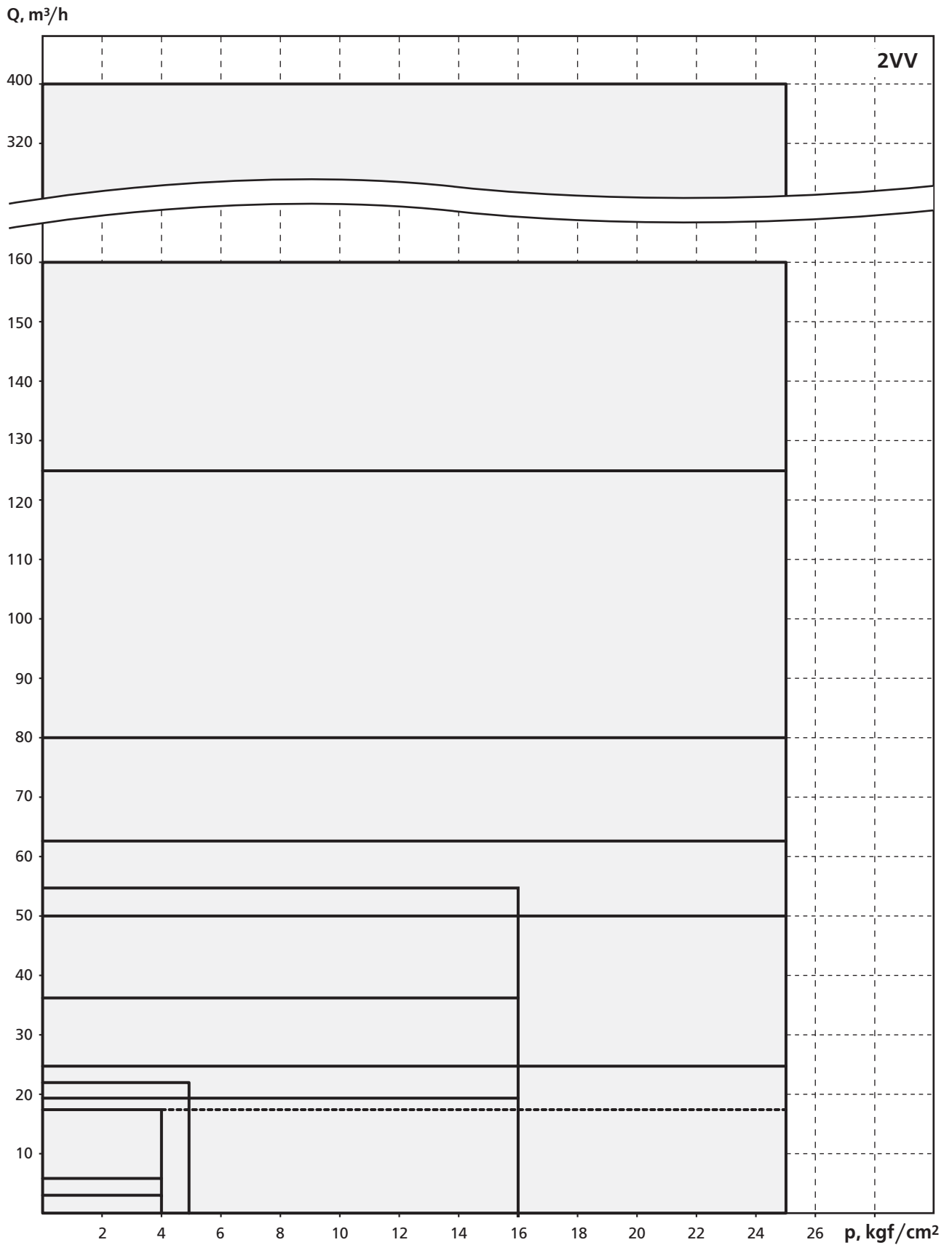


TECHNICAL DATA *

Pump	Capacity, m ³ /h not less than	Discharge pressure, kgf/cm ² , max	Rotation speed, rpm	Seal type
2VV 1.6/16	1.6	4	2900	T
2VV 2.5/16	2.5	4	2900	T
2VV 4/16	4	4	2900	T
2VV 6.3/16	6.3	4	2900	T
2VV 10/16	6	6.3	1450	T
2VV 16/16	16	4	1450	T
2VV 25/16	23	5	1450	T
2VG 5/16	18	16	1450	TD
2VG 40/16	35	16	1450	TD
2VG 63/16	55	16	1450	TD
A1 2VV 50/25	50	25	1450	T
A1 2VV 63/25	63	25	1450	T
A1 2VV 80/25	80	25	1450	T
A1 2VV 125/25	125	25	1450	T
A1 2VV 160/25	160	25	1450	T
A1 2VV 320/25	320	25	1450	T
A1 2VV 400/20	400	20	1450	T
A5 2VV 16/25	16	25	1450	T
A5 2VV 25/25	25	25	1450	T
A5 2VV 50/25	50	25	1450	T
A5 2VV 63/25	63	25	1450	T
A5 2VV 80/25	80	25	1450	T
A5 2VV 125/25	125	25	1450	T
A5 2VV 160/25	160	25	1450	T
A5 2VV 320/25	320	25	1450	T
A5 2VV 400/20	400	20	1450	T
A2 2VV 320/25	320	25	1450	TD
A2 2VV 400/20	400	20	1450	TD

* Type of shaft seal: T - single mechanical seal, TV - single mechanical seal with auxiliary seal, TD - double mechanical seal

PERFORMANCE RANGE



2VV

TWIN-SCREW PUMPS FOR MARINE AND RIVER VESSELS

APPLICATION

2VV series twin-screw pumps are intended for handling sea and fresh water mixed with petroleum products and oils, with temperature up to +80 °C, content of mechanical non-abrasive impurities up to 2.5% of mass, solids size below 0.2 mm.

The pumps are applied in the separation units for handling bilge water contaminated with petroleum products on marine and river vessels with unlimited navigation area.

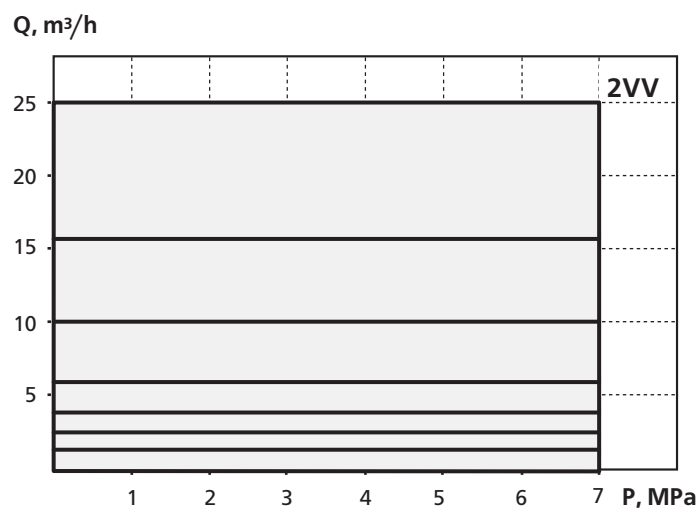


TECHNICAL DATA *

Pump	Capacity, m ³ /h min	Full bypass pressure, MPa	Rotation speed, rpm	Rated vacuum-metric suction head, m
2VV 1.6/16	1.6	7	2900	7
2VV 2.5/16	2.5	7	2900	7
2VV 4/16	4	7	2900	7
2VV 6.3/16	6.3	7	2900	6
2VV 10/16	10	7	1450	6
2VV 16/16	16	7	1450	6
2VV 25/16	25	7	1450	6

* Pump (unit) weight and overall dimensions are given in the operational manual

PERFORMANCE RANGE

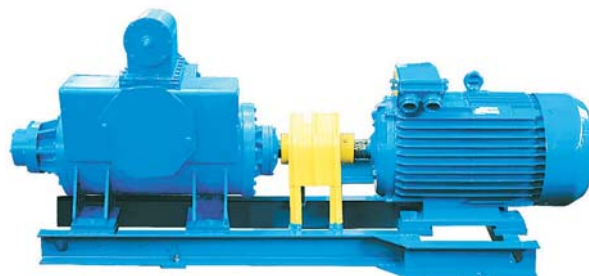


3V THREE-SCREW PUMPS FOR PETROLEUM PRODUCTS

APPLICATION

3V series three-screw pumps are intended for handling raw oil, fuel oil, mineral oil, diesel fuel, reactive and highly viscous fluids with lubricity properties, without abrasive impurities, with temperatures up to +100 °C and kinematic viscosity from 1.9 to 1000 °E.

The pumps are fully compliant with API 676 standard requirements and applied for supplying fuel oil and diesel fuel to TPP boilers, mineral oil in hydraulic systems, raw and intermediate products in oil refineries, loading/unloading oil and petroleum products at marine and railway terminals, and other industrial applications.



TECHNICAL DATA *			1/3
Pump	Capacity, m ³ /h min	Discharge pressure, kgf/cm ² , max	Rotation speed, rpm
A1 3V 4/25B-TV1-R1-E U2	6.8	25	2900
A1 3V 4/25-3/25B-TV1-R1-5.5 U3	3	25	1450
A1 3V 4/25-3/25B-TV1-R1-5.5-E U2	3	25	1450
A1 3V 4/25-3.2/4B-TV1-R1-1.5-E U2	3.2	4	2900
A1 3V 4/25-3.2/4B-TV1-R1-1.5 U3	3.2	4	2900
A1 3V 4/25-6.8/25B-TV1-R1-7.5 U3	6.8	25	2900
A1 3V 4/25-6.8/25B-TV1-R1-7.5-E U2	6.8	25	2900
A1 3V 4/160	5.8	160	2900
A1 3V 4/160-4/100B	5.8	100	2900
A1 3V 8/40-11.5/40B-TV3-R1-30-E	11.5	40	2900
A1 3V 10/35-11.5/40B-TV3-R1-30-E	12	35	2900
A1 3V 12/25-17/25B-TV3-R1-22-E	17	25	2900
A1 3V 4/160-4/63B	5.8	63	2900
A1 3V 8/25B	12.5	25	2900
A1 3V 8/100	11.52	100	2900
A1 3V 8/25-11/10B	12.5	10	2900
A1 3V 8/100-11/100B-1	11.52	100	2900
A1 3V 16/25B-TV1-R1-E U2	22	25	2900

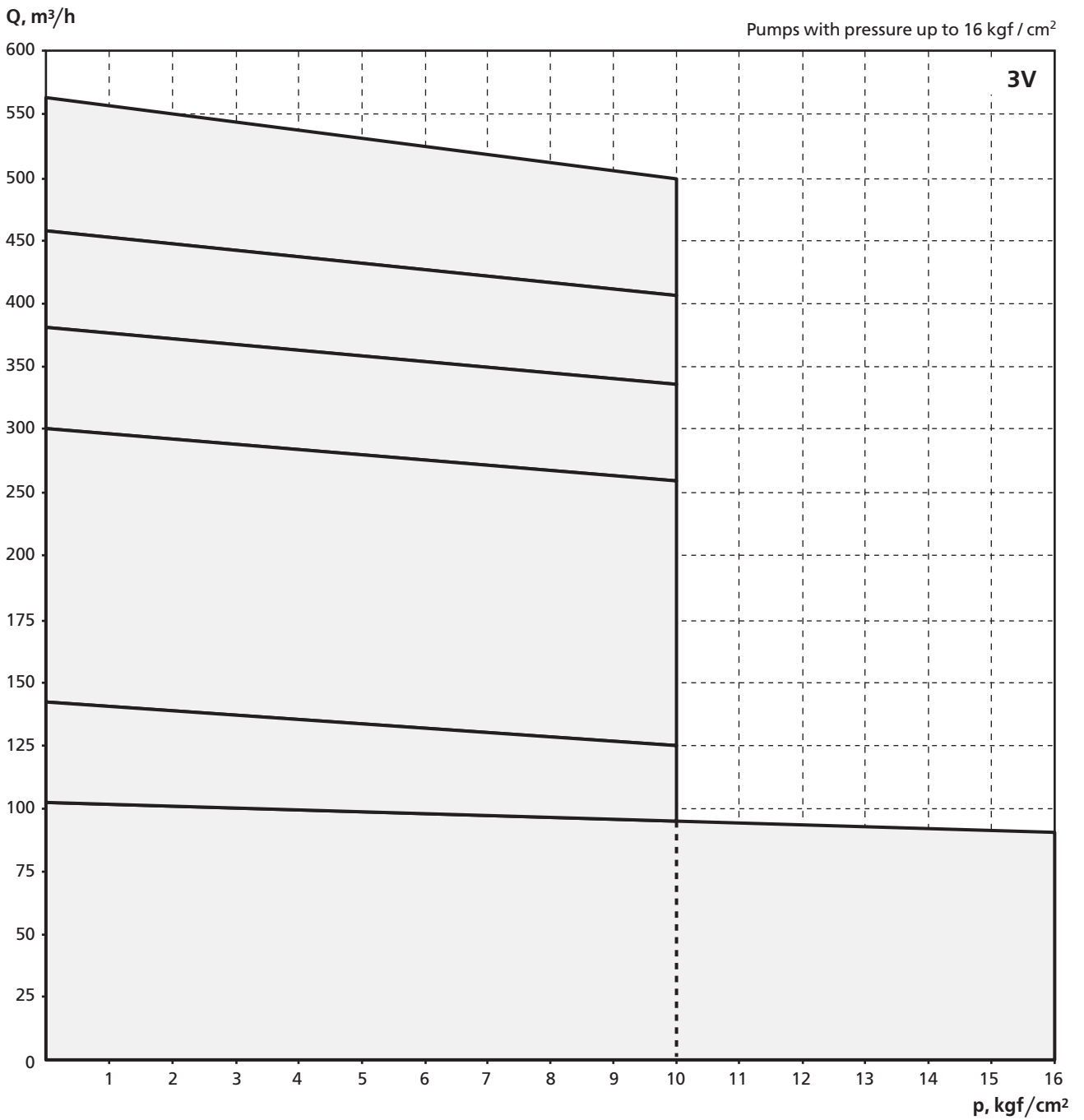
* Pump (unit) weight and overall dimensions are given in the operational manual

TECHNICAL DATA *			2/3
Pump	Capacity, m ³ /h min	Discharge pressure, kgf/cm ² , max	Rotation speed, rpm
A1 3V 16/25-10/25B-TV1-R1-15-E-U2	8	25	1450
A1 3V 16/25-10/25B-TV1-R1-15-U3	8	25	1450
A1 3V 16/25-11/6.3B-TV1-R1-7.5-E-U2	10	6.3	2900
A1 3V 16/25-11/6.3B-TV1-R1-7.5-U3	10	6.3	1450
A1 3V 16/25-24/6.3B-TV1-R1-15-E U2	24	6.3	2900
A1 3V 16/25-24/6.3B-TV1-R1-15 U3	24	6.3	2900
A1 3V 16/25-24/6.3B-TV1-R1-11-E U2	24	6.3	2900
A1 3V 16/25-22/25B-TV1-R1-22-E U2	22	25	2900
A1 3V 16/25-22/25B-TV1-R1-22 U3	22	25	2900
A1 3V 63/40	46.8	40	1450
A1 3V 16/100-20/100	21	100	2900
A1 3V 16/100-20/80	21	80	2900
A1 3V 63/40-45/40 B	46.8	40	1450
A1 3V 125/25-58/10B-1	58	10	980
A1 3V 125/25-90/6.3B	90	6.3	1450
A1 3V 125/25-90/6.3B-1	90	6.3	1450
A1 3V 125/25-90/25B	90	25	1450
A1 3V 125/25-90/25B-1	90	25	1450
A1 3Vx2 630/10	500	10	1450
A2 3V 63/25B-TV1-R1-E U2	47	25	1450
A2 3V 63/25-50/6.3B-TV1-R1-22-E U2	50	6.3	1450
A2 3V 63/25-50/6.3B-TV1-R1-22 U3	50	6.3	1450
A2 3V 63/25-47/25B-TV1-R1-55-E U2	47	25	1450
A2 3V 63/25-47/25B-TV1-R1-55 U3	47	25	1450
A2 3V 40/25B-TV1-R1-E U2	35	25	1450
A2 3V 40/25-38/6.3B-TV1-R1-15-E U2	38	6.3	1450
A2 3V 40/25-38/6.3B-TV1-R1-15 U3	38	6.3	1450
A2 3V 40/25-38/6.3B-TV1-R1-18.5-E U2	38	6.3	1450
A2 3V 40/25-35/25B-TV1-R1-45-E U2	35	25	1450
A2 3V 40/25-35/25B-TV1-R1-45 U3	35	25	1450
A2 3V 125/16B-TV1-R1-E U2	90	16	1450
A2 3V 125/16-90/6.3B-TV1-R1-45-E U2	90	6.3	1450
A2 3V 125/16-90/6.3B-TV1-R1-45 U3	90	6.3	1450
A2 3V 125/16-90/6.3B-TV1-R1-55 U3	90	6.3	1450
A2 3V 125/16-90/16B-TV1-R1-90-E U2	90	16	1450
A2 3V 125/16-90/16B-TV1-R1-90 U3	90	16	1450
A2 3V 125/16-58/10B-TV1-R1-45-E U2	58	10	1000
A3 3V 8/63-11/63B	11.52	63	2900
A3 3V 8/63-11/63B-1	11.52	63	2900
A3 3V 8/63	11.52	63	2900

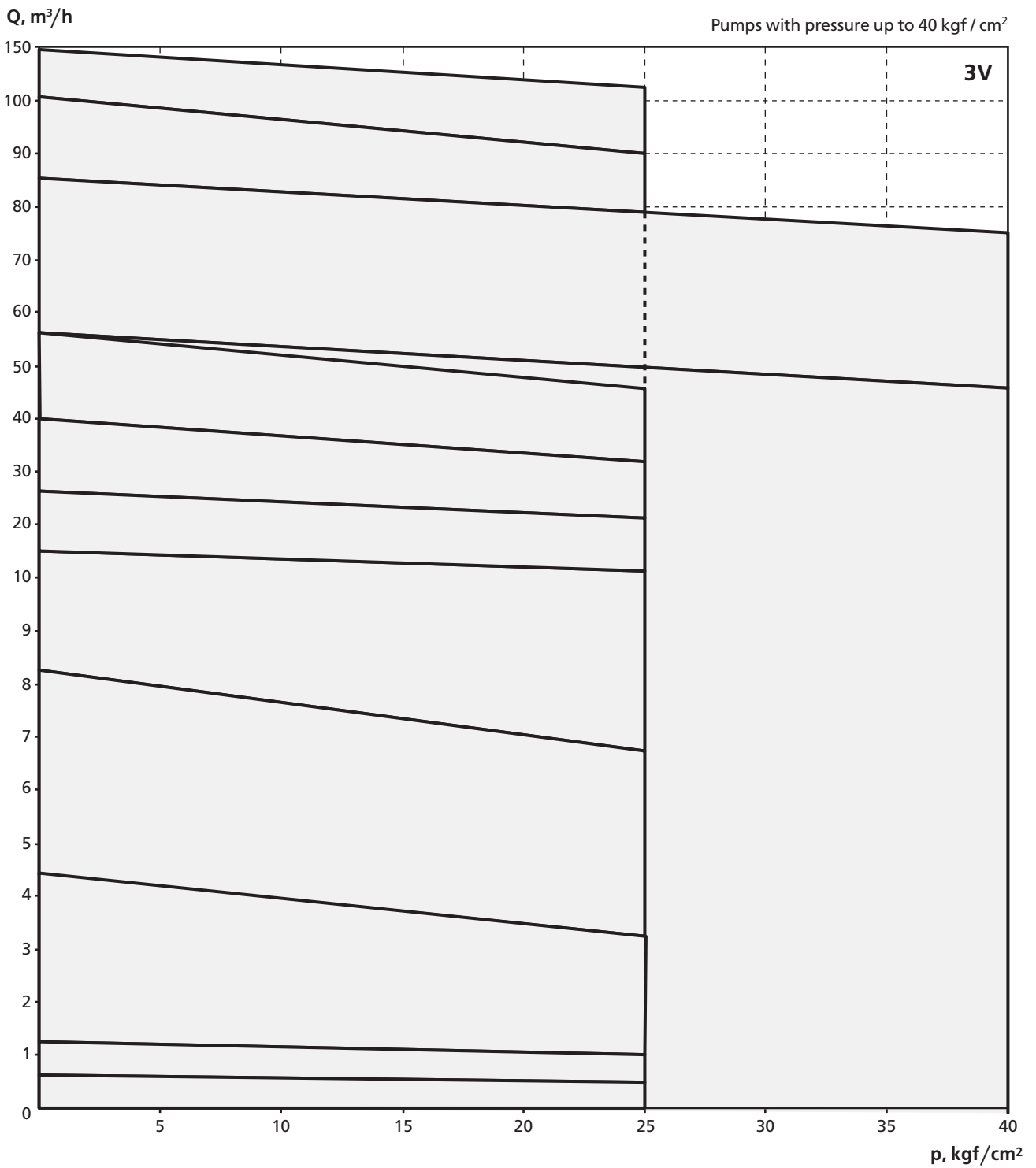
TECHNICAL DATA *

Pump	Capacity, m ³ /h min	Discharge pressure, kgf/cm ² , max	Rotation speed, rpm
A3 3V 8/160-8/160	10	160	2900
A3 3V 8/160-10/35	12	35	2900
A3 3V 12/110-12/80	17	80	2900
A3 3V 320/25	125	25	1450
A3 3V 16/25-22/25B-TV3-R1-22-E	22	25	2900
A3 3V 320/25-125/4B	125	4	1450
A3 3V 320/25-125/4B-1	125	4	1450
A3 3V 320/25-125/4B-3	125	4	1450
A3 3V 320/25-125/10B	125	10	1450
A3 3V 320/25-125/10B-1	125	10	1450
A3 3V 320/25-125/10B-3	125	10	1450
A3 3V 320/25-125/10B-5	125	10	1450
A3 3V 320/25-125/25B	125	25	1450
A3 3V 320/25-125/25B-1	125	25	1450
A3 3V*2 320/16-250/4B	252	4	1450
A3 3V*2 320/16-250/10B	252	10	1450
A3 3V*2 400/16-320/4B	324	4	1450
A3 3V*2 400/16-320/10B	324	10	1450
A3 3V*2 500/10-400/4B	400	4	1450
A3 3V*2 500/10-400/10B	400	10	1450
A4 3V 1.6/40	3.24	40	2900
A4 3V 1.6/40-3/25B	3.24	25	2900
A4 3V 1.6/40-3/25B-1	3.24	25	2900
A4 3V 4/25	6.84	25	2900
A4 3V 4/25-3/25B	3.24	25	1450
A5 3V 1.6/40	3.24	40	2900
A5 3V 1.6/40-3/40B	3.24	40	2900
A5 3V 1.6/40-3/40B-1	3.24	40	2900
A5 3V 4/25	6.84	25	2900
A5 3V 4/25-6.8/40B	6.84	40	2900
A5 3V 8/25B-TV1-R1-E U2	11.5	25	2900
A5 3V 8/25-6.5/4B-TV1-R1-3-E U2	6.5	4	1450
A5 3V 8/25-6.5/4B-TV1-R1-3 U3	6.5	4	1450
A5 3V 8/25-12.5/10B-TV1-R1-7.5-E U2	12.5	10	2900
A5 3V 8/25-12.5/10B-TV1-R1-7.5 U3	12.5	10	2900
A5 3V 8/25-11.5/25B-TV1-R1-15-E U2	11.5	25	2900
A5 3V 8/25-11.5/25B-TV1-R1-15 U3	11.5	25	2900
A5 3V 40/25	32.4	25	1450
A5 3V 40/25-35/6.3B-3	35	6.3	1450
A5 3V 40/25-35/6.3B-4	35	6.3	1450
A5 3V 40/25-35/10B	35	10	1450
A5 3V 40/25-35/10B-1	35	10	1450
A5 3V 40/25-30/25B-3	32.4	25	1450
A5 3V 40/25-30/25B-4	32.4	25	1450

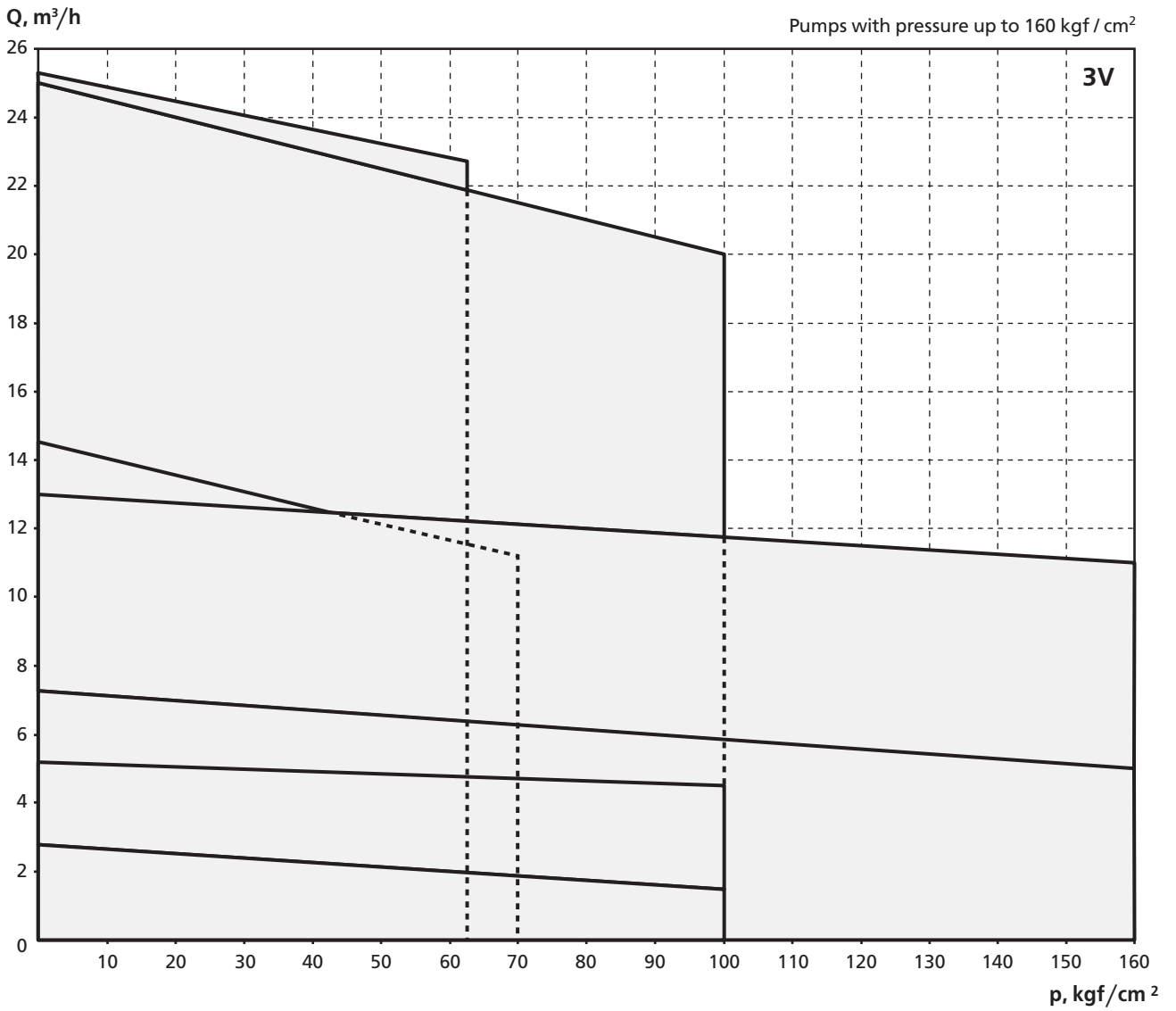
PERFORMANCE RANGE



PERFORMANCE RANGE



PERFORMANCE RANGE



3V THREE-SCREW PUMPS FOR MARINE AND RIVER VESSELS

APPLICATION

3V series three-screw pumps are intended for handling non-aggressive fluids with lubricity (mineral oil, fuel oil, raw oil, diesel fuel), without abrasive solids, with viscosity up to 1500 cSt and temperature up to +150 °C.

The pumps are applied in the fuel supply systems to the diesel engines on marine and river vessels, in the lubricant supply systems in marine turbine units, and also as high-pressure pumps for handling mineral oil in hydraulic systems.

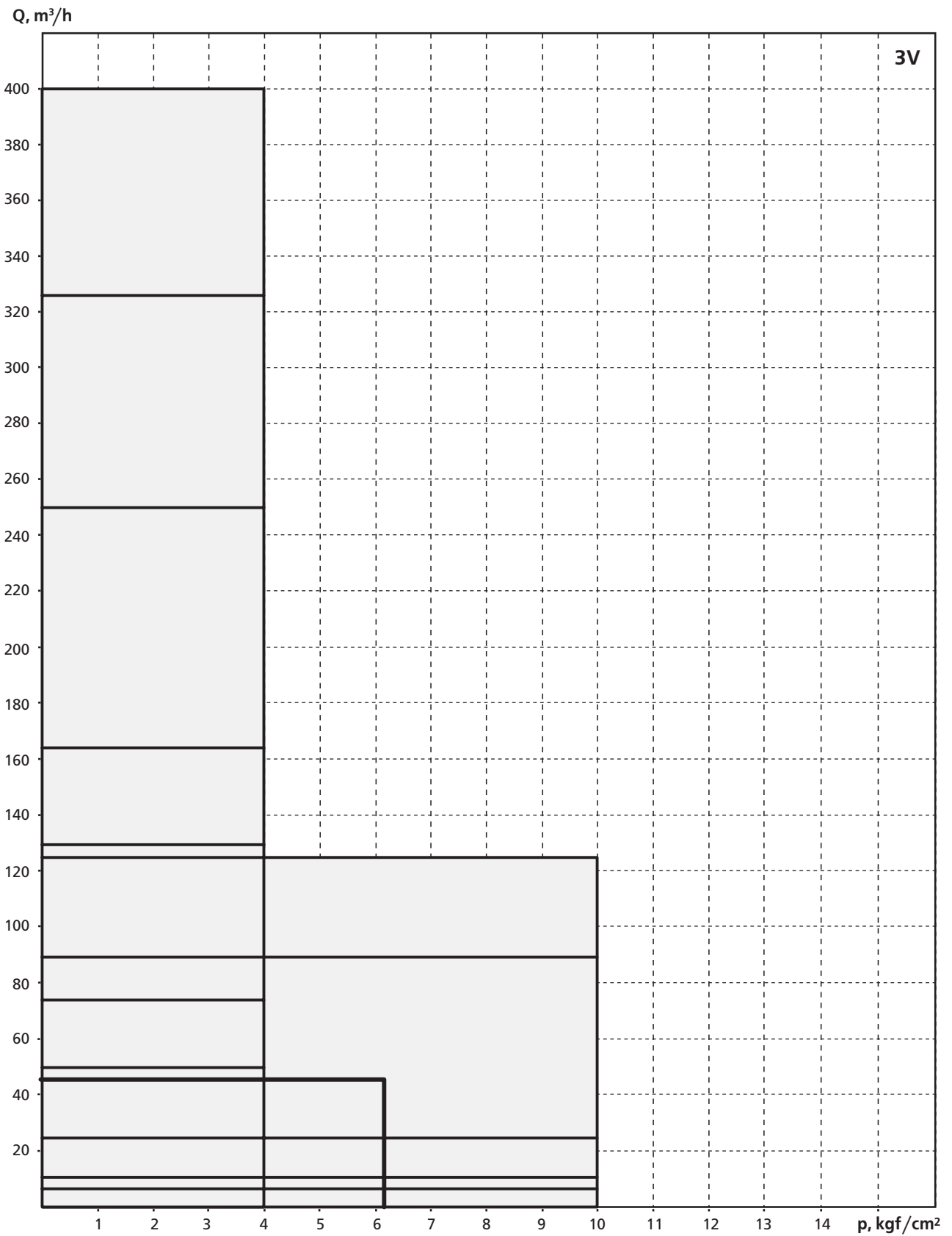


TECHNICAL DATA *				1/2
Pump	Capacity, m ³ /h min	Discharge pressure, kgf/cm ² , max	Rotation speed, rpm	Rated vacuum-metric suction head, m
A1 3V 0.25/25-0.4/25B	0.45	25	2900	6.5
A1 3V 0.25/25-0.4/25B-1	0.45	25	2900	6.5
A1 3V 0.6/63-1/25B	1	16	2900	6.5
A1 3V 0.63/63-0.7/16B	1	16	2900	6.5
A1 3V 1/100-1.8/100B-3	1.8	100	2900	6.5
A1 3V 1.6/40-1.3/25B	1.3	25	1450	6.5
A1 3V 1.6/40-3/10B	3.24	10	2900	6
A1 3V 1.6/40-3/10B-01	3.24	10	2900	6
A1 3V 1.6/40-3/25B	3.24	25	2900	6.5
A1 3V 2.5/100-3/100B-23	3.8	100	2900	6
A1 3V 4/25-6.8/10B	6.8	10	2900	6
A1 3V 4/25-6.8/25B	6.8	25	2900	6
A1 3V 4/160	5.8	160	2900	6
A1 3V 8/25-5/4B	5.5	4	1450	5

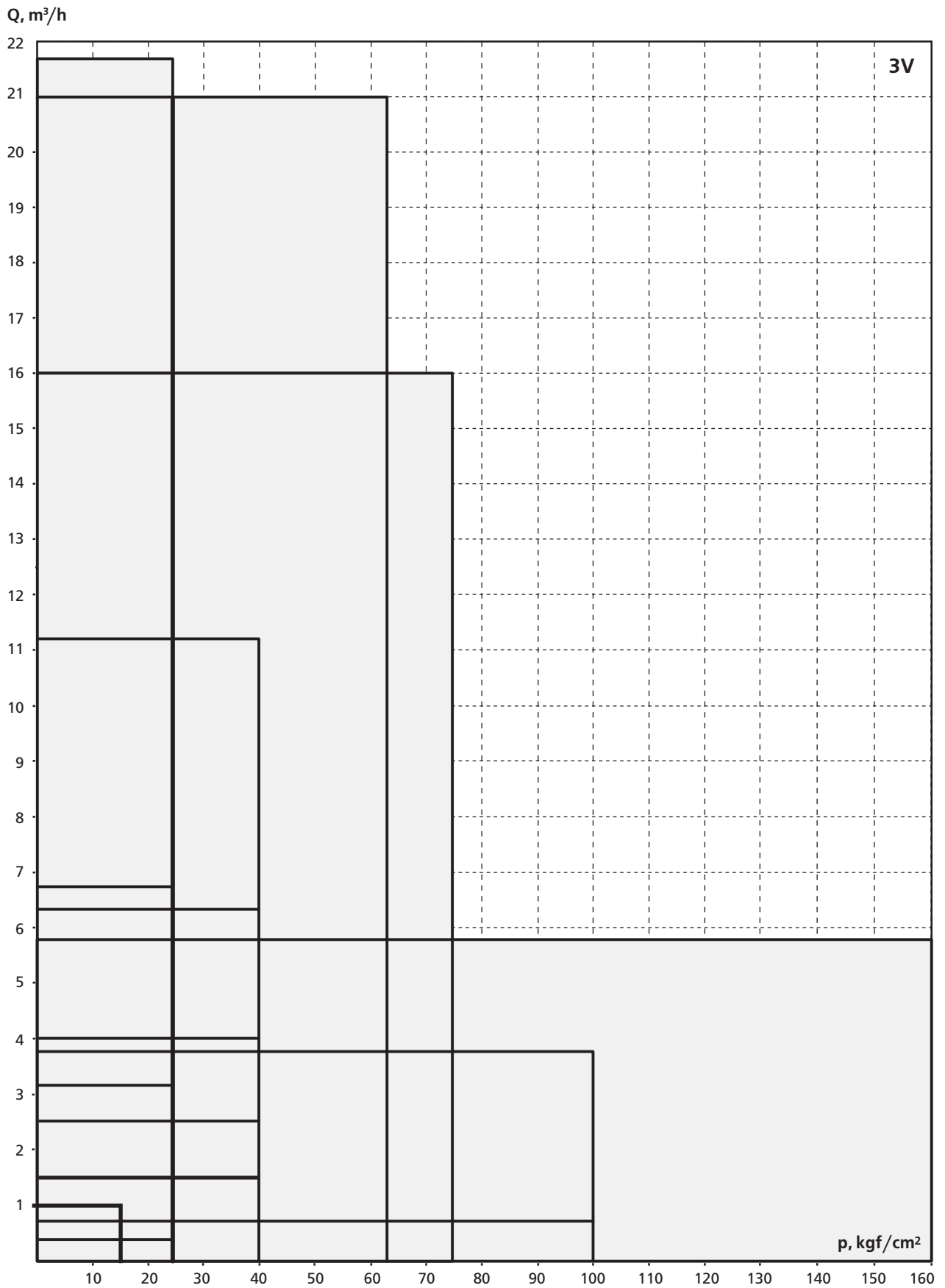
* Pump (unit) weight and overall dimensions are given in the operational manual

TECHNICAL DATA *				2/2
Pump	Capacity, m ³ /h min	Discharge pressure, kgf/cm ² , max	Rotation speed, rpm	Rated vacuum-metric suction head, m
A1 3V 8/25-11/10B	12.5	10	3000	5
A1 3V 8/25-11/10B-1	12.5	10	2900	5
A1 3V 8/63	11.6	40	2900	5
A1 3V 8/63-11/40B	11.6	40	2900	5
A1 3V 8/63-11/40B-1	11.6	40	2900	5
A1 3V 16/63-20/63U	21	63	2900	5
A1 3V 16/63-20/63U-13	21	63	2900	5
A1 3V 16/63-20/63U-3	21	63	2900	5
A1 3V 16/25-22/10B	21.6	10	2900	5
A1 3V 16/25-22/25B	21.6	25	2900	5
A1 3V 63/25-45/6.3B	47	6.3	1450	5
A1 3V 63/25-50/4B	50	4	1450	5
A1 3V 40/25	21	4	980	5
A1 3V 125/16-50/4B	45	4	730	5
A1 3V 125/16-90/4B	90	4	1450	5
A1 3V 125/16-90/10B	90	10	1450	5
A1 3V 320/16-125/4B	130	4	1450	5
A1 3V 320/16-125/10B	126	10	1450	5
A1 3V 400/16-80/4B	75	4	730	5
A1 3V 400/16-160/4B	162	4	1450	5
A1 3V*2 320/16-250/4B	255	4	1450	5
A1 3V*2 400/16-320/4B	325	4	1450	5
A1 3V*2 500/10-400/4B	400	4	1450	5
A2 3V 8/63	6.3 / 4 / 2.5 / 1.5	40	1450 / 980 / 760 / 480	5
A2 3V 16/63	16	75	2900	5

PERFORMANCE RANGE



PERFORMANCE RANGE



AS-3V

THREE-SCREW PUMPS FOR AUXILIARY NPP SYSTEMS

APPLICATION

AC-3V series three-screw pumps are intended for handling oil, petroleum products, fuel and lube oil, diesel fuel and other viscous fluids (from 1.25 to 100 °E) with temperature up to +100 °C.

The pumps are manufactured in accordance with the requirements of the Federal norms and rules in the field of atomic energy use, from the special construction materials intended for equipment of nuclear power plants.

AC-3V series pumps are applied at nuclear power plants for pumping oil in the lubrication system of bearings and mechanical seals of the main circulation pumps (MCP).

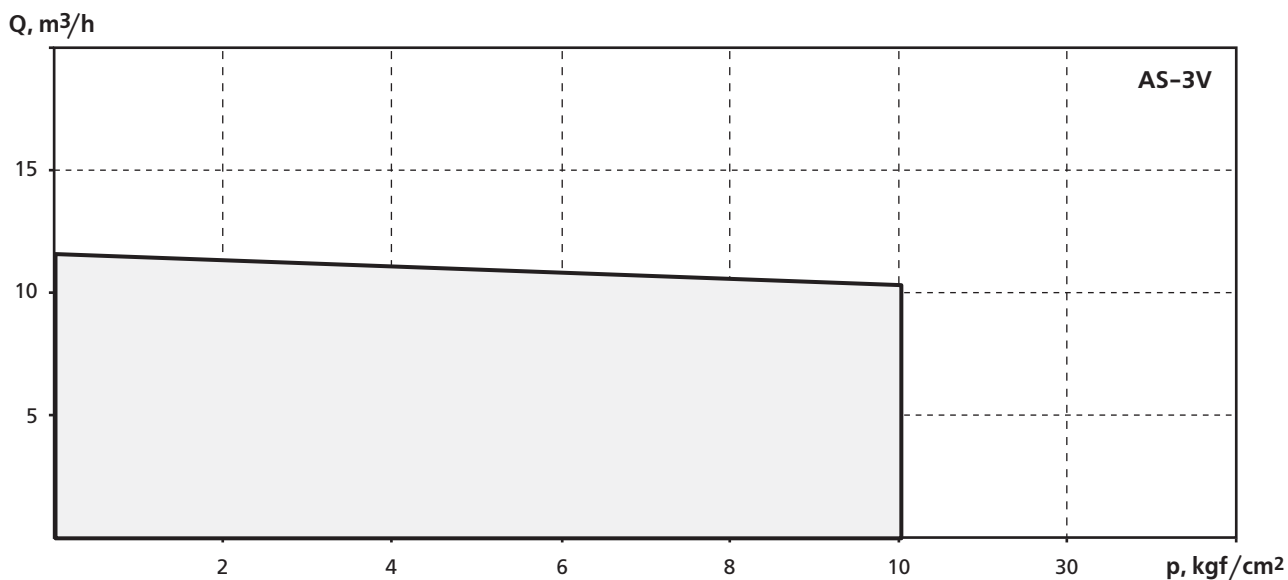


TECHNICAL DATA *

Pump	Capacity, m ³ /h min	Discharge pressure, kgf/cm ² , max	Full bypass pressure, MPa	Rotation speed, rpm	Rated, vacuum-metric head, m
AS-3V 8/25-11/10A	12.5	10	1.5	2900	5

* Pump (unit) weight and overall dimensions are given in the operational manual

PERFORMANCE RANGE



SH, NMSH, NMSHF, NMSHG GEAR PUMPS FOR OIL AND PETROLEUM PRODUCTS

APPLICATION

SH, NMSH, NMSHF, NMSHG series gear pumps are intended for handling oil, petroleum products, bitumen and other fluids without mechanical impurities, with kinematic viscosity from 1.08 to 470 °E and temperature up to +200 °C.

The pumps are applied for transferring raw materials, intermediate and finished products at oil refineries, supplying fuel oil to thermal power plants boilers, for transshipment of petroleum products at railway and offshore terminals, supplying lubes in the highly loaded mechanisms (turbines, rolling mills and others), handling bitumen at asphalt plants and mobile bitumen trucks.

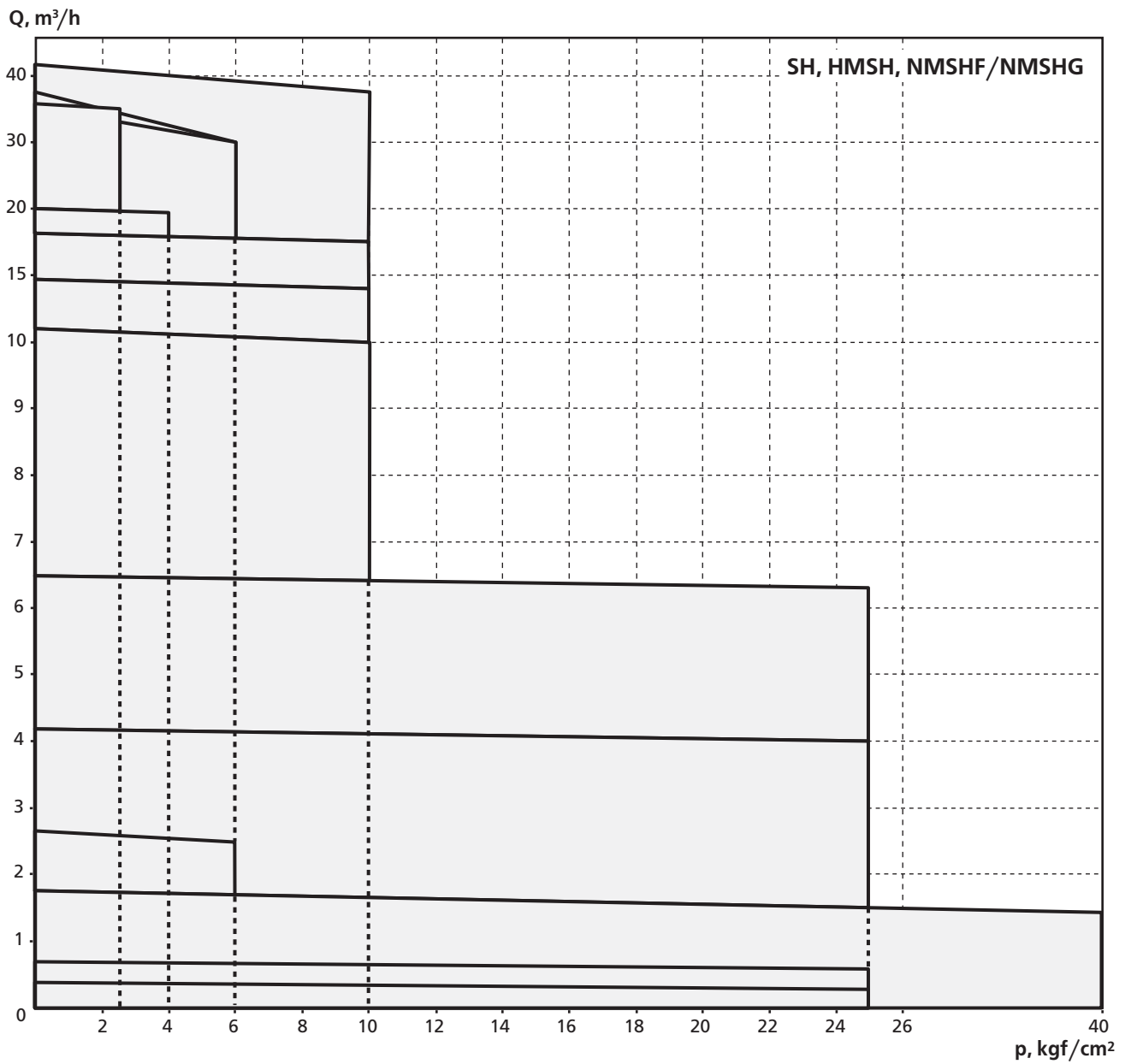


TECHNICAL DATA *				1/2
Pump	Pumped liquid kinematic viscosity mm ² /s (cSt), min	Capacity, m ³ /h min	Discharge pressure, kgf / cm ² , max	Rotation speed, rpm
NMSHF 0.6-25-0.25/25	36	0.25	25	980
NMSHF 0.6-25-0.25/10	36	0.25	10	980
NMSHF 0.6-25-0.18/20	1.8	0.18	20	980
NMSHF 0.6-25-0.18/10	1.8	0.18	10	980
NMSHF 0.8-25-0.63/25	36	0.63	25	1450
NMSHF 0.8-25-0.63/10	36	0.63	10	1450
NMSHF 0.8-25-0.44/20	1.8	0.44	20	1450
NMSHF 0.8-25-0.44/10	1.8	0.44	10	1450
NMSH 2-25-1.6/4 (up to 220°C)	1.8	1.6	4	1450
NMSH 2-25-1.6/4	1.8	1.6	4	1450
NMSH 2-25-1.6/6 (up to 220°C)	1.8	1.6	6	1450
NMSH 2-25-1.6/6	1.8	1.6	6	1450
NMSH 2-25-1.6/10 (up to 220°C)	1.8	1.6	10	1450
NMSH 2-25-1.6/10	1.8	1.6	10	1450
NMSH 2-25-1.6/16	1.8	1.6	16	1450
NMSH 2-25-1.6/16 (up to 220°C)	1.8	1.6	16	1450
NMSH 2-40-1.6/40	36	1.6	40	1450
NMSH 5-25-4.0/4	1.8	4	4	1450
NMSH 5-25-4.0/4 (up to 220°C)	1.8	4	4	1450

* Pump (unit) weight and overall dimensions are given in the operational manual

TECHNICAL DATA *				2/2
Pump	Pumped liquid kinematic viscosity mm ² /s (cSt), min	Capacity, m ³ /h min	Discharge pressure, kgf / cm ² , max	Rotation speed, rpm
NMSH 5-25-4.0/10	20	4	10	1450
NMSH 5-25-4.0/10 (up to 220°C)	20	4	10	1450
NMSH 5-25-4.0/25	36	4	25	1450
NMSH 5-25-4.0/25 (up to 220°C)	36	4	25	1450
NMSH 5-25-2.5/6	1.8	2.5	6	980
NMSH 5-25-2.5/6 (up to 220°C)	1.8	2.5	6	980
NMSH 8-25-6.3/2.5	1.8	6.3	2.5	1450
NMSH 8-25-6.3/2.5 (up to 220°C)	1.8	6.3	2.5	1450
NMSH 8-25-6.3/4	36	6.3	4	1450
NMSH 8-25-6.3/4 (up to 220°C)	36	6.3	4	1450
NMSH 8-25-6.3/6	36	6.3	6	1450
NMSH 8-25-6.3/6 (up to 220°C)	36	6.3	6	1450
NMSH 8-25-6.3/10	36	6.3	10	1450
NMSH 8-25-6.3/10 (up to 220°C)	36	6.3	10	1450
NMSH 8-25-6.3/25	75	6.3	25	1450
NMSH 8-25-6.3/25 (up to 220°C)	75	6.3	25	1450
NMSH 12-25-10/4	6	10	4	1450
NMSH 12-25-10/10	75	10	10	1450
NMSH 32-10-18/4	1.8	18	4	980
NMSH 32-10-18/6	20	18	6	980
NMSH 32-10-18/10	36	18	10	980
NMSH 80-16-30/4	1.8	30	4	980
NMSH 80-16-38/4	44	38	4	980
NMSH 80-16-38/6	44	38	6	980
NMSH 80-16-36/10	75	36	10	980
SH 3.2-25-1.6/16	75	1.6	16	980
SH 3.2-25-0.6/6-Rp	75	0.06...0.6	6	80...400
SH 40-4-19.5/4 (up to 220°C)	1.8	19.5	4	980
SH 40-4-19.5/4	1.8	19.5	4	980
SH 40-4-19.5/6 (up to 220°C)	75	19.5	6	980
SH 40-4-19.5/6	75	19.5	6	980
SH 80-2.5-37.5/2.5	20	37.5	2.5	980
SH 80-2.5-37.5/2.5 (up to 220°C)	20	37.5	2.5	980
SH 80-2.5-30/6 (up to 220°C)	75	30	6	980
SH 80-2.5-30/6	75	30	6	980
NMSHG 8-25-6.3/10	36	6.3	10	1450
NMSHG 8-25-1.7/2.5-Rp	36	0.15...1.7	2.5	70...400
NMSHG 20-25-14/10	75	14	10	980
NMSHG 20-25-5/1.6-Rp	75	4.3	1.6	150...300
NMSHG 120-10-30/6	150	30	6	415

PERFORMANCE RANGE



SH, NMSH, NMSHF MARINE GEAR PUMPS FOR PETROLEUM PRODUCTS

APPLICATION

SH, NMSH, NMSHF series gear pumps are intended for handling petroleum products, oil, diesel fuel, fuel oil, and other fluids without mechanical impurities, with kinematic viscosity from 1.08 to 300 °E and temperature up to +70 °C.

The pumps are applied for supplying fuel oil and diesel fuel to ship boilers and diesel units on marine and river vessels, supplying lubricating liquids in turbine units and other highly loaded mechanisms, as well as high-pressure pumps for injecting mineral oil in hydraulic systems.



TECHNICAL DATA *				1/2
Pump	Pumped liquid kinematic viscosity mm ² /s (cSt), min	Capacity, m ³ /h min	Discharge pressure, kgf/cm ² , max	Rotation speed, rpm
NMSHF 0.6-25-0.25/25U-3	1.8	0.25	25	980
NMSHF 0.6-25-0.40/25U-3	1.8	0.4	25	1450
NMSHF 0.8-25-0.63/25U-3	1.8	0.63	25	1450
NMSHF 2-40-1.6/4B-13	1.8	1.6	4	1450
NMSHF 2-40-1.6/6B-13	1.8	1.6	6	1450
NMSHF 2-40-1.6/16B-13	1.8	1.6	16	1450
NMSHF 2-40-1.6/16B-3	1.8	1.6	16	1450
NMSHF 2-40-0.8/16B-13	1.8	0.8	16	1450
NMSHF 5-25-4.0/4B-13	1.8	4	4	1450
NMSHF 5-25-4.0/4B-3	1.8	4	4	1450
NMSHF 8-25-6.3/4B-13	1.8	6.3	4	1450
NMSHF 8-25-6.3/6B-13	1.8	6.3	6	1450
NMSHF 8-25-6.3/25B-13	75	6.3	25	1450
NMSHF 8-25-6.3/4B-3	1.8	6.3	4	1450
NMSH 32-10-18/4B-13	1.8	18	4	1450
NMSH 32-10-18/4B-23	1.8	18	4	980
NMSH 32-10-18/6B-33	75	18	6	980
NMSH 32-10-18/10B-13	75	18	10	980
NMSH 32-10-18/4B-3	1.8	18	4	980

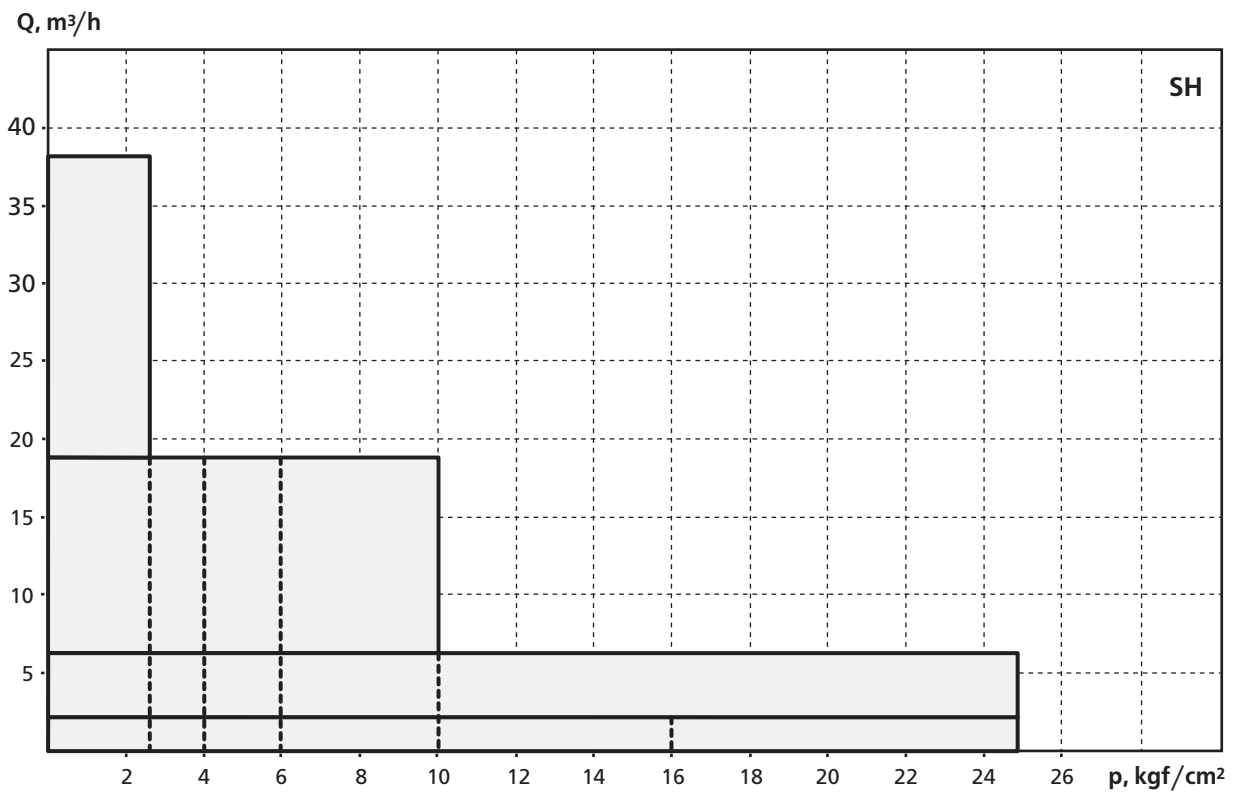
TECHNICAL DATA *

2/2

Pump	Pumped liquid kinematic viscosity mm ² /s (cSt), min	Capacity, m ³ /h min	Discharge pressure, kgf/cm ² , max	Rotation speed, rpm
SH 40-4-19.5/4-13	1.8	19.5	4	980
SH 40-4-19.5/4B-13	1.8	19.5	4	980
SH 40-4-19.5/4-23	1.8	19.5	4	980
SH 40-4-19.5/4B-23	1.8	19.5	4	980
SH 80-2.5-37.5/2.5B-13	75	37.5	2.5	980
SH 80-2.5-37.5/2.5B-23	75	37.5	2.5	980
SH 80-2.5-37.5/2.5B-33	75	37.5	2.5	980
SH 40-4-19.5/4-7	1.8	19.5	4	980
SH 40-4-19.5/4B-7	1.8	19.5	4	980
SH 40-4-19.5/6	75	19.5	6	980
SH 40-4-19.5/6B	75	19.5	6	980
SH 80-2.5-37.5/2.5B-43	75	37.5	2.5	980

* Pump (unit) weight and overall dimensions are given in the operational manual

PERFORMANCE RANGE



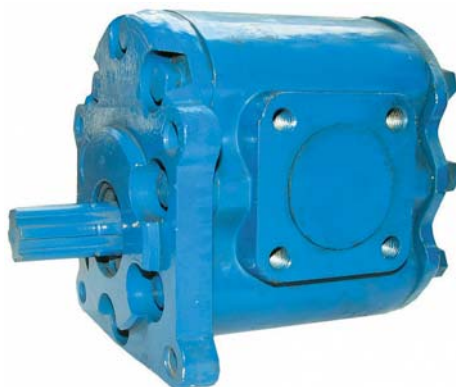
NSH GEAR PUMPS FOR HYDRAULIC SYSTEMS

APPLICATION

NSH series gear pumps are intended for handling oil, petroleum products, lubes and other fluids with kinematic viscosity from 7.5 to 10 °E and temperature from 0 °C to +80 °C.

The pumps are mounted on the internal combustion engine power take-off shaft. The turning moment is transmitted by means of a spline connection between the pump shaft and the take-off shaft.

NSH series pumps are applied for handling mineral oil in the hydraulic systems of tractors, loaders, agricultural, municipal, construction and road machinery and in other mechanisms aggregated with internal combustion engines.

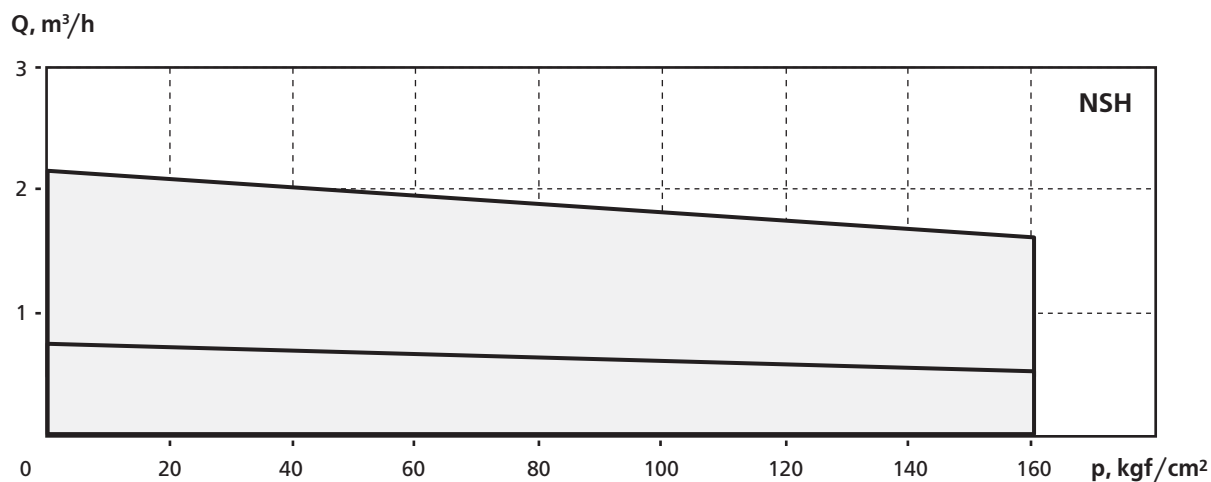


TECHNICAL DATA *

Pump	Pumped liquid kinematic viscosity, mm ² /s (cSt), min	Capacity m ³ /h min	Discharge pressure, kgf/cm ² , max	Rotation speed, rpm	Efficiency, %
NSH 10-M-3	55	0.8	160	1450	81
NSH 32-M-3	55	2.2	160	1450	81

* Pump (unit) weight and overall dimensions are given in the operational manual

PERFORMANCE RANGE



AS-SH, AS-NMSH GEAR PUMPS FOR AUXILIARY NPP SYSTEMS

APPLICATION

AS-SH and AS-NMSH series gear pumps are designed for handling oil, petroleum products, fuel oil, lubes, diesel fuel and other viscous media (from 1.08 to 470 °E) with temperature up to +220 °C.

The pumps are manufactured in accordance with the requirements of the Federal Rules and Regulations in the field of atomic energy use, from specialized construction materials intended for nuclear power plants equipment.

AS-SH and AS-NMSH series gear pumps are applied in nuclear power plants to supply oil to the main circulation pump oil tanks, to pump diesel fuel and lubricating oil in the emergency diesel generators, for filtering flame-retardant fluid in turbine control and lubrication systems.

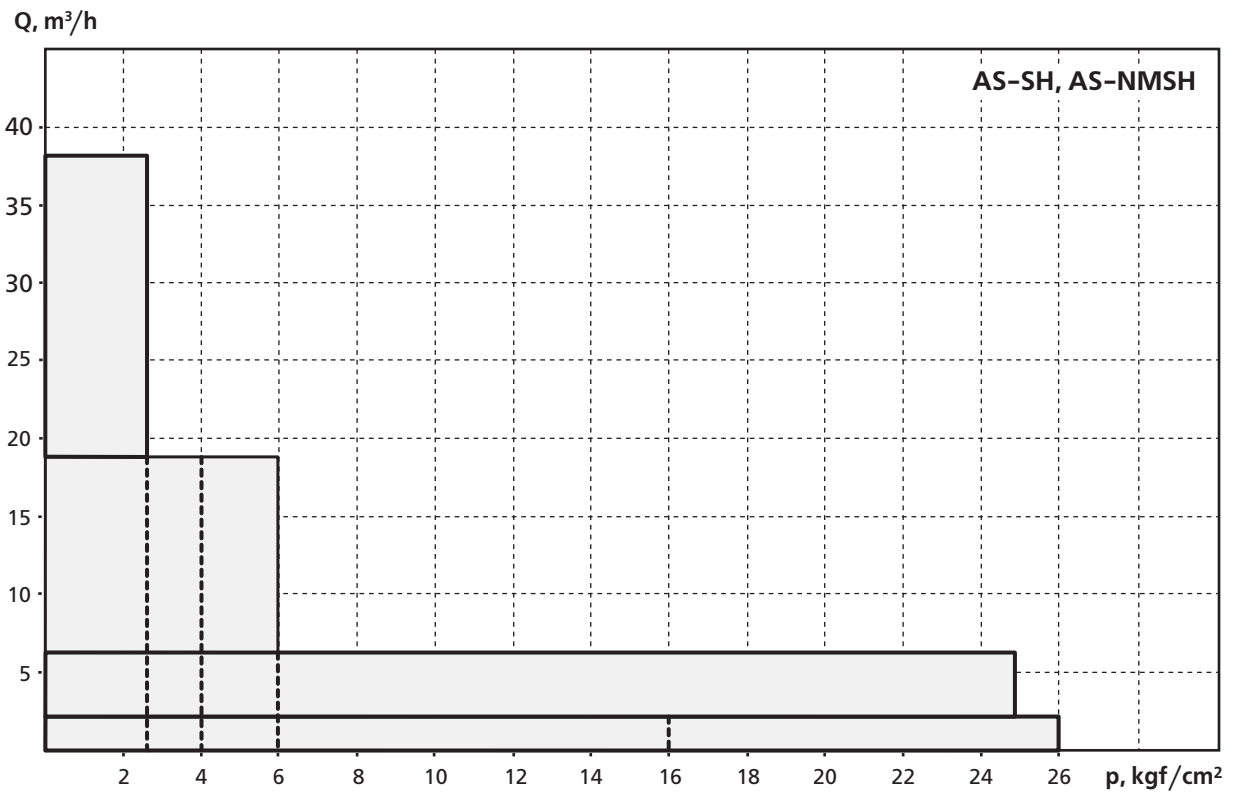


TECHNICAL DATA *

Pump	Capacity m ³ /h min	Discharge pressure, kgf/cm ² , max	Full bypass pressure, MPa	Rotation speed, rpm	Efficiency, %	Rated vacuum- metric suction head, m
AS-NMSHF 0.8-25-0.63/25A	0.63	25	3.75	1450	71.5	5
AS-NMSH 2-40-1.6/16A	1.6	16	2.4	1450	60	5
AS-NMSH 5-25-4.0/4A	4	4	0.6	1450	56	5
AS-NMSH 8-25-6.3/2.5A	6.3	2.5	0.55	1450	50	5
AS-NMSH 8-25-6.3/25A	6.3	25	3.75	1450	81	5
AS-NMSH 32-10-18/6A	18	6	0.9	980	70	5
AS-SH 40-4-19.5/4A	19.5	4	0.6	980	50	5
AS-SH 80-2.5-37.5/2.5A	37.5	2.5	0.55	980	49	5

* Pump (unit) weight and overall dimensions are given in the operational manual

PERFORMANCE RANGE



KV

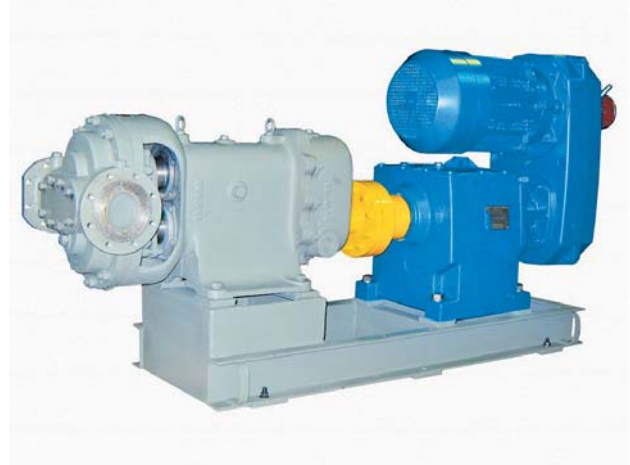
HIGH-PRESSURE ROTARY LOBE PUMPS

APPLICATION

The KV series rotary lobe pumps are intended for handling viscous petroleum products, fuel oil, lubes, spinning solution and other highly viscous fluids, including chemically active ones, with temperature up to +80 °C.

The casing and flow path parts are made of stainless molybdenum steel. The pumps are equipped with gland seal and a geared motor with variable speed transmission.

The pumps of the KV series are applied to provide auxiliary processes at oil refineries, chemical and petrochemical plants.



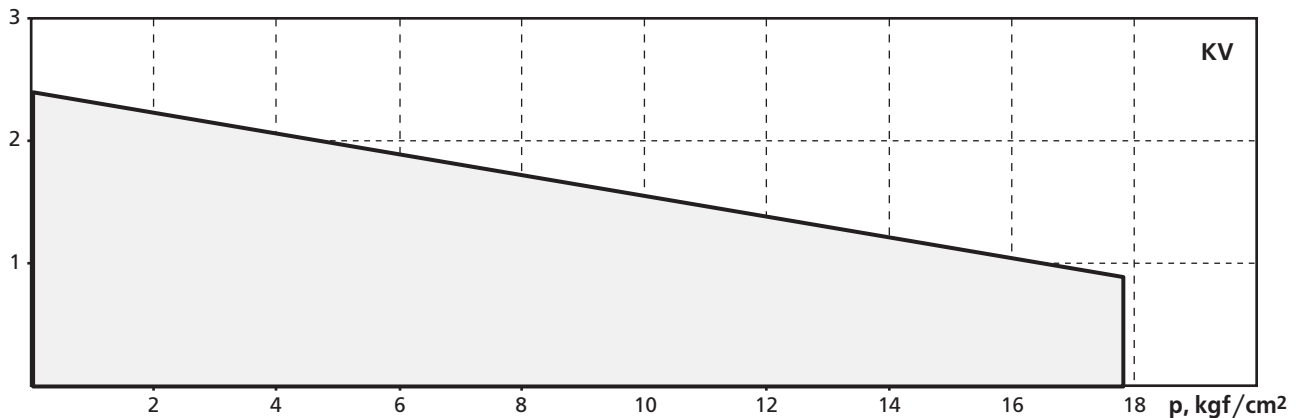
TECHNICAL DATA

Pump	Capacity range, m ³ /h	Static suction head, m	Discharge pressure, kgf/cm ² , max	Pumping unit power	Rotation speed range, rpm	Efficiency, %	Voltage, V	Current frequency, Hz
KV 0.7/18	0.6 - 2.5	80	18	6	30 - 112	30	380	50

* Pump (unit) weight and overall dimensions are given in the operational manual

PERFORMANCE RANGE

Q, m³/h



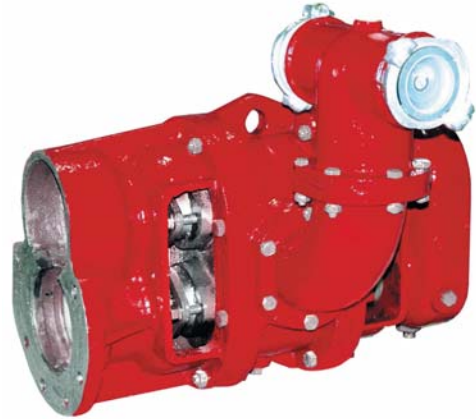
NKF

ROTARY LOBE FLANGED PUMPS FOR WATER AND UTILITIES

APPLICATION

The NKF series of rotary lobe flanged pumps are intended for handling water and similar liquids with temperature up to +30 °C, maximum concentration of solid particles up to 0.2 % of mass, solids size up to 0.2 mm.

The pumps are applied for intermittent water supply (irrigation, fertilizing) and drainage from natural sources of water (rivers, lakes, ponds, other reservoirs), watering at livestock farms, rapid supply of water in forest fire fighting, drainage (dewatering) of reservoirs, pits without access to electricity.

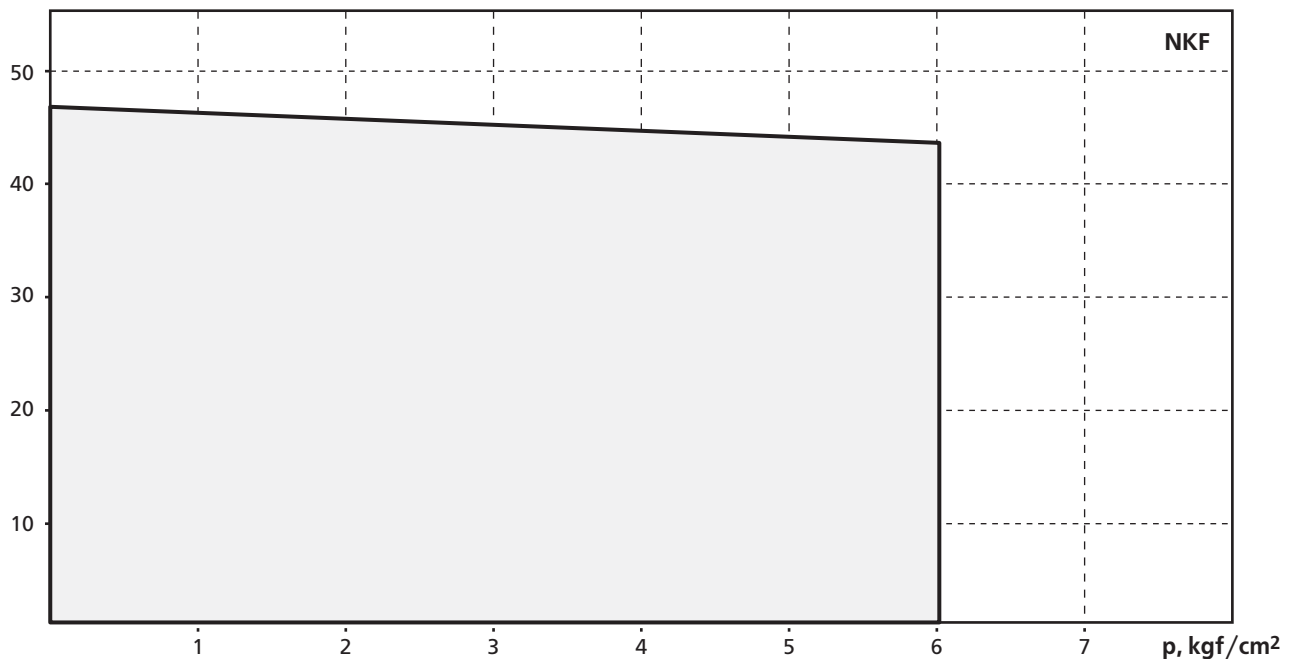


TECHNICAL DATA *					
Pump	Capacity, m ³ /h	Discharge pressure, kgf/cm ² , max	Max power, kW	Rotation speed, rpm	Rated vacuum-metric suction head, m
NKF-54	42	6	15	530	6

* Pump (unit) weight and overall dimensions are given in the operational manual

PERFORMANCE RANGE

Q, m³/h



UNDM-L

HERMETIC MEMBRANE DOSING AND PLUNGER PUMPS

DESCRIPTION

Hermetic membrane dosing and plunger pumping units of the UNDM-L series are intended for handling pure liquids (including chemically active and toxic ones) with temperature from -40 °C to +200 °C.

The membrane dosing units are based on the membrane-type pumps with variable capacity range, equipped with Teflon or metal multilayer diaphragms with integrity control sensors. The units are also available in the modular design including several pump heads driven by a single electric motor of up to 250 kW. The capacity can be precisely adjusted by changing the stroke length of the diaphragm drive rod and/or changing the number of strokes per minute by means of a frequency-controlled drive. The pumping units design and applied materials are compliant with the requirements of API 675 standard.

The membrane dosing pump units are applied for the volumetric pressure dosing of chemically active components, reagents, additives and other fluids in the processes of the oil & gas industry, chemical and petrochemical plants and in the other industries.

The plunger pumping units are designed to handle significant volumes of pure liquids with high injection pressure (up to 350 bar and above). The units can be manufactured in a strict accordance with the requirements of API 674 / ISO 13710 standard.



The plunger units are applied for injection of methanol and monoethylene glycol (MEG) into productive gas wells, water discharge into oil formations, and high-pressure reagent injection into various industrial processes.

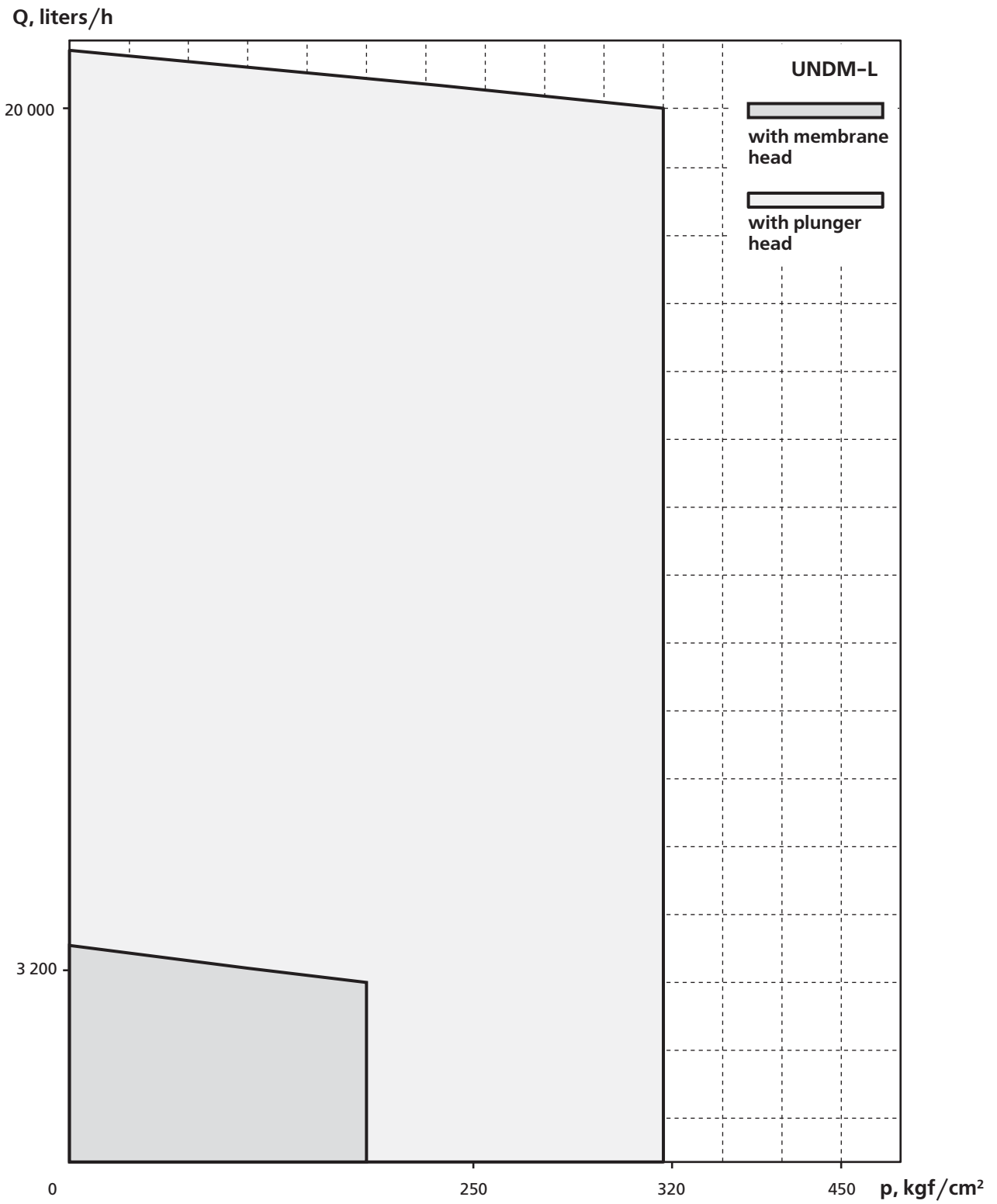
TECHNICAL DATA *

Unit Type	Capacity range, liters/h	Discharge pressure range kgf/cm ²	Pumped fluid properties		
			Kinematic viscosity, cm ² /s max	Solid inclusions size, mm max	Solid inclusions concentration, % max
UNDM-L (M)*	25 – 3200	1 – 250	8.0	0.1	0.2
UNDM-L (P)**	100 – 20 000	1 – 350			

* Pump unit with diaphragm head. ** Pump unit with plunger head.

At the customer's request the plunger pumping units are available with a hermetic plunger head, with sealing and collection of normal leakage off the plunger (PG version).

PERFORMANCE RANGE



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