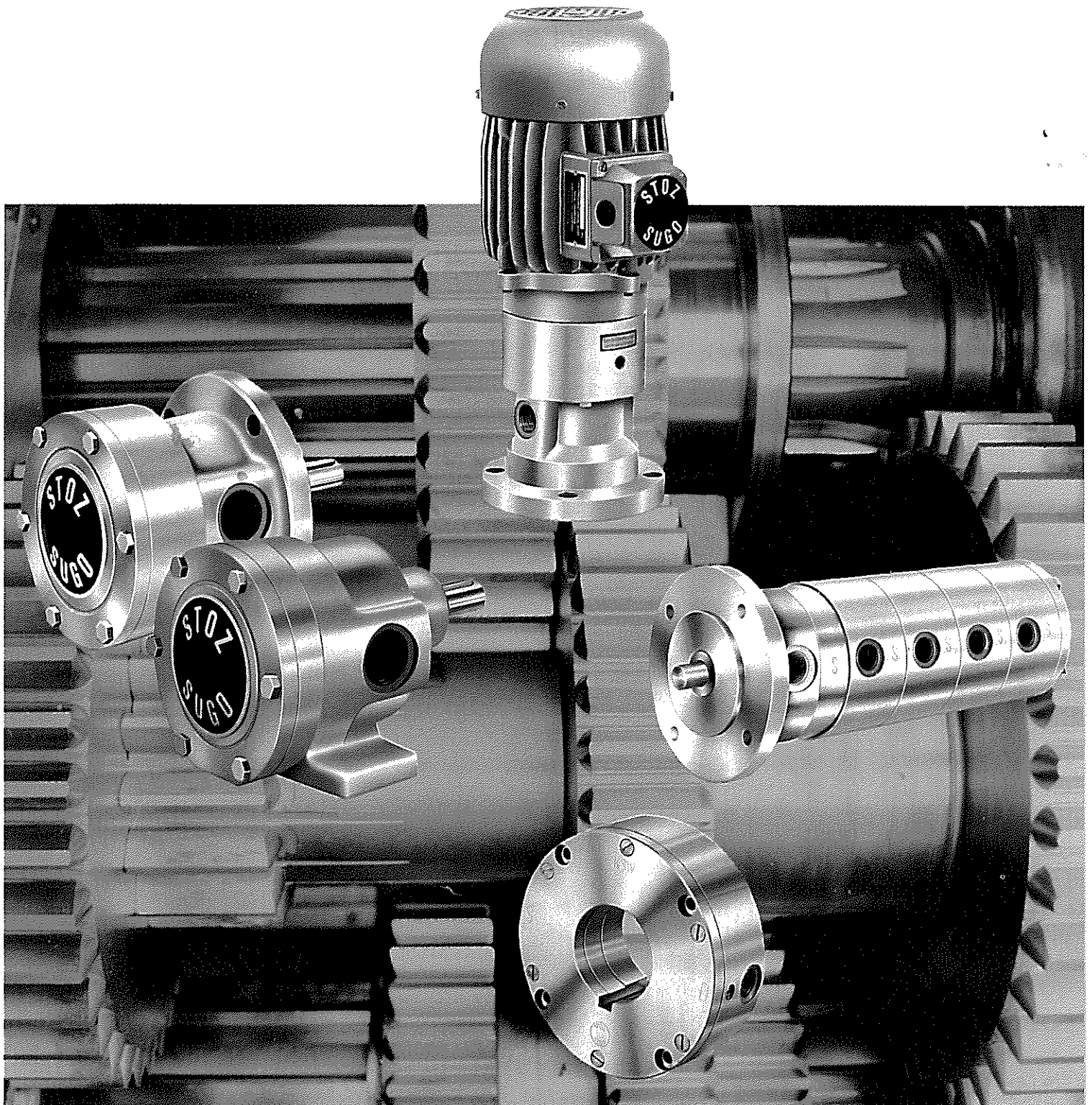
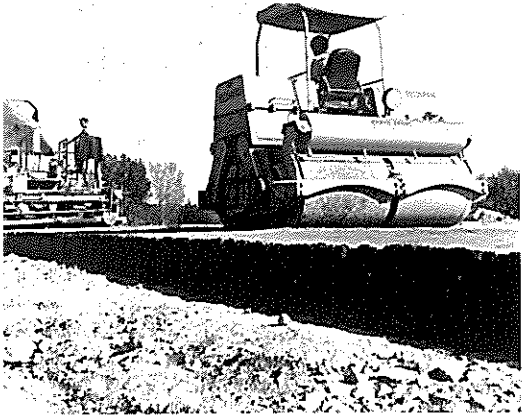


STOZ

PUMPENFABRIK

STOZ SUGO pumps ensure trouble free circulation of all lubricating and cooling liquids



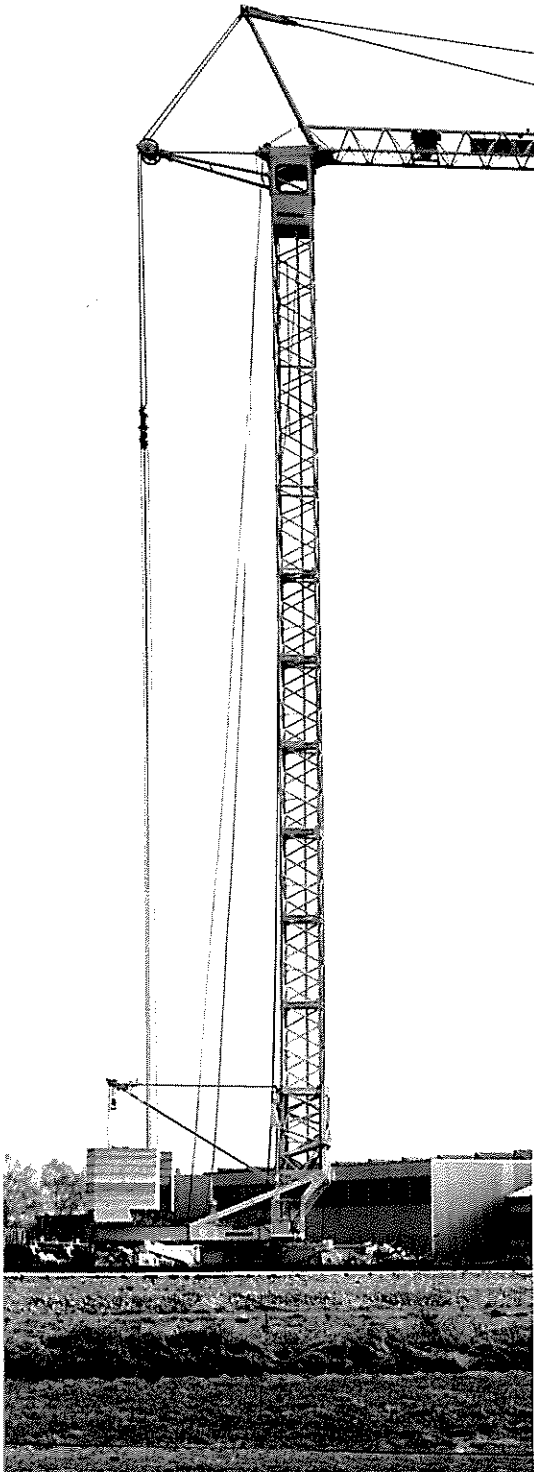


BOMAG concrete compressor BW 200



MAN truck F 90

The advantage of the STOZ SUGO pumps have been developed further by continuous improvements over 50 years for a variety of fields of application.



STOZ SUGO Pumps are well known for long life whilst maintaining constant output and pressure.

STOZ SUGO Pumps are self lubricated during operation and are maintenance free.

STOZ SUGO Pumps are self priming even after prolonged standstill.

STOZ SUGO Motorised Pressure Pumps are fitted with flexible couplings and are suitable for dual voltages.

STOZ SUGO Multi Circuit Pumps consist of several shaft mounted. Annular pumps arranged on a common shaft allowing output and pressure of the individual pumps to be varied as required.

STOZ SUGO Pumps Type KSW – alternating direction of rotation, with uni-directional liquid flow, operate without valves resulting in maximum reliability.

STOZ SUGO Pumps operate from speeds as low as 100 rpm.

STOZ SUGO Pumps are self-priming up to an oil viscosity of 10.000 mm²/s(cSt).

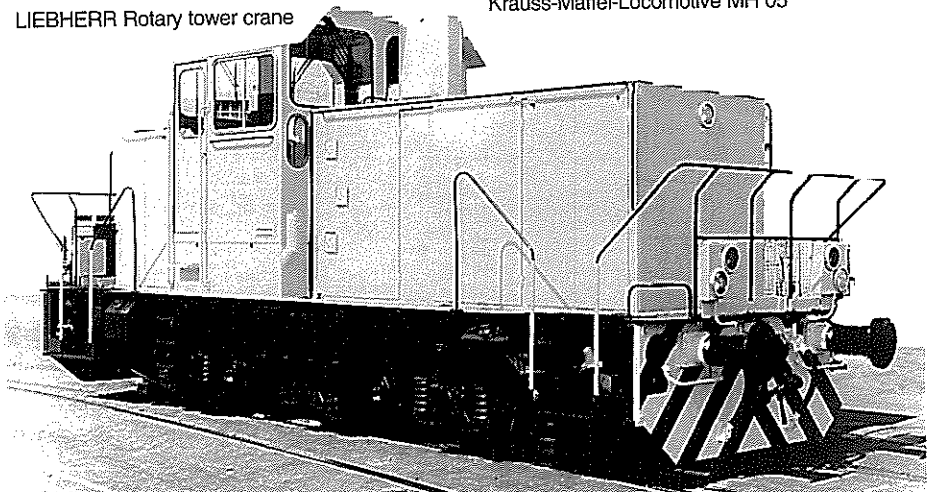
Without changing the overall dimensions the size Pump 0 can be produced with reduced outputs of 1 dm³/min.

STOZ SUGO Pumps are extremely suitable for external mounting due to their cylindrical shape.

STOZ SUGO provide the advice of experienced designers to assist customers in their applications.

LIEBHERR Rotary tower crane

VOITH gear type V 20 in Krauss-Maffei-Locomotive MH 05



STOZ SUGO Pumps Type N and KSW

STOZ SUGO pumps are self priming cell pumps

Fields of application
see pages 2, 3, 4 and 5, as oil lubricating and coolant pumps

Type of construction
with flange, foot mounted
flange mounted

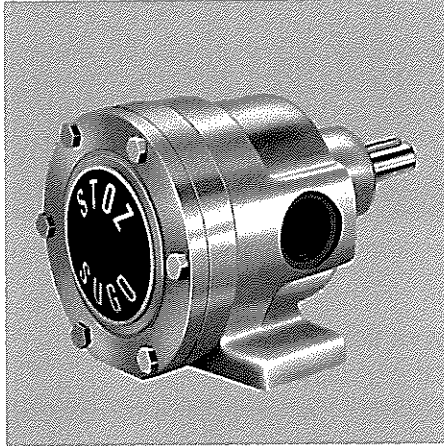
Type N
Oil lubricating and coolant pump for fixed direction of rotation, other direction of rotation-reversed direction of flow, delivery remains constant.

Type KSW

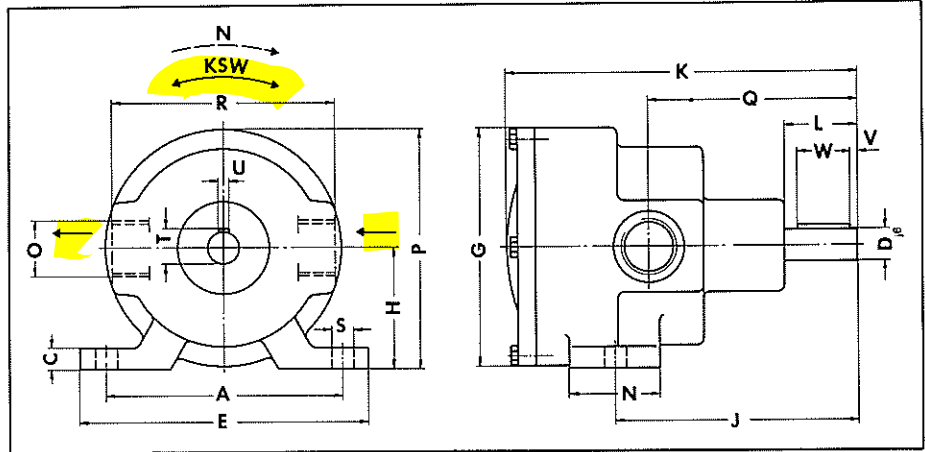
Oil lubricating pump for changing direction of rotation with constant direction of flow, without reversing valve.

Installation

horizontally and "vertically mounted pump, shaft upward"

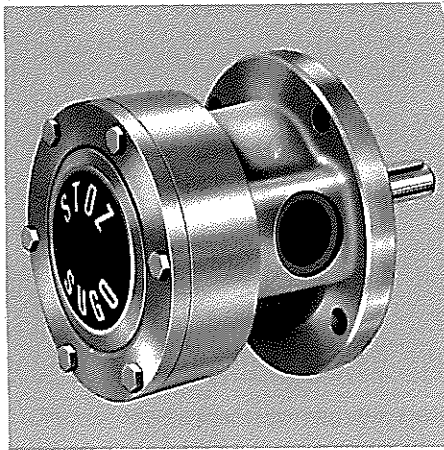


Foot

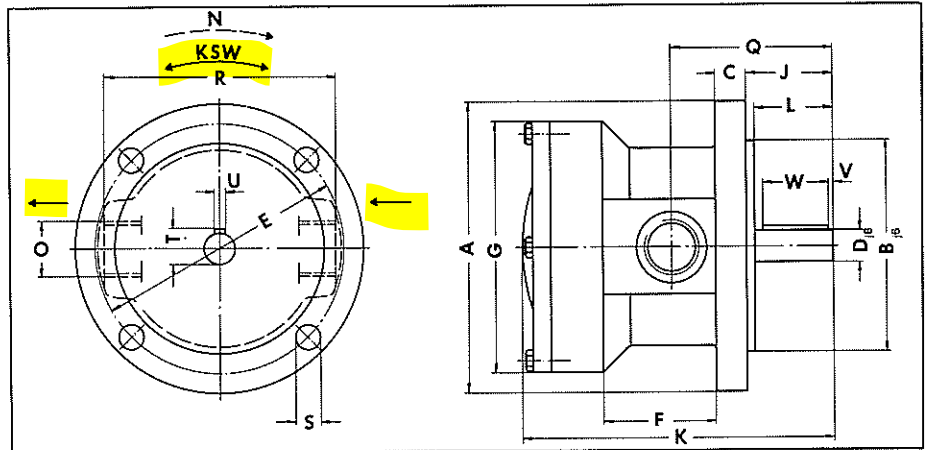


Dimension table type N and KSW foot

Size	A	C	D _s	E	G	H	J	K	L	N	O	P	Q	R	S	T	U	V	W
0	85	8	12	105	79	44	93	125	28	30	R 1/2"	83	83	74	8.5	13.5	4	3	20
1	90	8	12	110	91	46	93	134	28	35	R 1/2"	91	80	84	8.5	13.5	4	3	20
2	90	8	12	110	91	46	101	146	28	35	R 1/2"	91	85	83	8.5	13.5	4	3	20
3	104	9	15	130	117	60	120	171	35	60	R 1"	119	90	107	11	17	5	4	25



Flange



Dimension table type N and KSW flange

Size	A	B _s	C	D _s	E	F	G	J	K	L	O	Q	R	S	T	U	V	W
0	100	60	10	12	83	29	79	28	94	25	R 1/2"	50	73	6.5	13.5	4	2	20
1	110	80	11	12	95	43	96	33	119	30	R 1/2"	62	88	9.5	13.5	4	2	25
2	110	80	11	12	95	45	96	33	131	30	R 1/2"	67	87	9.5	13.5	4	2	25
3	140	100	12	15	120	70	117	38	171	35	R 1"	93	108	10.5	17	5	4	25
4	160	120	12	20	140	-	120	38	209	35	R 1 1/2"	125	109	10.5	22.5	6	4	25

Performance table type N and KSW, foot and flange

size	speed rpm	flow Q normal dm ³ /min	flow Q as required dm ³ /min	Power required KW	P appr. weight kilos foot	weight kilos flange
0		6	1-5	0.25	2.2	2.2
1		15	9-14	0.37	2.5	3.5
2	1500	24	18-22	0.55	2.8	3.8
3		50	30-45	1.1	6.3	8.2
4		100	55-90	2.2	-	11.0

The data of the performance table refer to:
Tubes with inside diameter according to BSP tube thread
Suction height 0.75 m
Lubricant ISO VG 32 (cSt/40° C)
Ambient temperature 293 K (20° C)
Pressure 3 bar

Please state in all cases operating data or particular operating conditions other than above see data on page 7.

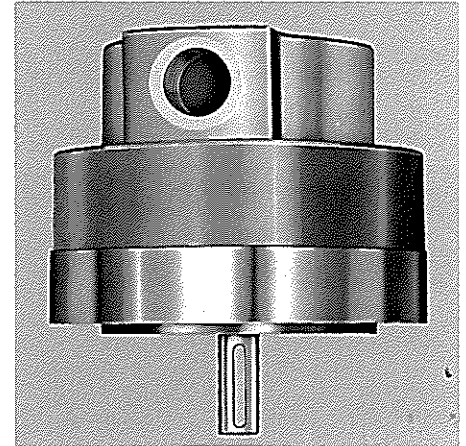
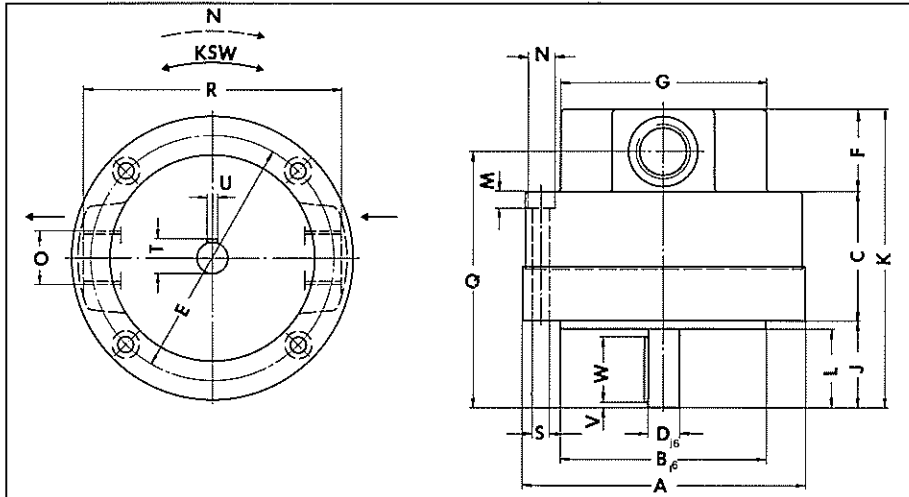
STOZ SUGO Pumps Type N and KSW Model "V"

Installation

"vertically mounted pump, shaft downward" and horizontal
Connection dimensions for fixing and drive, delivery flow and power required similar to flange types N and KSW

Exception

Size 4 Flange mounted Type works in any mounting position.



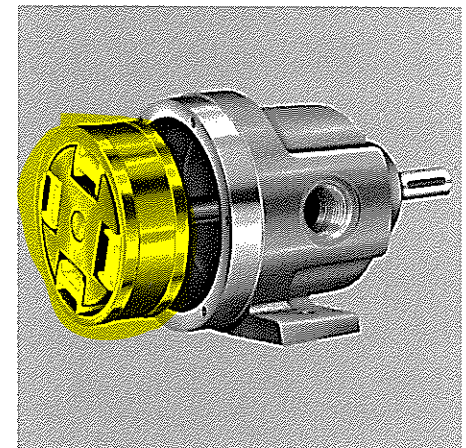
Model "V"

Dimensions table Flange Types N and KSW model "V"

Size	A	B ₆	C	D ₁₆	E	F	G	J	K	L	M	N	O	Q	R	S	T	U	V	W
0	100	60	45	12	83	27	70	28	100	25	6	10,5	R ^{1/4} "	86	89	6,5	13,5	4	2	20
1	110	80	50	12	95	32	80	33	115	30	6	10,5	R ^{1/2} "	99	101	6,5	13,5	4	2	25
2	110	80	54	12	95	43	80	33	130	30	6	10,5	R ^{3/4} "	107	100	6,5	13,5	4	2	25
3	140	100	74	15	120	50	100	38	162	35	8	13,5	R 1"	134	126	8,5	17	5	4	25

Data of output capacity in

relation to speed,
pressure, oil viscosity
and suction height.



Type KSW (exploded view)

Output Capacity

- as per performance table $\pm 10\%$
- varies according to oil, number of revolutions and suction height see characteristic curve page 9
- up to 1,500 rpm. linear, then constant

Oil viscosity

- up to 10,000 mm²/s (cSt)

Drive Speed

- minimum 100 rpm. at maximum suction height of 300 mm
- maximum 3,000 rpm with size 0–2
- from 2,000 rpm with special bearings dimension K is cover side ca. 10 mm longer

Suction height

- 2 m at 1,500 rpm. otherwise depending upon number of revolutions and oil viscosity

Pressure

- 3 bar
- with special bearings for up to 10 bar dimension K is cover side ca. 10 mm longer

Temperature

- up to 373 K (100° C)
- special models for up to 473 K (200° C)

Vibration

- screwed parts secured

Maintenance

- not required because all pumps are designed for self lubrication by the pumped lubricant

STOZ SUGO Shaft Mounted Annular Pumps Type N and KSW

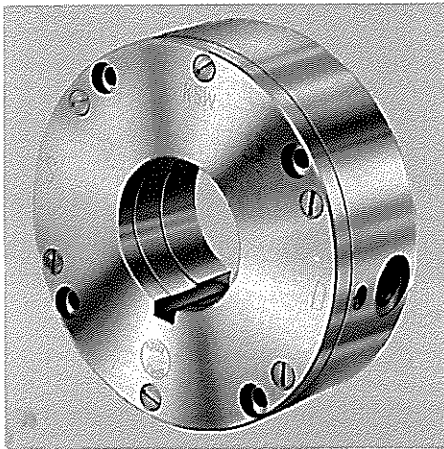
STOZ SUGO Annular Shaft mounted pumps are self priming cell lubrication pumps "without shaft" as per construction designs approved and known for decades.

Typical application
see pages 2, 3, 4 and 5
as an oil lubricating pump

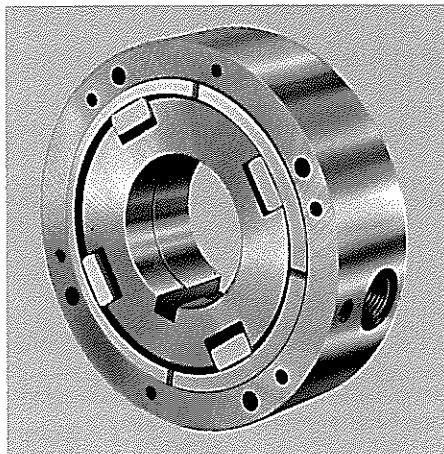
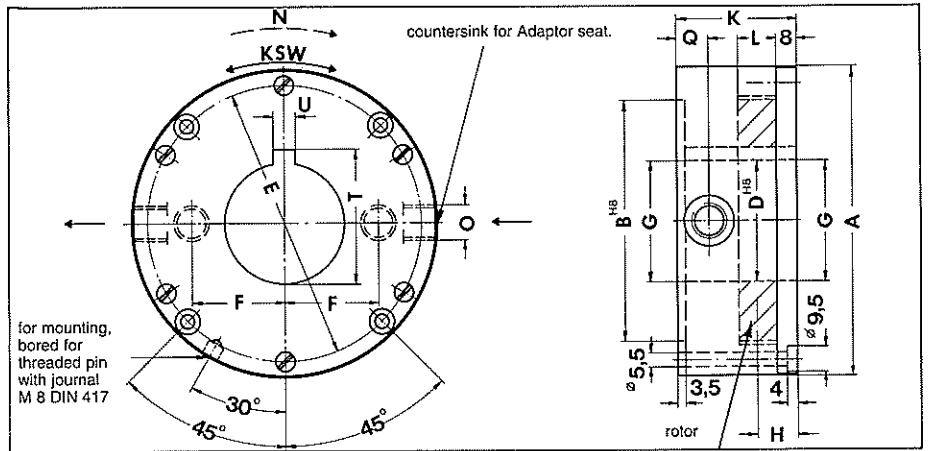
Type of Drive
Direct mounting on available shaft
the rotor is driven by a suitable key
or
stud see Dim: L

Mounting
Either by fixing to a machined face or
via a mating spigot in the shaft bore
Mounting position
horizontal or vertical the pump cover
must be below when mounted

Mounting
with light sliding fit not keyed on
Type N
for fixed direction of rotation, other
direction of rotation reverses direction
of flow, delivery volume remains
the same
Type KSW
for changing direction of rotation with
constant flow direction, without
reversing valves
Standard type
without seals (internal fitting within
the gear box or machine)



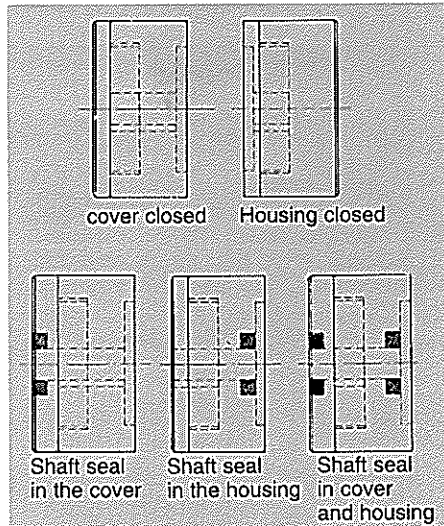
Normal type for internal Mounting



Normal type opened

Performance and dimensions table Types N and KSW

size	bore dia		rpm normal	rpm maximum	normal dm ³ /min with normal rpm	as per requirements dm ³ /min with normal rpm	Power required P KW	weight appr. kilos	Delivery flow Q											
	Housing outside dia	normal							A	B**	D**	E	F	G	H	K	L	O	Q	T
0	15/ 85	1500	2400				2.0	85	60	15	73	20	15.2						18	5.2
	30/100	1200	1900	6	1-5	0.25	2.2	100	75	30	88	27	30.2	15	45	14	R ^{1/2} "	12	35	8.2
	45/115	1000	1500				2.6	115	90	45	103	35	45.2						50	8.2
	60/130	800	1300				3.2	130	105	60	118	40	60.2						65	8.2
1	15/105	1500	1800				3.2	105	75	15	93	27	15.2						18	5.2
	30/120	1200	1500	15	9-14	0.37	4.0	120	90	30	108	35	30.2	15,5	55	15	R ^{1/2} "	18	35	8.2
	45/135	1000	1300				5.1	135	105	45	123	42	45.2						50	8.2
	60/150	800	1100				6.3	150	120	60	138	50	60.2						65	8.2
2	15/105	1500	1800				4.1	105	75	15	93	27	15.2						18	5.2
	30/120	1200	1500	24	18-22	0.55	5.1	120	90	30	108	35	30.2	20	70	24	R ^{1/2} "	20	35	8.2
	45/135	1000	1300				6.5	135	105	45	123	42	45.2						50	8.2
	60/150	800	1100				7.8	150	120	60	138	50	60.2						65	8.2



8 Types for External mounting

Bore diameter
can be increased by up to 5 mm
without modification of the diameter,
Keyway depth 2,5 mm

Bore diameter
Larger than 65 mm see dimension
sheet 3.03.000

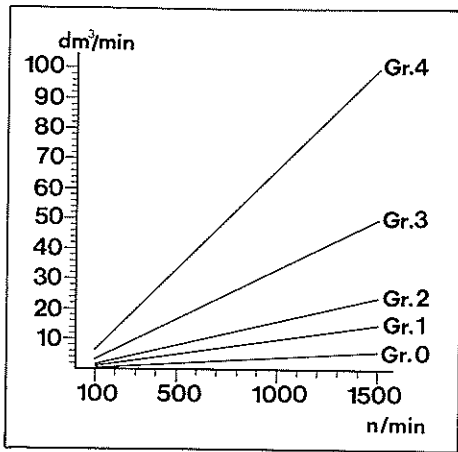
Threaded Ports plane side
Dimension F, where utilized the
internal spigot is omitted, locate pump
j 6 ground outside diameter

External mounting
closed version or with shaft seal,
as per margin sketches
Shaft seal in the cover = Dimensions K,
H and B are respectively 5 mm larger

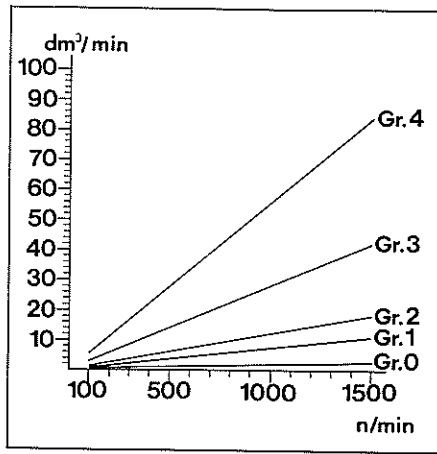
Corer fastening with hexagonal screws.
Fastening bore without lowering.
The data of the performance table refer to:
Tubes with inside diameter according to BSP
tube thread
Suction height 0.75 m
Lubricant ISO VG 32 (cSt/40° C)
Ambient temperature 293 K (20° C)
Pressure 3 bar

Please state in all cases operating
data or particular operating
conditions other than above.
See data on Page 7.

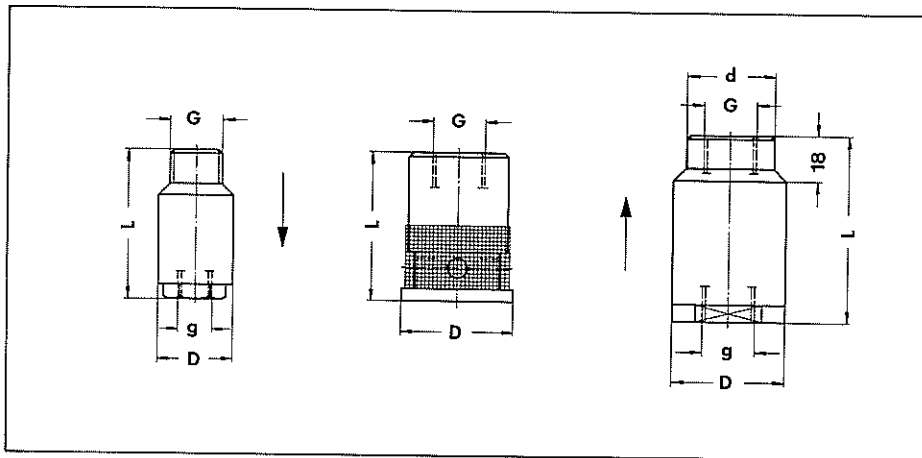
Delivery quantities of STOZ SUGO Pumps Type N and KSW with different oil viscosities



With oil ISO VG 32 (cSt/40° C), pressure 3 bar
Suction height 0.75 m as from 250 rpm
Ambient temperature 293 K (20° C)



With oil ISO VG 150 (cSt/40° C), pressure 3 bar
Suction height 0.75 m as from 250 rpm
Ambient temperature 293 K (20° C)



Relief pressure valve

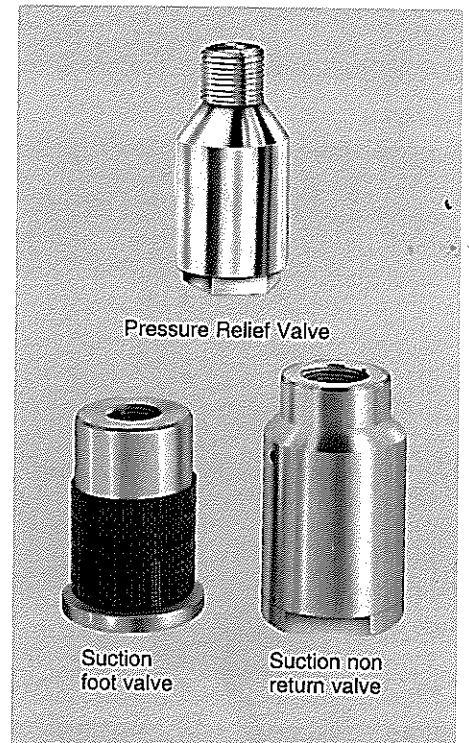
Size	D	G	g	L
0	30	R 1/4"	R 1/4"	60
1	30	R 1/2"	R 1/4"	60
2	30	R 3/4"	R 1/4"	60
3	50	R 1"	R 1/2"	100
4	50	R 1 1/4"	R 3/4"	100

Suction foot valve

Size	D	G	L
0	45	R 1/4"	60
1	45	R 1/2"	60
2	45	R 3/4"	60
3	65	R 1"	100
4	65	R 1 1/2"	100

Suction non return valve

Size	D	d	G=g	L
0	45	35	R 1/4"	75
1	45	35	R 1/2"	75
2	45	35	R 3/4"	75
3	65	60	R 1"	100
4	65	60	R 1 1/4"	100



These valves are required according to operating conditions i. e. with low number of revolutions or high suction heights and for limitation of the pressure. Size of valves and connection threads correspond to sizes of pumps.

Pressure Relief Valves

- spring loaded
- mounting position optional
- direction of flow as per sketch
- used where closure of pressure pipe is possible
- return pipe required from Relief valve

By pass valve

- fitted into the pump cover
- for pressure relief whilst regulating the output flow
- only suitable where partial closure of the pressure line occurs
- where direction of rotation and flow differs from sketch 6, details must be stated on ordering

Suction valves

- ball loaded
- vertical mounting only

Suction foot valve

- for incorporation in the oil sump

Suction non-return valve

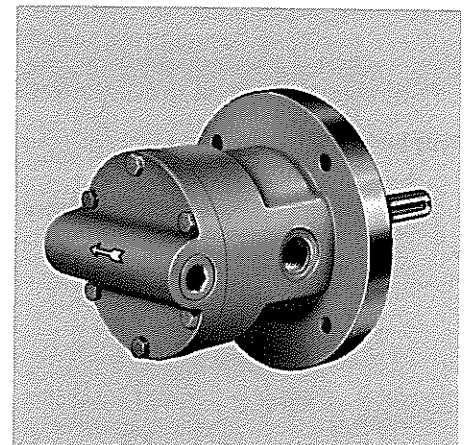
- for incorporation in the suction line at any point
- direction of flow as per sketch

Suction filter

- same dimensions as suction valves
- width of mesh 0.75 mm²

STOZ SUGO Pumps Types N et KSW

with integral by pass valve



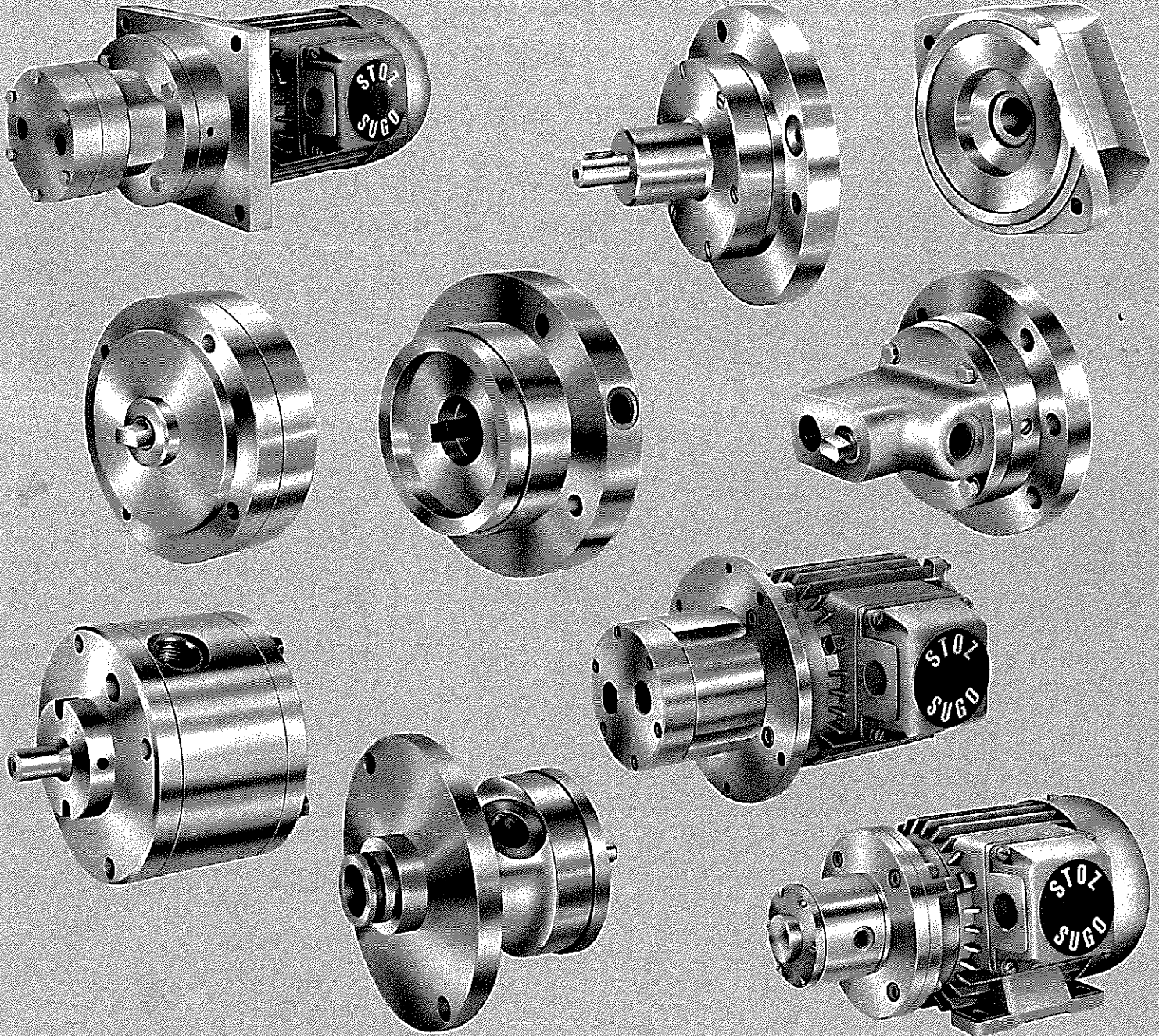
STOZ SUGO Pumps for any mounting conditions

On request the pumps can be widely adapted to the specific local conditions, for this purpose a mounting sketch is required.

The pumps shown below illustrate a small selection of "custom built" units where customers' specific requirements regarding drive and

mounting methods, as well as dimensions, output and duty were met, thereby eliminating many earlier design, installation and functional problems.

Due to continual developments, we reserve the right to make changes in design, dimensions and weight.



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STOZ
PUMPENFABRIK

FRITZ STOZ
Iron foundry and manufacturers of pumps