

DOUBLE ACTING SEMI-ROTARY HAND WING PUMPS
TYPE 'K'

Of simple and robust design, the quality of materials and workmanship guarantee long and effective service.

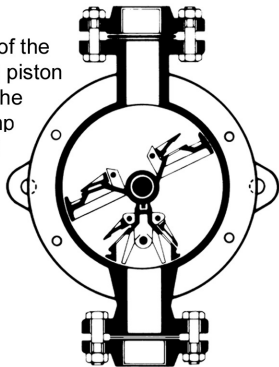
The **cast iron model** is suitable for the handling of clear and light liquids such as water, petrol, diesel and all fuels, paraffin, alcohol, light chemical solutions, edible oils etc. and are the only hand pumps safe for use with very hot liquids – up to 80°C (176°F).

For more corrosive liquids a **bronze model** is available in Sizes 0,1 and 2.

A major advantage : Type 'K' pumps are suitable for sites where electricity or other types of power are not available.

OPERATION

The pumps are operated by the movement of the handle which causes the shaft and the wing piston fitted with flap valves, to semi-rotate within the pump. Also enclosed in the body of the pump is the suction divider, fitted with flaps. Gland packing compressed by the gland ring and nut acts as a seal between the shaft and the pump cover. The standard model is supplied with threaded counterflanges. Two lugs facilitate the mounting of the pump to a wall or similar structure.



FEATURES

The Sigma 'K' Pump incorporates many original technical features which make it the best of its type.

- **Reinforced inlet, discharge and lugs** – prevent breakage even if subjected to rough treatment
- **Tapered internal body** – this unique technological advantage ensures automatic settlement of the wings in the body and guarantees smooth efficient operation even after years of usage
- **Rubber 'O'–ring** and a tight assembly without glue, allow easy dismantling and reassembly of the pump
- **Plastic caps**, easily removable, prevent dust entering the pump during transport and handling
- **Thorough quality control** – each pump is individually tested to a suction lift of 7m of water and 20m of delivery head. Various other frequent tests ensure an unparalleled quality, far beyond the requirements of British, German, Czech and other European and international Industrial Standards. Each pump is individually numbered to facilitate traceability of material, assembly shifts and various tests.

Standard cast-iron model – Type 'K'

MATERIALS OF CONSTRUCTION

Casing:	Cast Iron
Internals:	Brass
Shaft:	Steel
Gland Packing:	Soft graphite cord

Availability Substantial stocks of all sizes in Standard Construction ensure prompt deliveries.

SIGMA Type 'K' Pumps meet all major European industrial standards and notably British Standard and German DIN standard.

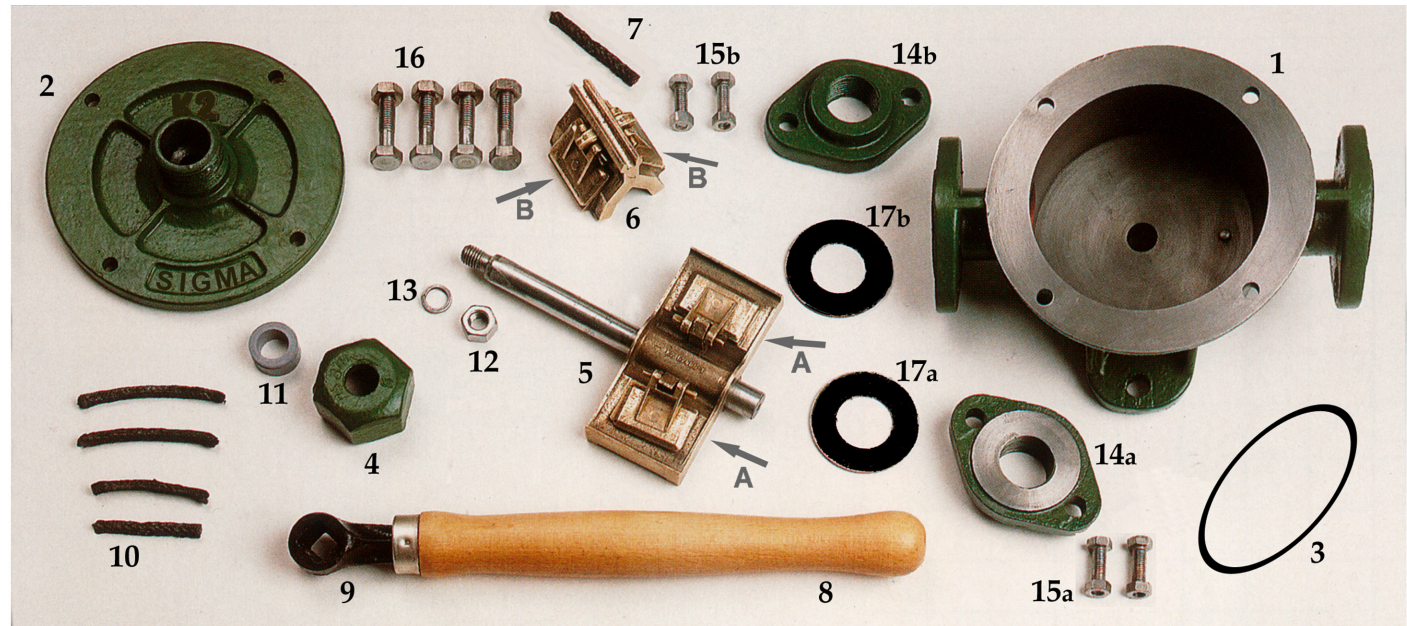
Colour Standard Model – Type 'K' is coloured green with environment-friendly paint. Red, blue and black are available upon request and other colours by special order.

SPARE PARTS

A "spares kit" is included in each case of pumps Sizes 00 – 5 completely "free of charge" consisting of a small number of handles, counterflanges, flange joints, gland nuts, gland rings and 'O'–rings.

MAIN USERS OF 'K' PUMPS

- Original Equipment Manufacturers such as Diesel Engine Manufacturers Trailer and Tank Manufacturers
- Petro-Chemical Industry
- Marine Applications
- Construction Industry
- Agricultural Industry
- Garage Equipment
- Reliable Back-Up for Electrical Pumps and big Motor Pumps
- Emergency and Safety Applications
- All Applications where Power is Not Available



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|--|--|--------------------------------|
| 1. Casing (Cast Iron) | 6. Suction Divider (or Bridge) fitted with Flaps
B - Brass Flaps mounted on Suction Divider | 12. Shaft Nut |
| 2. Cover (Cast Iron) | 7. Rubber Bridge Joint | 13. Shaft Nut Washer |
| 3. Rubber 'O'–Ring | 8. Wooden Handle | 14. Counterflanges (Cast Iron) |
| 4. Gland Nut (Cast Iron) | 9. Cast Iron Spike | 15. Flange Bolts & Nuts |
| 5. Brass Wing Piston with Flaps & Steel Shaft
A - Brass Flaps mounted on Wing with Brass Pins | 10. Gland Packing | 16. Cover Bolts & Nuts |
| | 11. Gland Ring (Teflon) | 17. Rubber Flange Joints |

ADDITIONAL models of SIGMA 'K' pumps:

* Without flanges: the inlet and outlet are threaded - available in Size 0 (1/2") – other sizes upon request – this special execution is suitable for mounting upon large diesel engines

* Fixing lugs normally closed – can be open

Customers' special requirements and modifications can be accommodated – please contact us

ADDITIONAL models of SIGMA semi-rotary hand wing pumps:

* In addition to the traditional 'K' double-acting pump, SIGMA now offers a high performance range of **Quadruple-Acting** semi-rotary pumps in cast iron and brass and also in bronze with bronze or brass internals

Please see separate ORIGINAL leaflet

Other models of Hand Pumps:

SIGMA are hand pump specialists, we also welcome your enquiries for quality rotary pumps, diaphragm pumps, low stand well pumps and deep well pumps (up to 29m)

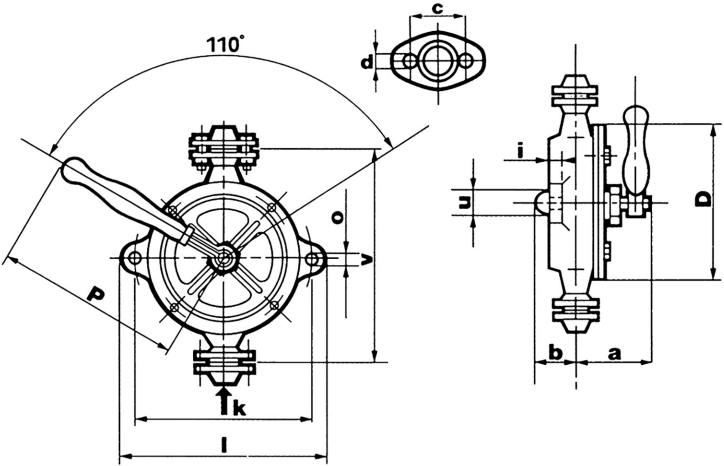
GENERAL INFORMATION – STANDARD MODEL

Type	K-00	K-0	K-1	K-2	K-3	K-4	K-5	K-7
SIZE IN INCHES	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/4"	1 1/2"	2"
WEIGHT*	kg	3.5	5.8	7.12	10	12.25	16.5	20.7
	lbs	8	13	16	22	27	36	46
DOUBLE STROKES* (per min)	80	65	60	55	50	50	45	40
CAPACITY	LPM	7.5	11.5	17.25	22.5	29	43.25	53.5
	GPM	1.65	2.5	3.75	5	6.5	9.5	11.75
MAX DELIVERY HEAD	m	25	25	25	25	22	22	20
	feet	82	82	82	82	72	72	66
PACKING	All pumps are packed in seaworthy wooden cases							
PIECES PER CASE	30	30	25	15	10	8	6	3
WEIGHT PER CASE*	gross	114	187	194	165	138	148	138
	nett	105	174	178	150	122.5	132	124

*This data is approximate

Suction lift – 7m for all sizes
For prolonged use at depth below 3m, a foot valve should be fitted.

DIMENSIONS - STANDARD MODEL - TYPE K



	K-00	K-0	K-1	K-2	K-3	K-4	K-5	K-7
D	100	135	150	170	200	220	245	288
a	90	140	140	145	170	190	200	273
b	45	55	55	60	62	74	76	72
i	7.5	10	10	10	12	12	12	15
k	98	130	150	170	200	220	240	310
v	110	175	205	230	275	295	320	360
l	120	160	180	200	240	255	275	360
o	7	13	13	13	13	13	13	15
p	220	300	300	360	450	500	600	620
u	32	25	25	30	30	30	35	50
c	-	55	65	75	90	90	100	100
d	-	9.5	9.5	9.5	14	14	14	15
in/out BSP	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/4"	1 1/2"	2"

Dimensions in mm

The **SIGMA** semi-rotary 'K' pump has proven over many years that it will remain effective after long periods of inactivity. The outstanding reliability of the SIGMA pump makes it the ideal accessory for large industrial systems.

SEMI-ROTARY HAND WING PUMPS

TYPE K
DOUBLE-ACTING

