



## ORIGINAL HAND PUMPS

### DOUBLE ACTING SEMI-ROTARY HAND WING PUMPS



**For numerous industrial and domestic applications, a SIGMA hand pump remains the solution.**

## DOUBLE ACTING SEMI-ROTARY HAND WING PUMPS – TYPE ‘K’

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

These pumps are 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).

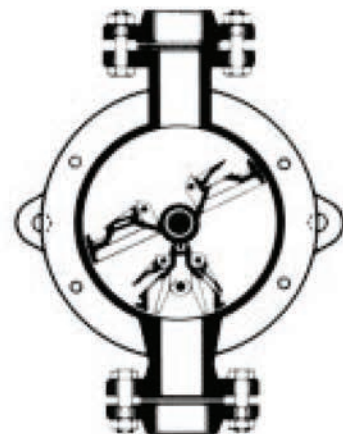
### OPERATION

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 has threaded flanges and 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.
- The tapered internal body – this unique technological advantage assures automatic settlement of the wings in the body and guarantees smooth efficient operation even after years of usage.
- A frost plug – allows water to be drained if there is a risk of frost.
- Thorough quality control – each pump is individually tested to a suction lift of 7m of water and 20m of delivery head.



## MATERIALS OF CONSTRUCTION

### Standard model – Type ‘K’

Casing:	Cast Iron
Internals:	Brass
Shaft:	Steel
Gland Packing:	Cotton saturated with Teflon (asbestos-free)

### Availability

Substantial stocks – Sizes 00-7 in Standard Construction ensure prompt deliveries.

SIGMA Type “K” Pumps meet all major European industrial standards.



Standard Model – type ‘K’ is in green colour, red is available upon request and other colours by special order.

## MATERIALS OF CONSTRUCTION

### Bronze Model – Type ‘K’

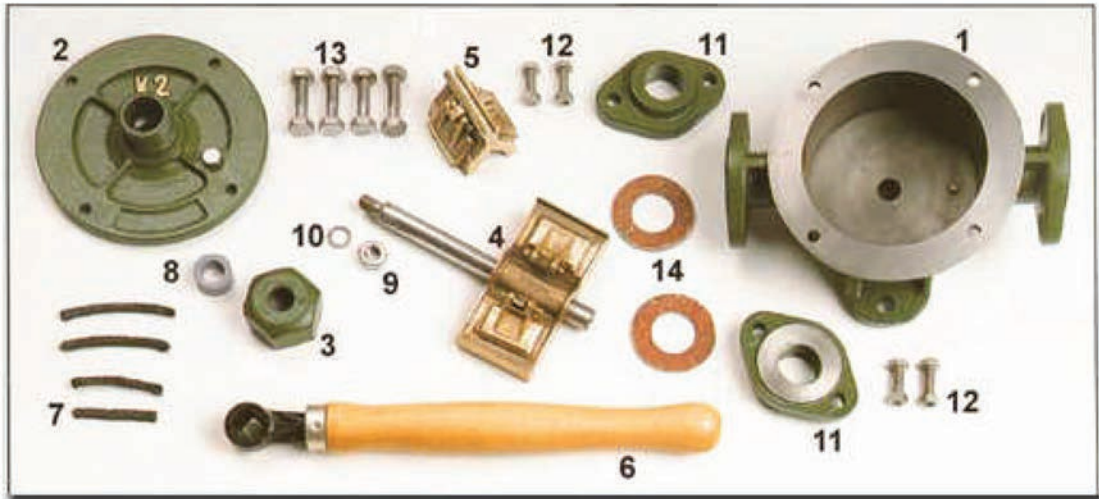
These pumps are suitable for corrosive liquids i.e. salt water, strong chemical solutions etc. Sizes 0, 1 and 2

Casing:	Bronze
Internals:	Brass
Shaft:	Stainless Steel
Gland Packing:	Cotton saturated with Teflon (asbestos-free)

## MAIN USERS OF ‘K’ PUMPS

- Diesel Engine Manufacturers
- Petro-Chemical Industry
- Marine Applications
- Construction Industry
- Agricultural Industry
- Garage Equipment
- Reliable Back-Up for Electrical Pumps

## COMPONENTS OF THE "K" PUMP



1. Casing
2. Cover
3. Gland Nut
4. Wing Piston with Flaps & Shaft
5. Suction Divider with Flaps
6. Handle
7. Gland Packing
8. Gland Ring
9. Shaft Nut
10. Washer
11. Counterflange
12. Flange Bolt & Nut
13. Cover Bolt & Nut
14. Flange Joint



# Sigma Semi-Rotary Hand Pumps

## GENERAL INFORMATION – STANDARD MODEL

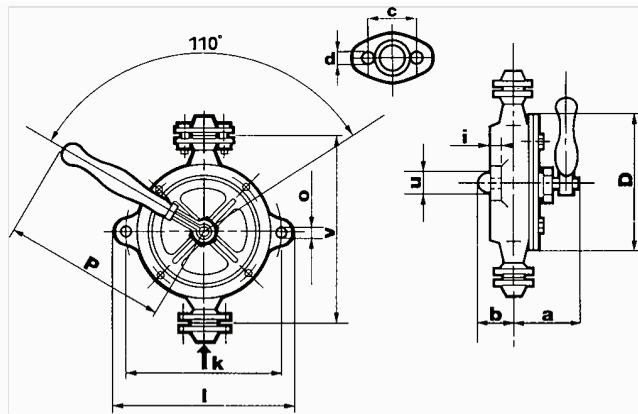
Type	K-00	K-0	K-1	K-2	K-3	K-4	K-5	K-7
<b>Size in inches</b>	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/4"	1 1/2"	2"
<b>Weight*</b>								
<b>kg</b>	3.2	5.1	6.1	8.8	11.5	12.6	16	32
<b>Lbs</b>	7.0	11.2	13.4	19.4	25.4	27.8	35.3	70.5
<b>Double strokes*</b>	80	65	60	55	50	50	45	40
<b>(per min)</b>								
<b>LPM</b>	7.5	11.5	17.25	22.5	29	43.25	53.5	90
<b>Capacity</b>								
<b>GPM</b>	1.65	2.5	3.75	5	6.5	9.5	11.75	19.8
<b>Max</b>	25	25	25	25	22	22	20	15
<b>Delivery</b>								
<b>Head</b>	82	82	82	82	72	72	66	49
<b>Pieces per case</b>	30	30	25	15	10	8	6	3
<b>gross</b>	117	174	174	153	136	122	117	116
<b>Weight per case</b>								
<b>net</b>	96	153	153	132	115	101	96	95

\*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



Measurements for the letter symbols can be found in the table below.

Size	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

Other **SIGMA** Products available:

**LOW STAND PUMPS \* HIGH STAND PUMPS \* ROTARY PUMPS**