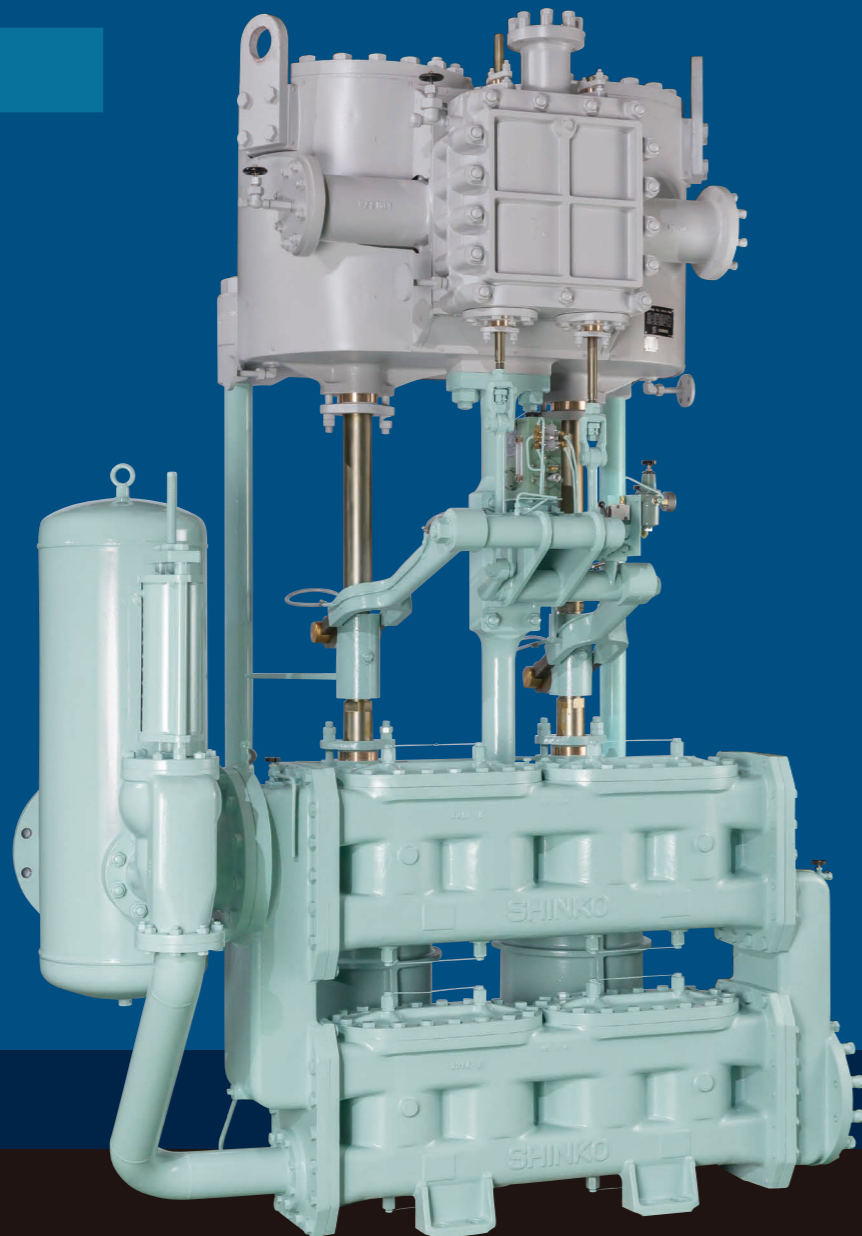


# KPH

## RECIPROCATING CARGO STRIPPING PUMPS

Shinko KPH steam driven reciprocating pumps are a vertical duplex double acting type, and have been designed and manufactured as cargo stripping pumps.

The liquid cylinders have been constructed as to minimize the clearance of the passage area volume leading to the valve boxes so that the pumps can prevent gas from forming during the piston suction phase. In this way, consideration has been given to improve pump performance.



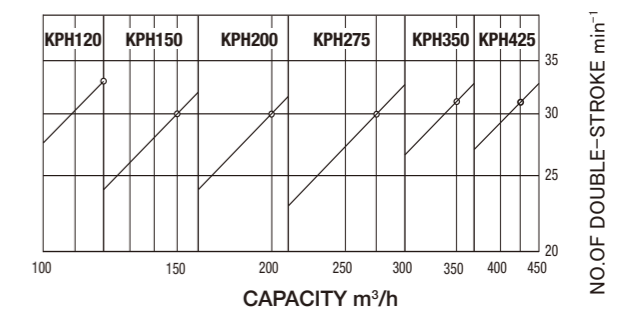
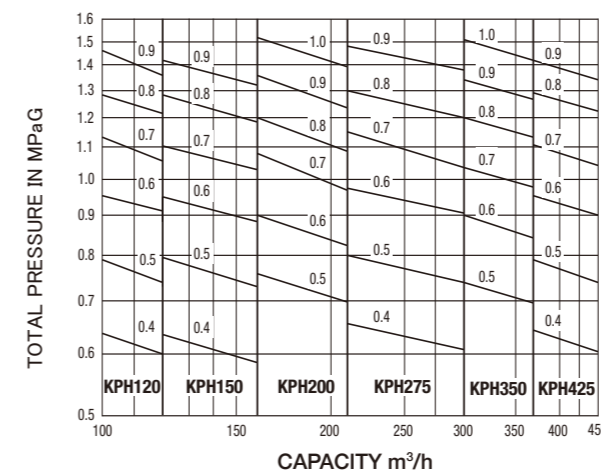
# KPH RECIPROCATING CARGO STRIPPING PUMPS

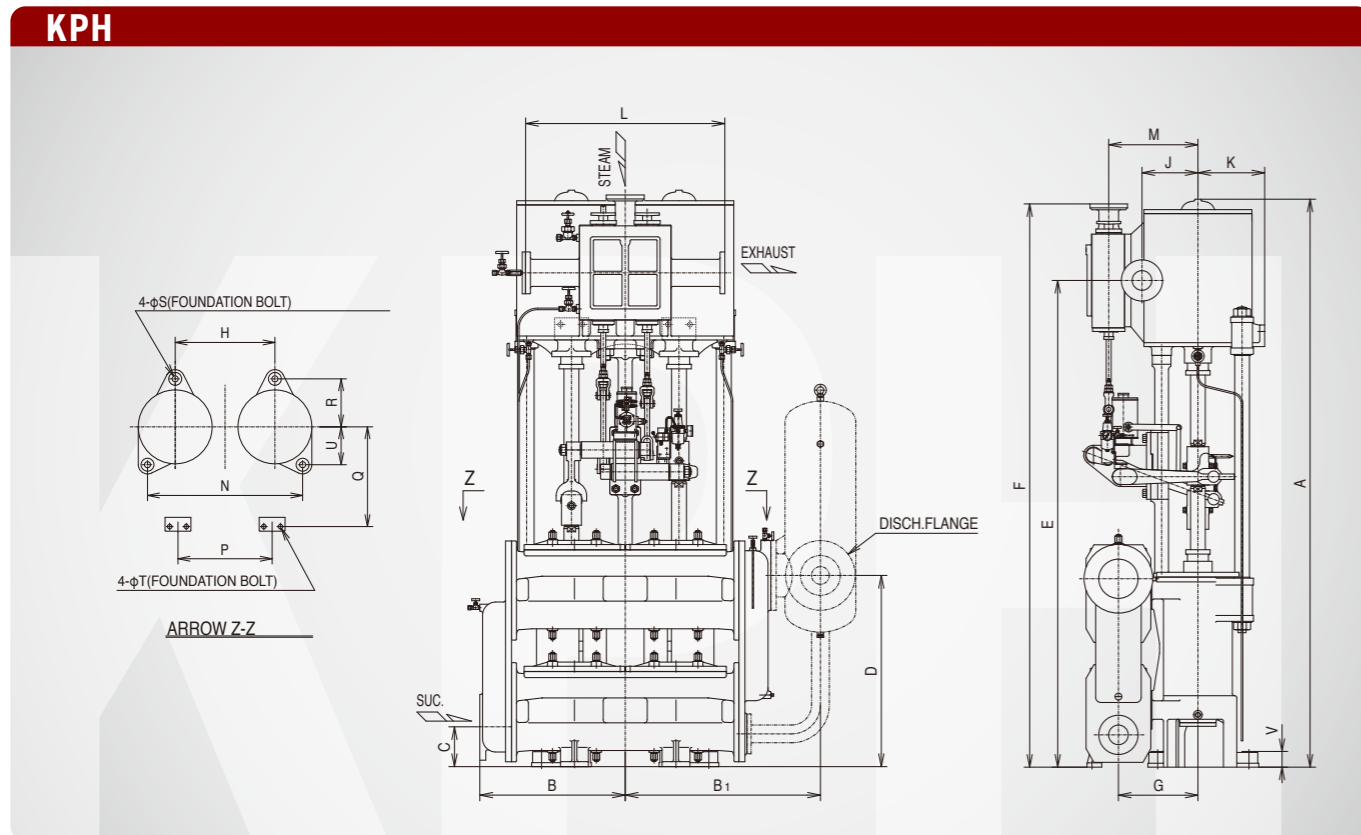
## SPECIFICATION

Item	Model	Model					
		KPH 120	KPH 150	KPH 200	KPH 275	KPH 350	KPH 425
Capacity(normal)	(m <sup>3</sup> /h)	120	150	200	275	350	425
Total pressure(max.)	(MPaG)	1.5					
Suction head	(m)	-5					
Working steam pressure	(MPaG)	1.2					
Exhaust steam pressure(max.)	(MPaG)	0.15					
Steam cylinder bore	(mm)	360	420	440	520	560	640
Liquid cylinder bore	(mm)	240	280	300	340	380	420
Stroke length	(mm)	380	380	460	460	460	460
No. of double stroke(nor.)	(min <sup>-1</sup> )	33	30	30	30	31	31
Suction bore	(mm)	150	200	200	250	300	300
Discharge bore	(mm)	125	150	200	250	250	300
Steam inlet bore	(mm)	65	65	65	80	80	100
Steam exhaust bore	(mm)	80	80	100	125	125	150
Weight : FC(BC)	(kg)	2625(2850)	3230(3500)	3580(3900)	4485(4900)	5880(6400)	8025(8800)
Water filled in casing	(kg)	210	270	350	405	530	640
Lub.oil filled in auto.lubricator	(ℓ)	2					

## ■ Pump Model Selection

Pump model selection is made by using the chart on the right according to the requirements of capacity, total head, and effective working steam pressure (steam chest pressure - exhaust steam pressure).





Dimensions : mm

Model	A	B	B <sub>1</sub>	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V
KPH 120	2420	640	840	180	810	2040	2440	385	470	250	290	900	410	730	465	515	220	27	23	170	80
KPH 150	2535	670	900	200	840	2150	2570	400	520	270	330	980	440	780	475	535	250	33	25	195	80
KPH 200	2814	730	980	200	960	2400	2790	405	540	285	340	1000	455	840	510	540	260	33	25	205	80
KPH 275	2920	820	1090	250	950	2485	2925	480	640	345	400	1200	545	950	570	635	290	33	25	225	80
KPH 350	3024	885	1155	270	1040	2570	3030	530	700	365	420	1300	575	1050	620	710	310	39	27	245	80
KPH 425	3229	945	1305	280	1050	2760	3230	620	780	415	470	1650	660	1150	650	820	340	39	33	260	80

## Remote Control System [KSC] (Option)

The Shinko KSC remote control system has been developed to indicate the number of strokes of the cargo stripping pump in the cargo control room of the oil tankers, and also to remotely control the number of strokes according to variation in the pump loads for safe and efficient operation. Furthermore, this system indicates the number of strokes accurately even if the stroke length of the piston of pump is shortened due to sucking air or gas at the final stripping stage.

The system consists of the following instruments:

- Stroke transmitter
- Stroke converter
- Stroke counter
- Speed control equipment
- Steam control valve
- Speed setter

## OPERATION

The KSC remote control system for the cargo stripping pumps is operated as follows:  
First, the following preparation should be carried out locally before operating the pumps.

- (1) Open the pump suction valves and discharge valves fully.
- (2) Open the exhaust valve fully.
- (3) Open the drain valves on the steam cylinder and the steam chest to draw out the drain water completely.
- (4) Open the steam valve fully.

The next procedure is to be carried out in the cargo control room after verifying that the above-mentioned preparations have been completed.

- (5) Control the speed setter so that the signal air pressure rises gradually, causing the steam control valve to open, permitting the pump to start.
- (6) When the pump starts, the stroke transmitter actuates the stroke converter to supply and release the air with each stroke. The number of strokes is indicated on the stroke counter in the control room.
- (7) To correspond to variation in the pump load, the rated number of strokes is always controlled and maintained by operating the speed setter.

