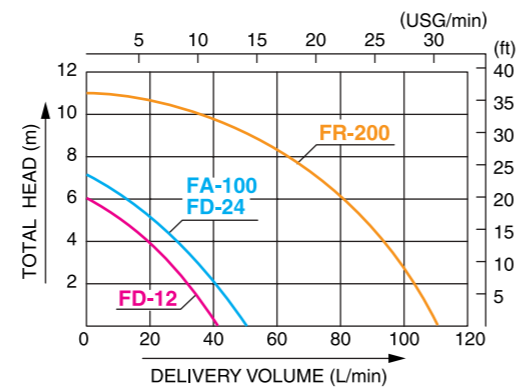


Powerful "FILL PUMP" Only 2 Minutes to Empty 200 L Drum (FR-200)

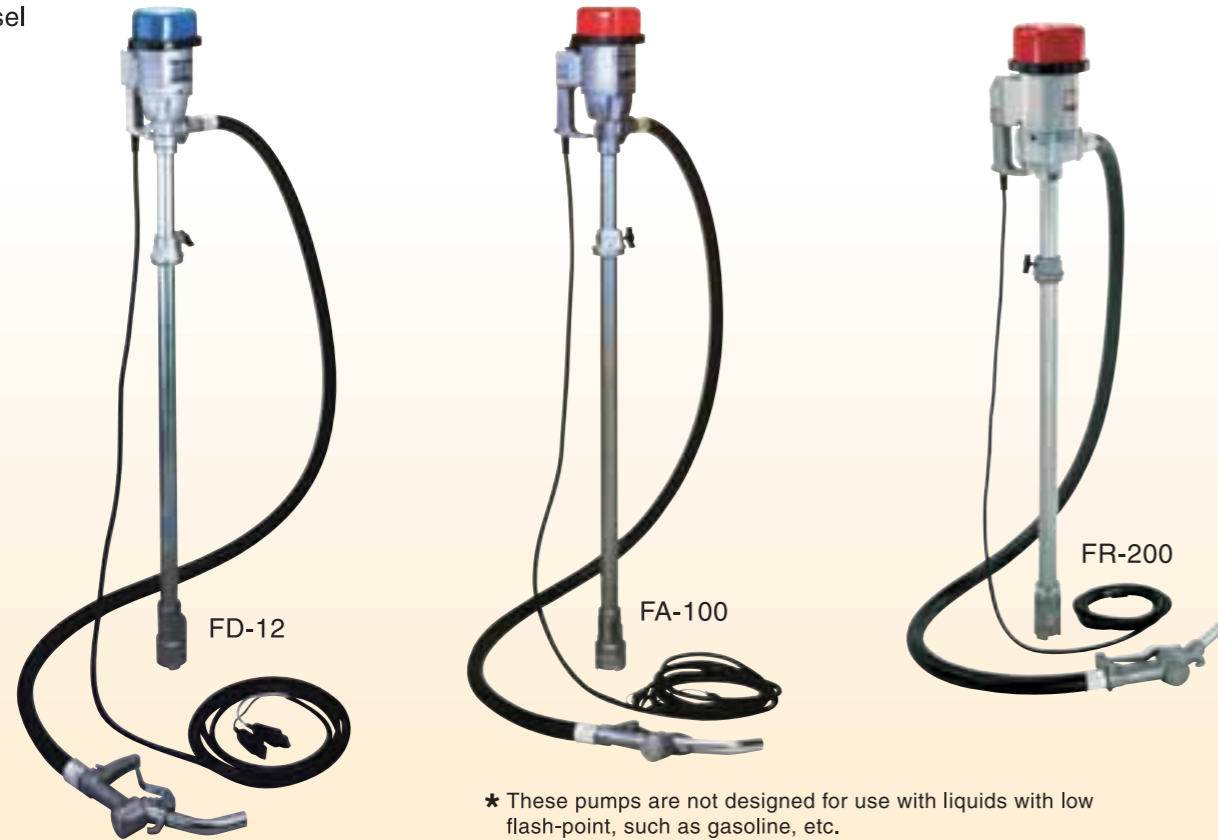
- Two stage system of axial flow vane and spiral vane result in an excellent flow rate.

■ Performance Curve



■ Applications

- High to low viscosity oil
- Machine oil
- Heavy fuel oil B
- Kerosene
- Diesel



* These pumps are not designed for use with liquids with low flash-point, such as gasoline, etc.

■ Specifications

	Model	FD-12	FD-24	FA-100	FR-200
PUMP	Connection Dia	20 mm (3/4")			32 mm (1 1/4")
	Connection Thread	Inner Pipe Thread			
	Total Head	6 m (19 ft)	7 m (23 ft)		11 m (36 ft)
	Delivery Volume	40 L/min (10 USG/min) (Kerosene, Light Oil)	50 L/min (13 USG/min) (Kerosene, Light Oil)		110 L/min (29 USG/min) (Kerosene, Diesel)
MOTOR	Type	Enclosed Fan-Cooled Commutator			Fan-Cooled Commutator
	Voltage	DC 12 V	DC 24 V	AC 110 V	AC 220 V – 240 V
	Rated Current	14 A	7 A	2 A	14 A
	Output	80 W	90 W	100 W	
	Revolution	7000 rpm	7300 rpm	7000 rpm	
	Rating	Continuous			
	Power cord	5 m (16.4 ft)			
	Delivery Hose	1 Oil-Proof Rubber Hose (2 m)			
Gross Weight	20 kg			30 kg	
Dimensions LxWxH (mm)	1228 x 291 x 172			1290 x 490 x 205	
Packing Unit	2				

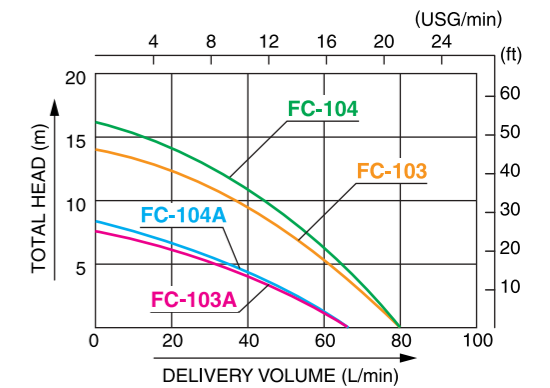
Handy Pumps Suitable for Transferring Chemicals & Solvents



* Not suitable for food products.

- Quickly transfers liquids, 80 L/min (FC-103, FC-104)
- With adjusting valve, delivery volume can be easily changed.
- Strainer is located at the bottom of suction pipe to prevent sediment and contaminants from entering the suction pipe.
- Unique pump design does not disturb liquids. By using this flow structure less "whirlpools". Useful with liquids that are easily disturbed or can be easily aerated, this design prevents air from being mixed with the pumped liquids.
- Durable motor
Totally enclosed motors airtight construction ensures long term reliability. Cool air intake prevents motor from overheating.
- Designed to pump volatile liquids.
Models, FC-103 and FC-104 are air motor operated and can be used with volatile liquids.

■ Performance Curve



■ Applications

- Transferring liquids from larger drums, barrels and other large bulk containers to smaller, volume containers.



■ Specifications

	Model	FC-103	FC-104	FC-103A	FC-104A	
PUMP	Total Head	16 m (52 ft)	14 m (46 ft)	7.5 m (25 ft)	8 m (26 ft)	
	Delivery Volume	80 L/min (21 USG/min)		65 L/min (17 USG/min)		
	Max. Temperature	60 °C				
	Flow Control	Valve				
MOTOR	Type	Electric Motor		Air Motor		
	Voltage	AC 100 V Single Phase 4 A		Air Pressure	0.3 – 0.7 MPa	
	Frequency	50 / 60 Hz		Air Consumption	500 NL/min	
	Output	160 W		Air Hose Inside Dia	φ 8	
	Power Code	4.7 m (15 ft)		Compressor	Continuous	
				Intermittently	More than 3 HP	
	Standard	FC-103(A)	1 PVC Delivery Hose (25 A x 1.3 m), 1 PVC Ball Cock (20 A), 1 Hose Band (φ 32)			
	Accessories	FC-104(A)	1 SUS304 Delivery Hose (25 A x 1.5 m), 1 SUS405 Ball Cock (25 A)			
Gross Weight	6.5 kg	5 kg	10.4 kg	8.7 kg		
Dimensions LxWxH (mm)	1290 x 190 x 250					
Packing Unit	1					

■ Liquid Sur faced Material

Mode	FC-103 FC-103A	FC-104 FC-104A
Outer Pipe	Polypropylene	SUS 304
Inner Pipe	Polypropylene	SUS 304
Impeller	PVDF	
Shaft	Hastelloy C	
Valve	PVC	SUS 304
Other Parts	Polypropylene	
Metal	PTFE	
Hose	PVC	SUS 304

* These pumps are not designed for use with liquids with low flash-point, such as gasoline, etc.

- PVDF: Polyvinylidene fluoride
- PTFE: Polytetrafluoroethylene
- P V C : Polyvinyl chloride