

## SFP-Series, Split-Flow Hydraulic Pumps

**ENERPAC** 

▼ SFP414SW and SFP403SW (Gauges and retract valves not shown)



- 2, 4, 6 or 8 split-flow outlets
- Individual or simultaneously operation of valves, with advance/hold/retract function
- Joystick (manual) controlled or pendant (solenoid) controlled valves
- Flow per outlet ranging from 0,27 to 2,10 l/min at 700 bar
- For double- and single-acting cylinders
- Adjustable pressure relief valve per circuit
- Reservoir: 20, 40 or 150 litres
- All models include pressure gauges.

▼ Step-by-step stage lifting an old windmill using double-acting RR506 cylinders powered by a split-flow pump.



## Multiple Outlets with Equal Flow for Lifting and Lowering



### Typical Split-Flow Pump Applications

For lifting and lowering applications on multiple points, Split-Flow Pumps are a far better alternative than using independently operated pumps. Where synchronization of maximum 4% is acceptable, Split-Flow Pumps are a safe and economical solution.

The SFP-Series pumps feature both single and synchronized multiple outlet control either through joystick or pendant operation.

### Application examples:

- Bridge deck lifting for bearing maintenance
- Stage lifting in construction and shipbuilding
- Skidding to move structures and buildings
- Levelling of constructions such as wind turbines.



### Remote Control Pendant

Split-Flow pumps with solenoid valves include a remote pendant with selector switches for each individual outlet, allowing single or multiple cylinder operation.

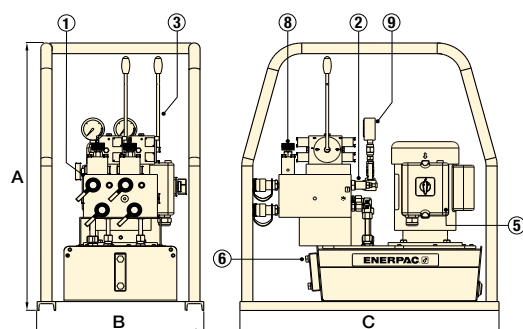


### High Pressure Hoses

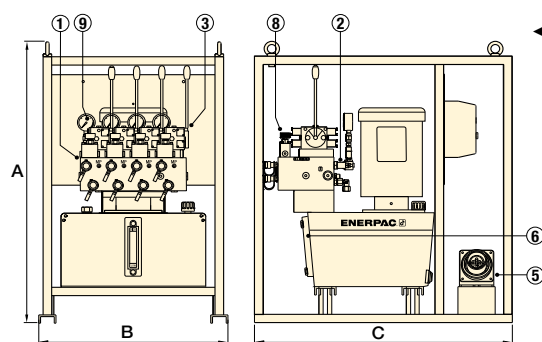
Enerpac offers a complete line of high quality hydraulic hoses. To ensure the integrity of your system, specify only genuine Enerpac hydraulic hoses.

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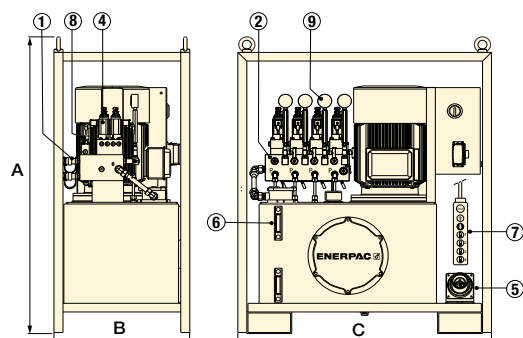
## Split-Flow Hydraulic Pumps



◀ SFP-Series with 20 litres reservoir (shown with 2 split-flow outlets)



◀ SFP-Series with 40 litres reservoir (shown with 4 split-flow outlets)



◀ SFP-Series with 150 litres reservoir (shown with 4 split-flow outlets)

### SFP Series



Reservoir Capacity:  
**20 - 40 - 150 litres**

Split-Flow Outlets:  
**2, 4, 6 and 8 outlets**

Flow at Rated Pressure:  
**0,27 - 2,10 l/min**

Motor Size:  
**0,75 - 15 kW**

Maximum Operating Pressure:  
**700 bar**




#### Lifting Cylinders

For a complete line of Enerpac cylinders, see the Cylinder and Lifting Products in our catalogue.

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- ① Manifold with split-flow outlets and CR400 couplers
- ② Adjustable pressure relief valve per circuit
- ③ Manual 4/3 control valves with joysticks
- ④ Solenoid 4/3 control valves (24 VDC)
- ⑤ Power socket
- ⑥ Oil sight gauge(s)
- ⑦ Remote control pendant with 5 m cord
- ⑧ Return flow control valve in each circuit
- ⑨ Hydraulic pressure gauge in each circuit

Number of Split-Flow Outlets	Usable Oil Capacity (litres)	Oil Flow per Outlet @ 700 bar (l/min)	Pump Model Number		Motor Size 400 V, 3ph 50 Hz (kW)	Dimensions (mm)			
			4/3 Valve Operation Advance/Hold/Retract Manual (Joystick)	24 V Solenoid (Pendant)		A	B	C	
2	20	0,27	SFP202MW	—	0,75	748	450	700	115
	40	0,30	SFP403MW	SFP403SW	2,2	1016	640	970	257
4	135	0,90	SFP409MW	SFP409SW	5,5	1356	605	1160	475
	135	1,40	SFP414MW	SFP414SW	7,5	1356	605	1160	490
	135	2,10	SFP421MW	SFP421SW	10	1356	605	1160	596
	135	1,30	—	SFP613SW	10	1356	805	1200	562
6	40	0,30	—	SFP803SW	5,5	1163	830	1113	450
	135	1,30	—	SFP813SW	15	1356	805	1200	620



#### Motor Voltage

Motor voltage is specified by the last letter in the model number.

Other motor voltages are available from Enerpac. Change "W" in the model as follows for other options:

**J** = 460-480V, 3 ph, 50-60 Hz

**G** = 208-240V, 3 ph, 50-60 Hz

## SFP-Series, Split-Flow Pump Network Kits

**ENERPAC**

### ▼ SFP-Series Split-Flow Pump Kit Components



### Connecting Split-Flow Pumps for more lift points and greater accuracy

- Control multiple Split-Flow Pumps with one control unit
- Pumps can be closer to the lifting points, requiring shorter hoses and increasing accuracy
- Synchronize all lift points to within 1,0 mm (0.04 inch)
- Network control boxes expand the number of lifting points by combining up to four split-flow pumps together, simplifying lifting operations by using a single operator station
- Plug and play synchronous lift upgrade kits limit initial investment and provide everyday flexibility to tailor the controls to the applications needs.



#### Split-Flow Pumps Kits

SFP-Series kits are customized from standard components to meet the needs of your unique applications. On the next page is the guide to help you choose the right components to upgrade or expand your equipment based on your application needs.

Contact your regional Enerpac representative / territory manager for support with your specific project.

#### Split-Flow Pump Network Kits

Split-Flow Pump Network Kits connect multiple Split-Flow Pumps under one control system.

#### Split-Flow Pump Synchro Kits

Split-Flow Pump Synchro Kits connect and electronically synchronize each lift point of a single Split-Flow Pump or multiple Split-Flow Pumps under one control system.



#### Junction Box

**SFPKSS4** and **SFPKSS8** junction boxes consolidate the signals from pressure and stroke sensors, allowing the master control box to synchronize the lifting operation.



#### SFPKMN, Master Control Box

All SFP-Series Synchro Kits include a master control box to allow the operator to easily monitor and control a multi-point synchronized lift and adjust individual lift points as needed.

All master control boxes feature an industrial grade touch screen and a user-friendly interface.



#### EVO-SC, Stroke Sensor Cables

Can be connected together for additional length. Ordered separately, requires one for each stroke sensor.

Model Number	Length (m)	Model Number	Length (m)
EVO-SC-6	6	EVO-SC-25	25



#### EVO-WSS, Wire Stroke Sensors

Provides stroke feedback to controls. Includes magnets for mounting. Ordered separately, requires one sensor for each

lifting point. Available in measuring range from 375 to 1000 mm.

Model Number	Range (mm)	Model Number	Range (mm)
EVO-WSS-375	375	EVO-WSS-1000	1000
EVO-WSS-500	500	—	—



#### Communication Cables

EVO-COMM-Series communication cables transfer information about the synchronized lift operation

from the master control panel to each of the connected split-flow pumps.

Model Number	Length (m)	Model Number	Length (m)
EVO-COMM-25	25	EVO-COMM-75	75
EVO-COMM-50	50	EVO-COMM-100	100

## Split-Flow Pump Network Kits



### Upgrading Split-Flow Pumps

To network multiple SFP-pumps together with standard function see drawing and table ①.

To upgrade a single SFP-pump to synchronous lift capability, see drawing and table ②.

To upgrade and network multiple SFP-pumps together with synchronous lift capabilities, see drawing and table ③.

### SFP Series



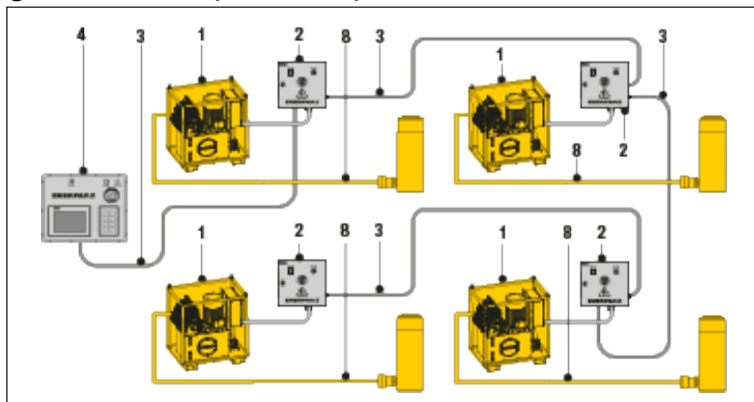
Multiple Pumps in Network System:

**1 - 4 pumps**

Maximum Lifting Points:

**32x cylinders**

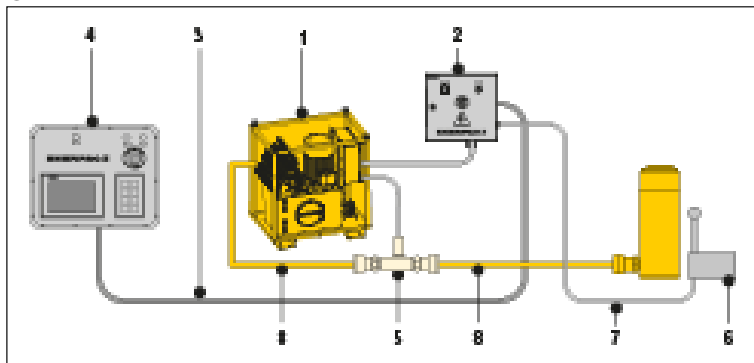
#### ① Networked SFP-Pumps in Standard Operation



#### ① Networked SFP-Pumps in Standard Operation

Nr.	Qty	Model Nr. & Description
1	4x	SFP...SW Pumps with solenoid valves
2	4x	SFPKSN Junction Box, 1x per pump
3	4x	SFPKSN-25 Communication Cable, 1x per pump
4	1x	SFPKMN Master Control Box
8		HC-700-Series, Hydraulic Hoses

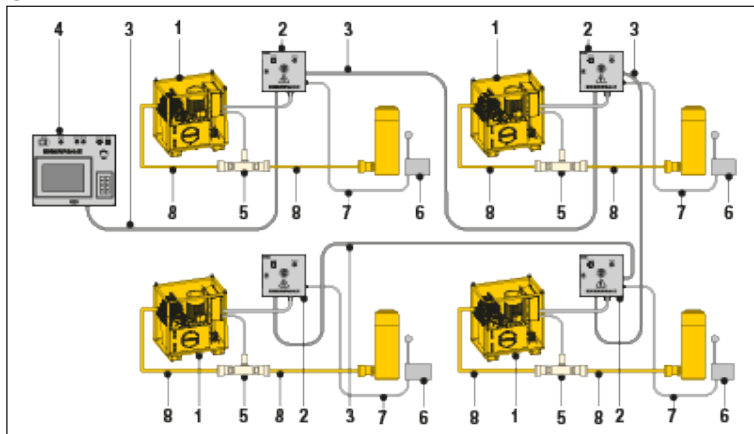
#### ② Single SFP-Pump in Multiple-Point Synchronous Lifting Operation



#### ② Single SFP-Pump in Multiple-Point Synchronous Lifting Operation

Nr.	Qty	Model Nr. & Description
1	1x	SFP...SW Pump with solenoid valves
2	1x	SFPKSS4 Junction Box for 2-4 lifting points or SFPKSS8 for 6-8 lifting points
3	1x	SFPKSN-25 Communication Cables
4	1x	SFPSC Single Slave Control Box
5		SFPKPT Pressure Transducer Kit (1x per cylinder A-port)
6		EVO-WSS-XXX Stroke Sensor, 1x per cylinder
7		EVO-SC-25 Stroke Sensor Cable, 1x per cylinder
8		HC-700-Series, Hydraulic Hoses

#### ③ Networked SFP-Pumps in Multiple-Point Synchronous Lifting Operation



#### ③ Networked SFP-Pumps in Multiple-Point Synchronous Lifting Operation

Nr.	Qty	Model Nr. & Description
1	4x	SFP...SW Pump with solenoid valves
2	4x	SFPKSS4 Junction Box, 1x per pump, for 2-4 lifting points or SFPKSS8 Junction Box for 6-8 lifting points
3	4x	EVO-COMM-XXX Communication Cable, 1x per pump
4	1x	EVOMASTER Master Control Box
5		SFPKPT Pressure Transducer Kit, 1x per cylinder A-port
6		EVO-WSS-XXX Stroke Sensor, 1x per cylinder
7		EVO-SC-25 Stroke Sensor Cable, 1x per cylinder
8		HC-700-Series, Hydraulic Hoses