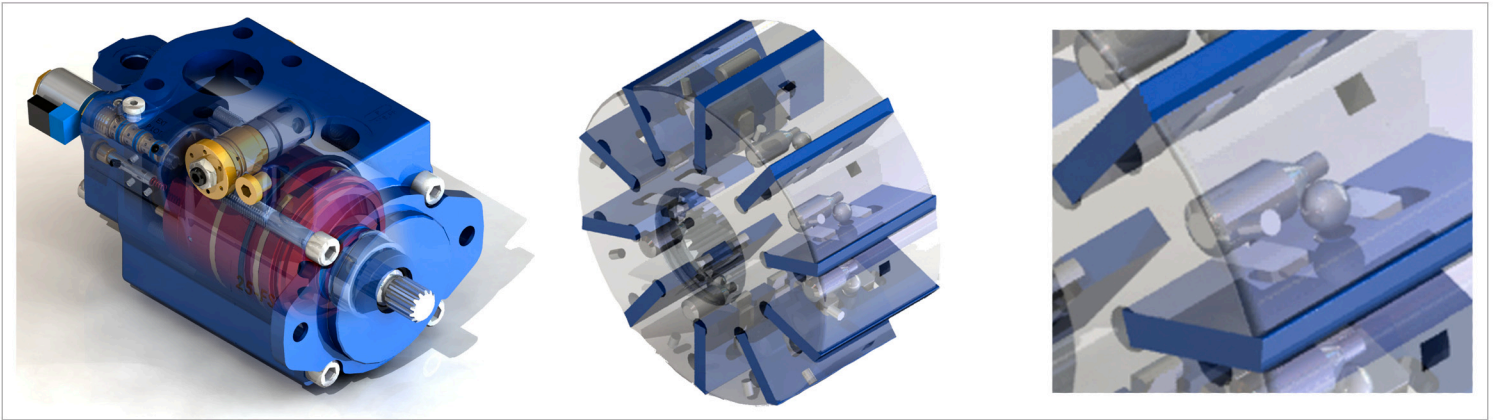


FUEL SAVING VANE PUMP

The Heavy Duty Fuel Saving Vane Pump (FSV) is a hydraulic pump that can be switched on and off with an electrical signal or hydraulic pilot.



3 in 1 Internal Valve

Relief Valve

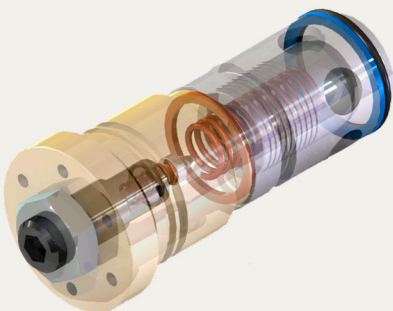
Adjustable balanced piston style.

Phasing Valve

Pressure to suction vented when vanes are restrained to prevent unwanted operation and enable soft start.

Meter off Valve

Externally sensed from load sensing valves.

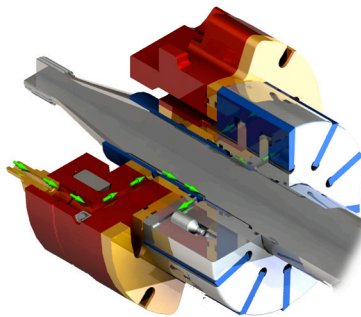


Vane Restraint

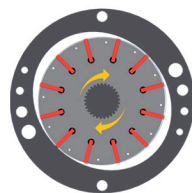
Pilot signal is directed through the electric solenoid valve through the rear plate, down the outside of the shaft and into the rotor (below).

The oil pilot acts on a spool that depresses a ball into a dimple in the vane to restrain any vane movement (above).

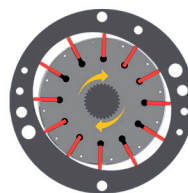
The on/off is smooth and even across the speed range.



Free Wheeling
Fuel Saving Mode

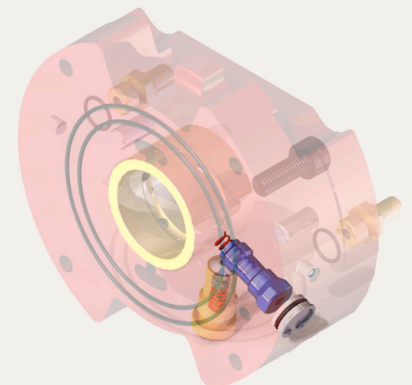


Pumping



High Speed & Pressure

The FSV incorporates a double intravane design. This allows the pump to reach higher pressure than other vane pumps. At low pressure both intravanes are energised in the suction in order to prevent vane skip. At higher pressure only one intravane is energised through a spool arrangement in the rear plate. This allows the pump to reach pressures previously not available in vane pumps (below).



MHFSUP-ANZDS

Patent No's. 200 4256150 AUST, 11/331 156 USA, 200 6246313 AUST, PCT/AU2007/000772-PCT
Mathers Hydraulics reserve the right to change specifications at any time without notice.



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MATHERS
HYDRAULICS

FUEL SAVING VANE PUMP

The Heavy Duty Fuel Saving Vane Pump (FSV) is a hydraulic pump that can be switched on and off with an electrical signal or hydraulic pilot.

Fuel Savings - Fixed Displacement Pump

SYSTEM FLOW (litre/min)	FUEL SAVINGS* (litre/hour)
50	0.3
100	0.6
150	0.9
200	1.3
250	1.6
300	1.9
350	2.3
400	2.6

* Calculation Parameters
Duty Cycle = 20%
System Idle Back Pressure = 10 Bar

Typical Industry Uses

- Waste Disposal Trucks
- Earth Moving Equipment
- Mining Equipment
- Tip / Dump Trucks
- Forklifts
- Agricultural Machinery
- Marine Equipment
- General Industry

Model Guide - Configuration Table

		10FSV	20FSV	25FSV	35FSV	45FSV	Power Steering
25FSV	Thru-Drive Double			✓			✓
	Thru-Drive Triple			✓			✓
	Double	✓	✓	✓			
	Triple	✓	✓	✓			
35FSV	Thru-Drive Double			✓	✓		✓
	Thru-Drive Triple			✓	✓		✓
	Double	✓	✓	✓	✓		
	Triple	✓	✓	✓	✓		
45FSV	Thru-Drive Double			✓	✓	✓	✓
	Thru-Drive Triple			✓	✓	✓	✓
	Double	✓	✓	✓	✓		
	Triple	✓	✓	✓	✓		

Specification Table

	Capacity (cc / Rev)	Pressure (Bar)	Max Speed (RPM)	On / Off
10FSV	3 - 23	175	4800	
20FSV	15 - 43	210	3000	
25FSV	35 - 95	300	2700	✓
35FSV	67 - 130	300	2500	✓
45FSV	111 - 200	300	2200	✓
Power Steering FSV	35 - 60	175	3500	✓

Distributor Information