



PREMIUM

PREMIUM PSV COUPLING



The Premium fluid coupling type PSV is electrically Solenoid valve Operated drain type coupling. These couplings are suitable for flange mounting on internal combustion engine which are having Inbuilt SAE housing & flywheel. Engine power is transmitted smoothly & shocklessly by the kinetic energy through the oil flowing between input & output elements of coupling. PSV coupling is act as soft starter when oil is progressively filled into working circuit thereby System in 'Drive Engage' condition for power transmission. When oil is drained out thro peripheral fitted controlled Nozzles and Oil flow diverted to Sump, then system act as 'Drive Dis Engage' condition & No power transmission takes place. Hence Fluid coupling act as Non wearing type hydraulic clutch

OPERATION

PSV coupling is fitted between Engine & driven machine in which the input & output are fully supported with antifriction bearings. The rectangular housing is of simple design of sufficient capacity to contain oil with Rotating parts. Oil in the systems is filled by oil feed pump & controlled by Solenoid valve which are mounted on stationary housing.

Main rotating component are as under.

Input : flexible coupling, Impeller, Casing, Input shaft.

Output : Runner, Output shaft, Output Hub.

The Impeller, Runner & Casing are of high tensile aluminum castings. Both the runner & impeller have large no of straight radial vanes. Input side is provided with elastic coupling for flange connection with engine in order to take care of misalignment of drive system and Cylinder to cylinder fluctuation from the Engine.

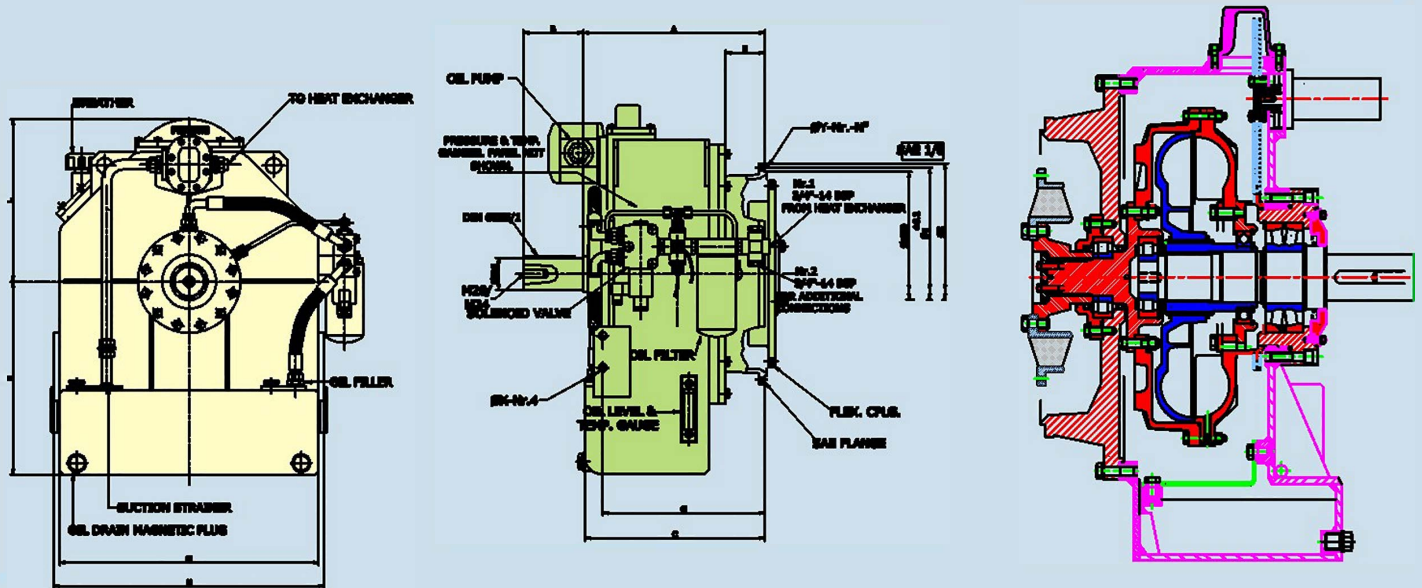
Output shaft is provided with parallel straight form with key for mounting of 'V' pulley when right angle drive is required. Or Inline transmission thro flexible coupling.

Inline filter is provided of spin-off type or Cartridge type having 25 micron filtering capacity. Level gauge is provided on housing for indication of oil level in coupling. Solenoid valve assembly is fitted on coupling body to feed/drain the oil in close loop system. These valves can be mounted on Left side or Right side of Fluid cplg Sump. Orifice nozzles are fitted on impeller flange to escape oil from working circuit. When 24 V DC single solenoid valve is operated, then pump oil flow is diverted to oil sump. In this condition, working circuit of fluid coupling is empty thereby drive is in Disengage condition Necessary provision has been kept for bearings lubrication. When power supply is off, oil is fed to working circuit & cplg is in 'Engage Condition'. Based on application requirement, Coupling output side can be Connected in two types.

1) Directly to driven machine by using suitable connecting flexible coupling for Inline power transmission OR

2) To transmit power in 90 deg orientation from output, Incorporate suitable 'V' pulley with belt drive. The radial forces are not to exceed than specified values. Connect Heat exchanger by using suitable hose pipes. Heat Exchanger's inlet to be connected to oil circulation pump delivery line and outlet to valve adaptor. Instruments for Temp, Pressure & solenoid valve are to be connected with required supply.

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TITLE OF THIS TABLE

CPLG SIZE	A	B	C	ØD	E	G	H	L	M	N	W1	W2	Q	ØX	ØY	N	Øp	ØZ	SAE FLYWHEEL	FLEX CPLG
480 PSV	455	150	450	80	98	408	500	420	670	700	310	340	35	20	12	12	511.17	552.0	14	AC 5
530 PSV	517	180	512	100	105	458	600	480	820	880	475	540	65	21	12	12	511.17	552.0	14	AC 6
610 PSV	583	180	502	100	95	448	60	528	820	880	580	695	70	24	12	12	511.17	552.0	14	AC 7
710 PSV	710	220	605	115	123	550	675	610	890	940	830	920	93	27	13	16	647.7	710.0	18	AC 7

FLUID COUPLING POWER TRANSMISSION CAPACITY AT VARIOUS SPEEDS

CPLG SIZE	960	1170	1440	1750	1950	2200	2600
480 PSV	80	105	180	290	320	350	415
530 PSV	115	165	250	415	450	495	-
610 PSV	180	245	330	575	630	680	-
710 PSV	245	330	627	1080	-	-	-



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