



PEMBRIL VARIABLE SPEED FLUID COUPLINGS

TYPE SCR 24R Sizes 18 to 52

The type SCR24R fluid couplings, when installed between a constant speed motor and driven machine, can be employed in a variety of ways depending upon the requirements of the particular application.

Scoop control fluid couplings will provide -

- Stepless variable output speed, using a fixed speed motor, over a range of 5:1 for centrifugal pumps and fans. On constant torque drives a 3:1 speed range may be achieved.
- Control of torque during acceleration of high inertia loads; a good example being the starting of belt conveyors.
- Engaging and disengaging of a drive with a continuously running motor. For example, descaling pumps in steel-works.

The units are readily adaptable for use with manual, remote or automatic control and can be supplied complete with most types of actuators pneumatic, hydraulic, or electric. In addition, special controls are available for certain applications, for example, belt conveyor drives.

Operation

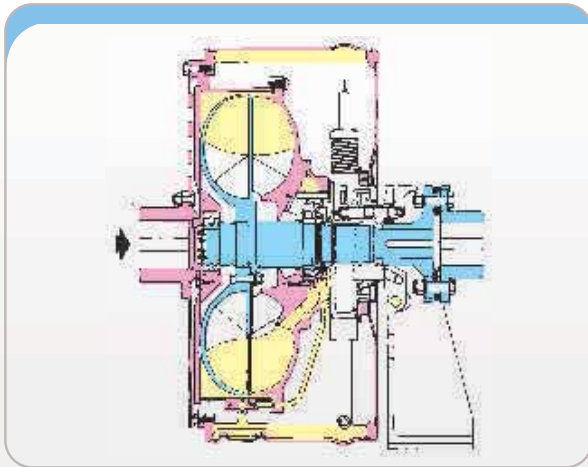
To vary the output speed of a fluid coupling it is necessary to vary the amount of fluid in the working circuit (i.e. between the runner and impeller). In operation, oil in the working circuit escapes centrifugally

through small leak-off nozzles in the drum of the inner casing assembly and forms a ring inside the rotating reservoir casing. The tip of the hollow scoop tube picks up oil from this rotating ring and returns it to the working circuit via an external cooler, if needed. The volume of oil retained in the working circuit depends on the radial position of the tip of the scoop tube. An external control lever on the scoop housing bracket enables the position of the scoop tube to be adjusted while the unit is running, thus varying the output speed or the torque transmitted.

Construction

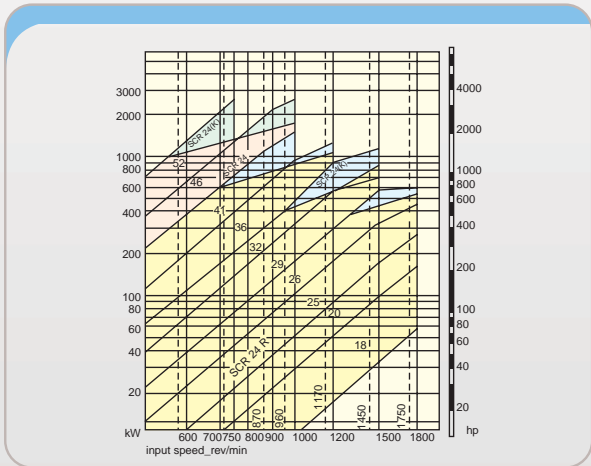
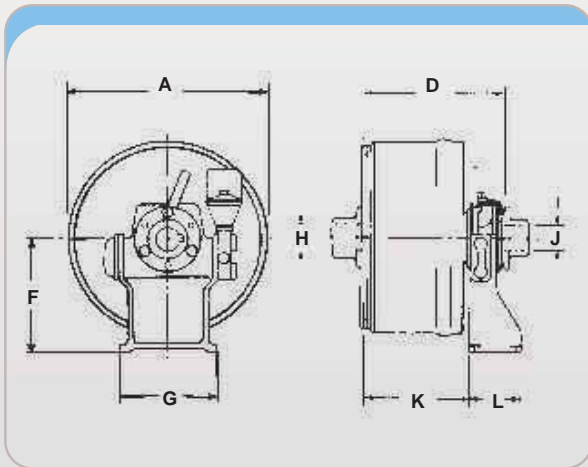
The main rotating casing of the fluid coupling is formed from two steel fabrications which are bolted together on the input end. The impeller and runner, between which oil circulates to transmit power, are aluminium alloy castings. The internal bearing arrangement ensures that no external hydraulic thrust can be created by the fluid coupling. The scoop tube is supported by a stationary cast iron bracket, normally mounted on the bed plate. This design of fluid coupling is provided with semi-flexible input and output mountings, and the weight of the rotating parts is supported by the shafts of the motor and driven machines. Bores and keyways of the input driving boss and output half coupling are finished to suit customers' requirements. Units are available in 10 sizes in ratings up to 2,580 kW.





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Technical Data

Size	Dimension in mm								Weight with oil (Kg)	Q(Ltr.)
	A	F	G	H	K	L	D	J		
18	629	355	324	85	321	152	406	76	205	16
20	692	355	324	85	337	152	422	76	249	21.6
23	789	457	387	110	406	190	527	100	389	31.8
26	891	457	387	110	445	190	565	100	456	47.5
29	1018	559	464	130	445	229	584	115	721	63.5
32	1108	559	464	130	543	229	683	115	874	86
36	1254	711	559	150	600	276	749	150	1344	23
41	1413	711	559	150	664	276	813	150	1654	184
46	1635	559	737	190	784	305	1016	165	2812	255
52	1862	559	737	190	832	305	1063	165	3331	364

Premium Energy Transmission Limited

Head Office : P.B. No. 5, Chinchwad, Pune - 411 019, India. Tel. : (91-20) 27475141 / 42 / 43 / 44, Fax : (91-20) 27450287, 27476601.

Branch Offices :

- **Western Region :** **Mumbai :** Industry Manor, Appasaheb Marathe Marg, Prabhadevi, Mumbai - 400 025. Tel. : (91-22) 24223747, 24365510, Fax : (91-22) 24377730.
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- Bangalore :** 16/3, Ali Asker Road, P. B. No. 216, Bangalore - 560 052. Tel. : (91-80) 22268773/2506, Fax : (91-80) 22253472.
- Hyderabad :** 6-2-47, A. C. Guards, 1st floor, P. B. No. 9, Hyderabad - 500 004. Tel. : (91-40) 23314025, 23390544, 23316446, Fax : (91-40) 23318557.
- Kochi :** 39/5567, M. G. Road, Ernakulam, Kochi - 682 015. Tel. : (91-484) 2359190, 2359372, Telefax : (91-484) 2359589.