

PUMP & FILTRATION SYSTEMS >



mag drive

Magnetic coupling for chemical and industrial processes



Magnetic drives are hermetically sealed thereby guaranteeing that environmentally hazardous, poisonous, and malodorous substances are pumped safely. The product chamber in the gear pump is completely separated from the environment by a containment shell. The torque is transferred from motor shaft to pump shaft without contact by means of heavy-duty permanent magnets. This design makes the magnetic couplings extremely safe and virtually maintenance-free.

Your benefits

- High suction pressures (standard to 25 bar, in special designs up to 100 bar)
- Hermetically-sealed design
- Optimized safety and leak sealing
- Long service life
- Virtually maintenance-free
- Low maintenance costs

Application limits:	
Viscosity:	1 to 5,000 mPas
Temperature:	-30 to 300 °C
Suction pressure:	<ul style="list-style-type: none"> Vacuum to 25 bar Special designs up to 100 bar available
Discharge pressure:	Vacuum to 100 bar

Typical pumping media and their characteristics

- Toxic: hydrochloric acids, benzene, coolants, phenol, molten sulfur
- Malodorous: nitric acid, acids, anhydrides, fats, thermal oils, flavorings
- Volatile: solvents, condensates
- Combustible: solvents, nitrate, explosive substances, blasting oils, nitroglycerin
- Highly pure: pharmaceutical products
- Crystallize on contact with air: isocyanates

Certificates¹⁾

- ATEX certificate
- 3.1 certificate
- German Air Quality certificate (TA-Luft)
- TR-CU (EAC) 010 - 012
- Performance test certificates

Options

- Special designs for suction pressures up to 100 bar
- Temperature monitoring on containment shell
- Temperature, pressure or level monitoring of sealing liquid

Technical data:										
Magnetic drive Type SMC (with a single containment shell):	SMC 27-02	SMC 45-04	SMC 45-8	SMC 60-07	SMC 60-14	SMC 60-22	SMC 75-30	SMC 110-50	SMC 110-80	SMC 135-135
Transferable torque in Nm:	2	2	8	7	14	22	30	50	80	135
Magnetic drive Type SMCD (with a dual containment shell):	-	-	-	SMCD 60-07	SMCD 60-14	SMCD 60-22	SMCD 75-30	SMCD 75-40	SMCD 110-50	SMCD 135-180
Transferable torque in Nm:	-	-	-	7	14	22	30	40	110	180

Pump size	Theoretical pumping capacities in l/min at 0 bar dp				Motor flange Ø [mm]	Magnetic drive sizes ²⁾
	500	750	1,000	1,500		
14/04	0,13	0,19	0,26	0,39	160	SMC 27-02, SMC 45-04
14/08	0,26	0,39	0,52	0,78	160	SMC 27-02, SMC 45-04
14/14	0,46	0,68	0,91	1,36	160	SMC 27-02, SMC 45-04
20/05	0,48	0,72	0,96	1,44	200	SMC 60-07, SMCD 60-07
22/06	0,64	0,96	1,28	1,92	200	SMC 60-07, SMCD 60-07
22/08	0,85	1,27	1,7	2,55	200	SMC 60-07, SMCD 60-07
20/10	0,96	1,44	1,92	2,88	200	SMC 60-07, SMCD 60-07
22/13	1,39	2,09	2,78	4,17	200 250	SMC 60-07, SMCD 60-07 SMC 60-14, SMCD 60-14
22/14	1,5	2,25	3	4,5	200 250	SMC 60-07, SMCD 60-07 SMC 60-14, SMCD 60-14
20/20	1,92	2,88	3,84	5,76	200	SMC 60-07, SMCD 60-07
22/22	2,35	3,53	4,7	7,05	200 250	SMC 60-07, SMCD 60-07 SMC 60-14, SMCD 60-14
28/28	5,1	7,65	10,2	15,3	250	SMC 60-14, SMC 60-22, SMCD 60-14, SMCD 60-22
36/36	12,8	19,2	25,6	38,4	250 300	SMC 60-22, SMCD 60-22 SMC 75-30, SMC 110-50, SMCD 75-30, SMCD 110-50
45/45	23,2	34,7	46,3	69,5	300 350	SMC 75-30, SMC 110-50, SMCD 75-30, SMCD 110-50 SMC 110-80, SMC 135-135
56/56	46,3	69,5	92,6	138,9	300 350	SMC 75-30, SMC 110-50, SMCD 75-30, SMCD 110-50 SMC 110-80
70/70	88	132	176	264	350	SMC 110-80, SMCD 110-50, SMCD 135-180

¹⁾ Other certificates and conformities upon request.

²⁾ Other sizes upon request.

