

DÜSTERLOH has been developing fluid technology products for more than 100 years.

The drives, controls and hydraulic power units from Hattingen are appreciated throughout the world for their complete reliability; including under extreme conditions. The owner-managed company's own development and construction department and the wide range of products cater for distinctive flexibility and customer-orientation.

Products

- Hydraulic radial piston motors
- Hydraulic axial piston motors
- Hydraulic high precision motors
- Pneumatic motors
- Pneumatic starters
- Hydraulic and pneumatic controls
- Hydraulic power units

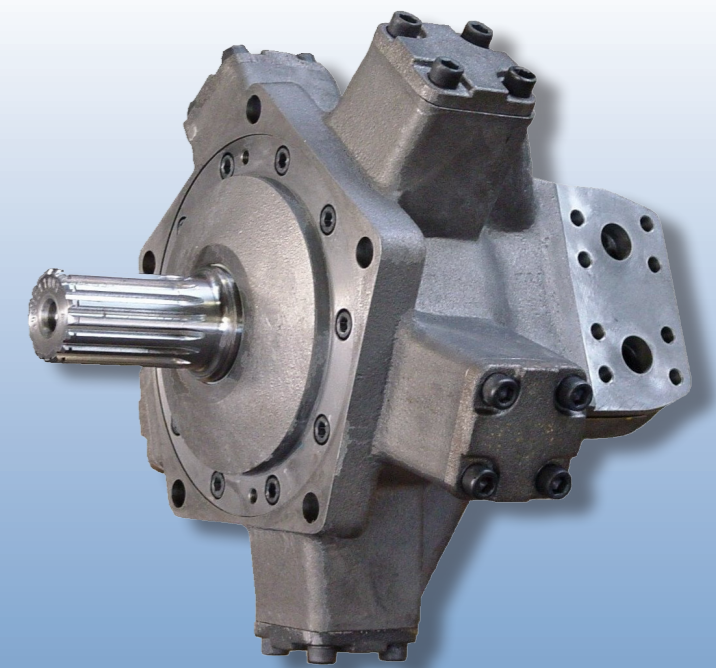
Designing controls and hydraulic power units specific to the customer is our company's major strength. Vast product diversity is also available for standardized products.

Industrial areas of application

- Machine tools
- Smelting and rolling mill equipment
- Foundry machines
- Testing machines
- Shipbuilding (diesel engines)
- Offshore technology
- Printing and paper technology
- Vehicle construction
- Manipulators
- Environmental technology
- Mining equipment
- Materials handling equipment



DÜSTERLOH
Fluidtechnik
Hydraulic motors



Axial piston motors
Radial piston motors
High-precision motors
Hydraulic brake motors
Hydraulic geared motors

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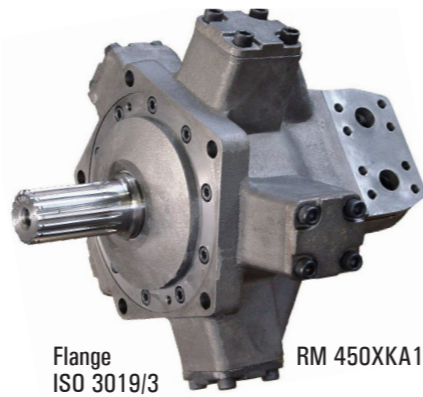
Axial- and radial piston motors



AEHP 40ZA1



Flange ISO 3019/2 KM 110ZAF



Flange ISO 3019/3 RM 450XKA1

Examine the following features of our motors:

- shaft end can be subjected to high radial and axial forces
- only very few moving parts in the rotating group
- extremely low moment of inertia
- instrument shaft may be fitted
- low leakage-built in wear compensation
- suitable for use with fire resistant fluids
- low maintenance
- small ports are B.S.P. type G threads according to ISO 22811
- full torque available over complete speed range
- immediately reversible
- high starting torque
- no counterpressure necessary when operated as a motor
- suitable for use as pumps with boosted system
- eminently suitable for control systems
- control of feed and discharge possible
- may be operated in parallel
- total efficiency up to 96%
- SAE Flange connection

Standard motors

Hydraulic motor type		displacement V_g ccm/rev.	torque		speed range		continuous pressure p_{cont} bar	interm. pressure $p_{interm.}$ bar	peak-pressure p_{peak} bar	power	
Axialpiston	Radialpiston		$T_{average\ spec.}$ Nm/bar	T_{max} Nm	n_{min} rpm	n_{max} rpm				$P_{cont.}$ kW	$P_{intermit.}$ kW
AE 3		2,859	0,04	10,25	10	5250	210	250	315	3,20	3,80
AE 4		4,003	0,06	14,25	5	3750	210	250	315	3,20	3,80
AE 5		5,146	0,07	18,50	3	3000	210	250	315	3,20	3,80
AE 10		11,44	0,16	40,90	10	3000	210	250	315	7,70	9,20
AE 16		16,01	0,23	57,30	5	2500	210	250	315	8,10	9,60
AE 21		21,31	0,31	76,25	3	2400	210	250	315	10,7	12,8
AE 22		22,50	0,32	80,00	10	2000	210	250	315	9,00	11,0
AE 32		31,50	0,45	113,0	5	2000	210	250	315	12,5	15,0
AE 40		40,50	0,58	145,0	3	2000	210	250	315	16,0	19,0
AE 45		45,00	0,65	161,3	10	2000	210	250	315	18,0	21,5
	KM 11	11,13	0,15	31,60	10	3000	140	210	250	3,50	4,30
	RM 11	11,13	0,15	37,70	5	3600	160	250	315	4,70	6,00
	KM 22	21,99	0,31	77,90	10	2250	160	250	315	6,00	7,50
	KM 32	32,98	0,47	118,0	10	1500	160	250	315	6,00	7,50
	KM 45	43,98	0,62	156,0	5	1800	160	250	315	9,50	11,0
	KM 63	65,97	0,95	236,0	5	1200	160	250	315	9,50	11,0
	KM 90	88,40	1,27	267,0	5	900	140	210	250	8,50	10,0
	KM 110	109,5	1,59	333,0	5	750	140	210	250	8,50	10,0
	RM 80N	80,43	1,15	363,0	5	800	250	315	400	12,0	15,0
	RM 125N	125,6	1,80	567,0	5	600	200	315	350	12,0	15,0
	RM 160N	160,9	2,36	742,0	5	800	250	315	400	24,0	30,0
	RM 250N	251,3	3,68	1159	5	600	200	315	350	24,0	30,0
	RM 250X	255,3	3,74	1177	5	600	250	315	400	28,0	35,0
	RM 355X	359,3	5,26	1657	5	550	250	315	400	36,0	45,0
	RM 450X	441,8	6,47	2038	5	500	250	315	400	40,0	50,0
	RM 500X	490,8	7,19	2264	5	450	250	315	400	40,0	50,0
	RM 710X	704,5	10,3	3249	5	500	250	315	400	63,0	80,0
	RM 900X	904,0	13,2	4170	5	450	250	315	400	63,0	80,0
	RM 1250X	1265	18,5	5837	5	540	250	315	400	125	150
	RM 2000X	2010	29,4	9274	5	350	250	315	400	130	160
	RM 3150X	3167	46,4	14606	3	250	250	315	400	145	180
	RM 5000X	5278	77,3	24343	2	150	250	315	400	150	190

- $p_{cont.}$ continuous pressure under the condition that average power is less then power cont.
- $p_{max.}$ max. working pressure when keeping to P_{cont} counted on a running time of max. 10% for one hour duty time
- p_{peak} short peak pressure at which components still function safely
- $P_{cont.}$ max. con. output power at max. reverse pressure up to 10 bar. Flushing should be considered for higher performance
- $P_{intermit.}$ output power over a short time (running time of max. 10% for one hour duty time)

Special characteristics of the high-precision motors are...

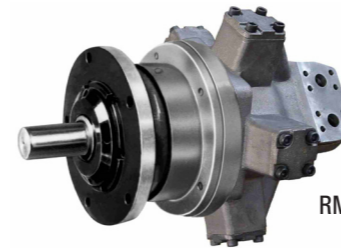
- low speed (unregulated 1 rpm, regulated 0,1rpm)
- high continuous speed (standard deviation 0,011 rpm bei 1 rpm)

High-precision hydraulic motors

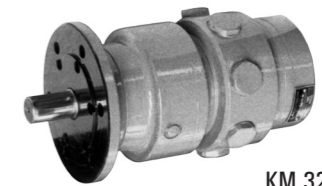
Hydraulic motor type		displacement V_g ccm/rev.	torque		speed range		continuous pressure p_{cont} bar	interm.-pressure $p_{interm.}$ bar	peak-pressure p_{peak} bar	power	
Axialpiston	Radialpiston		$T_{average\ spec.}$ Nm/bar	T_{max} Nm	n_{min} rpm	n_{max} rpm				$P_{cont.}$ kW	$P_{intermit.}$ kW
AEHP 40		43,70	0,63	155	1	2000	210	250	315	18,0	21
	RMHP 90	88,40	1,24	252	1	900	140	210	250	8,50	10
	RMHP 110	109,5	1,55	310	1	750	140	210	250	8,50	10

- $p_{cont.}$ continuous pressure under the condition that average power is less than $P_{cont.}$
- $p_{max.}$ max. working pressure when keeping to P_{cont} counted on a running time of max. 10% for one hour duty time
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Hydraulic brake motors with spring operated multiple disc brakes



RM 900XKA1 - LBD 901Z



KM 32ZA - LBD 11Z

Hydraulic brake motors of this design consist of radial piston motors linked to spring operated multiple disc brakes.

In order to open the disc brake the control pressure should be fed via a 2/3 way valve to the control line connection G 1/4. To reach the maximum braking moment in the stop function, the control pressure must be passed without pressure via the 2/3 way valve and a separate line to the tank. The braking moments given apply only to pressureless control line connection, and in the case of pressure increase in the control line connection are interrupted according to the spring characteristics as soon as the control pressure is reached.

Hydraulic brake motors with a cylindrical drive shaft and feather key according to DIN 6885, female involute splined shaft, or male involute splined drive shaft according to DIN 5480 can be supplied on request.

The drawing of shaft and flange of the brake motors are identical with the radial piston motors. So it is possible to change the motors.

Hydraulic geared motors



Coaxial geared motor

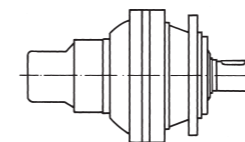
Hydraulic geared motors of this range consist of radial piston motors linked to a single or multiple stage coaxial or angular gearbox with or without spring disc brake. Coaxial hydraulic geared motors offer high torque and small r.p.m. in small dimensions. They are reversible and can be used for universal application. Angular gearboxes are often used for mobile drive because of short length and free space. Various models for multiple applications available.



Angular geared motor

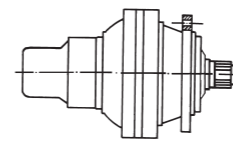
Output shaft design

Type: Z



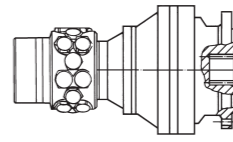
Keywayed shaft with parallel key acc. to DIN 6885

Type: K



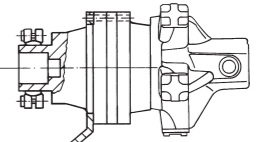
male involute splined shaft acc. to DIN 5480/5482

Type: FE



female involute splined shaft acc. to DIN 5480/5482

Type: FS



Hollow cylindrical shaft with torque arm and shrink disc

