

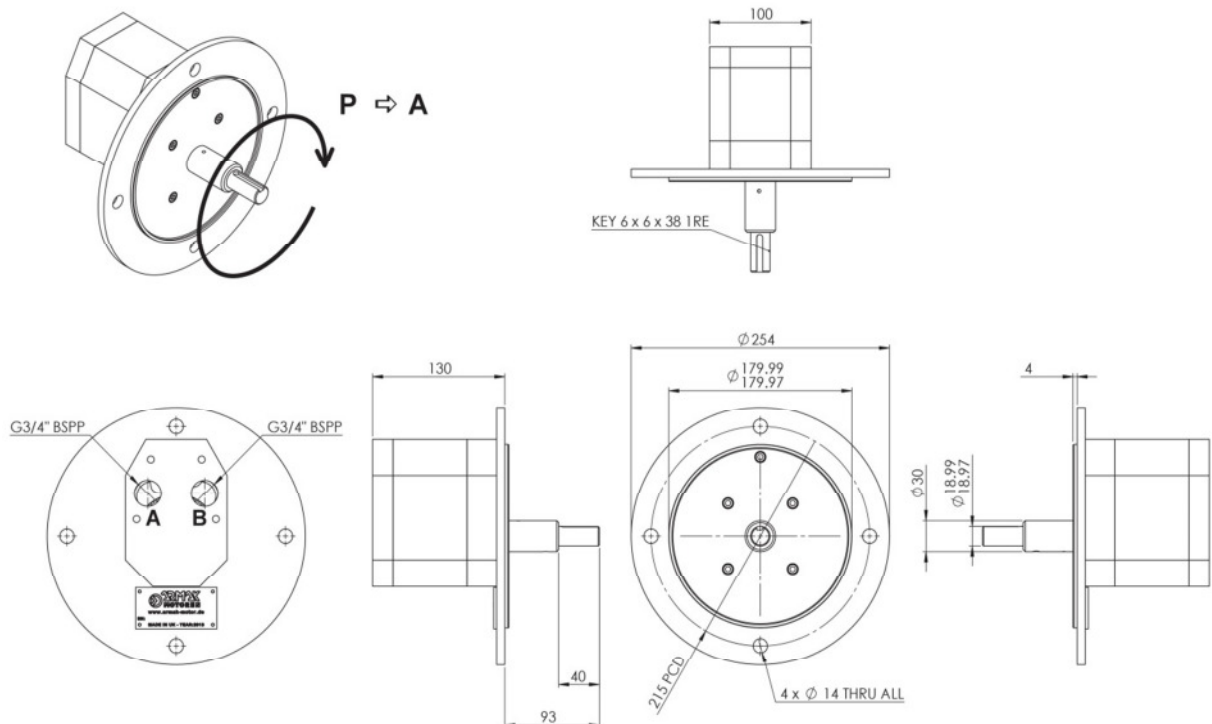
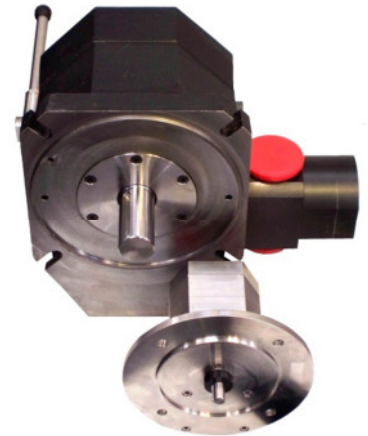
Armak Geared Piston Air Motor AGP110E



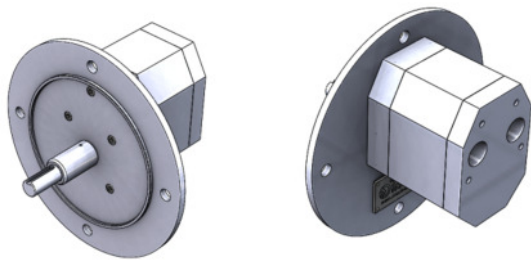
New Technology Air Motors

- **Interchangeable** to Globe Air Motor **RM110 – R14XXXA00** with same shaft - same flange - but higher power
- non vibrating operation even at high speeds
- contact free rotating pistons, resulting in long lifetime with reduced maintenance
- motor efficiency increases over time
- completely enclosed motor casing prevents internal corrosion. Without an internal oil sump
- compact design with total freedom of installation
- usable speed range from 75 rpm - high start torque
- perfect control with Armak lever / remote control valves including emergency stop or brake to machinery directive
- ATEX II cat. 2 GDcT5 and ATEX I M2 can be supplied valid under ATEX operating parameters

The torque is developed by one power piston and is transferred to the output shaft with a second contact free rotating piston by a synchronising gear train. This frictionless operation results in a long **maintenance free operation** without downtime. The **totally closed motor housing** without breather holes permits applications in wet or dirty surroundings without corrosion inside the motor. The picture shows the standard AGP motor.



Armak Geared Piston Air Motor AGP110E



Air Motor AGP110E

Comparison of Armak AGP110 (grey) with comparable Radial Piston Motor (yellow).
The AGP110 is more compact, with clean lines and a totally closed motor housing.

Data are valid for motor AGP110E without accessories like silencer, FRL, valves etc

Motor	AGP110E		Radial Piston Motor		RM110
max. power - 6 bar	kW	1.35	max. power - 6 bar	kW	1.2
speed at P_{max} / 6 bar	rpm	2.200	speed at P_{max} / 6 bar	rpm	2.100
torque at P_{max} / 6 bar	Nm	6	torque at P_{max} / 6 bar	Nm	5.3
start torque min.6 bar	Nm	8	start torque min.6 bar	Nm	6.5
cont. speed, max.	rpm	2.500	cont. speed, max.	rpm	2.400
minimum speed	rpm	75	minimum speed	rpm	300
air line connection	2 x G 3/4"		air line connection	2xBSP3/4"+1x1"	

Motor	AGP110E		RM110	
air lubrication shortrun	6 – 8		drops/minute	6 - 10
air lubrication cont.run	5 – 6		drops/minute	3 - 4
ambient temperature	° C	-20 - +80	ambient temperature	-20 - +89
inlet air temperature	° C	max. +65		
weight	kg	9	weight	13
radialforce shaftmiddle	N	1500	radial force shaft middle	445
axial force on shaft	N	20		

Armak Geared Piston Air Motor AGP110E



Motor Versions	Part Number
Motor basic design	AGP110E
Motor with lever control valve LCV - biased CW	AGP110J
Motor with lever control valve LCV - biased ACW	AGP110K
Motor with lever control valve LCV - no bias	AGP110L
Motor with remote control valve RCV - no bias	AGP110R
Motor with remote control valve RCV - biased CW	AGP110V
Motor with remote control valve RCV - biased ACW	AGP110W

Accessories	part number
Remote control	on request
Brake	on request
Gear Box	on request
Silencer	on request
Service Kit	on request
Filter / Regulator / Lubricator	on request

Valves:

In winch operation a lowering load can be braked to a full stop using Armak Valves. A parking brake can be used instead of a dynamic brake which requires frequent service.

Note:

All data are valid only with sufficient air supply and when using correctly sized fittings and valves with net. cross section suitable for the air volume required. Pressure loss by lubricator, silencer, valves and piping must be considered.

For the operating point consider the starting torque (example winches) or consider the operating torque (example pump drive).

In case of system failure (blocked shaft) the max. starting torque must be considered to prevent the motor from damaging gears or other components.

When using gears consider the gearbox efficiency: helical / epicyclic gears up to 97% per stage, worm gears sometimes below 50%, all depending on gear box design.

Additional Armak Motors:

Armak Rotary Piston Air Motor AGP210E, AGP310A, AGP410A or AGP510A

Armak Rotary Piston Air Motor AGP01BE, AGP04BE, AGP06BE, AGP07FA, AGP10FA or AGP16FA

Final Comment

In order to assure long and trouble free operation above data and additional data from the service manual must be adhered to.

Armak Geared Piston Air Motor AGP110E



Performance Data for AGP110E - identical to Armak Motor AGP01

Graphs will be supplied at a later date as the motor is in the final testing stage

the graph power versus speed

the graph torque versus speed

the graph air consumption versus speed

Armak Motor AGP110, AGP210, AGP310, AGP410, AGP510 with Lever Control Valve

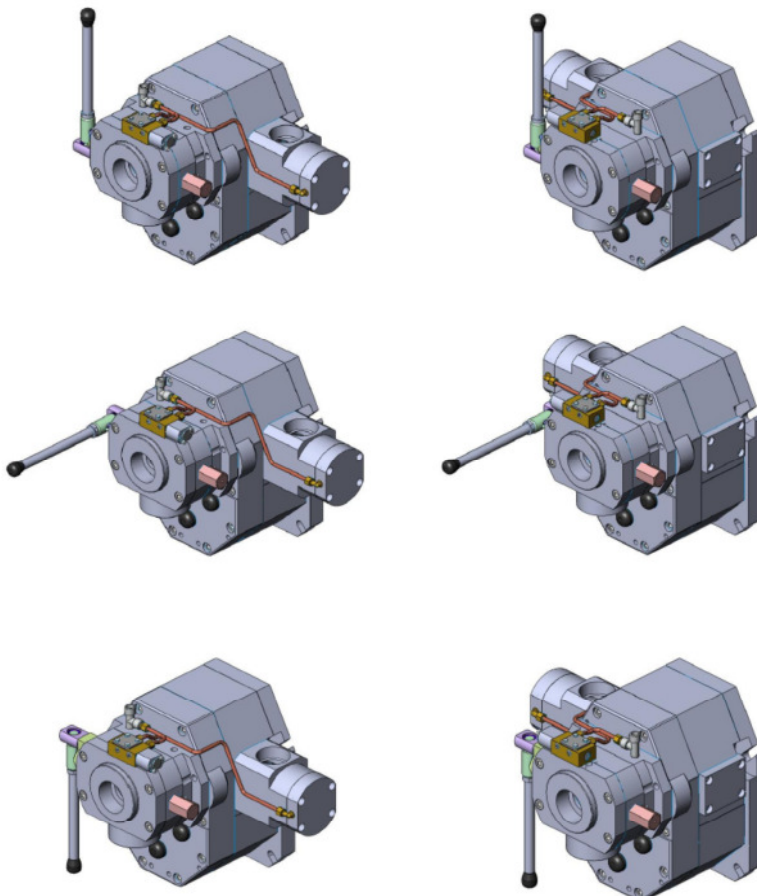
To prevent operator errors, the valve installation must fit the actual application.

On all motors AGP110, AGP210, AGP310, AGP410 or AGP510 the control lever can point upwards, forward or down. Such lever adjustment can be done even during the final installation of the motor

To achieve bias in valves as required for example in winch applications, CP check plates are installed in the valves. Depending on the application and on the users equipment, the air flow cross section in these check plates must adjusted.

Armak Lever Control or Remote Control Valves can completely if briefly stop the lowering under load on a winch. Brakes therefore will be static brakes with long life.

On Armak Air Motors AGP16 (shown below) the power valve can be mounted to the right or left of the motor. The power valve position must be specified with order.



Armak Geared Piston Air Motor AGP110E



Armak Air Motors – Production Program

Motor	Data at max. power and 6 bar			Start Torque Nm	max. continuous rpm	Mass kg
	kW	rpm	Nm			
AGP01	1,8	2.700	6,6	6,3	3.000	9
AGP110◆	1,8	2.700	6,6	6,3	3.000	9
RM110	1,2	2.100	5,3	6,8 – max. 11	2.400	13
AGP04	3,5	2.200	15	17	2.500	14
AGP210◆	3,5	2.200	15	17	2.500	14
RM210	2,8	1.980	14	19 – max 35	2.400	26
AGP06	6,2	2.600	22	28	2.600	20
AGP07	8,0	1.600	50	90	2.000	60
AGP310◆	8,0	1.600	50	90	2.000	60
RM310	6,1	1.800	32	35 – max 70	2.400	48
AGP10	11,0	1.100	95	140	1.800	75
AGP410◆	11,0	1.100	95	140	1.800	75
RM410	10,5	1.600	62	75 – max. 70	2.000	62
AGP16	16,0	1.300	120	165	1.800	82
AGP510◆	16,0	1.300	120	165	1.800	82
RM510	16,0	1.150	132	170–max 240	1.500	115

◆ AGP Motor with flange identical to equivalent Globe Radial Piston Motor

Winch Drive



Coal Mining Locomotive



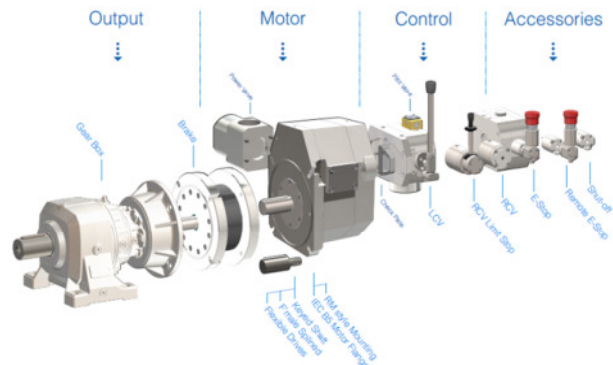
Earth Drilling Rig



Production Facility Hull, England



Armak Geared Piston Motors GP



We reserve the right for improvements without prior notice