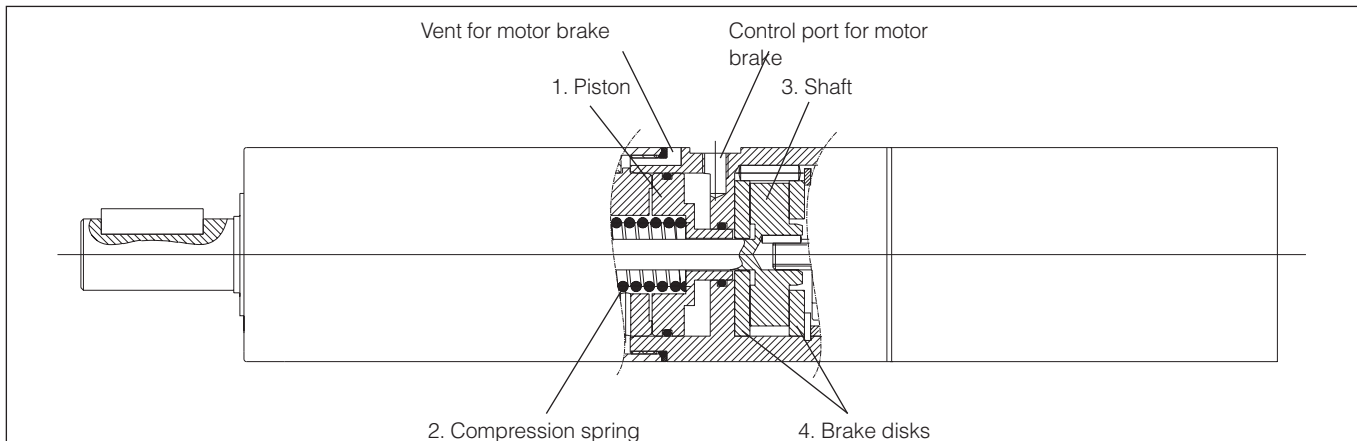


## Brake motor



## Brake motors

### Applications

The integrated brake is a spring-loaded disk brake, which is released at a minimum air pressure of 5 bar. The brake is applied in the absence of pressure. As soon as the control port for the brake is placed under pressure, the piston (1) is pressurised and the spring (2) is compressed. The motor can now start and the torque is passed to the shaft (3). The ventilation air from the brake is connected with the atmosphere. In order to brake the motor, the control air to the brake is simply vented. The piston (1) is pushed to the right by the spring (2), and the axle (3) is jammed between the two brake disks (4).

The technology and the size of air motors with integrated running and stationary brake make them ideal applications requiring repeated precise positioning. The motor can also be kept stationary in a specific position, and the stopping time for a rotating weight can be shortened significantly. Another typical application for brake motors is when the output shaft needs to be held in one position when the motor stops delivering torque. The brake can handle more than 1500 braking operations per hour at maximum braking torque.

### Disassembly and reassembly

Detach the connections with the motor and gearbox. Pull off the motor and gearbox part. The brake disks can be lifted off after the lock ring has been removed.

### Service and maintenance

After 20 000 braking operations as a stationary brake or 10 000 braking operations as an operating brake, the brake must be disassembled in order to check for wear.

### Warning:

If the number of braking operations is exceeded, the degree of wear might be greater than permitted and the braking effect might be lost. If this happens, you simply need to replace the worn brake linings. Tests show that the brake lining needs to be replaced after approx. 90 000 braking cycles

#### NOTE!

Brake motors must only ever be supplied with unlubricated air, otherwise there is a risk of oil from the supply air getting into the brake unit, resulting in poor brake performance or no braking effect.

## Technical data

Min braking torque for different motor types  
Motor size P1V-S020, 200 watt

Braking motor	Motor max torque, specified Nm	Brake min braking torque, theoretical Nm	Gearbox max torque, permitted Nm
P1V-S020A/DDE50	0,52	1,0	1,0
P1V-S020A/DD460	1,6	3,43	3,43
P1V-S020A/DD240	3,2	6,66	6,66
P1V-S020A/DD140	5,4	11,8	11,8
P1V-S020A/DD070	10,8	22,86	14,0
P1V-S020A/DD035	20,0	44,4	20,0
P1V-S020A/DD018	20,0	44,4	20,0
P1V-S020A/D011	66,0	137,2	108,0
P1V-S020A/D006	144,0	266,4	108,0
P1V-S020A/DD005	20,0*	44,4	20,0
P1V-S020A/D002	20,0*	44,4	20,0
P1V-S020A/D001	20,0*	44,4	20,0
P1V-S020A/D0005	20,0*	44,4	20,0

## Motor size P1V-S030, 300 watt

Braking motor	Motor max torque, specified Nm	Brake min braking torque, theoretical Nm	Gearbox max torque, permitted Nm
P1V-S030A/DDE50	0,8	1,0	1,0
P1V-S030A/DD460	2,4	3,43	3,43
P1V-S030A/DD240	4,8	6,66	6,66
P1V-S030A/DD140	8,2	11,8	11,8
P1V-S030A/DD060	19,2	20,6	14,0
P1V-S030A/DD028	41,0	40,0	36,0
P1V-S030A/D023	48,0	70,8	108,0
P1V-S030A/D010	114,0	123,6	108,0
P1V-S030A/DD005	36,0*	40,0	36,0

### \* Warning:

The permitted torque for the specific gearbox must not be exceeded!

### Brake release

Minimum pressure for brake release:

5 bar

**NOTE! All technical data is based on a working pressure of 6 bar.**



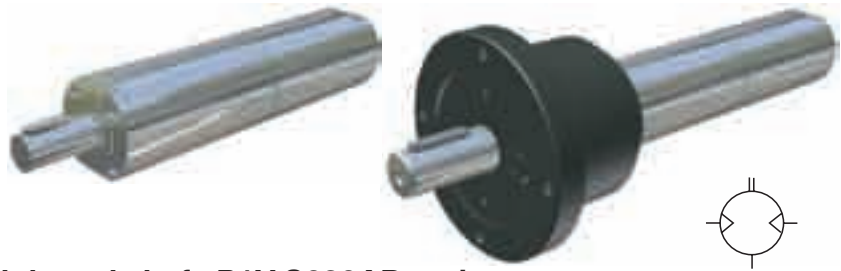
## Data for reversible brake motor with keyed shaft, P1V-S020AD series

Max power	Free speed	Speed at max power	Torque at max power	Min start torque	Air consumption at max power	Conn.	Min pipe ID	Weight	Order code
kW	rpm	rpm	Nm	Nm	l/s		mm	Kg	
0,200	14500	7250	0,26	0,40	6,3	G1/8	10	1,000	<b>P1V-S020ADE50</b>
0,200	4600	2300	0,80	1,20	6,3	G1/8	10	1,050	<b>P1V-S020AD460</b>
0,200	2400	1200	1,60	2,40	6,3	G1/8	10	1,050	<b>P1V-S020AD240</b>
0,200	1400	700	2,70	4,10	6,3	G1/8	10	1,150	<b>P1V-S020AD140</b>
0,200	700	350	5,40	8,20	6,3	G1/8	10	1,150	<b>P1V-S020AD070</b>
0,200	350	160	12,00	18,00	6,3	G1/8	10	1,150	<b>P1V-S020AD035</b>
0,100	180	90	10,50	15,00	4,5	G1/8	10	1,150	<b>P1V-S020AD018</b>
0,200	110	55	33,00	49,50	6,3	G1/8	10	3,300	<b>P1V-S020AD011</b>
0,200	60	30	72,00	108,00*	6,3	G1/8	10	3,300	<b>P1V-S020AD006</b>
0,180	50	25	20,00*	20,00*	6,3	G1/8	10	1,250	<b>P1V-S020AD005</b>
0,180	20	–	20,00*	20,00*	6,3	G1/8	10	1,250	<b>P1V-S020AD002</b>
0,180	10	–	20,00*	20,00*	6,3	G1/8	10	1,350	<b>P1V-S020AD001</b>
0,180	5	–	20,00*	20,00*	6,3	G1/8	10	1,350	<b>P1V-S020AD0005</b>

\* Max permitted torque

Torque curves, see page 24  
 Installation brackets, see page 35  
 Dimensions, see page 42  
 Permitted shaft loadings, see page 60  
 Service kits, see page 62

**NOTE!** All technical data is based on a working pressure of 6 bar.



## Data for reversible brake motor with keyed shaft, P1V-S030AD series

Max power	Free speed	Speed at max power	Torque at max power	Min start torque	Air consumption at max power	Conn.	Min pipe ID	Weight	Order code
kW	rpm	rpm	Nm	Nm	l/s		mm	Kg	
0,300	14500	7250	0,40	0,60	8,0	G1/4	10	1,350	<b>P1V-S030ADE50</b>
0,300	4600	2300	1,20	1,90	8,0	G1/4	10	1,400	<b>P1V-S030AD460</b>
0,300	2400	1200	2,40	3,60	8,0	G1/4	10	1,400	<b>P1V-S030AD240</b>
0,300	1400	700	4,10	6,10	8,0	G1/4	10	1,450	<b>P1V-S030AD140</b>
0,300	600	300	9,60	14,30	8,0	G1/4	10	1,500	<b>P1V-S030AD060</b>
0,300	280	140	20,50	26,00	8,0	G1/4	10	1,500	<b>P1V-S030AD028</b>
0,300	230	115	24,00	36,00	8,0	G1/4	10	3,650	<b>P1V-S030AD023</b>
0,300	100	50	57,00	85,50	8,0	G1/4	10	3,650	<b>P1V-S030AD010</b>
0,280	50	25	36,00*	36,00*	8,0	G1/4	10	1,600	<b>P1V-S030AD005</b>

\* Max permitted torque

Torque curves, see page 26  
 Installation brackets, see page 35  
 Dimensions, see page 43  
 Permitted shaft loadings, see page 60  
 Service kits, see page 62