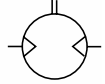


Note! All technical data are based on a working pressure of 6 bar and with oil.
Speed tolerance accuracy is $\pm 10\%$.

For ATEX conformity,
please contact Technical Sales

Note! Inlet and exhaust air flows are critical
for reaching the best performances.



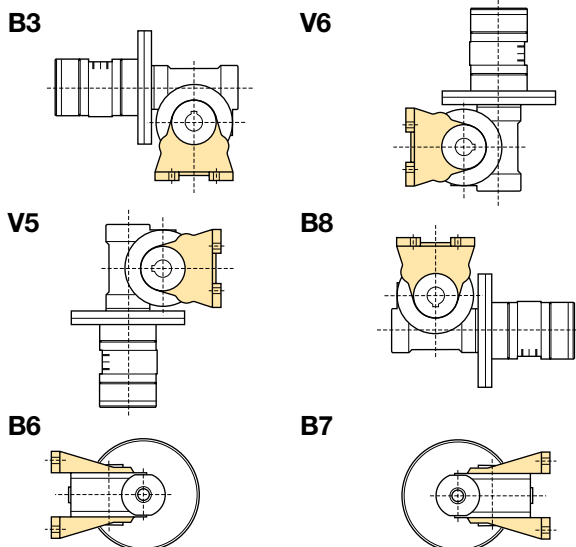
F, G, H: Reversible motor with worm gear box, flange left (F) or right (G), foot bracket or universal (H) mountings

Max power	Free speed	Nominal speed	Nominal torque	Min starting torque	Max gear box permanent torque	Air consumption	Conn.	Min pipe ID inlet/ outlet	Weight	Max permissible shaft loading		Mounting	Gear box type	Order code	Flange	Gear box type	Order code	Flange	Gear box type	Order code
Watt	rpm	rpm	Nm	Nm	Nm	l/s	BSP	mm	kg	F radial (N)	F axial (N)									
1600	430	320	40.0	42.0	49.0	31.7	G1/2	15/19	8.2	Hollow shaft, See shaft option		Bracket	W49KA	P1V-A160H0043**	On left	W49F	P1V-A160F0043**	On right	W49F	P1V-A160G0043**
1600	200	150	79.0	67.0	125.0	31.7	G1/2	15/19	11.5			Universal	W63U	P1V-A160H0020**	Option	-	-	Option	-	-
1600	95	70	159.0	121.0	250.0	31.7	G1/2	15/19	18.8			Universal	W86U	P1V-A160H0010**	Option	-	-	Option	-	-
1600	75	55	191.0	137.0	225.0	31.7	G1/2	15/19	18.8			Universal	W86U	P1V-A160H0008**	Option	-	-	Option	-	-
3200	500	350	76.0	86.0	125.0	65.0	G3/4	19/25	16.8	Hollow shaft, See shaft option		Universal	W63U	P1V-A320H0050**	Option	-	-	Option	-	-
3200	220	150	170.0	174.0	285.0	65.0	G3/4	19/25	24.1			Universal	W86U	P1V-A320H0022**	Option	-	-	Option	-	-
3200	125	85	280.0	240.0	295.0	65.0	G3/4	19/25	24.1			Universal	W86U	P1V-A320H0013**	Option	-	-	Option	-	-
3200	62	44	508.0	365.0	660.0	65.0	G3/4	19/25	63.0			Bracket	W130K	P1V-A320H0006**	On left	W130F	P1V-A320F0006**	On right	W130F	P1V-A320G0006**
5000	500	300	143.0	160.0	205.0	96.7	G1	25/32	26.6	Hollow shaft, See shaft option		Universal	W75U	P1V-A500H0050**	Option	-	-	Option	-	-
5000	220	130	315.0	325.0	480.0	96.7	G1	25/32	45.0			Universal	W110U	P1V-A500H0022**	Option	-	-	Option	-	-
5000	125	75	509.0	439.0	595.0	96.7	G1	25/32	48.0			Universal	W110U	P1V-A500H0013**	Option	-	-	Option	-	-
5000	55	37	980.0	930.0	1250.0	96.7	G1	25/32	79.0			Bracket	WR130A	P1V-A500H0006**	On left	WR130F	P1V-A500F0006**	On right	WR130F	P1V-A500G0006**

** Specify installation position in the order code as in the illustrations
Maximum admissible speed (idling)
Air consumption at the maximum air motor power

Note!
** specify installation position in the order code as in the illustration below.
Example: P1V-A160H0043B3

F, G, H: Installation positions, worm gear, foot mounting



Note: Oil-bath gearboxes mean that the installation position must be decided in advance. The installation position determines the volume of oil in the gearbox and location of oil filling and drain plugs.

Self-locking

Dynamic self-locking means that the force acting on the output shaft of the gear can not turn the gear further when the air motor is stopped. Dynamic self-locking is only possible when the gear ratio is high, and at low speeds. None of our worm drive gears are completely self-locking in dynamic conditions.

Static self-locking means that the force acting on the output shaft of the gear can not begin to turn the shaft.

When loads with considerable momentum are driven, it is necessary to have a braking time sufficient to stop the gearbox from being overloaded. It is extremely important that the maximum permitted torque is not exceeded.

Tip: Braking of the air motor can be arranged by either slowly restricting the air supply to the motor until it is completely shut off, or by slowly reducing the supply pressure to zero.

Types of Self-locking

1. Static, not self-locking
2. Static, self-locking - quicker return under vibration - not dynamically self-locking
3. Static, self-locking - return only possible under vibration - good dynamic self-locking

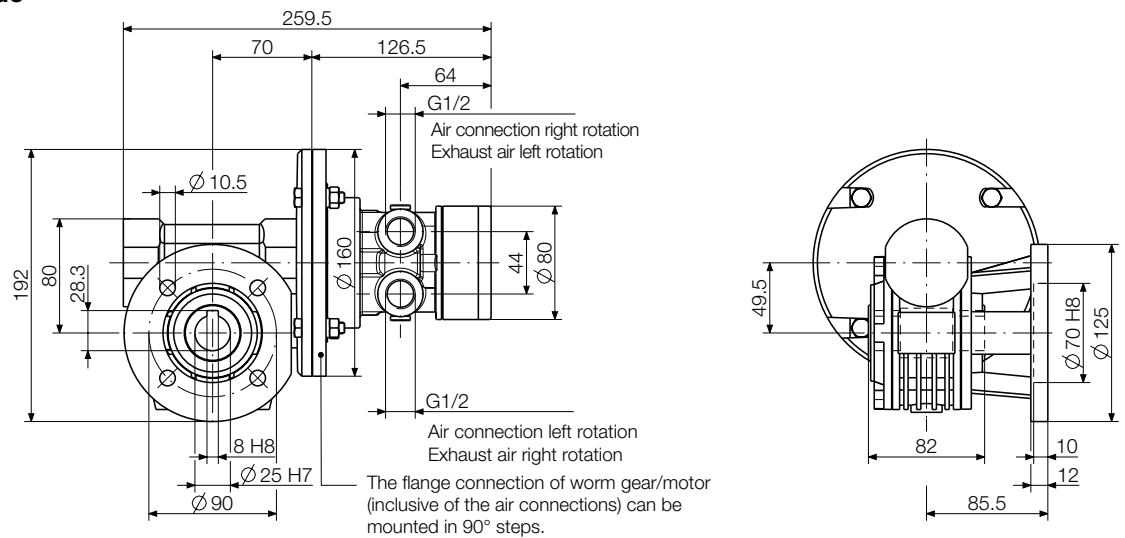


Important!

Since it is practically impossible to guarantee total self-locking, an external brake must be used to guarantee that vibration can not cause an output shaft to move.

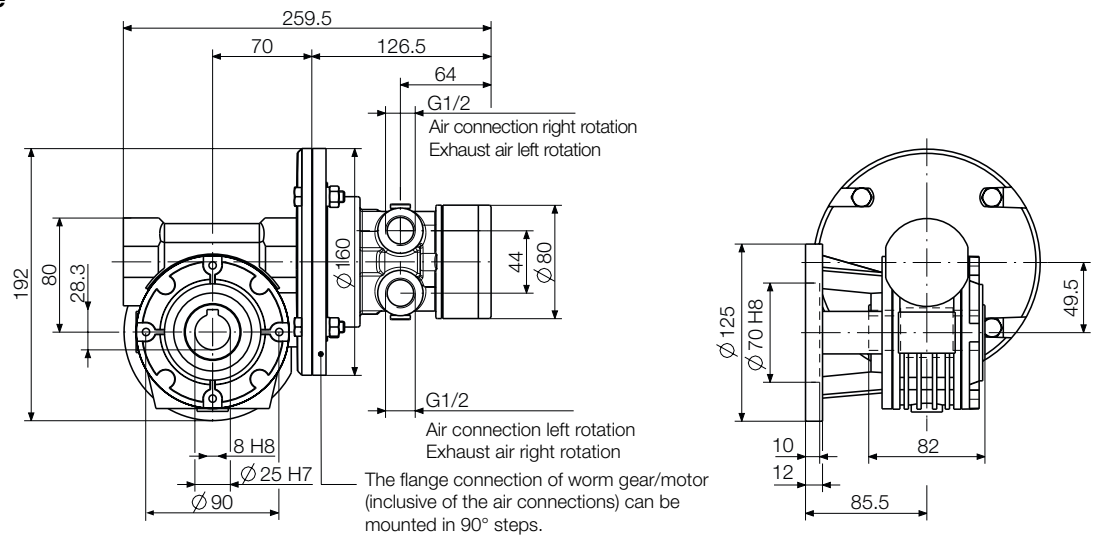
P1V-A160G0043••, worm gear box (G)

Flange on right side



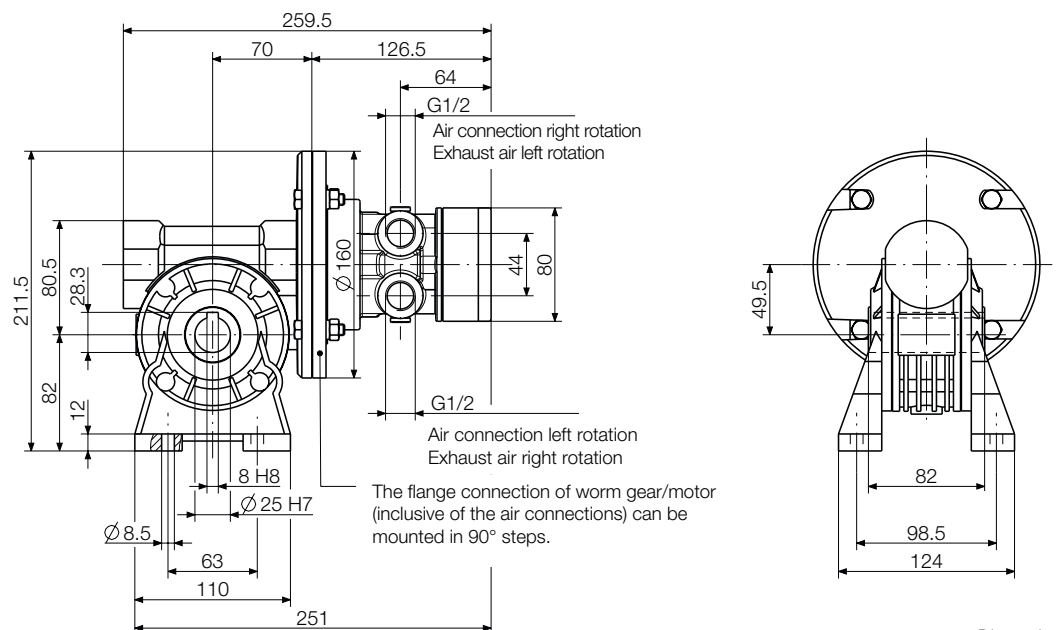
P1V-A160F0043••, worm gear box (F)

Flange on left side



P1V-A160H0043••, worm gear box (H)

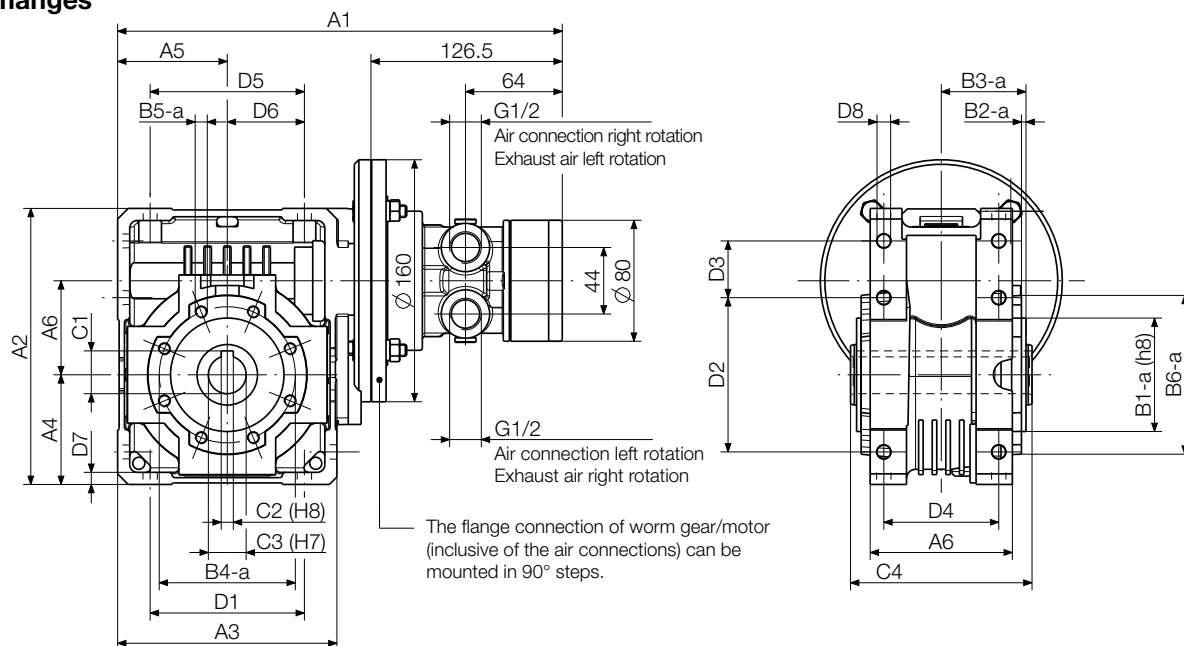
Foot bracket



Dimensions in mm

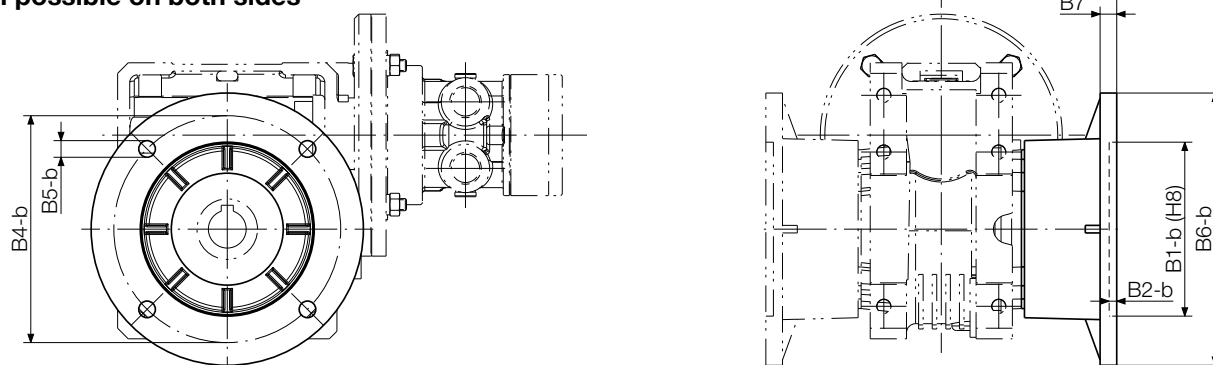
P1V-A160H00••••, worm gear box (H) Universal mounting

Without flanges



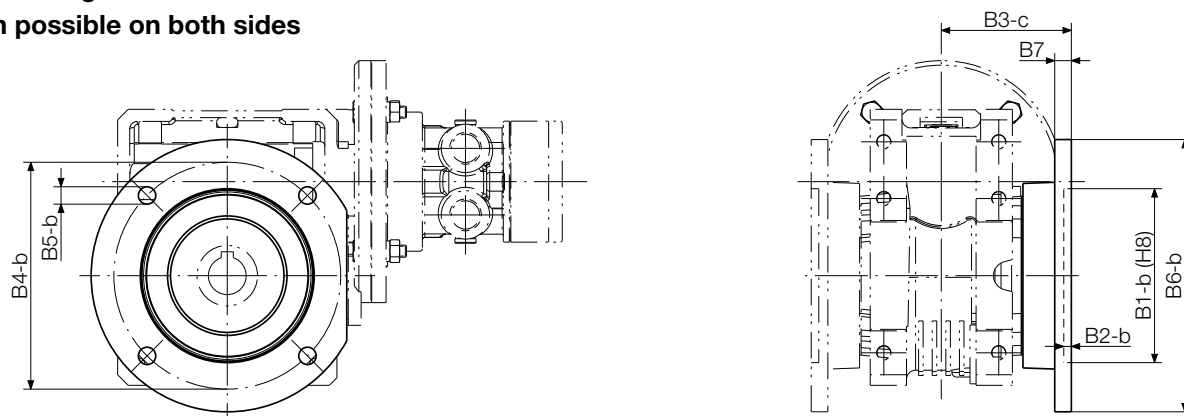
With wide flange

Adaption possible on both sides



With close flange

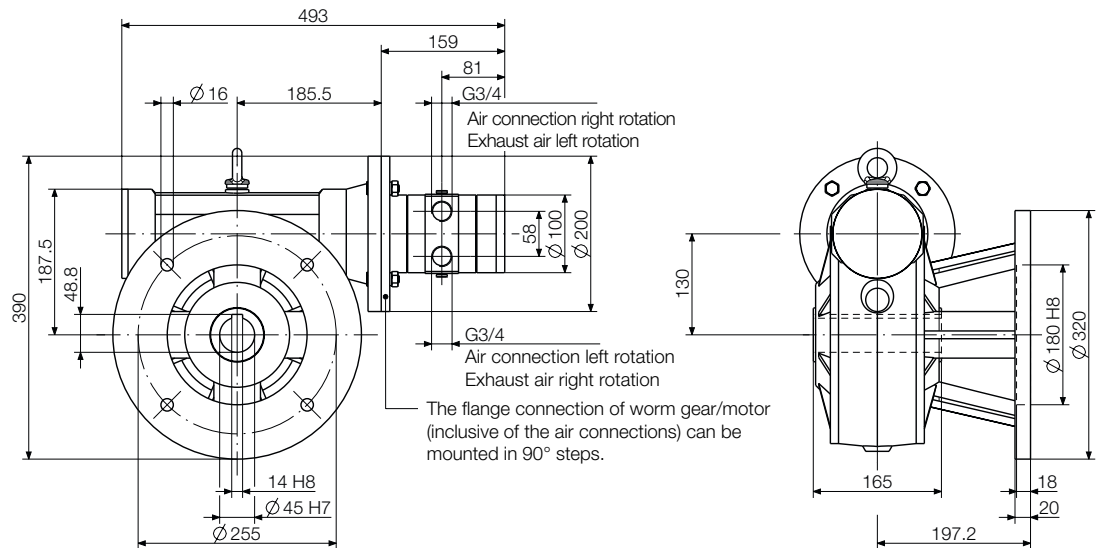
Adaption possible on both sides



Order code	Dimensions (mm)															
	A1	A2	A3	A4	A5	A6	B1-a	B1-b	B2-a	B2-b	B3-a	B3-b	B3-c	B4-a	B4-b	B5-a
P1V-A160H0020••	294.0	182.5	145.0	72.5	72.5	94.0	75.0	115.0	3.0	5.0	56.0	116.0	-	90.0	150.0	M8x14
P1V-A160H0010••	355.0	245.5	200.0	100.0	100.0	125.0	110.0	152.0	3.5	6.0	68.0	151.0	-	130.0	176.0	M10x18
P1V-A160H0008••	355.0	245.5	200.0	100.0	100.0	125.0	110.0	152.0	3.5	6.0	68.0	-	-	130.0	176.0	M10x18
	B5-b	B6-a	B6-b	B7	C1	C2	C3	C4	D1	D2	D3	D4	D5	D6	D7	D8
P1V-A160H0020••	11.0	105.0	180.0	11.0	28.3	8.0	25.0	120.0	102.0	102.0	37.5	76.0	102.0	51.0	8.0	9.0
P1V-A160H0010••	12.5	150.0	210.0	15.0	38.3	10.0	35.0	140.0	144.0	144.0	45.5	101.0	144.0	72.0	11.0	11.5
P1V-A160H0008••	12.5	150.0	210.0	15.0	38.3	10.0	35.0	140.0	144.0	144.0	45.5	101.0	144.0	72.0	11.0	11.5

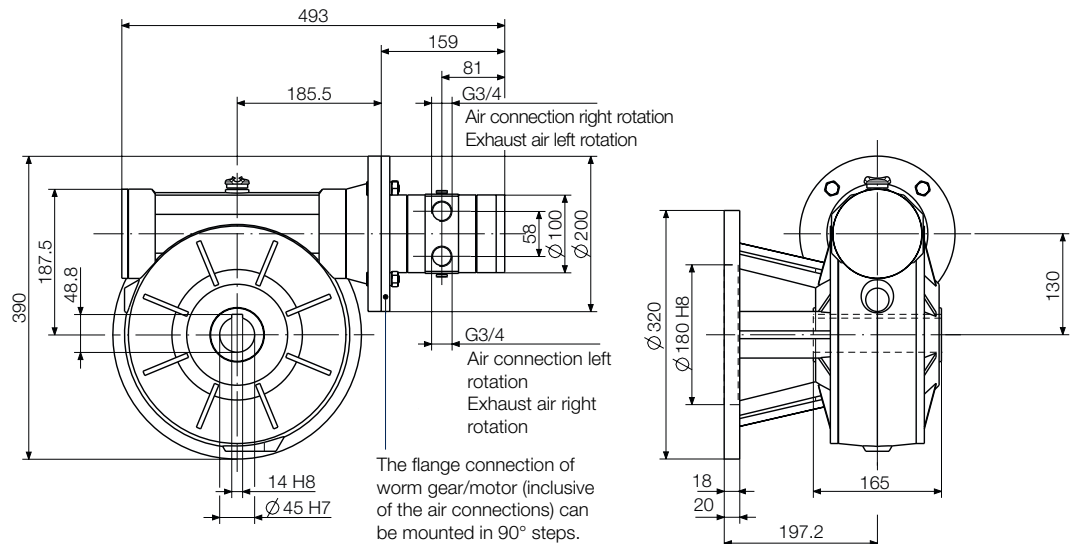
P1V-A320G0006••, worm gear box (G)

Flange on right side



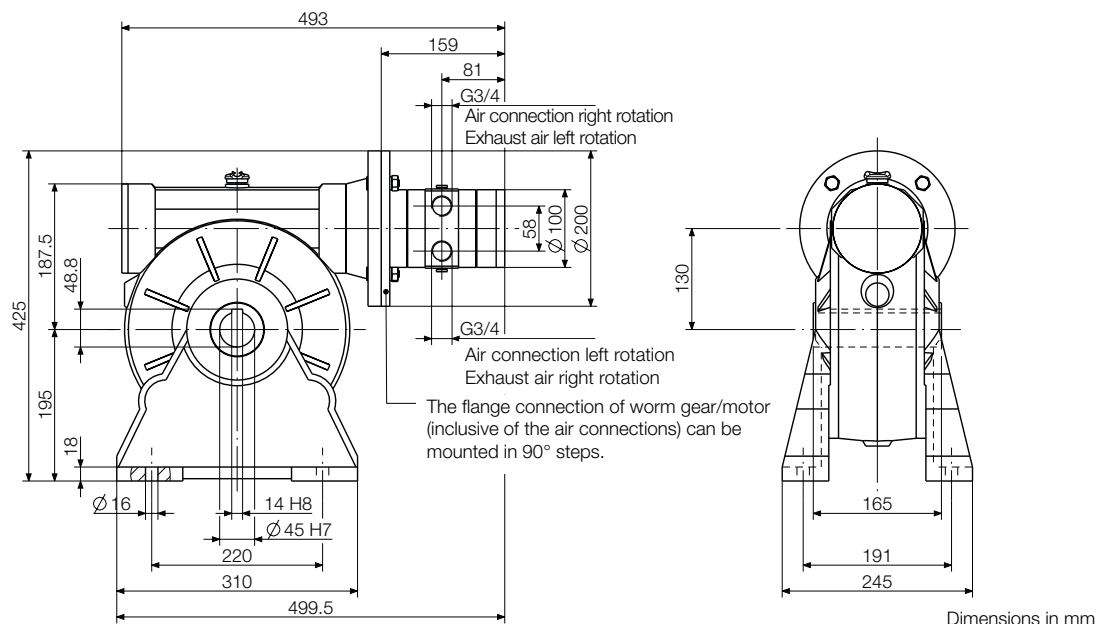
P1V-A320F0006••, worm gear box (F)

Flange on left side



P1V-A320H0006••, worm gear box (H)

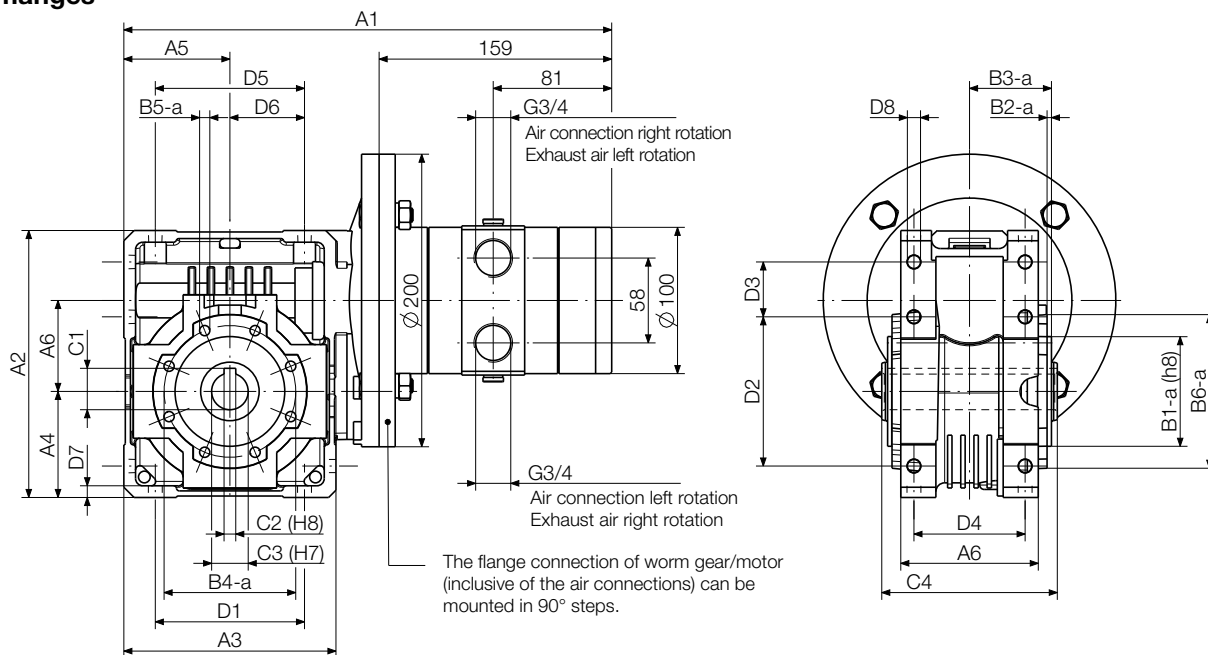
Foot bracket



Dimensions in mm

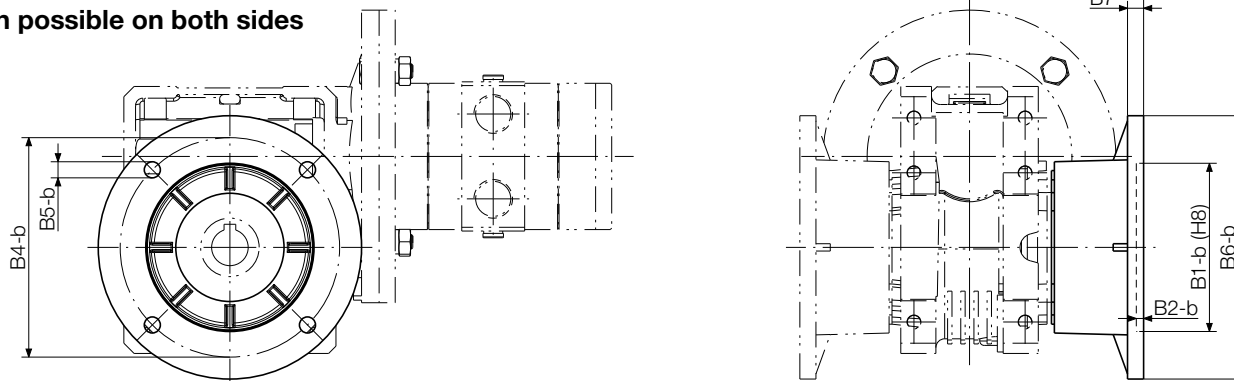
P1V-A320H00••••, worm gear box (H) Universal mounting

Without flanges



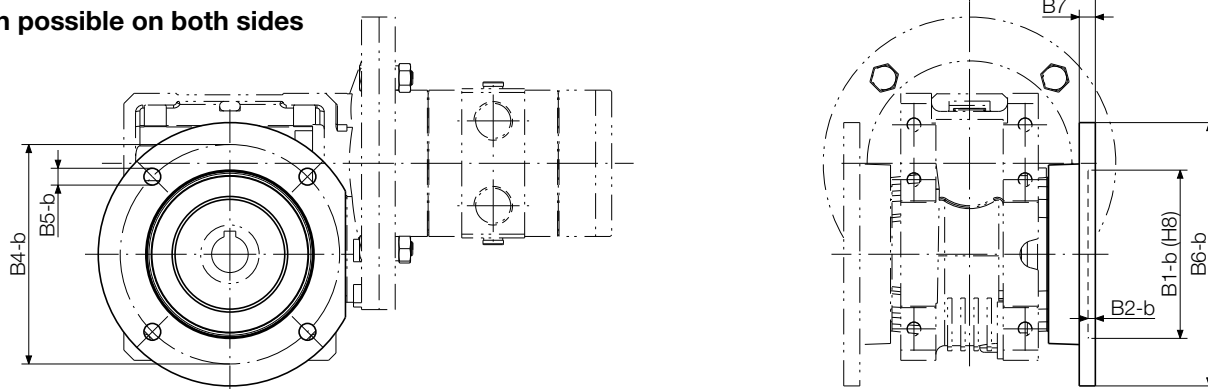
With wide flange

Adaption possible on both sides



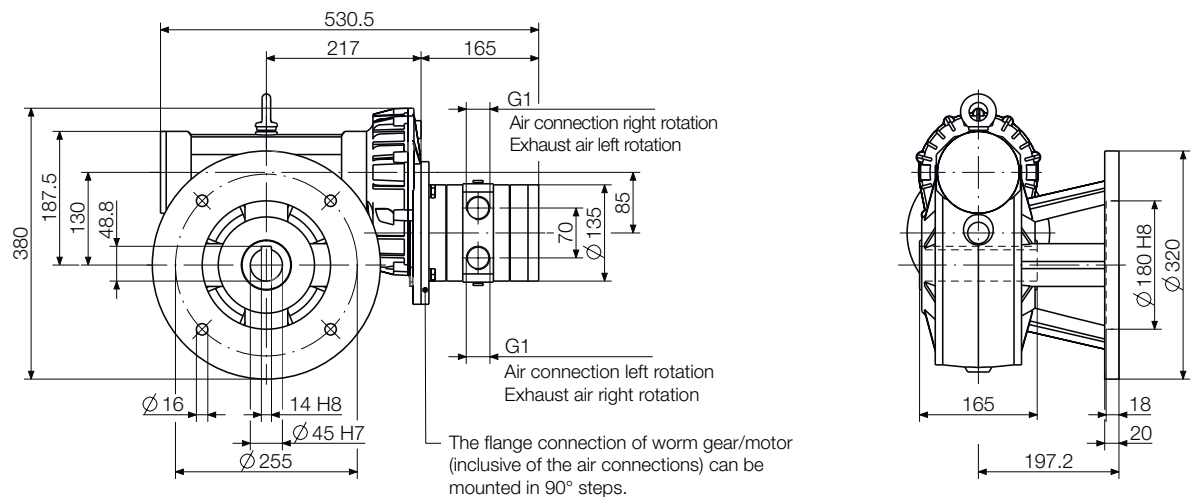
With close flange

Adaption possible on both sides

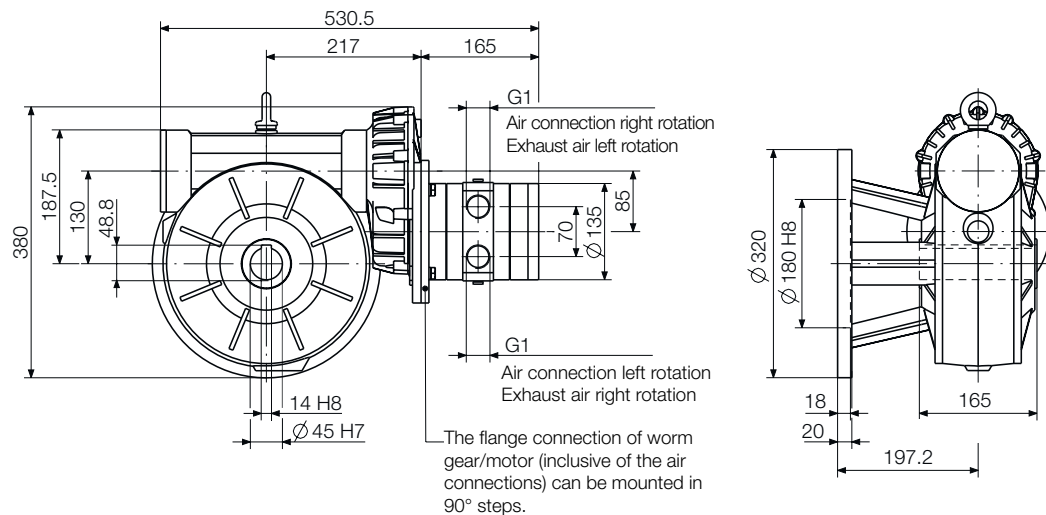


Order code	Dimensions (mm)															
	A1	A2	A3	A4	A5	A6	B1-a	B1-b	B2-a	B2-b	B3-a	B3-b	B3-c	B4-a	B4-b	B5-a
P1V-A320H0050••	334.0	182.5	145.0	72.5	72.5	94.0	75.0	115.0	3.0	5.0	56.0	116.0	86.0	90.0	150.0	M8x14
P1V-A320H0022••	387.0	245.5	200.0	100.0	100.0	125.0	110.0	152.0	3.5	6.0	68.0	151.0	110.5	130.0	176.0	M10x18
P1V-A320H0013••	387.0	245.5	200.0	100.0	100.0	125.0	110.0	152.0	3.5	6.0	68.0	-	110.5	130.0	176.0	M10x18
	B5-b	B6-a	B6-b	B7	C1	C2	C3	C4	D1	D2	D3	D4	D5	D6	D7	D8
P1V-A320H0050••	11.0	105.0	180.0	11.0	28.3	8.0	25.0	120.0	102.0	102.0	37.5	76.0	102.0	51.0	8.0	9.0
P1V-A320H0022••	12.5	150.0	210.0	15.0	38.3	10.0	35.0	140.0	144.0	144.0	45.5	101.0	144.0	72.0	11.0	11.5
P1V-A320H0013••	12.5	150.0	210.0	15.0	38.3	10.0	35.0	140.0	144.0	144.0	45.5	101.0	144.0	72.0	11.0	11.5

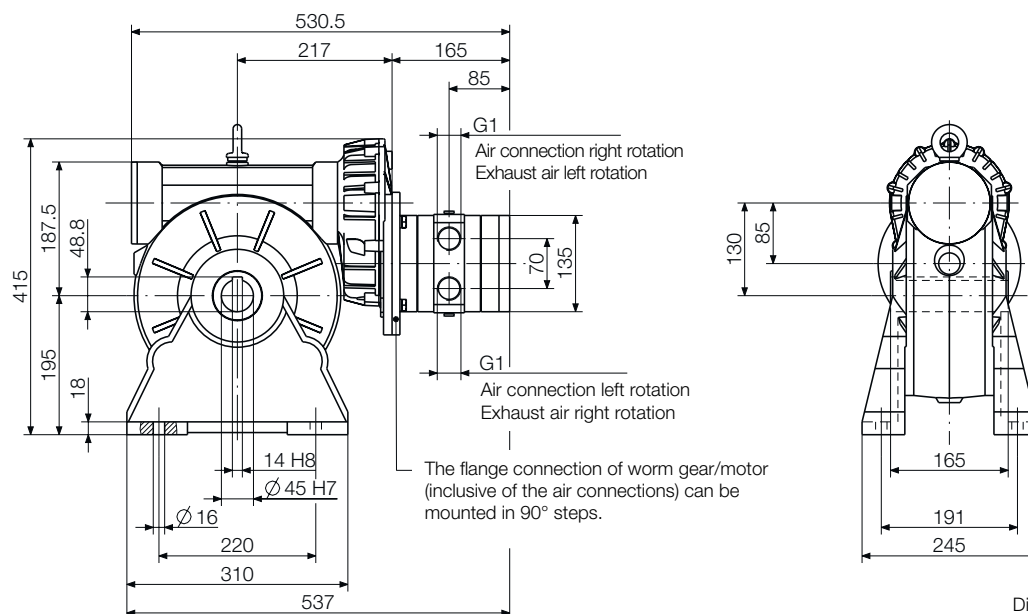
P1V-A500G0006••, worm gear box (G)
Flange on right side



P1V-A500F0006••, worm gear box (F)
Flange on left side



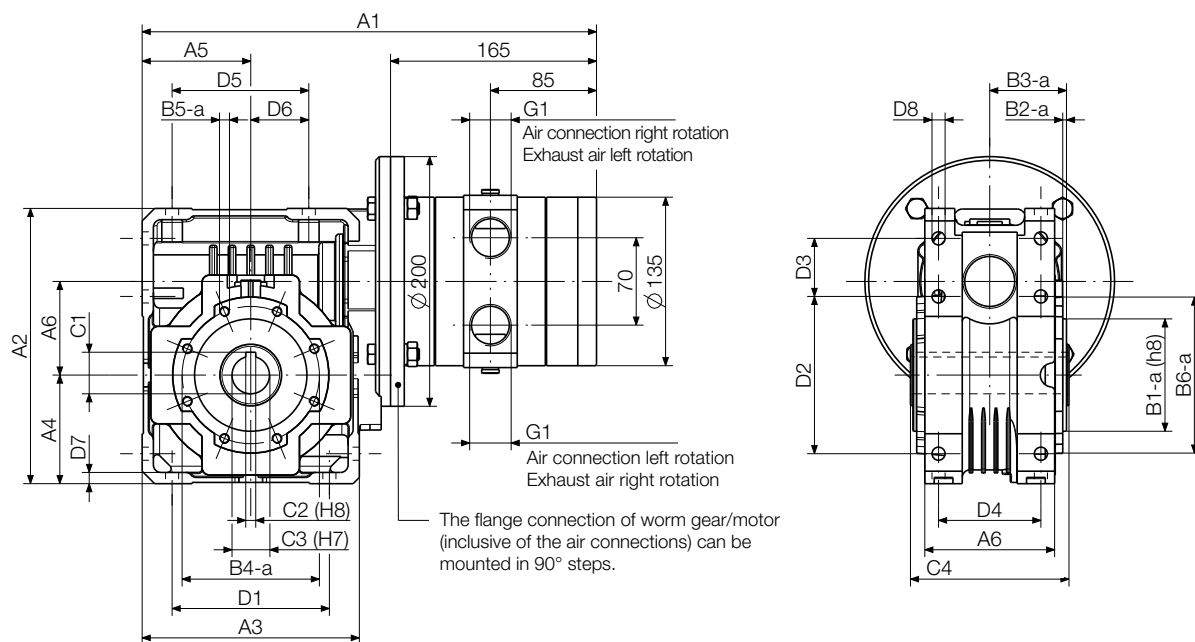
P1V-A500H0006••, worm gear box (H)
Foot bracket



Dimensions in mm

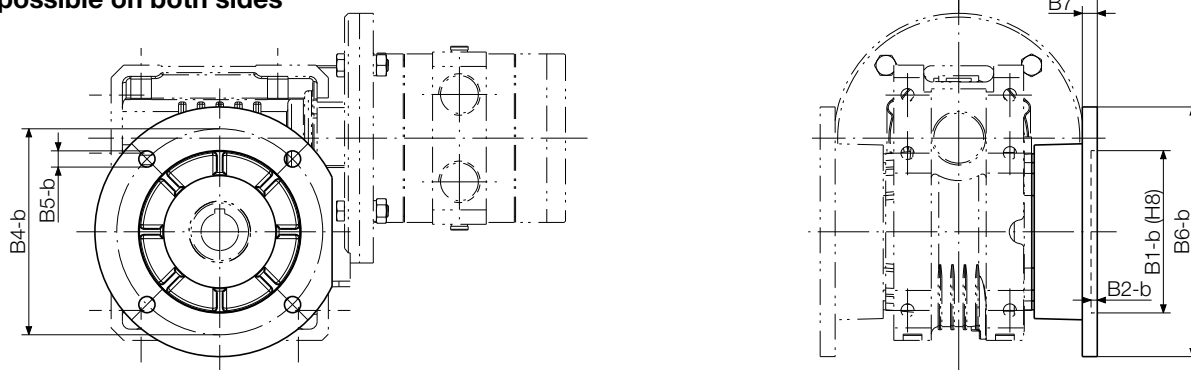
P1V-A500H00••••, worm gear box (H) Universal mounting

Without flanges



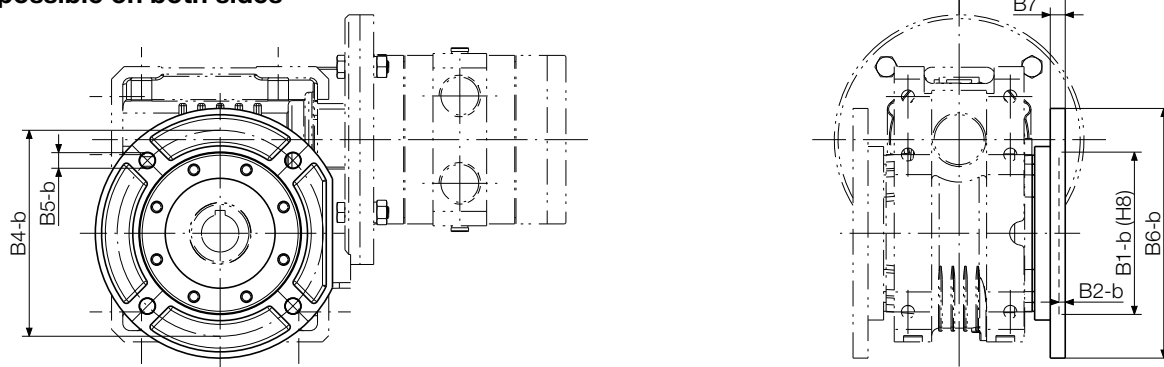
With wide flange

Adaption possible on both sides



With close flange

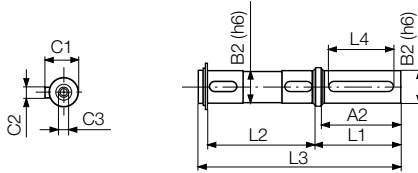
Adaption possible on both sides



Order code	Dimensions (mm)															
	A1	A2	A3	A4	A5	A6	B1-a	B1-b	B2-a	B2-b	B3-a	B3-b	B3-c	B4-a	B4-b	B5-a
P1V-A500H0050••	364.0	220.5	174.0	87.0	87.0	75.0	90.0	130.0	3.0	5.0	61.5	110.0	85.0	110.0	165.0	M8 x 14
P1V-A500H0022••	433.0	308.0	250.0	125.0	125.0	110.1	130.0	170.0	3.5	12.0	76.5	179.5	131.5	165.0	230.0	M12 x 19
P1V-A500H0013••	433.0	308.0	250.0	125.0	125.0	110.1	130.0	170.0	3.5	12.0	76.5	179.5	131.5	165.0	230.0	M12 x 19
	B5-b	B6-a	B6-b	B7	C1	C2	C3	C4	D1	D2	D3	D4	D5	D6	D7	D8
P1V-A500H0050••	12.5	125.0	200.0	12.0	33.3	8.0	30.0	127.0	126.0	126.0	46.5	82.0	109.5	46.5	9.0	10.5
P1V-A500H0022••	13.0	200.0	280.0	20.0	45.3	12.0	42.0	155.0	184.0	184.0	58.0	115.0	174.0	82.0	14.0	14.0
P1V-A500H0013••	13.0	200.0	280.0	20.0	45.3	12.0	42.0	155.0	184.0	184.0	58.0	115.0	174.0	82.0	14.0	14.0

Shafts with keys and additional flanges for motors with worm gear boxes

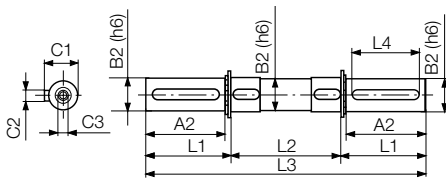
Single-ended shafts with keys for motors with worm gear boxes (F, G, H types)



Order code	for hollow shaft mm	max. radial force N	max. axial force N	Weight kg	Dimensions (mm)								
					A2	B2	C1	C2	C3	L1	L2	L3	L4
9121510242	Ø25 x 82	3450	690	0.6	60.0	25.0	28.0	8.0	M8	65.0	82.0	154.0	50.0
9121510243	Ø25 x 120	5000	1000	0.75	60.0	25.0	28.0	8.0	M8	65.0	120.0	192.0	50.0
P1V-A/107573	Ø30 x 127	6200	1240	0.85	60.0	30.0	33.0	8.0	M10	65.0	127.0	199.0	50.0
9121510244	Ø35 x 140	7000	1400	1.6	60.0	35.0	38.0	10.0	M10	65.0	140.0	214.0	50.0
9121510245	Ø42 x 155	8000	1600	2.8	75.0	42.0	45.0	12.0	M12	80.0	155.0	244.0	60.0
9121510246	Ø45 x 165	13800	2760	3.2	80.0	45.0	48.5	14.0	M12	85.0	165.0	261.0	70.0

C2: UNI 6604, DIN 6885

Double-ended shafts with keys for motors with worm gear boxes (F, G, H types)



Order code	for hollow shaft mm	max. radial force N	max. axial force N	Weight kg	Dimensions (mm)								
					A2	B2	C1	C2	C3	L1	L2	L3	L4
9121510247	Ø25 x 82	3450	690	0.78	60.0	25.0	28.0	8.0	M8	63.2	82.0	208.4	50.0
9121510248	Ø25 x 120	5000	1000	0.98	60.0	25.0	28.0	8.0	M8	63.2	120.0	246.4	50.0
P1V-A/813122	Ø30 x 127	6200	1240	1.11	60.0	30.0	33.0	8.0	M10	64.0	127.0	255.0	50.0
9121510249	Ø35 x 140	7000	1400	2.08	60.0	35.0	38.0	10.0	M10	64.0	140.0	268.0	50.0
9121510250	Ø42 x 155	8000	1600	3.64	75.0	42.0	45.0	12.0	M12	79.2	155.0	313.4	60.0
9121510251	Ø45 x 165	13800	2760	4.16	80.0	45.0	48.5	14.0	M12	84.7	165.0	334.4	70.0

C2: UNI 6604, DIN 6885

Material specification

Shaft	High grade steel
Key	Hardened steel

Wide Flanges for motors with worm gear boxes (F, G, H types)



Gear box type & size	Order code Wide flange	Dimensions (mm)									
		B6-b	B1-b(H8)	B2-b	B3-b	B4-a	B4-b	B5-a	B5-b	B6-a	B7
W63U	P1V-A/830929	180.0	115.0	5.0	116.0	90	150.0	M8x14	11.0	105.0	11.0
W75U	P1V-A/834335	210.0	152.0	6.0	151.0	130	176.0	M10x18	12.5	150.0	15.0
W86U	P1V-A/830931	210.0	152.0	6.0	-	130	176.0	M10x18	12.5	150.0	15.0
W110U	P1V-A/830934	280.0	170.0	12.0	179.5	165.0	230.0	M12x19	13.0	200.0	20.0

Kit contains the flange and the screws to fix on the gear box

Close Flanges for motors with worm gear boxes (F, G, H types)



Gear box type & size	Order code Wide flange	Dimensions (mm)									
		B6-b	B1-b(H8)	B2-b	B3-b	B4-a	B4-b	B5-a	B5-b	B6-a	B7
W63U	P1V-A/830930	180.0	115.0	5.0	116.0	90	150.0	M8x14	11.0	105.0	11.0
W75U	P1V-A/106042	210.0	152.0	6.0	151.0	130	176.0	M10x18	12.5	150.0	15.0
W86U	P1V-A/830932	210.0	152.0	6.0	-	130	176.0	M10x18	12.5	150.0	15.0
W110U	P1V-A/830935	280.0	170.0	12.0	179.5	165.0	230.0	M12x19	13.0	200.0	20.0

Kit contains the flange and the screws to fix on the gear box

Material specification

Flange	Aluminium
Screws	Zinc coated steel

Lubrication and service life

Oil and oil mist are things which one tries to avoid to get the best possible working environment. In addition, purchasing, installation and maintenance of oil mist equipment costs money and, above all, time to achieve optimum lubrication effect.

The P1V-A motor is equipped with vanes for intermittent operation as standard for most common applications.

Service interval



The first service is due after approximately 500 hours of operation. After the first service, the service interval is determined by the degree of vane wear.

The following normal service intervals should be applied to in order to guarantee problem-free operation in air motors working continuously at load speeds.

Intermittent lubrication operation

Duty cycle	70%
Max. duration of intermittent use	15 minutes
Oil volume	1 drop oil/Nm ³
Filtering 40 µm	app. 750 hours operation
Filtering 5 µm	app. 1,000 hours operation

Continuous lubrication operation

Oil volume	1 drop oil/Nm ³
Filtering 40 µm	app. 1,000 hours operation
Filtering 5 µm	app. 2,000 hours operation

Continuous lubrication operation

Oil volume	Oil free
Filtering 40 µm	app. 750 hours operation
Filtering 5 µm	app. 1,000 hours operation

Standard vanes (0, D):

For intermittent lubrication-free operation.

They can operate 70% of the time for up to 15 minutes without lubrication.

With lubrication, these motors can operation 100% of the time.

"Black" vanes (C, E):

For continuous lubrication-free operation.

(To obtain the longest possible service life, we recommend no oil in the air.)

Service kits

The following kits are available for the basic motors, consisting of vanes, O-rings and springs:

Motor type	Motor power Watt	Order code	
		Vanes for intermittent lubrication operation, options "O & D"	Vanes for continuous lubrication operation, options "C & E"
P1V-A160A0900	1600	P1V-6/4450331B	P1V-6/4450332B
P1V-A160D0300	1600	P1V-6/4450331D	P1V-6/4450332D
P1V-A160B0140	1600	P1V-6/4450331E	P1V-6/4450332E
P1V-A160B•••••	1600	P1V-6/4450331B	P1V-6/4450332B
P1V-A160H••••••	1600	P1V-6/4450331B	P1V-6/4450332B
P1V-A160F••••••	1600	P1V-6/4450331B	P1V-6/4450332B
P1V-A160G••••••	1600	P1V-6/4450331B	P1V-6/4450332B
P1V-A160D••••••	1600	P1V-6/4450331B	P1V-6/4450332B
P1V-A160E••••••	1600	P1V-6/4450331B	P1V-6/4450332B
P1V-A320A0700	3200	P1V-6/4450341B	P1V-6/4450342B
P1V-A320D0300	3200	P1V-6/4450341D	P1V-6/4450342D
P1V-A320B0140	3200	P1V-6/4450341E	P1V-6/4450342E
P1V-A320B0060	3200	P1V-6/4450341B	P1V-6/4450342B
P1V-A320H••••••	3200	P1V-6/4450341B	P1V-6/4450342B
P1V-A320F••••••	3200	P1V-6/4450341B	P1V-6/4450342B
P1V-A320G••••••	3200	P1V-6/4450341B	P1V-6/4450342B
P1V-A320D••••••	3200	P1V-6/4450341B	P1V-6/4450342B
P1V-A320E••••••	3200	P1V-6/4450341B	P1V-6/4450342B
P1V-A500A0600	5000	P1V-6/4450351B	P1V-6/4450352B
P1V-A500D0300	5000	P1V-6/4450351D	P1V-6/4450352D
P1V-A500B0145	5000	P1V-6/4450351E	P1V-6/4450352B
P1V-A500H••••••	5000	P1V-6/4450351B	P1V-6/4450352B
P1V-A500F••••••	5000	P1V-6/4450351B	P1V-6/4450352B
P1V-A500G••••••	5000	P1V-6/4450351B	P1V-6/4450352B
P1V-A500D••••••	5000	P1V-6/4450351B	P1V-6/4450352B
P1V-A500E••••••	5000	P1V-6/4450351B	P1V-6/4450352B
P1V-A600A0700	6000	P1V-6/4450351B	P1V-6/4450352B
P1V-A600D0350	6000	P1V-6/4450351D	P1V-6/4450352D
P1V-A600B0160	6000	P1V-6/4450351E	P1V-6/4450352E
P1V-A900A0600	9000	P1V-6/440246C	-
P1V-AJ00A0600	18000	P1V-6/440246B	-

••••• Rest of the air motor order code

For more information about our maintenance services, please contact your local parker sales office.