

AF

Compact actuator AF Series

Specifications

		Solid type							Hollow shaft type					
		AF017N	AF042N	AF080N	AF125N	AF380N*3	AF500N	AF050C	AF120C	AF200C*3	AF320C			
Actuator														
Motor	Motor model	-	MHMF042	MDMF102	MDMF102	MDMF152	MDMF202	MHMF302	MDMF402	MDMF402	MDMF102	MDMF202	MHMF302	MHMF502
	Motor rated capacity	kW	0.4	1.0	1.0	1.5	2.0	3.0	4.0	4.0	1.0	2.0	3.0	5.0
	Speed ratio	-	81	126	126	126	129	102.18 (1737/17)	217.86 (1525/7)	252.33 (757/3)	120.47 (2289/19)	120	155.96	157
	Rated torque	Nm	82*2	415	481	722	986	1,169	3,329	3,856	460	917	1,784	3,002
	Momentary max. torque	Nm	289	415	1,029	1,029	1,960	3,062	9,310	11,567	1,225	2,746	4,900	7,840
	Rated output speed	min ⁻¹	37.0	15.9	15.9	15.9	15.5	19.6	9.2	7.9	16.6	16.7	12.8	12.7
	Momentary max. speed	min ⁻¹	80.2	31.7	31.7	31.7	31.0	39.1	17.4	15.1	33.2	33.3	25.6	22.3
	Backlash	arc.min.	≤1	≤1	≤1	≤1	≤1	≤1	≤1	≤1	≤1	≤1	≤1	≤1
	Allowable load inertia moment	kgm ²	11	117	117	164	221	473	2472	3311	84	158	1057	1763
	Motor brake	-	With/Without	With	With	With	With	With	With	Without	Without	Without	With	With
	Allowable moment	Nm	784	784	1,660	1,660	2,150	3,430	7,050	11,000	1,764	3,920	8,820	20,580
	Mass	kg	7.2 (6.8)	15	16	17	26	39.7	75.1	91.1	32	43	113	164
	Motor torque limit*1	%	350	86	214	142	198	261	279	300	266	299	274	261
Compatible servo driver														
A6SE : Basic type			MBDLN25SE	MDDL45SE	MDDL45SE	MDDL55SE	MEDLN83SE	MFDLN3SE	MFDLN3SE	MFDLN3SE	MDDL45SE	MEDLN83SE	MFDLN3SE	MFDLN3SE
A6SG : RS485 communication type			MBDLN25SG	MDDL45SG	MDDL45SG	MDDL55SG	MEDLN83SG	MFDLN3SG	MFDLN3SG	MFDLN3SG	MDDL45SG	MEDLN83SG	MFDLN3SG	MFDLN3SG
A6SF : Multifunction type			MBDLT25SF	MDDL45SF	MDDL45SF	MDDL55SF	MEDLT83SF	MFDLT3SF	MFDLT3SF	MFDLT3SF	MDDL45SF	MEDLT83SF	MFDLT3SF	MFDLT3SF
A6NE : RTEX network standard type			MBDLN25NE	MDDL45NE	MDDL45NE	MDDL55NE	MEDLN83NE	MFDLN3NE	MFDLN3NE	MFDLN3NE	MDDL45NE	MEDLN83NE	MFDLN3NE	MFDLN3NE
A6NF : RTEX network multi function			MBDLT25NF	MDDL45NF	MDDL45NF	MDDL55NF	MEDLT83NF	MFDLT3NF	MFDLT3NF	MFDLT3NF	MDDL45NF	MEDLT83NF	MFDLT3NF	MFDLT3NF
A6BE : EtherCAT network standard type			MBDLN25BE	MDDL45BE	MDDL45BE	MDDL55BE	MEDLN83BE	MFDLN3BE	MFDLN3BE	MFDLN3BE	MDDL45BE	MEDLN83BE	MFDLN3BE	MFDLN3BE
A6BF : EtherCAT network multi function			MBDLT25BF	MDDL45BF	MDDL45BF	MDDL55BF	MEDLT83BF	MFDLT3BF	MFDLT3BF	MFDLT3BF	MDDL45BF	MEDLT83BF	MFDLT3BF	MFDLT3BF

*1 Set the torque limit of the servo amplifier so that the torques does not exceed the momentary maximum torque of the compact actuator.

*2 Value calculated from the rated torque of the motor when the ambient temperature is 20°C. When the ambient temperature is 40°C, the torque will be 75% of the rated torque.

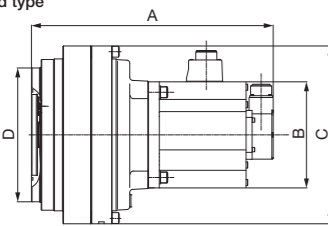
*3 Please contact us for the release date.

Dimensions

		Solid type							Hollow shaft type					
Part	Unit	AF017N (0.4kW)	AF017N (1.0kW)	AF042N (1.0kW)	AF042N (1.5kW)	AF080N	AF125N	AF380N	AF500N	AF050C	AF120C	AF200C	AF320C	
A	mm	218.3/189 With/Without	249.2	255	269	293.4	331.4	384.15	390	303	354.1	467.5	508.5	
B	mm	□130	□130	□130	□130	□130	□176	□176	□176	φ48	φ61	φ75	φ120	
C	mm	φ133	φ133	φ159	φ159	φ189	φ221	φ295	φ325	284	317.5	418	491.5	
D	mm	φ94h7	φ94h7	φ118h7	φ118h7	φ140h7	φ160h7	φ222h7	φ253h7	φ176h7	φ199h7	φ260h7	φ340h7	

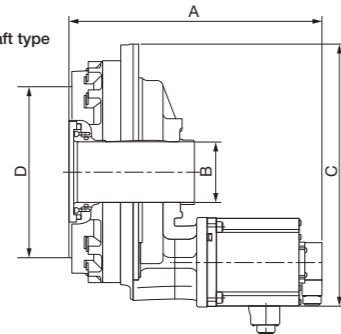
AF-N

Solid type



AF-C

Hollow shaft type



Nabtesco

Nabtesco Corporation

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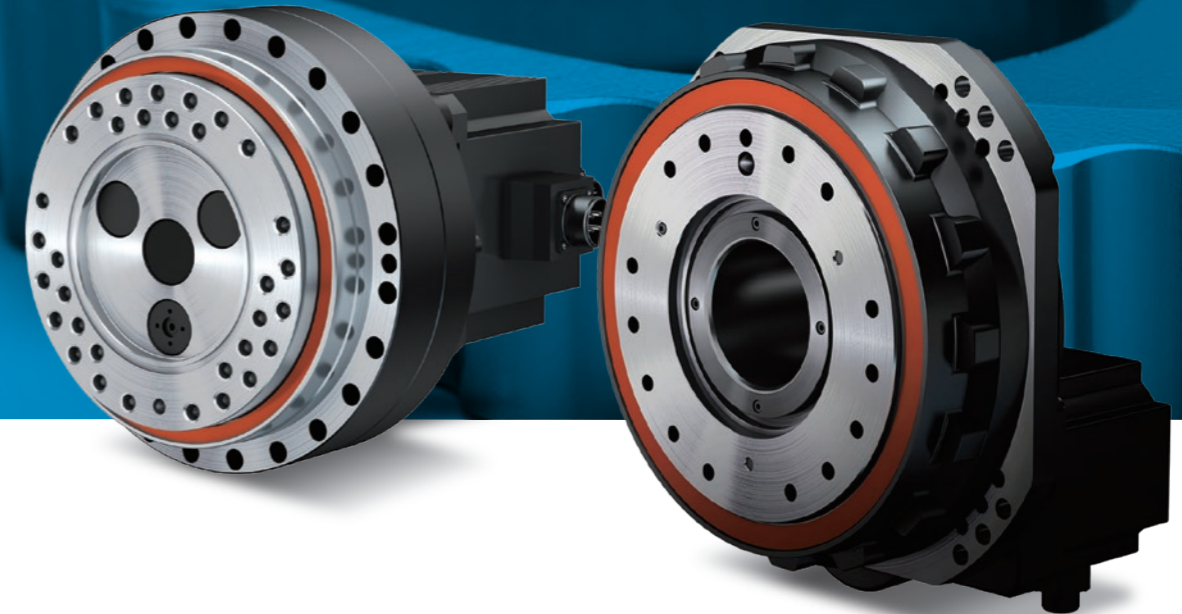
RV[®]

Precision Reduction Gear RV[™]
Compact actuator

AF

AF Series

ALL in ONE



All models include Panasonic MINAS A6 AC servomotors

Maximum speed*
MAX 33% UP

Allowable load inertia*
MAX 349% UP

Encoder resolution*
17bit → 23bit

*Compared with previous models.

Nabtesco

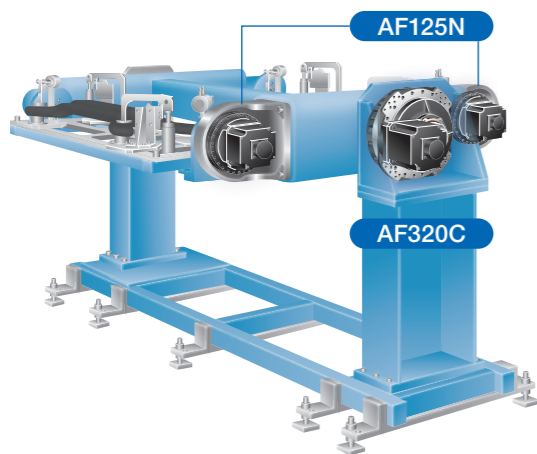
AF Series

Features

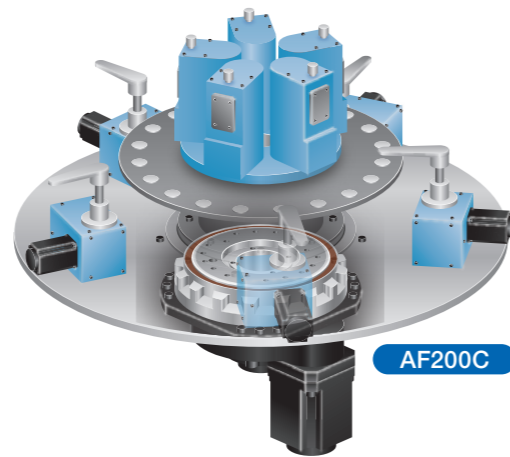
- Servomotor from Panasonic Corporation (attached)
- Pre-lubricated with grease
- Solid shaft & hollow shaft
- High accuracy (backlash ≤ 1 arc.min.)
- Compact



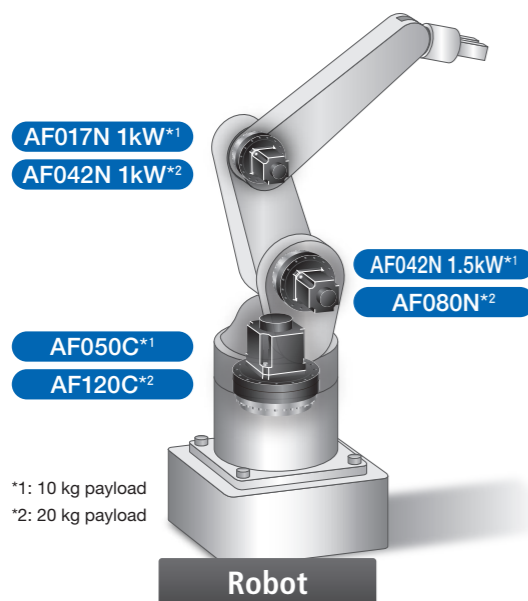
Main Applications



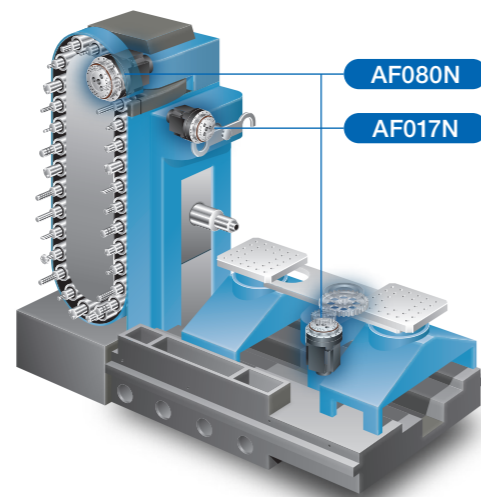
Positioner for automobile parts



Indexer



Robot



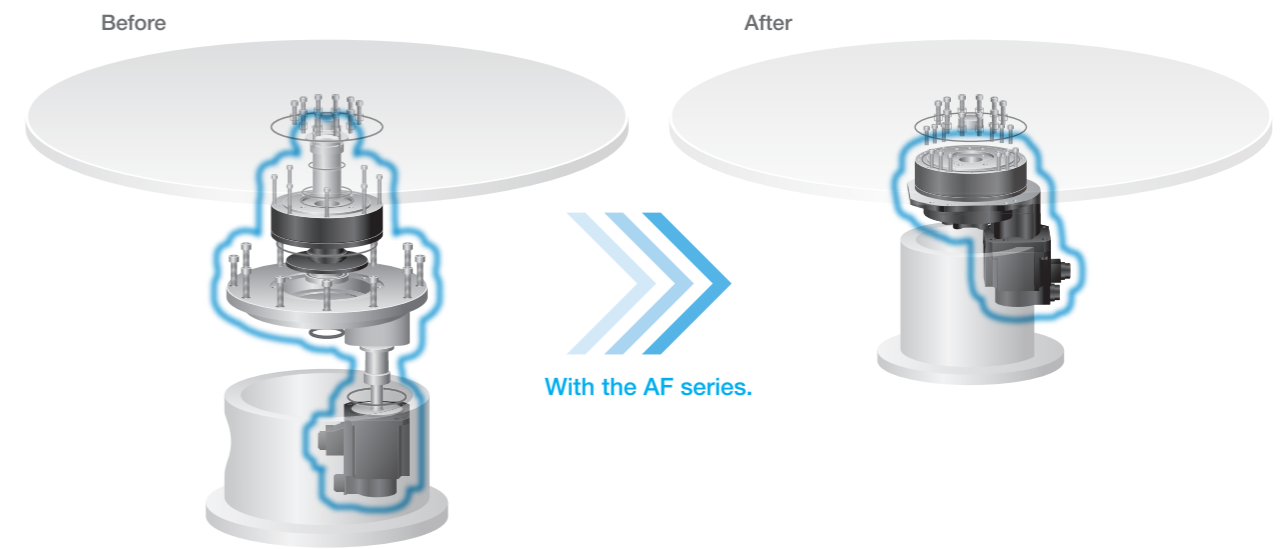
Machine Tools

*1: 10 kg payload
*2: 20 kg payload

The examples above are reference only. The model must be selected based on the requirements for the system it will be used in.

Benefits

Reduction of Required Parts & Assembly Time

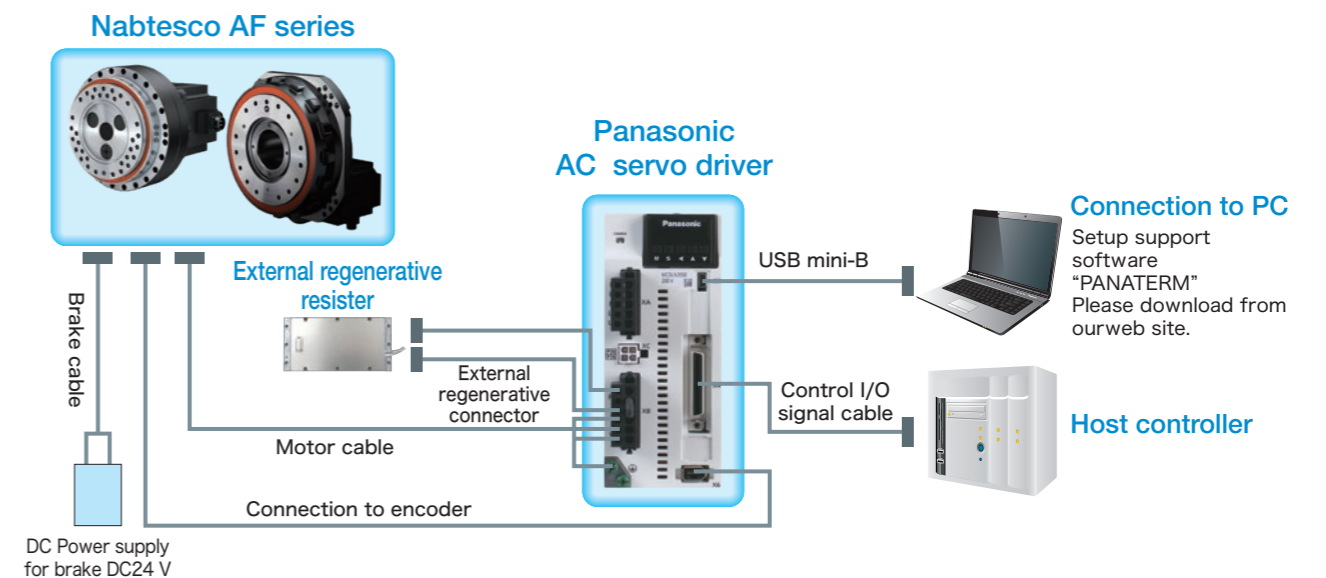


More parts means more time needed for design / assembly. Also requires lubrication and sealing.

Reduced Man-hours

Integrated design is easy to install. Comes pre-lubricated with grease.

Overall Wiring



New two-degree-of-freedom control system

Frequency response 3.2 kHz

Built-in filters and adjusting functions

PANATERM Support

Modbus Support (A6SF, A6SG Series)