



ISO 9001
JQA-1190



VIGO SERVO™

High Performance,
Single Axis Positioning Actuator

AR SERIES



Nabtesco

The *AR* SERIES is the most powerful ALL-In-One Single Axis Component

Nabtesco offers a state-of-the-art Single Axis Actuator packed with the latest technology.

■ ***Compact Integrated Design***

The servo actuator integrates the main bearing, reduction gear, servo motor, holding electromagnetic brake and encoder into a flat and compact single unit. It is capable of supporting heavy loads and precise indexing is performed.

- Reduces equipment size
- Reduces number of design components

■ ***Rigid, high precision reduction gear in a single unit design.***

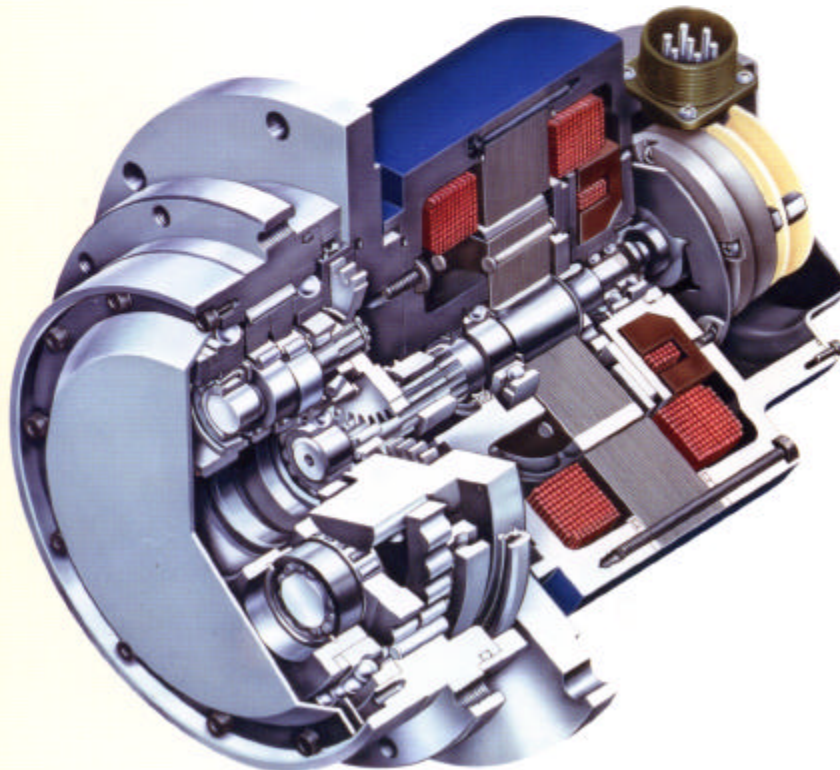
The reduction gears used in the servo actuator are maintenance free RV and GH reduction gears. Over 1 million of these rigid, high precision and highly reliable reduction gears are used in industrial robots and machine tools all over the world.

■ ***Servo amplifier with built-in indexing controller***

- Indexing initiated by simply inputting start signal
- Indexing data can be set up to accommodate 255 addresses
- Indexing data easily set without consideration of mechanical reduction ratio

■ ***Endless rotational indexing is available - even with an absolute encoder***

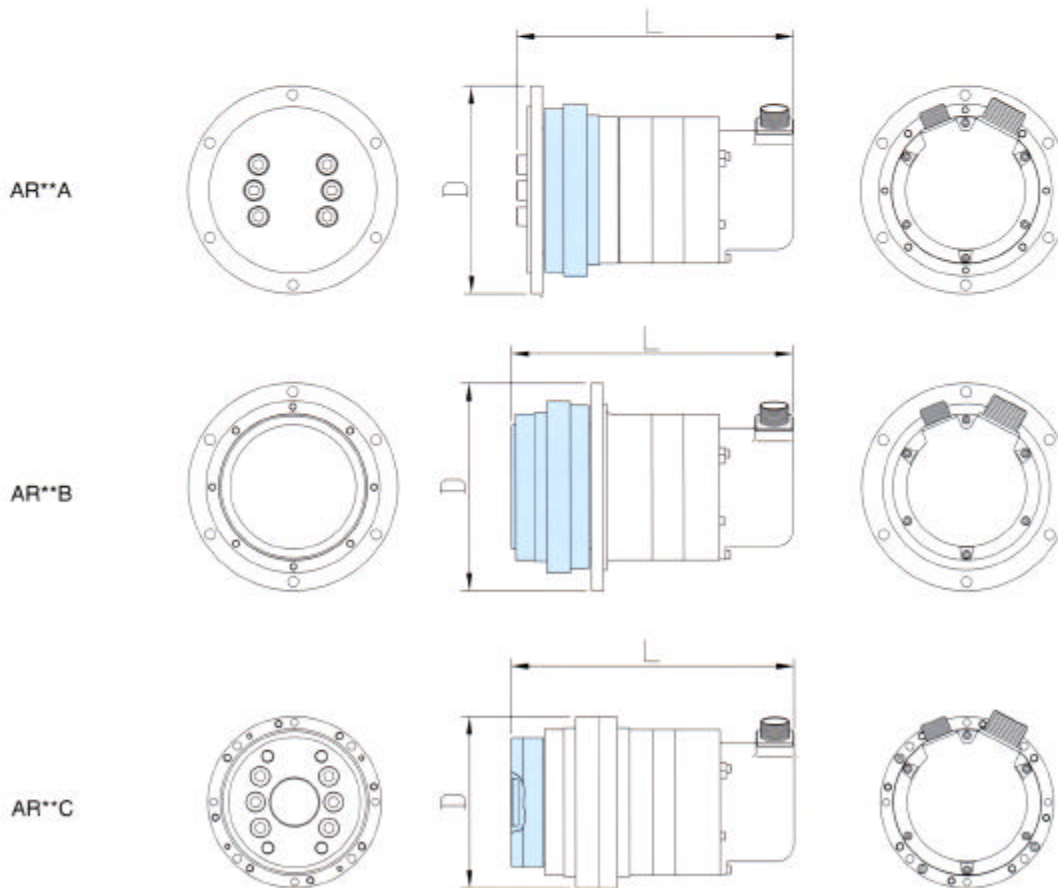
Absolute encoder does not have a rotational limit.



■ High torque type specification

Servo Actuator Frame Number	AR15					AR30					AR60					AR135					
	High torque type																				
Motor Output (kw)	0.4					0.8					1.5					2.5					
Reduction gear frame no.	RV15AII					RV40E					RV80E					RV160E					
Reduction gear ratio	56	80	104	120	140	56	80	104	120	152	65	80	100	120	152	80	100	128	144	170	
Rated output torque (Nm)	66	94	122	141	167	132	188	245	282	363	304	376	470	564	715	753	941	1204	1352	1599	
Maximum torque (Nm)	263	274	274	274	274	461	659	856	988	1029	1019	1254	1568	1882	1960	2258	2822	3613	3920	3920	
Maximum output rotation speed (rpm)	54	38	29	25	21	54	38	29	25	20	46	38	30	25	20	31	25	20	17	15	
Back lash (arc min)	1																				
Allowable thrust load (N)	1960					5194					7840					14700					
Allowable moment (Nm)	608					1666					1735					3920					
Brake torque (Nm)	86	115	143	162	186	212	282	353	400	494	451	539	657	774	962	1051	1286	1615	1803	2019	
Speed/position detector	Absolute type: 2048 x 4 pulse/rev.										Incremental type: 2000 x 4 pulse/rev.										
Weight (kg)	12.5					27					37.5					73.5					
Servo amplifier frame no.	ARN15					ARN30					ARN60					ARN135					
Power supply	3 phase AC200 ~ 230v +10% -15% 50/60Hz																				
Dimensions L/D (mm)	AR**A	235 / 175					263 / 230					285 / 260					336 / 325				
	AR**B	239 / 175					268 / 230					292 / 260					342 / 325				
	AR**C	240 / 145					270 / 190					291 / 222					344 / 280				

The specification which conforms the UL and EN standards has a different connector shape than that shown below.
For the reduction gear ratio of the type C, the value shown in the table must be incremented by 1.

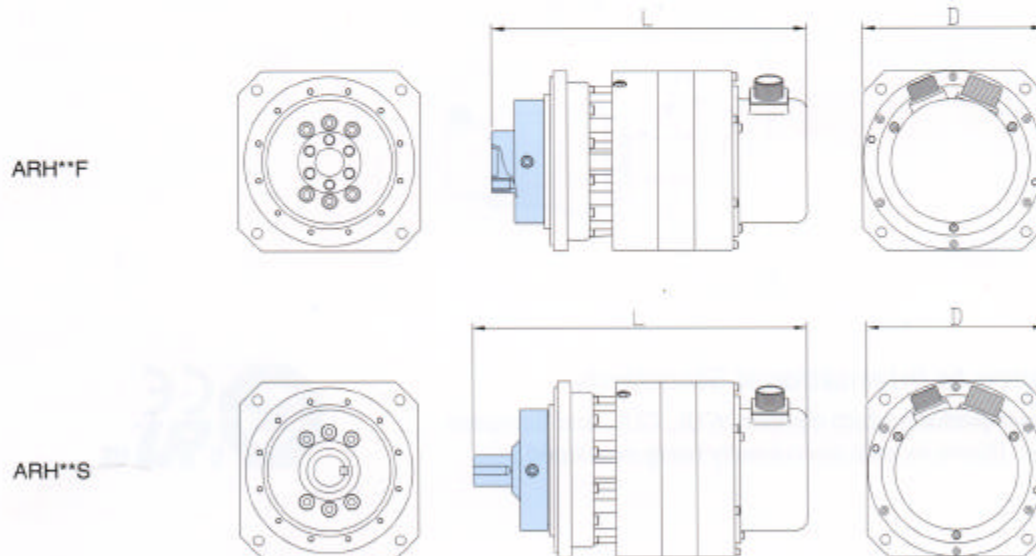


■ indicates the sections which rotate.

High speed type - Hollow type specification

Servo Actuator Frame Number	ARH7			ARH17			ARH24			
	High torque type									
Motor Output (kw)	0.8			1.5			2.5			
Reduction gear frame no.	GH7			GH17			GH24			
Reduction gear ratio	461/41	21	153/5	11	21	31	11	21	31	
Rated output torque (Nm)	26	49	73	52	99	146	103	198	292	
Maximum torque (Nm)	91	173	206	172	329	486	310	593	696	
Maximum output rotation speed (rpm)	273	143	97	273	143	97	227	119	81	
Back lash (arc min)	6									
Allowable thrust load (N)	1470			1960			2940			
Allowable moment (Nm)	461			804			843			
Brake torque (Nm)	60	89	119	81	157	225	167	314	461	
Speed/position detector	Absolute type: 2048 x 4 pulse/rev. Incremental type: 2000 x 4 pulse/rev.									
Weight (kg)	19			33			51			
Servo amplifier frame no.	ARN30			ARN60			ARN135			
Power supply	3 phase AC200 ~ 230v +10% -15% 50/60Hz									
Dimensions L/D (mm)	ARH**F	278 / 160			307 / 190			336 / 240		
	ARH**S	300 / 160			350 / 190			395 / 240		

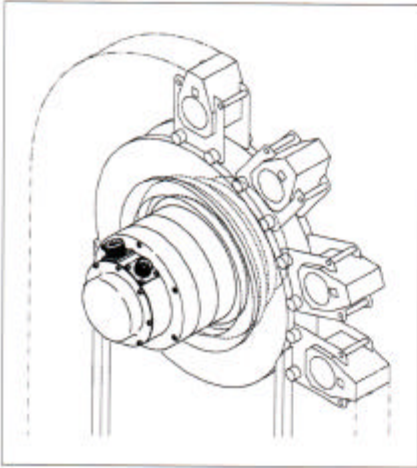
Specifications which conforms UL and EN standards has connector with different configuration than shown below.



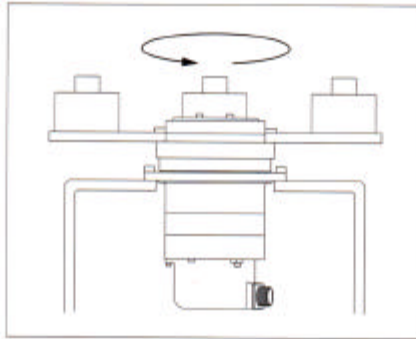
■ **Application Examples**

The AR series is suited for ATC magazines and welding positioners, etc, which need multi-rotation without origin return. Short-cut/random indexing operation is also available.

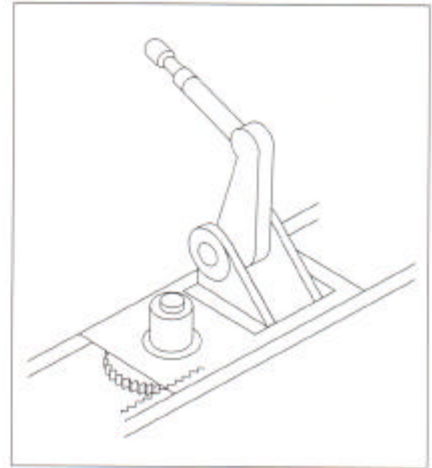
ATC Magazine
AR**A



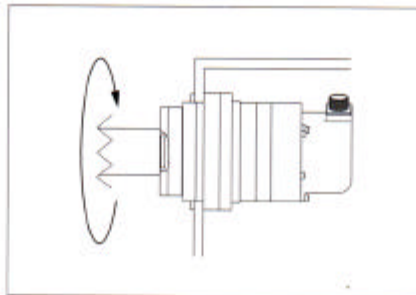
Assembly table
AR**B



Robot drive
ARH**



Head stock
AR**C

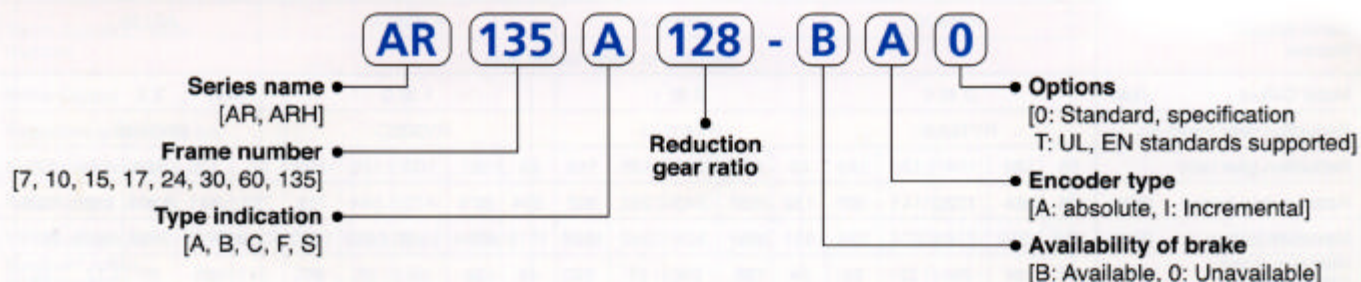


■ **Conformance to International Standards**

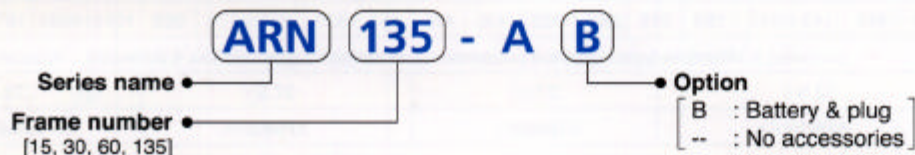
There is a line-up of products which conform to UL, CUL, and European Safety Standards. (Some models are currently being developed.)



■ Servo actuator model code chart



■ Servo amplifier model code chart



■ Battery model display

21EP002 Required when using the absolute encoder.

Please contact us for more information and ordering assistance for the AR series.

Nabtesco

• Nabtesco Precision USA Inc.

28850 Cabot Drive, Suite 300, Novi, Michigan 48377, USA
 PHONE: 1-248-538-9165 FAX: 1-248-538-9170
 E-MAIL: info@nabtesco-precision.com
 HomePage : www.nabtesco-precision.com

• Nabtesco Precision Europe GmbH

Klosterstraße 49, D-40211 Düsseldorf, Germany
 PHONE: 49-211-173790 FAX: 49-211-364677
 E-MAIL: info@nabtesco-precision.de
 HomePage : www.nabtesco-precision.de

• Nabtesco corporation Tokyo Head Office

9-18, Kaigan 1-chome, Minato-ku, Tokyo 105-0022, Japan
 PHONE: 81-3-3578-7461 FAX: 81-3-3578-7471
 E-MAIL: P_information@nabtesco.com
 HomePage : www.nabtesco.com

• Nabtesco corporation Tsu Plant

594 Ichimachida, Katada-cho, Tsu-shi, Mie Pref. 514-8533, Japan
 PHONE: 81-59-237-4600 FAX: 81-59-237-4610

• Specifications are subject to change without notice.

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