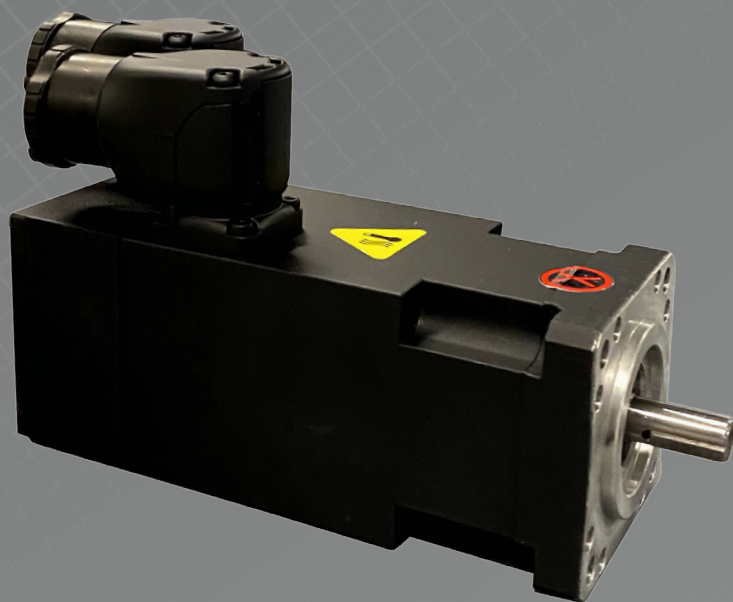
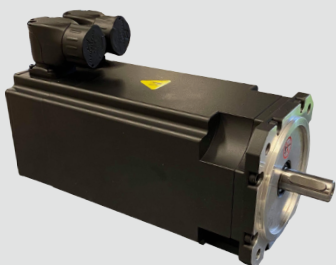
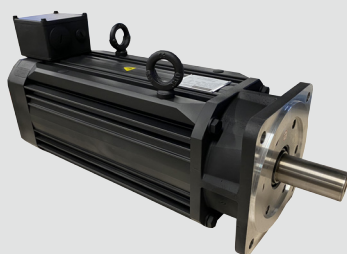


BRUSHLESS AC SERVOMOTORS



AR / ARS SERIES

V12.0.0

CODIFICATION

AR 115E6 - 130S - 000 - 00

- 1 Flange(mm)

2 Motor length

3 Number of poles
- 4 Voltage/1000tr/min

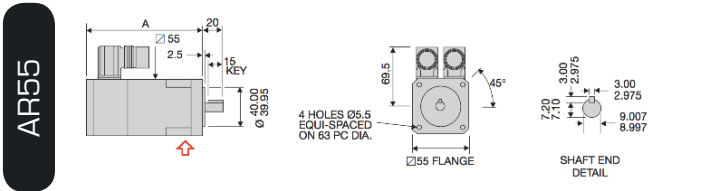
5 Brake
0 = Without
1 = With
- 6 Encoder
0 = Resolver
1 = 2048pts
2 = 2500pts
...9
A = BissC
B = Endat
C = Hyperface

7 Connectors
0 = M17
1 = M23
2 = etc.

8 Shaft
K = Keyway
D = Tapped shaft

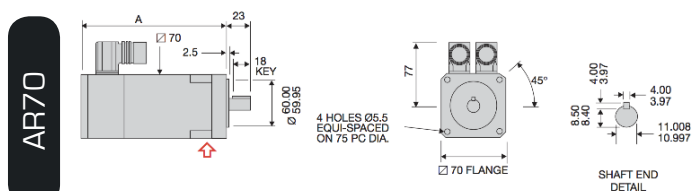
The AR series of servomotors combine Neodymium Iron Boron magnets with low inertia rotors, giving cost effective performance. Also ARS shortened version in 92 to 142 frame

PLAN 2D



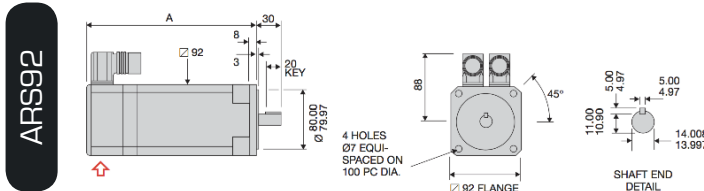
Dimension	Motor type AR55	A	C	G
'A'	Without brake	122	140	176
	With brake	158	176	212

FOR INCREMENTAL ENCODER ADD 30mm TO DIMENSION 'A'
FOR ABSOLUTE ENCODER ADD 30mm TO DIMENSION 'A'



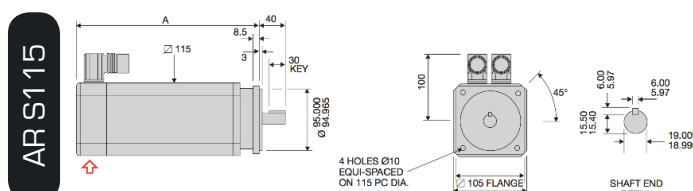
Dimension	Motor type AR70	A	C	E
'A'	Without brake	131	158	185
	With brake	158	185	212

FOR INCREMENTAL ENCODER ADD 18mm TO DIMENSION 'A'
FOR ABSOLUTE ENCODER ADD 28mm TO DIMENSION 'A'



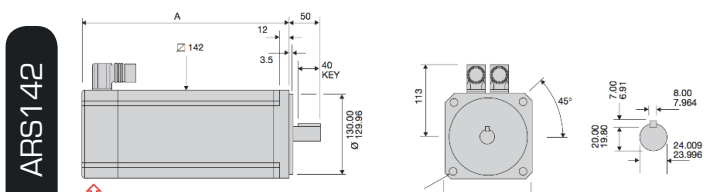
Dimension	Motor type ARS92	C	E	G	J
'A'	Without brake	160	180	200	220
	With brake	200	220	240	260

FOR INCREMENTAL ENCODER ADD 20mm TO DIMENSION 'A'
FOR ABSOLUTE ENCODER ADD 30mm TO DIMENSION 'A'



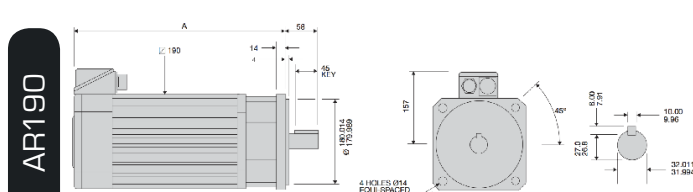
Dimension	Motor type AR115	A	B	C	E
'A'	Without brake	189	209	229	269
	With brake	209	229	249	289

FOR INCREMENTAL ENCODER ADD 23mm TO DIMENSION 'A'
FOR ABSOLUTE ENCODER ADD 33mm TO DIMENSION 'A'



Dimension	Motor type AR142	C	E	G	J
'A'	Without brake	236	276	316	361
	With brake	276	316	356	401

NO ADDITIONAL LENGTH FOR INCREMENTAL OR ABSOLUTE ENCODERS



Dimension	Motor type AR190	C	E	G	J
'A'	Without brake	378	418	458	498
	With brake	378	418	458	498

NO ADDITIONAL LENGTH FOR INCREMENTAL OR ABSOLUTE ENCODERS

Nominal power values are shown at a single specified speed. At higher speeds, the nominal power of the motor may also be higher. For further information or performance curves, please contact A2V.

CARACTERISTIQUES

Motor type	Cont. stall torque with Heatsink	Cont. stall current (rms)	Peak torque	Peak current	Resis- tance	Induc- tance	Speed			Rotor inertia	Torque constant (3xKtrms)	Nominal Values (see below) Power	Nett Weight
	Nm	A	Nm	Amps	Ohms	mH	230 Vac	380 Vac	Max Speed	kg.cm ²	Nm/ A	W	kg
AR55A4-22S	0.22	0.78	0.74	2.87	29	17	8000	8000	8000	0.14	0.258	60	□ 1.2
AR55A4-32S	0.22	0.53	0.74	1.97	59	36	8000	8000	8000	0.14	0.375	60	□ 1.2
AR55A4-44S	0.22	0.39	0.74	1.45	112	67	7300	8000	8000	0.14	0.51	60	□ 1.2
AR55C4-22S	0.44	1.6	1.4	5.43	9.8	8.4	8000	8000	8000	0.19	0.258	100	□ 1.4
AR55C4-32S	0.44	1.07	1.4	3.73	20	17	8000	8000	8000	0.19	0.375	100	□ 1.4
AR55C4-44S	0.44	0.78	1.4	2.75	39	33	7300	8000	8000	0.19	0.51	100	□ 1.4
AR55G4-22S	0.85	3.1	3	11.63	3.6	3.6	8000	8000	8000	0.28	0.258	220	□ 1.9
AR55G4-32S	0.85	2.1	3	8	7.3	7.8	8000	8000	8000	0.28	0.375	220	□ 1.9
AR55G4-44S	0.85	1.6	3	5.88	15	15	7300	8000	8000	0.28	0.51	220	□ 1.9
AR70A4-22S	0.7	2.3	2.2	8.53	3.9	6.5	8000	8000	8000	0.32	0.258	190	□ 2.0
AR70A4-32S	0.7	1.6	2.2	5.87	9.2	13.9	8000	8000	8000	0.32	0.375	190	□ 2.0
AR70A4-44S	0.7	1.17	2.2	4.31	18	27	7300	8000	8000	0.32	0.51	190	□ 2.0
AR70C4-32S	1.3	3.2	4.5	12	2.9	6	8000	8000	8000	0.47	0.375	350	□ 2.6
AR70C4-44S	1.3	2.3	4.5	8.82	5.3	11.6	7300	8000	8000	0.47	0.51	350	□ 2.6
AR70C4-64S	1.3	1.6	4.5	6	12.5	25	5000	8000	8000	0.47	0.75	350	□ 2.6
AR70E4-22S	2.0	7	6.6	25.58	0.79	1.9	8000	8000	8000	0.62	0.258	540	□ 3.2
AR70E4-32S	2.0	4.8	6.6	17.6	1.7	4	8000	8000	8000	0.62	0.375	540	□ 3.2
AR70E4-44S	2.0	3.5	6.6	12.94	2.9	7.5	7300	8000	8000	0.62	0.51	540	□ 3.2
ARS92C4-32S	1.6	4	4.6	12.27	2.6	10.8	8000	8000	8000	0.94	0.375	400	□ 4.1
ARS92C4-44S	1.6	2.9	4.6	9.02	4.6	20	7300	8000	8000	0.94	0.51	400	□ 4.1
ARS92C4-64S	1.6	2	4.6	6.13	10.4	43	5000	6000	6000	0.94	0.75	400	□ 4.1
ARS92E4-32S	2.4	5.9	6.7	17.87	1.34	7.5	6000	6000	6000	1.3	0.375	600	□ 4.9
ARS92E4-44S	2.4	4.3	6.7	13.14	2.8	14	6000	6000	6000	1.3	0.51	600	□ 4.9
ARS92E4-64S	2.4	2.9	6.7	8.93	5.4	30	5000	6000	6000	1.3	0.75	600	□ 4.9
ARS92G4-32S	3.3	8	9.2	24.53	0.86	4.7	6000	6000	6000	1.6	0.375	800	□ 5.7
ARS92G4-44S	3.3	5.8	9.2	18.04	1.5	8.9	6000	6000	6000	1.6	0.51	800	□ 5.7
ARS92G4-64S	3.3	4	9.2	12.27	3.4	19	5000	6000	6000	1.6	0.75	800	□ 5.7
ARS92J4-44S	4.1	7.4	11.4	22.35	1.24	7.2	6000	6000	6000	2	0.51	1000	□ 6.5
ARS92J4-64S	4.1	5.1	11.4	15.2	2.5	15	5000	6000	6000	2	0.75	1000	□ 6.5
ARS92J4-88S	4.1	3.7	11.4	11.18	5	29	3600	6000	6000	2	1.02	1000	□ 6.5
ARS115A6-64S	4.2	4.9	11	14.67	2.7	15	5000	6000	6000	2.7	0.75	1100	□ 5.6
ARS115A6-88S	4.2	3.6	11	10.78	5.5	28	3600	6000	6000	2.7	1.02	1100	□ 5.6
ARS115A6-130S	4.2	2.4	11	7.19	11.4	60	2500	4100	5400	2.7	1.53	1100	□ 5.6
ARS115B6-64S	5.8	6.9	16	21.33	1.5	9.4	5000	6000	6000	3.9	0.75	1400	□ 6.9
ARS115B6-88S	5.8	5.1	16	15.69	2.9	18	3600	6000	6000	3.9	1.02	1400	□ 6.9
ARS115B6-130S	5.8	3.4	16	10.46	6.4	39	2500	4100	5400	3.9	1.53	1400	□ 6.9
ARS115C6-64S	7.5	9.1	22	29.33	0.9	6.7	5000	6000	6000	5.1	0.75	1800	□ 8.1
ARS115C6-88S	7.5	6.6	22	21.57	1.7	12.6	3600	6000	6000	5.1	1.02	1800	□ 8.1
ARS115C6-130S	7.5	4.5	22	14.38	3.7	28	2500	4100	5400	5.1	1.53	1800	□ 8.1
ARS115E6-88S	10.8	9.5	33	32.35	1.01	8.1	3600	6000	6000	7.5	1.02	2400	□ 10.5
ARS115E6-130S	10.8	6.4	33	21.57	2.1	18	2500	4100	5400	7.5	1.53	2500	□ 10.5
ARS115E6-180S	10.8	4.7	33	15.71	4.2	34	1800	2900	3900	7.5	2.1	2500	□ 10.5
ARS142C6-64S	12.1	15	30	40	0.43	4.7	5000	6000	6000	11.5	0.75	2100	△ 12.8
ARS142C6-88S	12.1	11	30	29.41	0.76	8.9	3600	6000	6000	11.5	1.02	2100	△ 12.8
ARS142C6-130S	12.1	7.4	30	19.61	1.7	19	2500	4100	5400	11.5	1.53	2100	△ 12.8
ARS142E6-88S	17	16	45	44.12	0.42	5.3	3600	6000	6000	17	1.02	2900	△ 16
ARS142E6-130S	17	10.5	45	29.41	0.9	11.8	2500	4100	5400	17	1.53	2900	△ 16
ARS142E6-180S	17	7.6	45	21.43	1.9	22	1800	2900	3900	17	2.1	2900	△ 16
ARS142G6-130S	22	13.8	60	39.22	0.6	8.4	2500	4100	5400	22	1.53	3500	△ 20
ARS142G6-180S	22	10	60	28.57	1.24	16	1800	2900	3900	22	2.1	3500	△ 20
ARS142G6-260S	22	6.9	60	19.8	2.4	34	1200	2000	2700	22	3.03	3500	△ 20
ARS142J6-130S	26	16	76	49.67	0.43	6.3	2500	4100	5400	27	1.53	4400	△ 24
ARS142J6-180S	26	11.9	76	36.19	0.88	12.3	1800	2900	3900	27	2.1	4400	△ 24
ARS142J6-260S	26	8.2	76	25.08	1.8	25	1200	2000	2700	27	3.03	4400	△ 24
AR190C8-130S	35	21	87	56.86	0.39	4.9	2500	4000	4000	55 (38*)	1.53	5000	△ 28.5
AR190C8-180S	35	15	87	41.43	0.77	9.7	1800	2900	3900	55 (38*)	2.1	5000	△ 28.5
AR190C8-260S	35	10.5	87	28.71	1.5	20	1200	2000	2700	55 (38*)	3.03	2800	■ 28.5
AR190E8-130S	49	30	129	84.31	0.19	3.4	2500	4000	4000	78 (57*)	1.53	6700	△ 36
AR190E8-180S	49	21	129	61.43	0.38	6.4	1800	2900	3900	78 (57*)	2.1	6700	△ 36
AR190E8-260S	49	15	129	42.57	0.83	13.7	1200	2000	2700	78 (57*)	3.03	4100	■ 36
AR190G8-130S	59	37	170	111.11	0.126	2.5	2500	4000	4000	100 (80*)	1.53	8400	△ 43
AR190G8-260S	59	18	170	56.11	0.55	10.5	1200	2000	2700	100 (80*)	3.03	8400	△ 43
AR190G8-360S	59	13.3	170	40.48	1.02	20	900	1400	1900	100 (80*)	4.2	5000	■ 43
AR190J8-180S	70	32	210	100	0.18	3.8	1800	2900	3900	130 (100*)	2.1	9200	△ 50
AR190J8-260S	70	22	210	69.31	0.37	8	1200	2000	2700	130 (100*)	3.03	9200	△ 50
AR190J8-360S	70	16	210	50	0.75	16	900	1400	1900	130 (100*)	4.2	5900	■ 50

● Standard motor type
 Preferred motor type
 (*) Low Inertia Version HRL
 1000 rpm nominal speed
 △ 2000 rpm nominal speed
 3000 rpm nominal speed

PERFORMANCE DATA

A2V BRUSHLESS AC SERVOMOTORS

The AR range of servomotors combine Neodymium Iron Boron magnets with low inertia rotors giving cost effective performance.

- Inertia values include the feedback device
- Temperature rise ΔT on the windings is 110°C and applies to all rated torque values
- TENV (IC400) = Totally Enclosed Non Ventilated
- Tolerance : $\pm 10\%$
- Except for voltage gradient [V/1000rpm] and torque constant [Nm/A] values which are to +15%/ -5% tolerance

FRAME	55/70	92/115	142/190
PLATE SIZE (mm)	150 x 150 x 6	300 x 300 x 12	500 x 500 x 20

- Heatsink torque ratings apply to motors fitted with an aluminium plate as follows :

Frame Size		AR / ARS VOLTAGE GRADIENT AVAILABILITY												
		8	11	16	22	32	44	64	88	130	180	260	360	520
55	A													
	C													
	G													
70	A													
	C													
	E													
92	C													
	E													
	G													
	J													
115	A													
	B													
	C													
	E													
142	C													
	E													
	G													
	J													
190	C								⊕	⊕	⊕	⊕	⊕	⊕
	E								+	⊕	⊕	⊕	⊕	⊕
	G									+	⊕	⊕	⊕	⊕
	J										+	⊕	⊕	⊕

⊕ Available with size 1,5 power connector or terminal box only

+ Terminal box only



IP65 enclosure protection. Shaft protection IP64 with seal fitted



Industry standard shaft and flange sizes



Integral Resolver Feedback



Temperature sensor mounted in motor winding

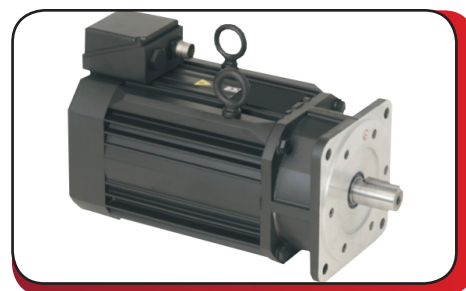


Class F insulation

OPTIONS

■ STANDARD FEATURE ● OPTION ○ OPTION NOT AVAILABLE

DESCRIPTION	OPTIONS	SERVOMOTOR TYPE					
		55	70	92	115	142	190
Waveform	Sinusoidal	■	■	■	■	■	■
Mechanical	Flange mounted	■	■	■	■	■	■
	Keyway	■	■	■	■	■	■
	Plain shaft	○	○	○	○	○	○
	IP65 (IP64 at shaft with seal fitted)	■	■	■	■	■	■
	ARS compact version	●	●	■	■	■	●
	ARL low inertia version	●	●	●	○	●	○
Eelectrical connection	Interconnectron motor and feedback connectors	■	■	■	■	■	○
	MS vertical connectors	●	●	●	●	●	○
	Terminal box with feedback connectors	●	●	●	●	●	■
	Flying leads	○	○	○	○	○	○
Failsafe holding brake	24V D.C. spring applied	○	○	○	○	○	○
	90V D.C. spring applied	○	○	●	●	●	○
	110V A.C. spring applied	○	○	●	●	●	○
	Zero backlash 24V D.C. permanent magnet	○	○	○	○	○	○
Feedback device	2 pole resolver	■	■	■	■	■	■
	Incremental encoder with block commutation	○	○	○	○	○	○
	Single or multiturn absolute encoder	○	○	○	○	○	○
Additional encoder options	Encoder mounting kit to suit customer specified encoder	○	○	○	○	○	○
UL approval	UL certification	○	○	○	○	○	○



AR190 with terminal box



AR70 with optional flying leads

In accordance with our policy of continual product improvement, A2V reserves the right to amend the specification of these products without prior notification