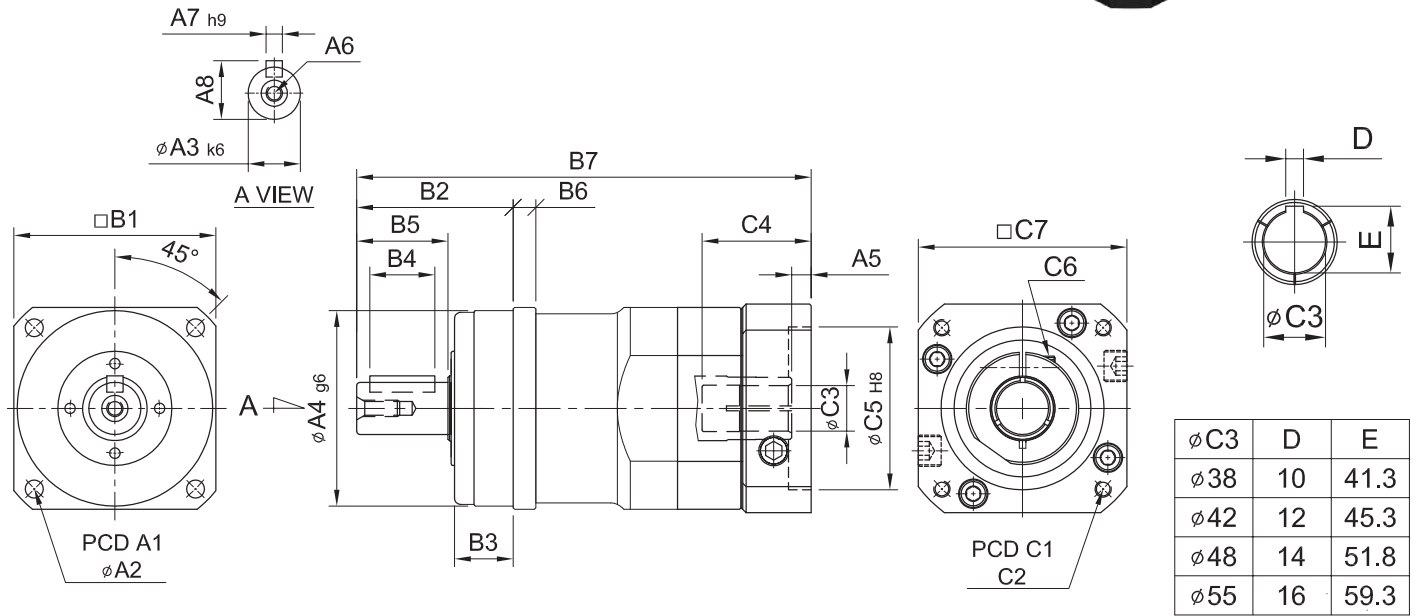
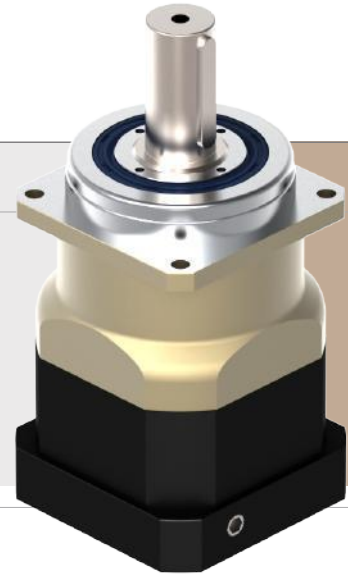


# SERVOBOX

## MODEL : SF

1-Stage / Kademe

RATIO / ÇEVİRİM : 3, 4, 5, 6, 7, 8, 9, 10



unit / birim: mm

Model Code	62	75	100	142	180
<b>A</b>					
A1	68	85	120	165	215
A2	5.5	6.8	9	11	13
A3	16	22	32	40	55
A4	60	70	90	130	160
A5	6	9.2	10.5	10	11.5 · 13.5
A6	M5 x P0.8	M8 x P1.25	M10 x P1.5	M12 x P1.75	M14 x P2.0
A7	5	6	10	12	16
A8	18	24.5	35	43	59
<b>B</b>					
B1	62	76	106	142	180
B2	48	56	88	112	112
B3	18	18	27	27	26
B4	20	32	50	70	70
B5	28	36	58	82	82
B6	6	7	10	12	15
B7	139.5 · 147.5	191	242.5	306	360 · 362
<b>C</b>					
C1	70 · 75 · 90	90 · 110 · 115 · 145	115 · 145 · 165	145 · 165 · 200	200 · 215 · 265
C2	M4 · M5 · M6	M5 · M6 · M8	M6 · M8 · M10	M8 · M10 · M12	M10 · M12 · M16
C3	14 · (16) · 19	19 · 22 · 24	24 · 28 · 32	35 · 38	38 · 42 · 48 · 55
C4	33.5	59.2	67.5	84.5	114.5 · 116.5
C5	50 · 60 · 70	70 · 80 · 95 · 110	95 · 110 · 130	110 · 130 · 180	114.3 · 180 · 230
C6	M5 x P0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5	M10 x P1.5
C7	64 · 70 · 80	92 · 110 · 130	122 · 130 · 150	146 · 150 · 190	182 · 200 · 250



Model No.		Unit/Birim	Ratio Çevrim	62	75	100	142	180
Nominal output torque / Nominal Çıkış Torqu	$T_{2N}$	Nm	3	59	165	216	625	1,206
			4	51	146	208	555	1,069
			5	48	155	333	618	1,189
			6	45	150	315	583	1,118
			7	45	142	309	573	1,108
			8	44	141	305	553	1,070
			9	44	140	293	551	1,060
	10	43	136	294	549	1,059		
Max. Acceleration Torque / Max. İvmelenme Torqu	$T_{2B}$	Nm	3 ~ 10	1.8 Times of Rated Output Torque / 1,8 x Nominal Çıkış Torqu				
Max. Output Torque / Max. Çıkış Torqu	$T_{2NOT}$	Nm	3 ~ 10	3 Times of Rated Output Torque / 3 x Nominal Çıkış Torqu				
Rated Input Speed / Nominal Giriş Devri	$n_{1N}$	rpm	3 ~ 10	3,000	3,000	3,000	3,000	3,000
Max. Input Speed / Max. Giriş Devri	$n_{1B}$	rpm	3 ~ 10	6,000	6,000	6,000	5,000	4,000
Backlash P <sub>s</sub> / Min. Boşluk Oranı		arcmin	3 ~ 10	-	≤ 1	≤ 1	≤ 1	≤ 1
Backlash P <sub>0</sub> / Düşük Boşluk Oranı		arcmin	3 ~ 10	≤ 3	≤ 3	≤ 3	≤ 3	≤ 3
Backlash P <sub>1</sub> / Azaltılmış Boşluk Oranı		arcmin	3 ~ 10	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5
Backlash P <sub>2</sub> / Standart Boşluk Oranı		arcmin	3 ~ 10	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7
Torsional Rigidity / Burulma Direnci		Nm/arcmin	3 ~ 10	8	15	27	60	150
Max. Radial Force / Max. Radyal Yük	$F_{2rB}$	N	3 ~ 10	2,240	4,150	8,760	12,750	17,860
Max. Axial Force / Max. Aksiyel Yük	$F_{2aB}$	N	3 ~ 10	1,920	3,780	7,500	10,840	15,180
Service Life / Hizmet Ömrü	$L_H$	hr	3 ~ 10	S5 Döngüsel Çalışma: >30,000 (S1 Sürekli Çalışma: >15,000 saat) S5 Cycle Operation: >30,000 (S1 Continuous Operation: >15,000 hrs)				
Efficiency / Verim	$\eta$	%	3 ~ 10	≥ 97				
Operating Temperature / Çalışma Sıcaklığı		°C	3 ~ 10	- 25° C ~ + 90° C				
Lubrication / Yağlama			3 ~ 10	Synthetic Grease / Sentetik Gres				
Protection Class / Koruma Sınıfı			3 ~ 10	IP65				
Mounting Position / Montaj Pozisyonu			3 ~ 10	Any / Her Yönde				
Noise Level / Ses Seviyesi		dB	3 ~ 10	≤ 58	≤ 60	≤ 63	≤ 65	≤ 67
Weight / Ağırlık ±3%		Kg	3 ~ 10	1.7	4.5	8.3	16.7	34.3

#### ■ Mass Moments of Inertia / Atalet Ağırlık Momenti (kg.cm<sup>2</sup>)

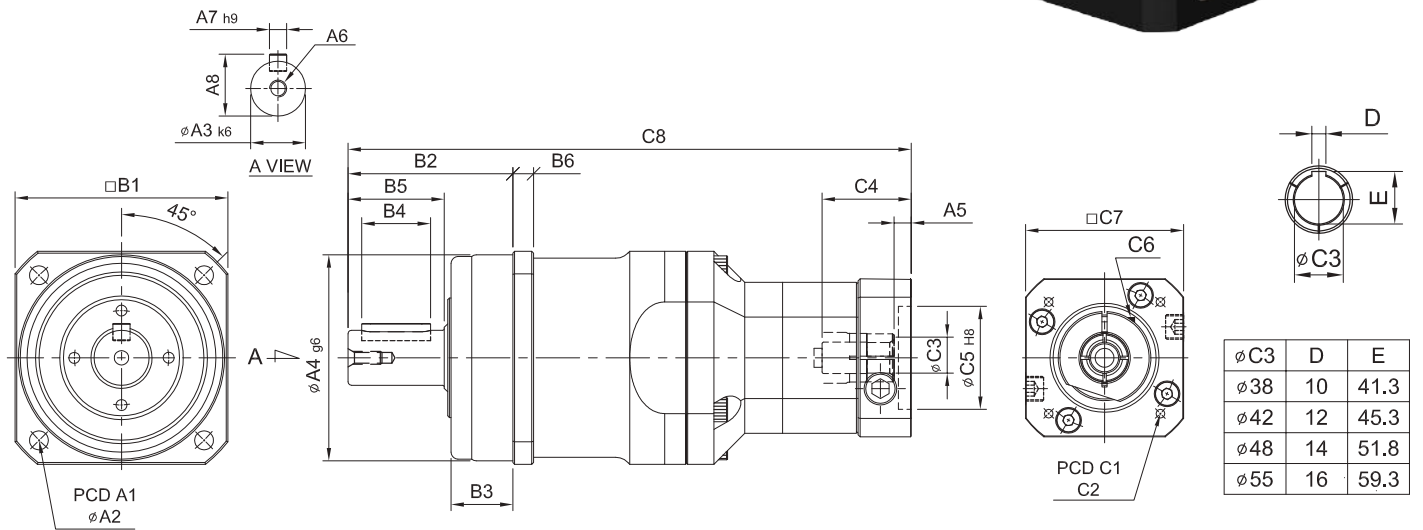
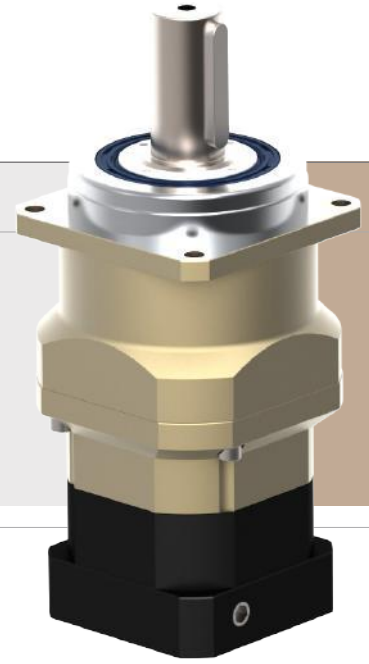
Ratio / Çevrim	62	75	100	142	180
3	0.15	0.60	3.21	9.18	28.82
4	0.14	0.51	2.80	7.51	23.56
5	0.13	0.45	2.71	7.40	23.74
6	0.13	0.45	2.65	7.15	22.65
7	0.12	0.42	2.54	7.15	22.40
8	0.12	0.42	2.51	7.01	22.35
9	0.12	0.42	2.51	7.01	22.35
10	0.12	0.42	2.51	7.01	22.35

# SERVOBOX

## MODEL : SF

2-Stage / Kademe

RATIO / ÇEVİRİM : 15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100



unit / birim: mm

Model Code	62	75	100	142	180
<b>A</b> A1	68	85	120	165	215
A2	5.5	6.8	9	11	13
A3	16	22	32	40	55
A4	60	70	90	130	160
A5	5	6	9	10	10
A6	M5 x P0.8	M8 x P1.25	M10 x P1.5	M12 x P1.75	M14 x P2.0
A7	5	6	10	12	16
A8	18	24.5	35	43	59
<b>B</b> B1	62	76	106	142	180
B2	48	56	88	112	112
B3	18	18	27	27	26
B4	20	32	50	70	70
B5	28	36	58	82	82
B6	6	7	10	12	15
<b>C</b> C1	46 · 60 · 63	70 · 75 · 90	90 · 110 · 115 · 145	115 · 145 · 165	145 · 165 · 200
C2	M3 · M4 · M5	M4 · M5 · M6	M5 · M6 · M8	M6 · M8 · M10	M8 · M10 · M12
C3	8 · 9 · 11	14 · (16) · 19	19 · 22 · 24	24 · 28 · 32	35 · 38
C4	26	33.5	59	67	84.5
C5	30 · 40 · 50	50 · 60 · 70	70 · 80 · 95 · 110	95 · 110 · 130	110 · 130 · 180
C6	M4 x P0.7	M5 x P0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5
C7	46 · 55	64 · 70 · 80	92 · 110 · 130	122 · 130 · 150	146 · 150 · 190
C8	164	198.8 · 206.8	278	344	395



Model No.		Unit/Birim	Ratio Çevrim	62	75	100	142	180
Nominal output torque / Nominal Çıkış Torku	$T_{2N}$	Nm	15	59	142	298	625	1,206
			20	51	126	267	555	1,069
			25	48	158	296	618	1,189
			30	45	130	278	583	1,118
			35	45	128	275	573	1,108
			40	43	123	265	553	1,070
			50	48	138	296	618	1,189
			60	45	130	277	583	1,118
			70	45	128	275	573	1,108
			80	43	123	265	553	1,070
			90	44	125	247	516	993
100	43	121	262	549	1,059			
Max. Acceleration Torque / Max. İvmelenme Torku	$T_{2B}$	Nm	15 ~ 100	1.8 Times of Rated Output Torque / 1,8 x Nominal Çıkış Torku				
Max. Output Torque / Max. Çıkış Torku	$T_{2NOT}$	Nm	15 ~ 100	3 Times of Rated Output Torque / 3 x Nominal Çıkış Torku				
Rated Input Speed / Nominal Giriş Devri	$n_{1N}$	rpm	15 ~ 100	3,000	3,000	3,000	3,000	3,000
Max. Input Speed / Max. Giriş Devri	$n_{1B}$	rpm	15 ~ 100	6,000	6,000	5,000	5,000	4,000
Backlash P <sub>s</sub> / Min. Boşluk Oranı		arcmin	15 ~ 100	-	-	≤ 3	≤ 3	≤ 3
Backlash P <sub>0</sub> / Düşük Boşluk Oranı		arcmin	15 ~ 100	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5
Backlash P <sub>1</sub> / Azaltılmış Boşluk Oranı		arcmin	15 ~ 100	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7
Backlash P <sub>2</sub> / Standart Boşluk Oranı		arcmin	15 ~ 100	≤ 9	≤ 9	≤ 9	≤ 9	≤ 9
Torsional Rigidity / Burulma Direnci		Nm/arcmin	15 ~ 100	8	15	27	60	140
Max. Radial Force / Max. Radyal Yük	$F_{2rB}$	N	15 ~ 100	2,240	4,150	8,760	12,750	17,860
Max. Axial Force / Max. Aksiyel Yük	$F_{2aB}$	N	15 ~ 100	1,920	3,780	7,500	10,840	15,180
Service Life / Hizmet Ömrü	$L_H$	hr	15 ~ 100	S5 Döngüsel Çalışma: >30,000 (S1 Sürekli Çalışma: >15,000 saat) S5 Cycle Operation: >30,000 (S1 Continuous Operation: >15,000 hrs)				
Efficiency / Verim	$\eta$	%	15 ~ 100	≥ 94				
Operating Temperature / Çalışma Sıcaklığı		°C	15 ~ 100	- 25° C ~ + 90° C				
Lubrication / Yağlama			15 ~ 100	Synthetic Grease / Sentetik Gres				
Protection Class / Koruma Sınıfı			15 ~ 100	IP65				
Mounting Position / Montaj Pozisyonu			15 ~ 100	Any / Her Yönde				
Noise Level / Ses Seviyesi		dB	15 ~ 100	≤ 58	≤ 60	≤ 63	≤ 65	≤ 67
Weight / Ağırlık ±3%		Kg	15 ~ 100		4.8			37.3

#### ■ Mass Moments of Inertia / Atalet Ağırlık Momenti (kg.cm<sup>2</sup>)

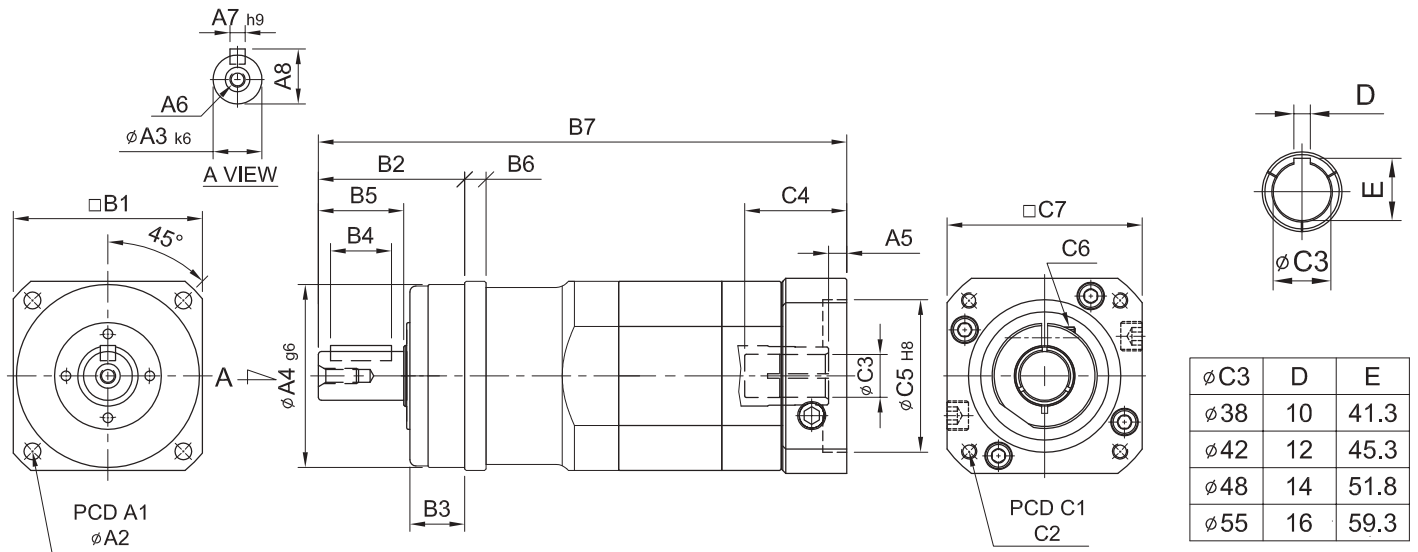
Ratio / Çevrim	62	75	100	142	180
15	0.03	0.13	0.47	2.63	7.30
20	0.03	0.13	0.47	2.63	7.30
25	0.03	0.13	0.47	2.63	7.10
30	0.03	0.13	0.47	2.43	7.10
35	0.03	0.13	0.47	2.43	7.10
40	0.03	0.13	0.47	2.43	6.92
50	0.03	0.13	0.44	2.43	6.92
60	0.03	0.13	0.44	2.39	6.72
70	0.03	0.13	0.44	2.39	6.72
80	0.03	0.13	0.44	2.39	6.72
90	0.03	0.13	0.44	2.39	6.72
100	0.03	0.13	0.44	2.39	6.72

# SERVOBOX

## MODEL : SF-A

2-Stage / Kademe

RATIO / ÇEVİRİM : 15, 20, 25, 30, 35, 40, 50, 70, 100



unit / birim: mm

Model Code	62A	75A	100A	142A	180A	
<b>A</b>	A1	68	85	120	215	
	A2	5.5	6.8	9	11	13
	A3	16	22	32	40	55
	A4	60	70	90	130	160
	A5	6	8	10.5	10	11.5 · 13.5
	A6	M5 x P0.8	M8 x P1.25	M10 x P1.5	M12 x P1.75	M14 x P2.0
	A7	5	6	10	12	16
	A8	18	24.5	35	43	59
<b>B</b>	B1	62	76	106	142	180
	B2	48	56	88	112	112
	B3	18	18	27	27	26
	B4	20	32	50	70	70
	B5	28	36	58	82	82
	B6	6	7	10	12	15
	B7	173.3 · 181.3	214	282.5	373	441 · 443
<b>C</b>	C1	70 · 75 · 90	90 · 110 · 115 · 145	115 · 145 · 165	145 · 165 · 200	200 · 215 · 265
	C2	M4 · M5 · M6	M5 · M6 · M8	M6 · M8 · M10	M8 · M10 · M12	M10 · M12 · M16
	C3	14 · (16) · 19	19 · 22 · 24	24 · 28 · 32	35 · 38	38 · 42 · 48 · 55
	C4	33.5	51	67.5	84.5	114.5 · 116.5
	C5	50 · 60 · 70	70 · 80 · 95 · 110	95 · 110 · 130	110 · 130 · 180	114.3 · 180 · 230
	C6	M5 x P0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5	M10 x P1.5
	C7	64 · 70 · 80	92 · 110 · 130	122 · 130 · 150	146 · 150 · 190	182 · 200 · 250



Model No.		Unit/Birim	Ratio Çevrim	62A	75A	100A	142A	180A
Nominal output torque / Nominal Çıkış Torku	$T_{2N}$	Nm	15	59	165	216	625	1,206
			20	51	146	208	555	1,069
			25	48	155	333	618	1,189
			30	45	150	315	583	1,118
			35	45	142	309	573	1,108
			40	51	146	208	555	1,069
			50	48	155	333	618	1,189
			70	45	142	309	573	1,108
	100	43	136	291	549	1,059		
Max. Acceleration Torque / Max. İvmelenme Torku	$T_{2B}$	Nm	15 ~ 100	1.8 Times of Rated Output Torque / 1,8 x Nominal Çıkış Torku				
Max. Output Torque / Max. Çıkış Torku	$T_{2NOT}$	Nm	15 ~ 100	3 Times of Rated Output Torque / 3 x Nominal Çıkış Torku				
Rated Input Speed / Nominal Giriş Devri	$n_{1N}$	rpm	15 ~ 100	3,000	3,000	3,000	3,000	3,000
Max. Input Speed / Max. Giriş Devri	$n_{1B}$	rpm	15 ~ 100	6,000	6,000	5,000	5,000	4,000
Backlash Ps / Min. Boşluk Oranı		arcmin	15 ~ 100	-	≤ 3	≤ 3	≤ 3	≤ 3
Backlash P0 / Düşük Boşluk Oranı		arcmin	15 ~ 100	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5
Backlash P1 / Azaltılmış Boşluk Oranı		arcmin	15 ~ 100	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7
Backlash P2 / Standart Boşluk Oranı		arcmin	15 ~ 100	≤ 9	≤ 9	≤ 9	≤ 9	≤ 9
Torsional Rigidity / Burulma Direnci		Nm/arcmin	15 ~ 100	8	15	27	60	140
Max. Radial Force / Max. Radyal Yük	$F_{2rB}$	N	15 ~ 100	2,240	4,150	8,760	12,750	17,860
Max. Axial Force / Max. Aksiyel Yük	$F_{2aB}$	N	15 ~ 100	1,920	3,780	7,500	10,840	15,180
Service Life / Hizmet Ömrü	$L_H$	hr	15 ~ 100	S5 Döngüsel Çalışma: >30,000 (S1 Sürekli Çalışma: >15,000 saat) S5 Cycle Operation: >30,000 (S1 Continuous Operation: >15,000 hrs)				
Efficiency / Verim	$\eta$	%	15 ~ 100	≥ 94				
Operating Temperature / Çalışma Sıcaklığı		°C	15 ~ 100	- 25° C ~ + 90° C				
Lubrication / Yağlama			15 ~ 100	Synthetic Grease / Sentetik Gres				
Protection Class / Koruma Sınıfı			15 ~ 100	IP65				
Mounting Position / Montaj Pozisyonu			15 ~ 100	Any / Her Yönde				
Noise Level / Ses Seviyesi		dB	15 ~ 100	≤ 58	≤ 60	≤ 63	≤ 65	≤ 67
Weight / Ağırlık ±3%		Kg	15 ~ 100	2.6	8.2	11.5	25.6	43

#### ■ Mass Moments of Inertia / Atalet Ağırlık Momenti (kg.cm<sup>2</sup>)

Ratio / Çevrim	62A	75A	100A	142A	180A
15	0.15	0.60	3.21	9.18	28.82
20	0.14	0.51	2.80	7.51	23.56
25	0.13	0.45	2.71	7.40	23.24
30	0.15	0.60	3.21	9.18	28.82
35	0.12	0.42	2.54	7.15	22.40
40	0.14	0.51	2.80	7.51	23.56
50	0.13	0.45	2.71	7.40	23.24
70	0.12	0.42	2.54	7.15	22.40
100	0.12	0.42	2.51	7.01	22.35