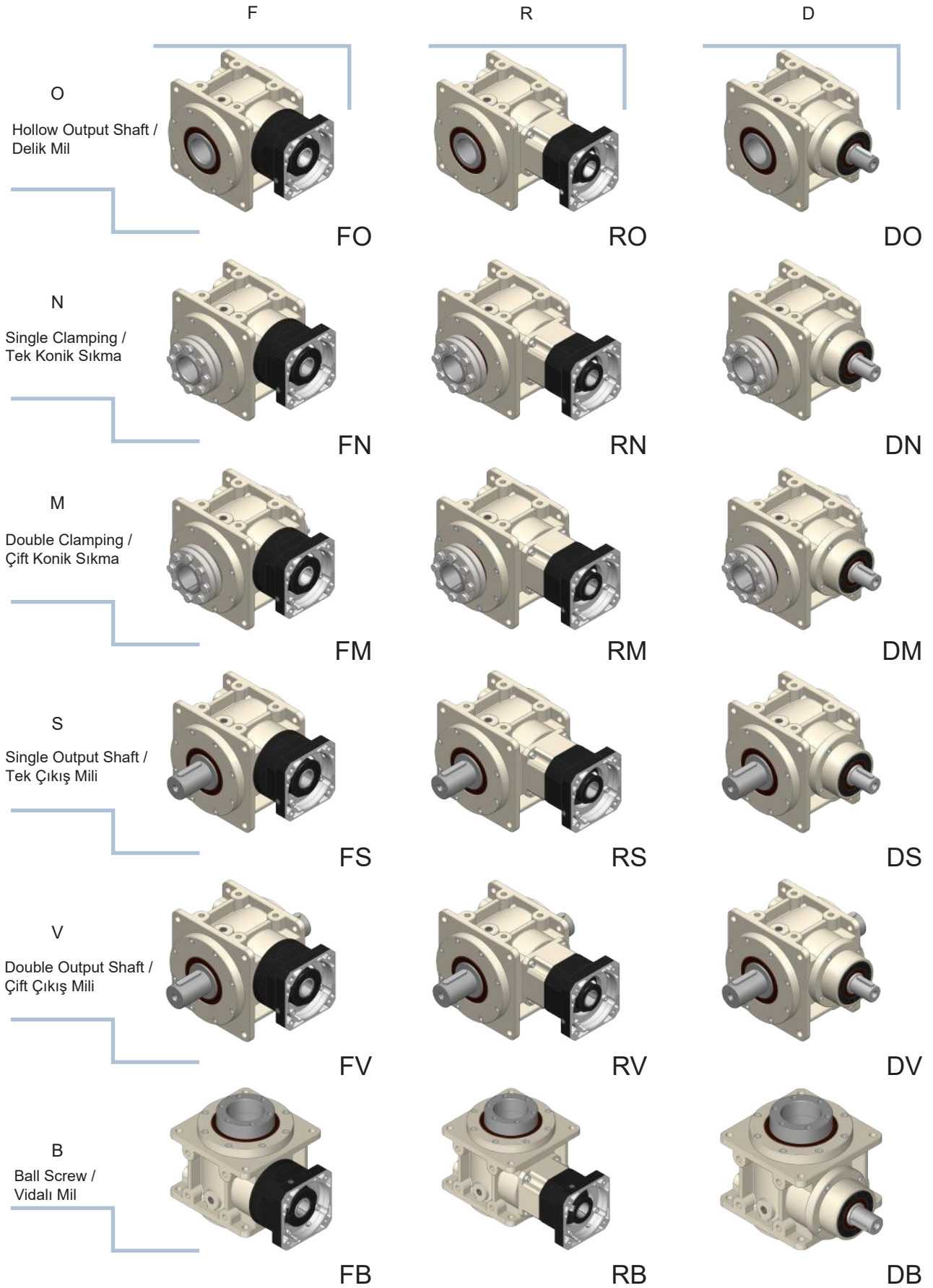
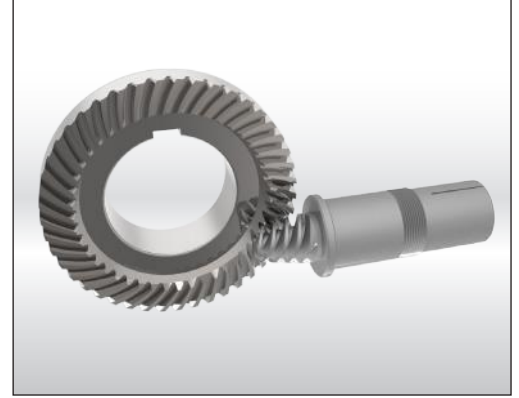
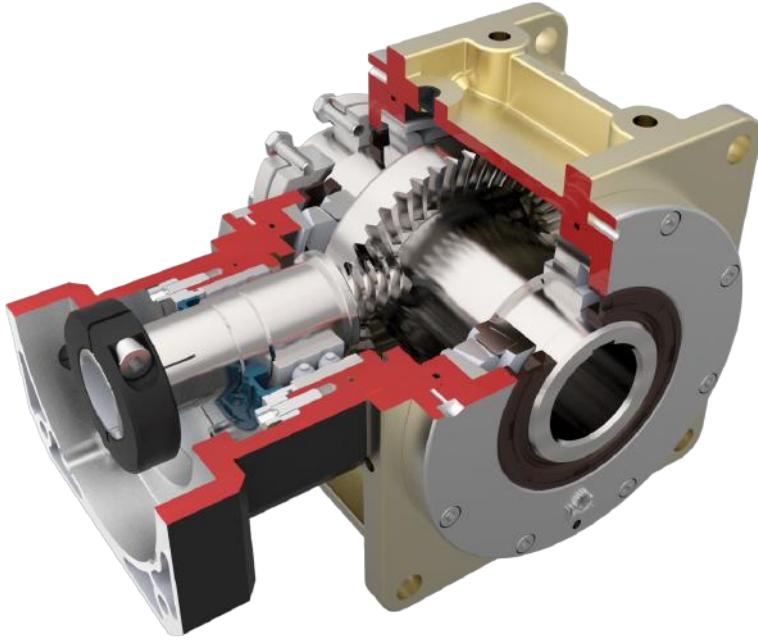


HY series / serileri



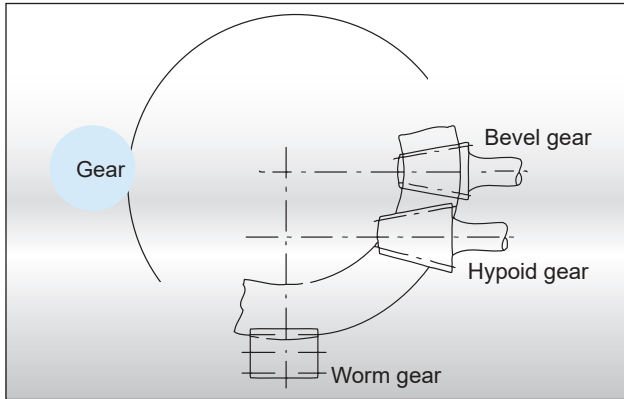
Features of HY Series / HY Serilerinin Özellikleri



Super-Reduction-Hypoid Gear / Hypoid Dişli

Gleason super-reduction-hypoid gear tooth system, the max. single stage ratio is 1/15. Single stage ratio 1/20~1/60 is optional.

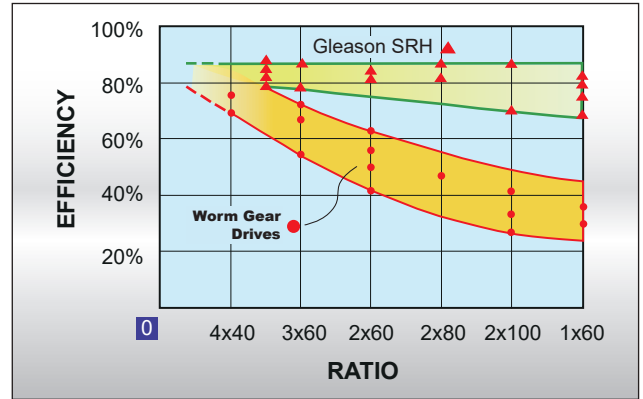
1 kademe için 1/60'a kadar tahvil oranı sağlanabilmektedir.



High Output Torque / Yüksek Çıkış Torku

The gear box is one-piece constructed to ensure the high rigidity and corrosion-resistant capability.

Redüktör sağlamlık ve paslanmaya karşı dayanıklı olması için tek parça olarak üretilmiştir.



High Efficiency

High running efficiency, the efficiency more than 90%.

%90'dan daha fazla verimliliğe ulaşılır.

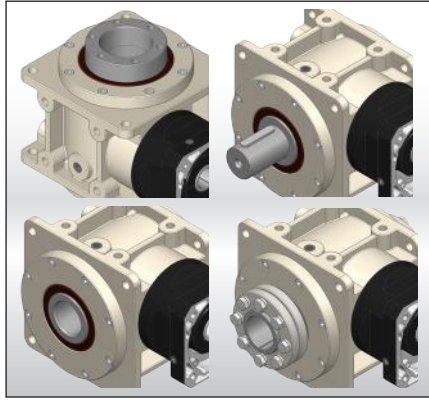
Features of HY Series / HY Serilerinin Özellikleri



Low Backlash / Düşük Boşluk Oranı

Using Gleason high precision CNC grinding machine to grinding the spiral bevel gears. Torsional backlash depending on design up to <2 arcmin.

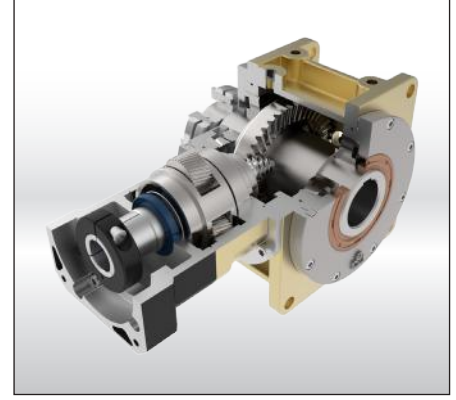
Konik dişlileri taşlamak için yüksek hassasiyetli Gleason CNC kullanılmıştır. Bu sayede <2 arcmin'e kadar burulma boşluğu elde edilir.



Mounting Position / Montaj Pozisyonu

Multiple precision machined surface is easy for assembly, suitable for any optional mounting orientation. Output shaft and input shaft are designed to suit for various industries applications.

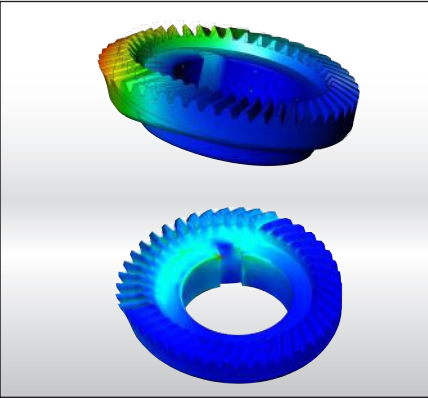
Çok hassas işlenen yüzeyler montajda kolaylık ve çeşitlilik sağlar. Çıkış ve giriş milleri birçok uygulama için tasarlanmıştır.



More High Gear Ratio / Çok Çeşitli Çevrim Oranı

High precision grinded and carburized spiral bevel gears with optimal designed planetary gear can do ratio 1500: 1.

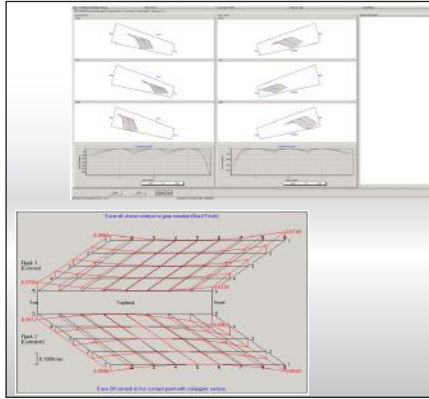
Yüksek hassasiyetle taşlanmış ve karbürlenmiş konik dişliler ve planet dişliler sayesinde 1/1500'e kadar tahvil oranına ulaşılır.



CAE Design and Analysis / CAE Dizayn ve Analiz

Employs 3D-CAE software for analysis and design, the software allows for analyzing the strength of the entire gear reducer and helical teeth. Increasing the service life of gears and the gear reducer.

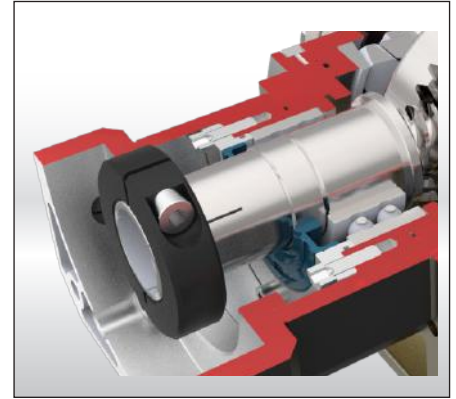
Analiz ve dizayn için 3D-CAE yazılımı kullanılmıştır. Bu sayede redüktör ve helis dişlilerin mukavemeti ve hizmet ömrü test edilmiş olur.



Optimized Design / Optimize Edilmiş Dizayn

Use Gleason's design software to design new spiral bevel gears. Through the ideal gear contact pattern for application, achieve high permissible output torque.

Konik dişlilerin dizaynında Gleason yazılımı kullanılmıştır. En uygun temas modellemesiyle, yüksek çıkış torkuna ulaşılır.



Collet Locking Mechanism / Kovan Kilitleme Mekanizması

The input-end and the motor are coupled through a collet locking mechanism. It has passed dynamical balance analysis to assure concentricity and balance on the connection and no backlash for power transmission while running at high speed.

Giriş mili ve motor mili kovan kilitleme mekanizmasıyla birbirine bağlanır. Yüksek devirlerde çalışırken güç iletiminde boşluk olmaması ve bağlantı dengesinin sağlanması amacıyla dinamik denge analizi yapılır.

HY Series / Serileri

1-Stage / Kademe

Model No.		Unit Birim	Ratio Çevrim	55	75	90	115	130	140	160	190
Nominal output torque / Nominal Çıkış Torku	T_{2N}	Nm	3,4,5	35	70	140	260	430	720	1,100	1,440
			6,8,10	30	60	117	220	365	615	957	1,230
			12,15	25	50	95	180	300	510	815	1,020
Max. Acceleration Torque / Max.İvmelenme Torku	T_{2B}	Nm	3~15	1.5 Times of Rated Output Torque / 1,5 x Nominal Çıkış Torku							
Max. Output Torque / Max.Çıkış Torku	T_{2NOT}	Nm	3~15	3 Times of Rated Output Torque / 3 x Nominal Çıkış Torku							
Rated Input Speed / Nominal Giriş Devri	n_{1N}	rpm	3,4,5	2,100	1,800	1,500	1,150	1,000	700	600	550
			6,8,10	3,200	2,700	2,200	1,800	1,500	1,200	1,100	1,000
			12,15	3,900	3,300	2,800	2,300	2,000	1,600	1,350	1,300
Max. Input Speed / Max.Giriş Devri	n_{1B}	rpm	3~15	8,000	8,000	7,000	6,000	5,000	5,000	4,500	4,500
Backlash / Boşluk Oranı	J_t	arcmin	P0	-	-	≤ 3	≤ 3	≤ 3	≤ 3	≤ 3	≤ 3
			P1	≤ 6	≤ 6	≤ 6	≤ 6	≤ 6	≤ 6	≤ 6	≤ 6
			P2	≤ 9	≤ 9	≤ 9	≤ 9	≤ 9	≤ 9	≤ 9	≤ 9
Max. Radial Force Ball Bearing / Max. Radyal Yük Bilyalı Rulman	F_{2rB}	N	3~15	1,495	2,366	2,691	4,797	5,837	7,020	9,490	12,337
Max. Axial Force Ball Bearing / Max. Aksiyel Yük Bilyalı Rulman	F_{2aB}	N	3~15	748	1,183	1,346	2,399	2,919	3,510	4,745	6,169
Max. Radial Force Taper Bearing / Max. Radyal Yük Masuralı Rulman	F_{2rB}	N	3~15	-	- 6,545(B)	5,523 6,545(B)	9,100	12,320	14,420	18,620	24,080
Max. Axial Force Taper Bearing / Max. Aksiyel Yük Masuralı Rulman	F_{2aB}	N	3~15	-	- 3,273(B)	2,762 3,273(B)	4,550	6,160	7,210	9,310	12,040
Service Life / Hizmet Ömrü	L_H	hr	3~15	S5 Döngüsel Çalışma : >30,000 (S1 Sürekli Çalışma : >15,000 hrs) S5 Cycle Operation: >30,000 (S1 Continuous Operation: >15,000 hrs)							
Efficiency / Verim	η	%	3~8	≥ 96%							
			10~15	≥ 93%							
Operating Temperature / Çalışma Sıcaklığı		°C	3~15	-10°C ~ +90°C							
Lubrication / Yağlama			3~15	Synthetic Oil / Sentetik Yağ							
Noise Level / Ses Seviyesi		dB	3~5	≤ 67	≤ 67	≤ 69	≤ 69	≤ 71	≤ 71	≤ 72	≤ 72

NOTE / NOT: (B) Ball Screw / Vidalı Mil

Mass Moments of Inertia / Atalet Ağırlık Momenti (kgcm²)

Ratio / Çevrim	55	75	90	115	130	140	160	190
3	0.39	0.98	2.42	7.12	14.03	26.96	52.32	91.47
4	0.30	0.73	1.77	5.09	9.17	17.44	32.78	62.43
5	0.23	0.58	1.41	4.00	7.12	13.53	24.76	44.29
6	0.22	0.52	1.41	3.65	6.76	12.25	22.49	39.55
8	0.17	0.43	1.12	2.85	5.09	8.95	15.67	27.07
10	0.15	0.38	1.00	2.46	4.27	7.38	12.47	21.43
12	0.14	0.36	0.88	2.25	3.81	6.47	10.67	18.14
15	0.13	0.34	0.81	2.07	3.45	5.76	9.23	15.53

HY Series / Serileri

2-Stage / Kademe

Model No.		Unit Birim	Ratio Çevrim	55	75	90	115	130	140	160	190
Nominal output torque / Nominal Çıkış Torku	T_{2N}	Nm	20,30,40,50	35	70	140	260	430	720	1,100	1,440
			60,80,100	30	60	117	220	365	615	957	1,230
			120,150	25	50	95	180	300	510	815	1,020
Max. Acceleration Torque / Max.İvmelenme Torku	T_{2B}	Nm	20~150	1.5 Times of Rated Output Torque / 1,5 x Nominal Çıkış Torku							
Max. Output Torque / Max.Çıkış Torku	T_{2NOT}	Nm	20~150	3 Times of Rated Output Torque / 3 x Nominal Çıkış Torku							
Rated Input Speed / Nominal Giriş Devri	n_{1N}	rpm	20~150	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Max. Input Speed / Max.Giriş Devri	n_{1B}	rpm	20~150	6,000	6,000	6,000	6,000	5,000	5,000	5,000	4,000
Backlash / Boşluk Oranı	J_t	arcmin	P0	-	-	≤ 4	≤ 4	≤ 4	≤ 4	≤ 4	≤ 4
			P1	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7
			P2	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10
Max. Radial Force Ball Bearing / Max. Radyal Yük Bilyalı Rulman	F_{2rB}	N	20~150	1,495	2,366	2,691	4,797	5,837	7,020	9,490	12,337
Max. Axial Force Ball Bearing / Max. Aksiyel Yük Bilyalı Rulman	F_{2aB}	N	20~150	748	1,183	1,346	2,399	2,919	3,510	4,745	61,69
Max. Radial Force Taper Bearing / Max. Radyal Yük Masuralı Rulman	F_{2rB}	N	20~150	-	- 6,545(B)	5,523 6,545(B)	9,100	12,320	14,420	18,620	24,080
Max. Axial Force Taper Bearing / Max. Aksiyel Yük Masuralı Rulman	F_{2aB}	N	20~150	-	- 3,273(B)	2,762 3,273(B)	4,550	6,160	7,210	9,310	12,040
Service Life / Hizmet Ömrü	L_H	hr	20~150	S5 Döngüsel Çalışma : >30,000 (S1 Sürekli Çalışma : >15,000 hrs) S5 Cycle Operation: >30,000 (S1 Continuous Operation: >15,000 hrs)							
Efficiency / Verim	η	%	20~80	≥ 92%							
			100~150	≥ 90%							
Operating Temperature / Çalışma Sıcaklığı		°C	20~150	-10°C ~ +90°C							
Lubrication / Yağlama			20~150	Synthetic Oil / Sentetik Yağ							
Noise Level / Ses Seviyesi		dB	20~150	≤ 67	≤ 67	≤ 69	≤ 69	≤ 71	≤ 71	≤ 72	≤ 72

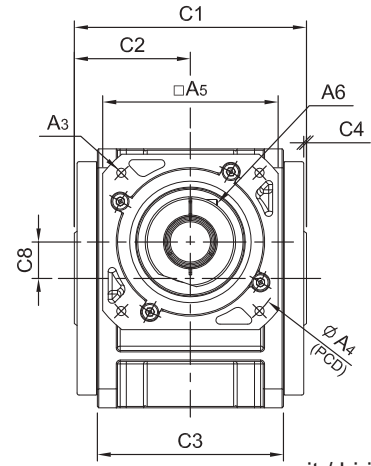
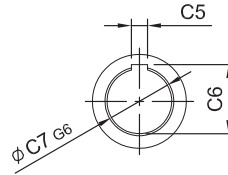
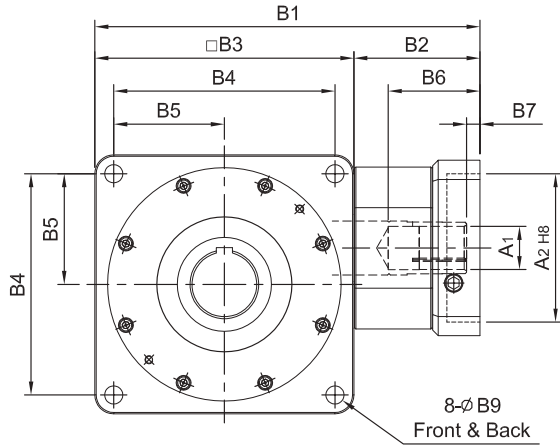
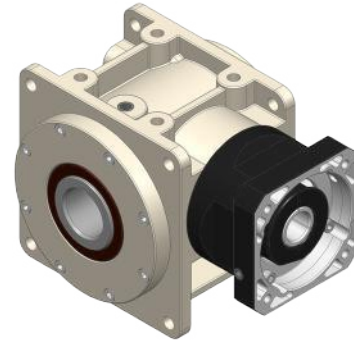
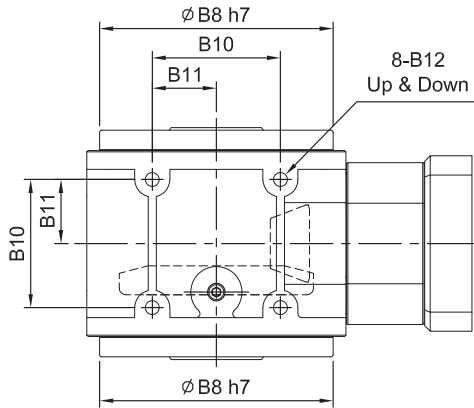
NOTE / NOT: (B) Ball Screw / Vidalı Mil

Mass Moments of Inertia / Atalet Ağırlık Momenti (kgcm²)

Ratio / Çevrim	55	75	90	115	130	140	160	190
20	0.46	1.38	1.41	6.64	6.73	12.57	12.85	13.33
25	0.39	1.15	1.18	4.9	4.99	7.99	8.27	8.75
30	0.37	1.06	1.09	4.15	4.24	6.58	6.86	7.34
40	0.36	1.06	1.07	4.09	4.13	6.38	6.48	6.66
50	0.36	1.05	1.06	4.07	4.09	6.31	6.36	6.45
60	0.35	0.94	0.97	3.2	3.29	4.14	4.42	4.9
75	0.35	0.94	0.96	3.17	3.24	4.04	4.23	4.56
80	0.34	0.94	0.95	3.14	3.18	3.94	4.04	4.22
100	0.34	0.93	0.94	3.12	3.14	3.87	3.92	4.01
120	0.33	0.93	0.94	3.1	3.1	3.8	3.8	3.8
150	0.33	0.92	0.93	3.08	3.06	3.73	3.68	3.59

HY-FO series / serileri

RATIO / ÇEVİRİM : 3.4.5.6.8.10.12.15 (1-Stage / Kademe)

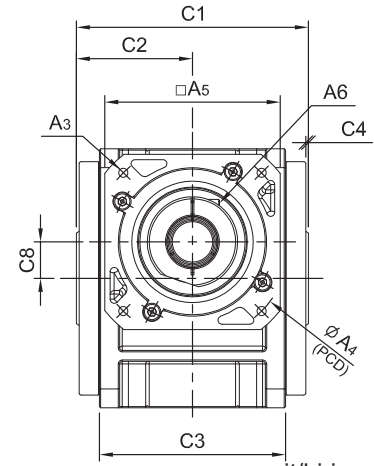
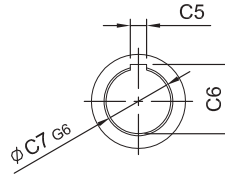
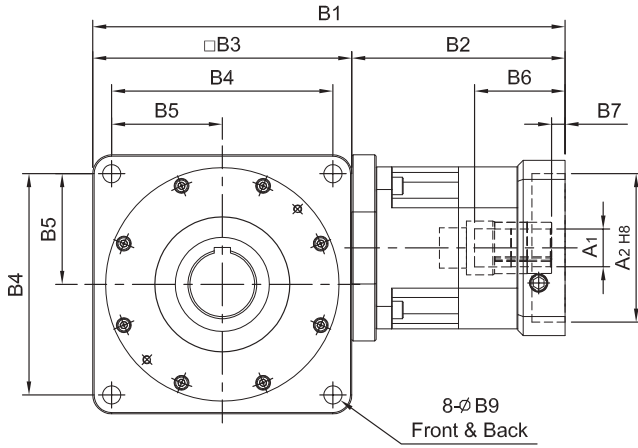
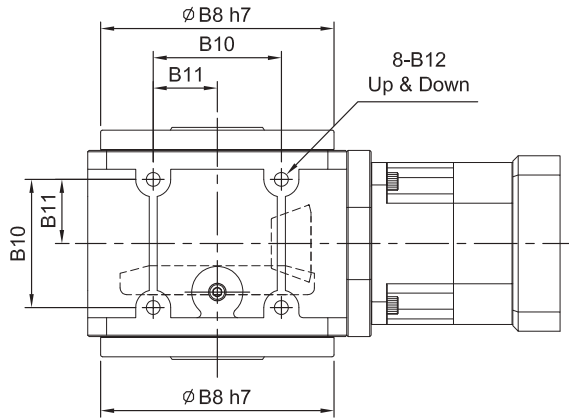
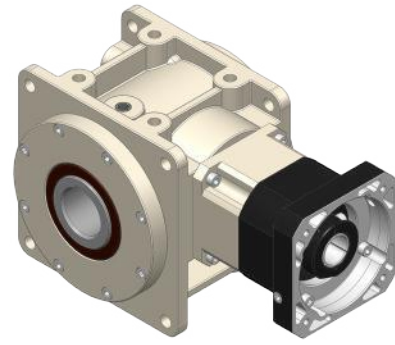


unit / birim: mm

Model Code	55	75	90	115	130	140	160	190
A1	8 · 11	14	14 · 19	19 · 24	28 · 32	35	35 · 38	42 · 48
A2	30 · 40 · 50	50 · 60 · 70	50 · 70 · 80 · 95	70 · 80 · 95 · 110	95 · 110 · 130	110 · 130 · 180	110 · 130 · 180	114.3 · 180 · 230 · 250
A3	M3 · M4 · M5	M4 · M5 · M6	M5 · M6	M5 · M6 · M8	M6 · M8 · M10	M8 · M10 · M12	M8 · M10 · M12	M12 · M16
A4	46 · 60 · 63	70 · 75 · 90	70 · 90 · 100 · 115	90 · 100 · 115 · 145	115 · 145 · 165	145 · 165 · 200	145 · 165 · 200	200 · 215 · 265 · 300
A5	46 · 55	64 · 70 · 80	80 · 92 · 110	92 · 110 · 130	122 · 130 · 150	146 · 150 · 190	146 · 150 · 190	182 · 200 · 250 · 265
A6	M3 x P.05	M5 x P.0.8	M5 x P.0.8	M8 x P1.25	M8 x P1.25	M10 x P1.5	M10 x P1.5	M10 x P1.5
B1	123	158	202	241	286	333	358	417 · 419
B2	33	43	62	71	94	118	118	153 · 155
B3	90	115	140	170	192	215	240	264
B4	78	98	118	144	164	182	206	224
B5	39	49	59	72	82	91	103	112
B6	26	38	49	58	69.5	81.5	81.5	114.5 · 116.5
B7	5	6	9	8	10	10	10	11.5 · 13.5
B8	84	103	128	148	173	200	227	254
B9	6.8	9	11	11	13.5	15	17.5	17.5
B10	44	54	66	80	95	104	120	140
B11	22	27	33	40	47.5	52	60	70
B12	M6 x P1.0	M8 x P1.25	M10 x P1.5	M12 x P1.75	M12 x P1.75	M14 x P2.0	M16 x P2.0	M16 x P2.0
C1	88	108	132	156	172	187	212	242
C2	44	54	66	78	86	93.5	106	121
C3	60	80	100	120	138	146	166	196
C4	2	2	2	2	2	2	2	2
C5	6	7	8	10	12	14	14	18
C6	22.8	28.3	33.3	43.3	51.3	58.8	63.8	74.3
C7	20	25	30	40	48	55	60	70
C8	9	14	18	23	27	32	38	42
Weight / Ağırlık	3.0	4.6	8.3	12.3	18.2	26.6	37.6	59.5

HY-RO series / serileri

RATIO / ÇEVİRİM : 20.25.30.40.50.60.75.80.100.120.150 (2-Stage / Kademe)

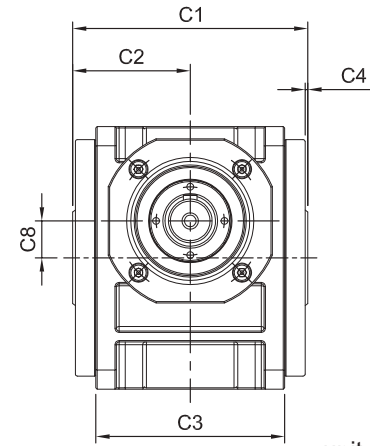
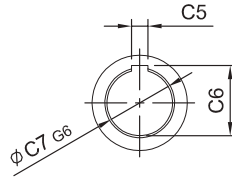
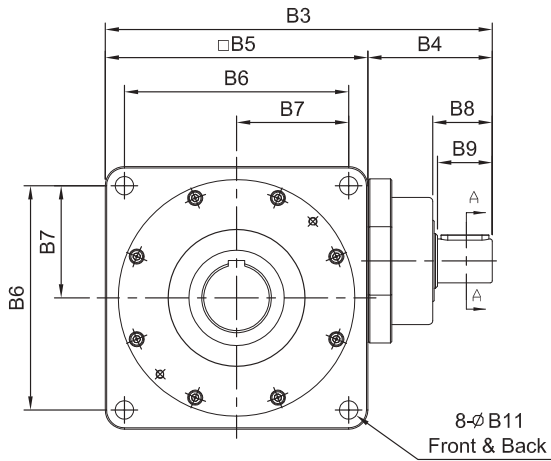
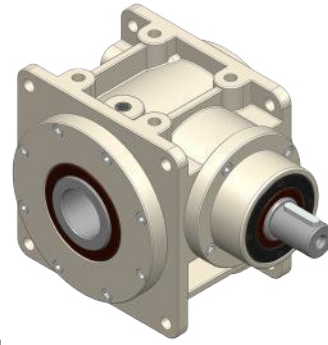
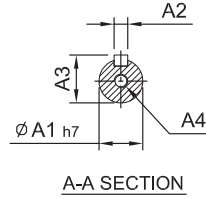
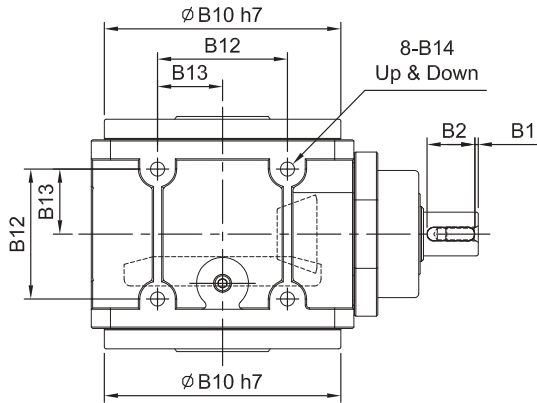


unit/birim: mm

	Model Code	55	75	90	115	130	140	160	190
A	A1	8 · 11	14	(14) · 19	19 · 24	28 · 32	32 · 35	32 · 35	38 · 42 · 48 · 55
	A2	30 · 40 · 50	50 · 60 · 70	50 · 70 · 80 · 95	70 · 80 · 95 · 110	95 · 110 · 130	110 · 130 · 180	110 · 130 · 180	114.3 · 180 · 230 · 250
	A3	M3 · M4 · M5	M4 · M5 · M6	M5 · M6	M5 · M6 · M8	M6 · M8 · M10	M8 · M10 · M12	M8 · M10 · M12	M12 · M16
	A4	46 · 60 · 63	70 · 75 · 90	70 · 90 · 100 · 115	90 · 100 · 115 · 145	115 · 145 · 165	145 · 165 · 200	145 · 165 · 200	200 · 215 · 265 · 300
	A5	46 · 55	64 · 70 · 80	80 · 92 · 110	92 · 110 · 130	122 · 130 · 150	146 · 150 · 190	146 · 150 · 190	182 · 200 · 250 · 265
	A6	M3 x P.05	M5 x P0.8	M5 x P0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5	M10 x P1.5	M10 x P1.5
B	B1	157	201	(224.5) · 237	287	340	405	430	508 · 510
	B2	67	86	(84.5) · 97	117	148	190	190	244 · 246
	B3	90	115	140	170	192	215	240	264
	B4	78	98	118	144	164	182	206	224
	B5	39	49	59	72	82	91	103	112
	B6	26	32	(33.5) · 45.5	59	67	84.5	84.5	114.5 · 116.5
	B7	5	6	(6) · 10	9	10	10	10	11.5 · 13.5
	B8	84	103	128	148	173	200	227	254
	B9	6.8	9	11	11	13.5	15	17.5	17.5
	B10	44	54	66	80	95	104	120	140
	B11	22	27	33	40	47.5	52	60	70
	B12	M6 x P1.0	M8 x P1.25	M10 x P1.5	M12 x P1.75	M12 x P1.75	M14 x P2.0	M16 x P2.0	M16 x P2.0
C	C1	88	108	132	156	172	187	212	242
	C2	44	54	66	78	86	93.5	106	121
	C3	60	80	100	120	138	146	166	196
	C4	2	2	2	2	2	2	2	2
	C5	6	7	8	10	12	14	14	18
	C6	22.8	28.3	33.3	43.3	51.3	58.8	63.8	74.3
	C7	20	25	30	40	48	55	60	70
	C8	9	14	18	23	27	32	38	42
Weight / Ağırlık		3.5	5.8	10.0	16.0	26.8	41.2	52.1	86.1

HY-DO series / serileri

RATIO / ÇEVİRİM : 3.4.5.6.8.10.12.15 (1-Stage / Kademe)

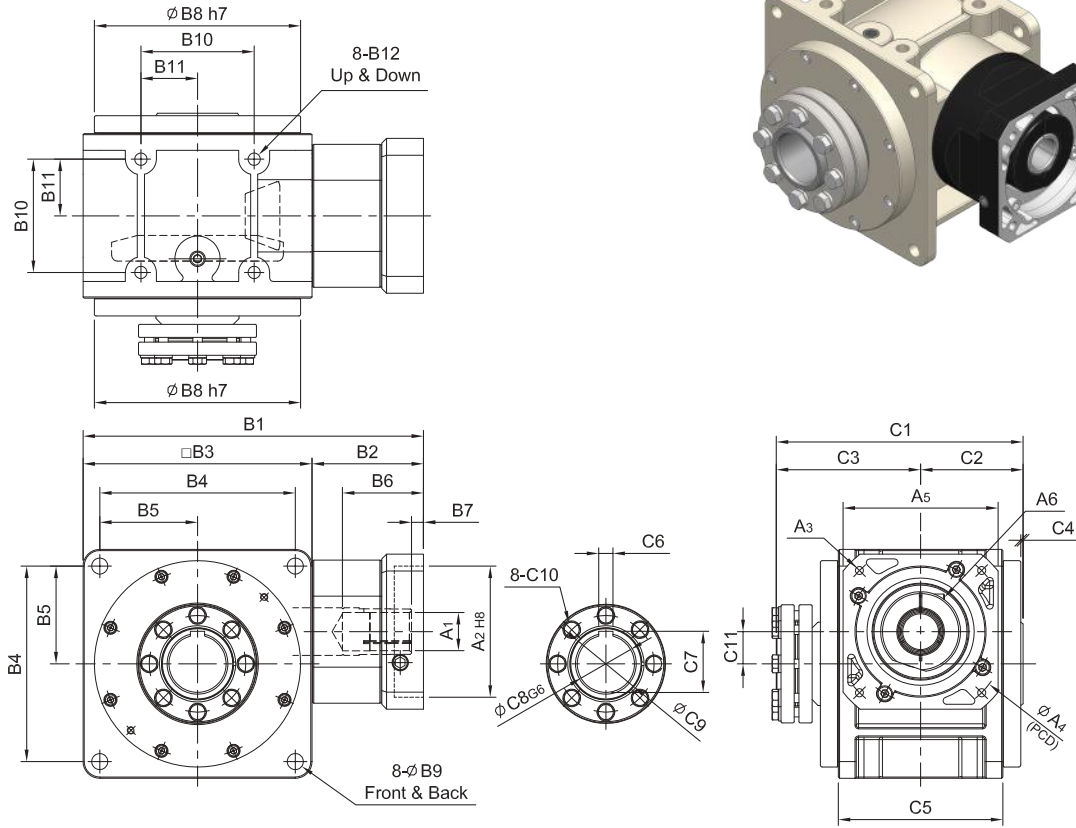


unit / birim: mm

A	Model Code	55	75	90	115	130	140	160	190
	A1	14	19	24	28	32	32	38	40
	A2	5	6	8	8	10	10	12	12
	A3	16	21.5	27	31	35	35	41	43
	A4	M5 x P0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5	M10 x P1.5	M10 x P1.5	M12 x P1.75	M12 x P1.75
B	B1	2.5	2.5	2.5	2.5	5	5	5	5
	B2	20	25	35	35	40	40	50	50
	B3	147	181	218	260	293	315	367	403
	B4	57	66	78	90	101	100	127	139
	B5	90	115	140	170	192	215	240	264
	B6	78	98	118	144	164	182	206	224
	B7	39	49	59	72	82	91	103	112
	B8	27	32	42.5	42.5	52.5	51.5	62	63.5
	B9	25	30	40	40	50	50	60	60
	B10	84	103	128	148	173	200	227	254
	B11	6.8	9	11	11	13.5	15	17.5	17.5
	B12	44	54	66	80	95	104	120	140
	B13	22	27	33	40	47.5	52	60	70
	B14	M6 x P1.0	M8 x P1.25	M10 x P1.5	M12 x P1.75	M12 x P1.75	M14 x P2.0	M16 x P2.0	M16 x P2.0
C	C1	88	108	132	156	172	187	212	242
	C2	44	54	66	78	86	93.5	106	121
	C3	60	80	100	120	138	146	166	196
	C4	2	2	2	2	2	2	2	2
	C5	6	7	8	10	12	14	14	18
	C6	22.8	28.3	33.3	43.3	51.3	58.8	63.8	74.3
	C7	20	25	30	40	48	55	60	70
	C8	9	14	18	23	27	32	38	42
Weight / Ağırlık		2.9	4.6	8.1	11.0	18.7	25.9	36.8	56.1

HY-FN series / serileri

RATIO / ÇEVİRİM : 3.4.5.6.8.10.12.15 (1-Stage / Kademe)

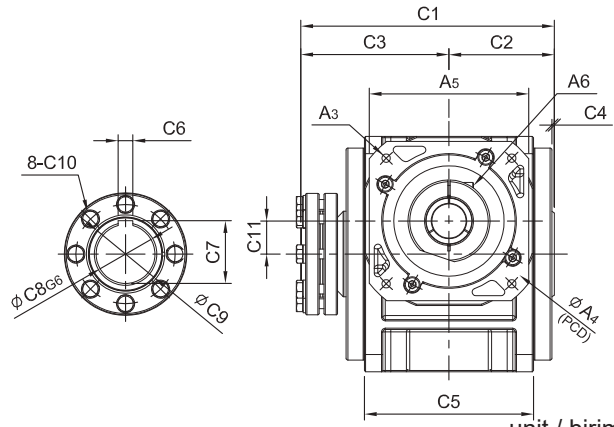
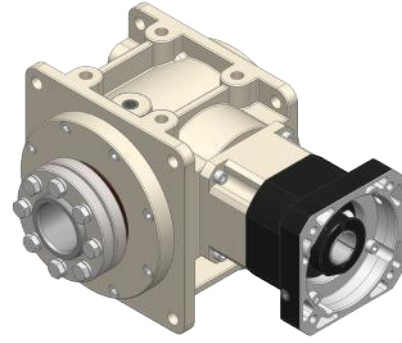
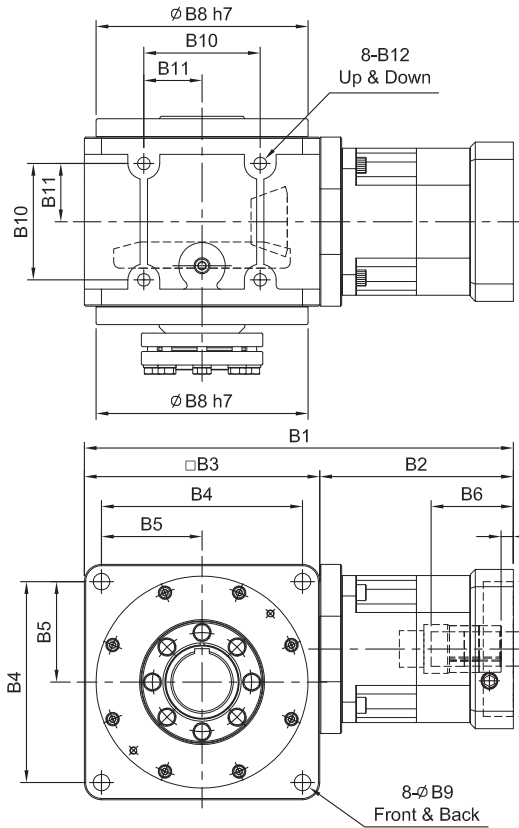


unit / birim: mm

	Model	55	75	90	115	130	140	160	190
	Code								
A	A1	8 ∙ 11	14	14 ∙ 19	19 ∙ 24	28 ∙ 32	35	35 ∙ 38	42 ∙ 48
	A2	30 ∙ 40 ∙ 50	50 ∙ 60 ∙ 70	50 ∙ 70 ∙ 80 ∙ 95	70 ∙ 80 ∙ 95 ∙ 110	95 ∙ 110 ∙ 130	110 ∙ 130 ∙ 180	110 ∙ 130 ∙ 180	114.3 ∙ 180 ∙ 230 ∙ 250
	A3	M3 ∙ M4 ∙ M5	M4 ∙ M5 ∙ M6	M5 ∙ M6	M5 ∙ M6 ∙ M8	M6 ∙ M8 ∙ M10	M8 ∙ M10 ∙ M12	M8 ∙ M10 ∙ M12	M12 ∙ M16
	A4	46 ∙ 60 ∙ 63	70 ∙ 75 ∙ 90	70 ∙ 90 ∙ 100 ∙ 115	90 ∙ 100 ∙ 115 ∙ 145	115 ∙ 145 ∙ 165	145 ∙ 165 ∙ 200	145 ∙ 165 ∙ 200	200 ∙ 215 ∙ 265 ∙ 300
	A5	46 ∙ 55	64 ∙ 70 ∙ 80	80 ∙ 92 ∙ 110	92 ∙ 110 ∙ 130	122 ∙ 130 ∙ 150	146 ∙ 150 ∙ 190	146 ∙ 150 ∙ 190	182 ∙ 200 ∙ 250 ∙ 265
	A6	M3 x P.05	M5 x P0.8	M5 x P0.8	M8 x P1.25	M8 x P1.25	M10 x P1.5	M10 x P1.5	M10 x P1.5
B	B1	123	158	202	241	286	333	358	417 ∙ 419
	B2	33	43	62	71	94	118	118	153 ∙ 155
	B3	90	115	140	170	192	215	240	264
	B4	78	98	118	144	164	182	206	224
	B5	39	49	59	72	82	91	103	112
	B6	26	38	49	58	69.5	81.5	81.5	114.5 ∙ 116.5
	B7	5	6	9	8	10	10	10	11.5 ∙ 13.5
	B8	84	103	128	148	173	200	227	254
	B9	6.8	9	11	11	13.5	15	17.5	17.5
	B10	44	54	66	80	95	104	120	140
	B11	22	27	33	40	47.5	52	60	70
	B12	M6 x P1.0	M8 x P1.25	M10 x P1.5	M12 x P1.75	M12 x P1.75	M14 x P2.0	M16 x P2.0	M16 x P2.0
C	C1	109	134	160	189	207	224	249	281
	C2	44	54	66	78	86	93.5	106	121
	C3	65	80	94	111	121	130.5	143	160
	C4	2	2	2	2	2	2	2	2
	C5	60	80	100	120	138	146	166	196
	C6	6	7	8	10	12	14	14	18
	C7	22.8	28.3	33.3	43.3	51.3	58.8	63.8	74.3
	C8	20	25	30	40	48	55	60	70
	C9	28	34	44	52	60	65	73	83
	C10	M6	M6	M6	M8	M8	M8	M8	M10
	C11	9	14	18	23	27	32	38	42
Weight / Ağırlık		3.2	5.0	8.7	13.0	19.3	27.4	39.4	61.7

HY-RN series / serileri

RATIO / ÇEVİRİM : 20.25.30.40.50.60.75.80.100.120.150 (2-Stage / Kademe)

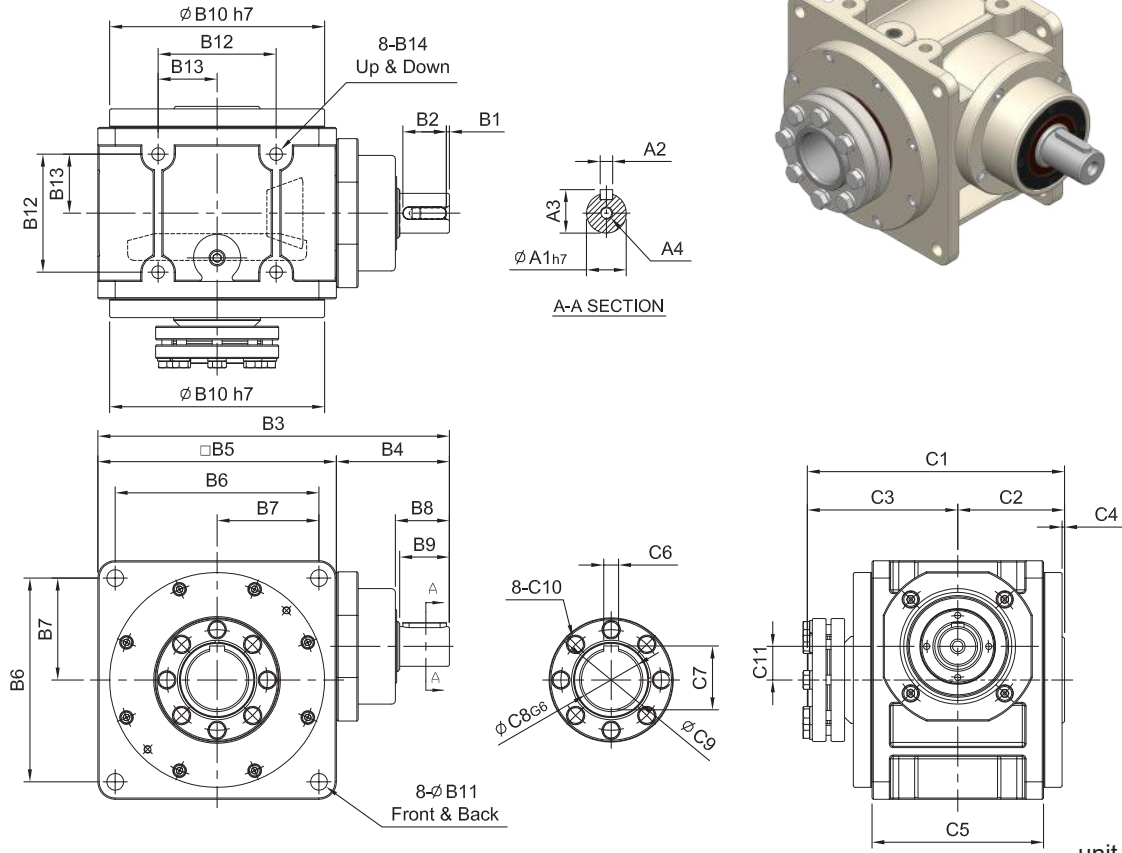


unit / birim: mm

Model Code	55	75	90	115	130	140	160	190
A1	8 · 11	14	(14) · 19	19 · 24	28 · 32	32 · 35	32 · 35	38 · 42 · 48 · 55
A2	30 · 40 · 50	50 · 60 · 70	50 · 70 · 80 · 95	70 · 80 · 95 · 110	95 · 110 · 130	110 · 130 · 180	110 · 130 · 180	114.3 · 180 · 230 · 250
A3	M3 · M4 · M5	M4 · M5 · M6	M5 · M6	M5 · M6 · M8	M6 · M8 · M10	M8 · M10 · M12	M8 · M10 · M12	M12 · M16
A4	46 · 60 · 63	70 · 75 · 90	70 · 90 · 100 · 115	90 · 100 · 115 · 145	115 · 145 · 165	145 · 165 · 200	145 · 165 · 200	200 · 215 · 265 · 300
A5	46 · 55	64 · 70 · 80	80 · 92 · 110	92 · 110 · 130	122 · 130 · 150	146 · 150 · 190	146 · 150 · 190	182 · 200 · 250 · 265
A6	M3 x P.05	M5 x P0.8	M5 x P0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5	M10 x P1.5	M10 x P1.5
B1	157	201	(224.5) · 237	287	340	405	430	508 · 510
B2	67	86	(84.5) · 97	117	148	190	190	244 · 246
B3	90	115	140	170	192	215	240	264
B4	78	98	118	144	164	182	206	224
B5	39	49	59	72	82	91	103	112
B6	26	32	(33.5) · 45.5	59	67	84.5	84.5	114.5 · 116.5
B7	5	6	(6) · 10	9	10	10	10	11.5 · 13.5
B8	84	103	128	148	173	200	227	254
B9	6.8	9	11	11	13.5	15	17.5	17.5
B10	44	54	66	80	95	104	120	140
B11	22	27	33	40	47.5	52	60	70
B12	M6 x P1.0	M8 x P1.25	M10 x P1.5	M12 x P1.75	M12 x P1.75	M14 x P2.0	M16 x P2.0	M16 x P2.0
C1	109	134	160	189	207	224	249	281
C2	44	54	66	78	86	93.5	106	121
C3	65	80	94	111	121	130.5	143	160
C4	2	2	2	2	2	2	2	2
C5	60	80	100	120	138	146	166	196
C6	6	7	8	10	12	14	14	18
C7	22.8	28.3	33.3	43.3	51.3	58.8	63.8	74.3
C8	20	25	30	40	48	55	60	70
C9	28	34	44	52	60	65	73	83
C10	M6	M6	M6	M8	M8	M8	M8	M10
C11	9	14	18	23	27	32	38	42
Weight / Ağırlık	3.8	6.2	10.5	16.7	28.0	41.9	53.9	88.4

HY-DN series / serileri

RATIO / ÇEVİRİM: 3.4.5.6.8.10.12.15 (1-Stage / Kademe)

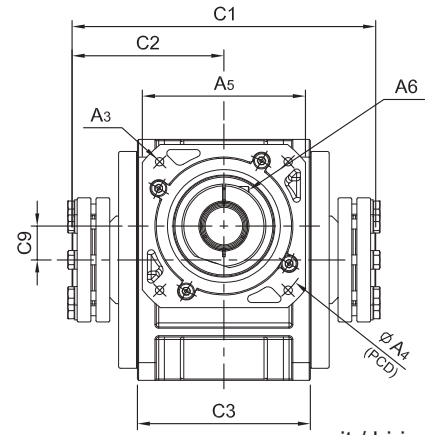
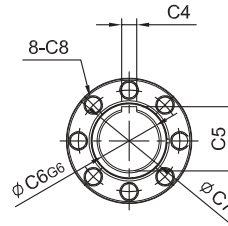
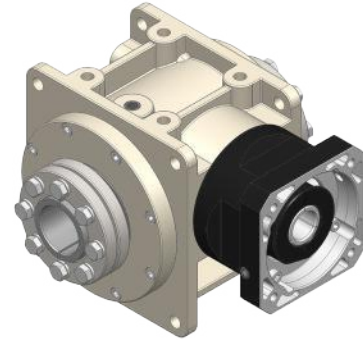
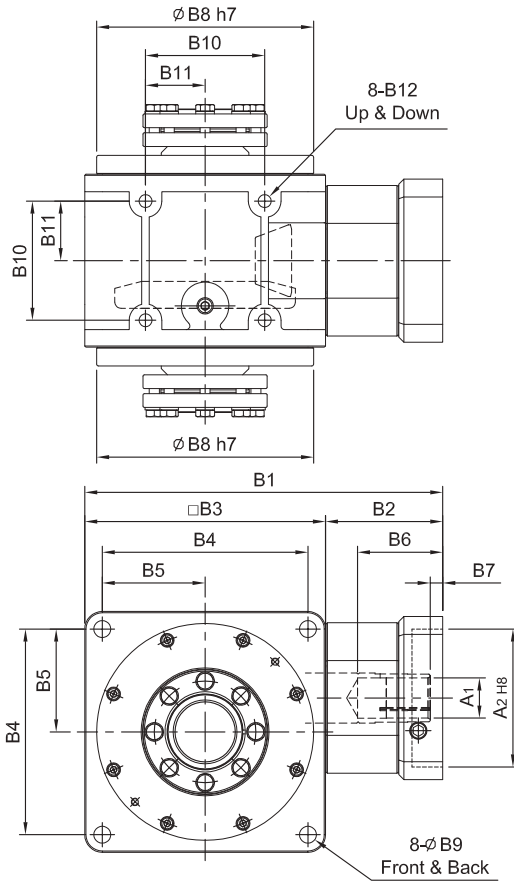


unit / birim: mm

Model Code	55	75	90	115	130	140	160	190
A	A1	14	19	24	28	32	32	40
	A2	5	6	8	8	10	10	12
	A3	16	21.5	27	31	35	35	43
	A4	M5 x P0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5	M10 x P1.5	M10 x P1.5	M12 x P1.75
B	B1	2.5	2.5	2.5	2.5	5	5	5
	B2	20	25	35	35	40	40	50
	B3	147	181	218	260	293	315	403
	B4	57	66	78	90	101	100	139
	B5	90	115	140	170	192	215	264
	B6	78	98	118	144	164	182	224
	B7	39	49	59	72	82	91	112
	B8	27	32	42.5	42.5	52.5	51.5	63.5
	B9	25	30	40	40	50	50	60
	B10	84	103	128	148	173	200	254
	B11	6.8	9	11	11	13.5	15	17.5
	B12	44	54	66	80	95	104	140
	B13	22	27	33	40	47.5	52	70
	B14	M6 x P1.0	M8 x P1.25	M10 x P1.5	M12 x P1.75	M12 x P1.75	M14 x P2.0	M16 x P2.0
C	C1	109	134	160	189	207	224	281
	C2	44	54	66	78	86	93.5	121
	C3	65	80	94	111	121	130.5	160
	C4	2	2	2	2	2	2	2
	C5	60	80	100	120	138	146	196
	C6	6	7	8	10	12	14	18
	C7	22.8	28.3	33.3	43.3	51.3	58.8	74.3
	C8	20	25	30	40	48	55	70
	C9	28	34	44	52	60	65	83
	C10	M6	M6	M6	M8	M8	M8	M10
	C11	9	14	18	23	27	32	42
Weight / Ağırlık		3.1	5.0	8.6	11.6	19.9	27.8	58.4

HY-FM series / serileri

RATIO / ÇEVİRİM : 3.4.5.6.8.10.12.15 (1-Stage / Kademe)

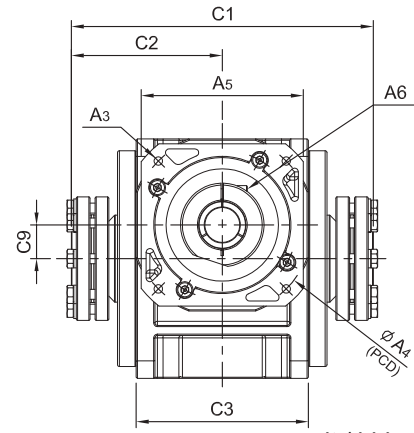
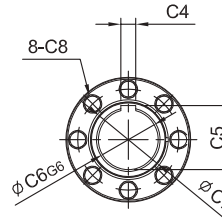
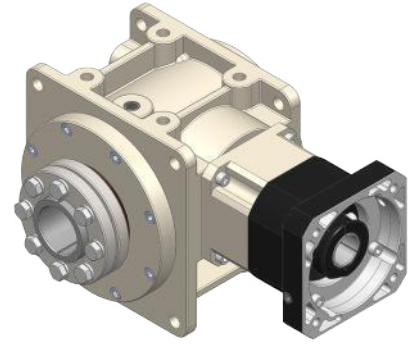
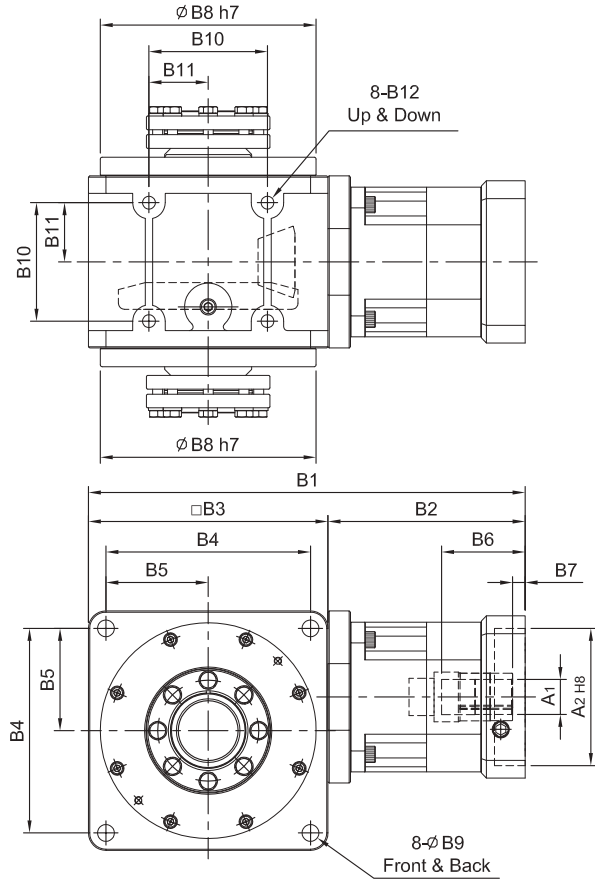


unit / birim: mm

Model Code	55	75	90	115	130	140	160	190
A1	8 · 11	14	14 · 19	19 · 24	28 · 32	35	35 · 38	42 · 48
A2	30 · 40 · 50	50 · 60 · 70	50 · 70 · 80 · 95	70 · 80 · 95 · 110	95 · 110 · 130	110 · 130 · 180	110,130,180	114.3 · 180 · 230 · 250
A3	M3 · M4 · M5	M4 · M5 · M6	M5 · M6	M5 · M6 · M8	M6 · M8 · M10	M8 · M10 · M12	M8 · M10 · M12	M12 · M16
A4	46 · 60 · 63	70 · 75 · 90	70 · 90 · 100 · 115	90 · 100 · 115 · 145	115 · 145 · 165	145 · 165 · 200	145 · 165 · 200	200 · 215 · 265 · 300
A5	46 · 55	64 · 70 · 80	80 · 92 · 110	92 · 110 · 130	122 · 130 · 150	146 · 150 · 190	146 · 150 · 190	182 · 200 · 250 · 265
A6	M3 x P.05	M5 x P0.8	M5 x P0.8	M8 x P1.25	M8 x P1.25	M10 x P1.5	M10 x P1.5	M10 x P1.5
B1	123	158	202	241	286	333	358	417 · 419
B2	33	43	62	71	94	118	118	153 · 155
B3	90	115	140	170	192	215	240	264
B4	78	98	118	144	164	182	206	224
B5	39	49	59	72	82	91	103	112
B6	26	38	49	58	69.5	81.5	81.5	114.5 · 116.5
B7	5	6	9	8	10	10	10	11.5 · 13.5
B8	84	103	128	148	173	200	227	254
B9	6.8	9	11	11	13.5	15	17.5	17.5
B10	44	54	66	80	95	104	120	140
B11	22	27	33	40	47.5	52	60	70
B12	M6 x P1.0	M8 x P1.25	M10 x P1.5	M12 x P1.75	M12 x P1.75	M14 x P2.0	M16 x P2.0	M16 x P2.0
C1	130	160	188	222	242	261	286	320
C2	65	80	94	111	121	130.5	143	160
C3	60	80	100	120	138	146	166	196
C4	-	-	-	-	12	14	14	18
C5	-	-	-	-	51.3	58.8	63.8	74.3
C6	20	25	30	40	48	55	60	70
C7	28	34	44	52	60	65	73	83
C8	M6	M6	M6	M8	M8	M8	M8	M10
C9	9	14	18	23	27	32	38	42
Weight / Ağırlık	3.5	5.3	9.2	13.7	20.5	28.6	41.0	64.0

HY-RM series / serileri

RATIO / ÇEVİRİM : 20.25.30.40.50.60.75.80.100.120.150 (2-Stage / Kademe)

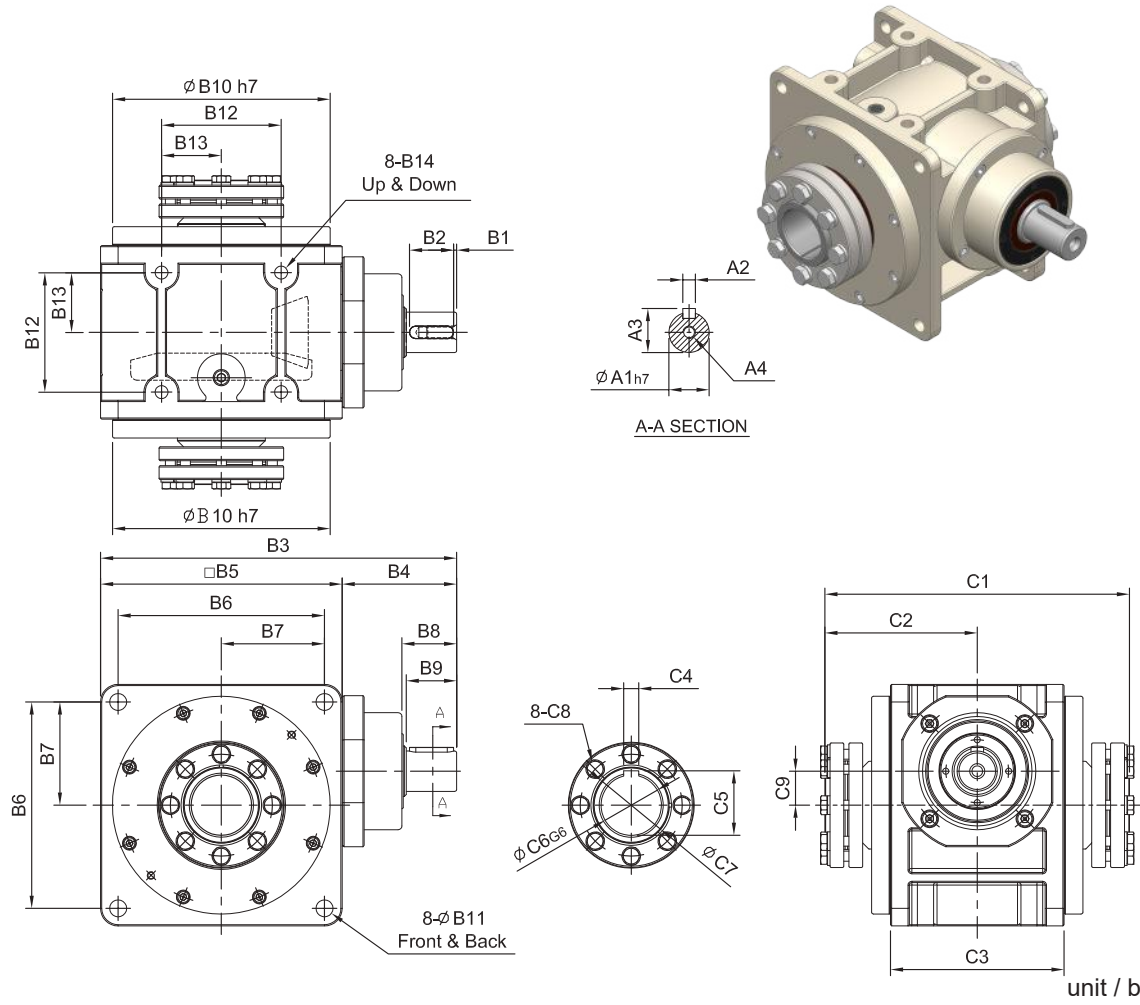


unit / birim: mm

	Model Code	55	75	90	115	130	140	160	190
A	A1	8 · 11	14	(14) · 19	19 · 24	28 · 32	32 · 35	32 · 35	38 · 42 · 48 · 55
	A2	30 · 40 · 50	50 · 60 · 70	50 · 70 · 80 · 95	70 · 80 · 95 · 110	95 · 110 · 130	110 · 130 · 180	110 · 130 · 180	114.3 · 180 · 230 · 250
	A3	M3 · M4 · M5	M4 · M5 · M6	M5 · M6	M5 · M6 · M8	M6 · M8 · M10	M8 · M10 · M12	M8 · M10 · M12	M12 · M16
	A4	46 · 60 · 63	70 · 75 · 90	70 · 90 · 100 · 115	90 · 100 · 115 · 145	115 · 145 · 165	145 · 165 · 200	145 · 165 · 200	200 · 215 · 265 · 300
	A5	46 · 55	64 · 70 · 80	80 · 92 · 110	92 · 110 · 130	122 · 130 · 150	146 · 150 · 190	146 · 150 · 190	182 · 200 · 250 · 265
	A6	M3 x P.05	M5 x P.0.8	M5 x P.0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5	M10 x P1.5	M10 x P1.5
B	B1	157	201	(224.5) · 237	287	340	405	430	508 · 510
	B2	67	86	(84.5) · 97	117	148	190	190	244 · 246
	B3	90	115	140	170	192	215	240	264
	B4	78	98	118	144	164	182	206	224
	B5	39	49	59	72	82	91	103	112
	B6	26	32	(33.5) · 45.5	59	67	84.5	84.5	114.5 · 116.5
	B7	5	6	(6) · 10	9	10	10	10	11.5 · 13.5
	B8	84	103	128	148	173	200	227	254
	B9	6.8	9	11	11	13.5	15	17.5	17.5
	B10	44	54	66	80	95	104	120	140
	B11	22	27	33	40	47.5	52	60	70
	B12	M6 x P1.0	M8 x P1.25	M10 x P1.5	M12 x P1.75	M12 x P1.75	M14 x P2.0	M16 x P2.0	M16 x P2.0
C	C1	130	160	188	222	242	261	286	320
	C2	65	80	94	111	121	130.5	143	160
	C3	60	80	100	120	138	146	166	196
	C4	-	-	-	-	12	14	14	18
	C5	-	-	-	-	51.3	58.8	63.8	74.3
	C6	20	25	30	40	48	55	60	70
	C7	28	34	44	52	60	65	73	83
	C8	M6	M6	M6	M8	M8	M8	M8	M10
	C9	9	14	18	23	27	32	38	42
Weight / Ağırlık		4.1	6.6	11.0	17.4	29.1	43.1	55.6	90.7

HY-DM series / serileri

RATIO / ÇEVİRİM : 3.4.5.6.8.10.12.15 (1-Stage / Kademe)

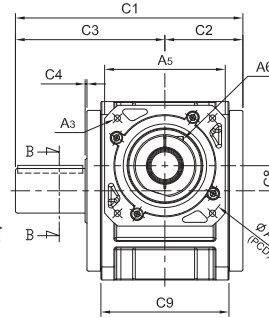
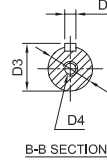
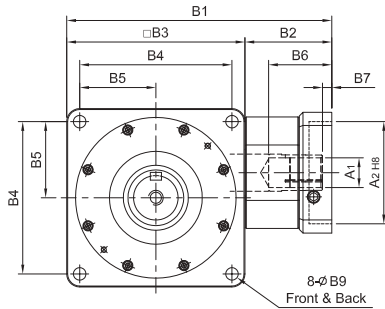
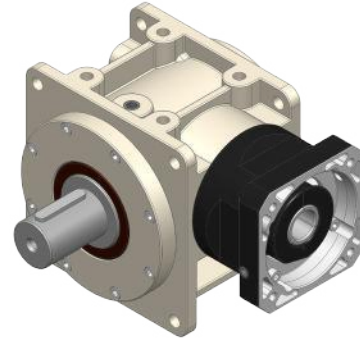
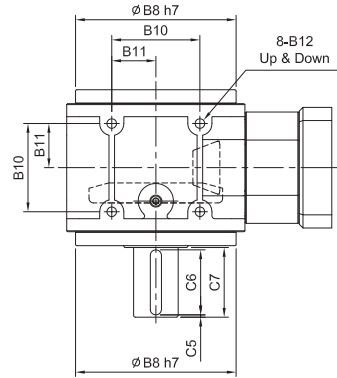


unit / birim: mm

Model Code	55	75	90	115	130	140	160	190
	55	75	90	115	130	140	160	190
A1	14	19	24	28	32	32	38	40
A2	5	6	8	8	10	10	12	12
A3	16	21.5	27	31	35	35	41	43
A4	M5 x P0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5	M10 x P1.5	M10 x P1.5	M12 x P1.75	M12 x P1.75
B1	2.5	2.5	2.5	2.5	5	5	5	5
B2	20	25	35	35	40	40	50	50
B3	147	181	218	260	293	315	367	403
B4	57	66	78	90	101	100	127	139
B5	90	115	140	170	192	215	240	264
B6	78	98	118	144	164	182	206	224
B7	39	49	59	72	82	91	103	112
B8	27	32	42.5	42.5	52.5	51.5	62	63.5
B9	25	30	40	40	50	50	60	60
B10	84	103	128	148	173	200	227	254
B11	6.8	9	11	11	13.5	15	17.5	17.5
B12	44	54	66	80	95	104	120	140
B13	22	27	33	40	47.5	52	60	70
B14	M6 x P1.0	M8 x P1.25	M10 x P1.5	M12 x P1.75	M12 x P1.75	M14 x P2.0	M16 x P2.0	M16 x P2.0
C1	130	160	188	222	242	261	286	320
C2	65	80	94	111	121	130.5	143	160
C3	60	80	100	120	138	146	166	196
C4	-	-	-	-	12	14	14	18
C5	-	-	-	-	51.3	58.8	63.8	74.3
C6	20	25	30	40	48	55	60	70
C7	28	34	44	52	60	65	73	83
C8	M6	M6	M6	M8	M8	M8	M8	M10
C9	9	14	18	23	27	32	38	42
Weight / Ağırlık	3.4	5.3	8.9	11.9	20.7	29.7	41	60.7

HY-FS series / serileri

RATIO / ÇEVİRİM : 3.4.5.6.8.10.12.15 (1-Stage / Kademe)

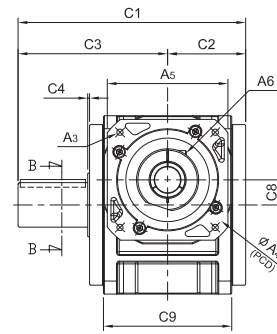
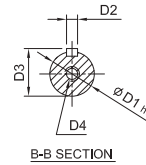
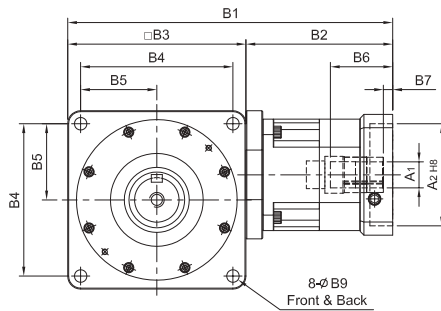
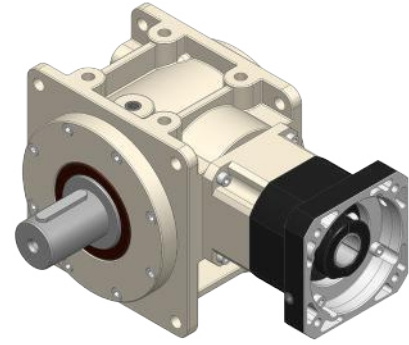
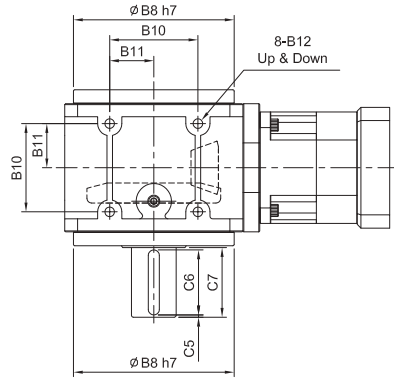


unit / birim : mm

	Model Code	55	75	90	115	130	140	160	190
A	A1	8 · 11	14	14 · 19	19 · 24	28 · 32	35	35 · 38	42 · 48
	A2	30 · 40 · 50	50 · 60 · 70	50 · 70 · 80 · 95	70 · 80 · 95 · 110	95 · 110 · 130	110 · 130 · 180	110 · 130 · 180	114.3 · 180 · 230 · 250
	A3	M3 · M4 · M5	M4 · M5 · M6	M5 · M6	M5 · M6 · M8	M6 · M8 · M10	M8 · M10 · M12	M8 · M10 · M12	M12 · M16
	A4	46 · 60 · 63	70 · 75 · 90	70 · 90 · 100 · 115	90 · 100 · 115 · 145	115 · 145 · 165	145 · 165 · 200	145 · 165 · 200	200 · 215 · 265 · 300
	A5	46 · 55	64 · 70 · 80	80 · 92 · 110	92 · 110 · 130	122 · 130 · 150	146 · 150 · 190	146 · 150 · 190	182 · 200 · 250 · 265
	A6	M3 x P.05	M5 x P.0.8	M5 x P.0.8	M8 x P.1.25	M8 x P.1.25	M10 x P.1.5	M10 x P.1.5	M10 x P.1.5
B	B1	123	158	202	241	286	333	358	417 · 419
	B2	33	43	62	71	94	118	118	153 · 155
	B3	90	115	140	170	192	215	240	264
	B4	78	98	118	144	164	182	206	224
	B5	39	49	59	72	82	91	103	112
	B6	26	38	49	58	69.5	81.5	81.5	114.5 · 116.5
	B7	5	6	9	8	10	10	10	11.5 · 13.5
	B8	84	103	128	148	173	200	227	254
	B9	6.8	9	11	11	13.5	15	17.5	17.5
	B10	44	54	66	80	95	104	120	140
	B11	22	27	33	40	47.5	52	60	70
	B12	M6 x P1.0	M8 x P1.25	M10 x P1.5	M12 x P1.75	M12 x P1.75	M14 x P2.0	M16 x P2.0	M16 x P2.0
C	C1	121	146	180	214	245	275	310	350
	C2	42	52	64	76	84	91.5	103	118
	C3	79	94	120	138	161	183.5	206	231
	C4	2	2	2	2	2	2	2	2
	C5	5	2.5	2.5	2.5	2.5	5	5	5
	C6	25	35	45	55	70	80	90	100
	C7	35	40	50	60	75	90	100	110
	C8	9	14	18	23	27	32	38	42
	C9	60	80	100	120	138	146	166	196
D	D1	20	24	32	40	48	55	60	70
	D2	6	8	10	10	12	14	14	16
	D3	22.5	27	35	51.3	51	58.5	63	74
	D4	M6 x P1.0	M8 x P1.25	M10 x P1.5	M10 x P1.5	M12 x P1.75	M16 x P2.0	M20 x P2.5	M20 x P2.5
Weight / Ağırlık		3.2	5.0	9.1	14.0	21.0	30.6	42.8	67.9

HY-RS series / serileri

RATIO / ÇEVİRİM : 20.25.30.40.50.60.75.80.100.120.150 (2-Stage / Kademe)

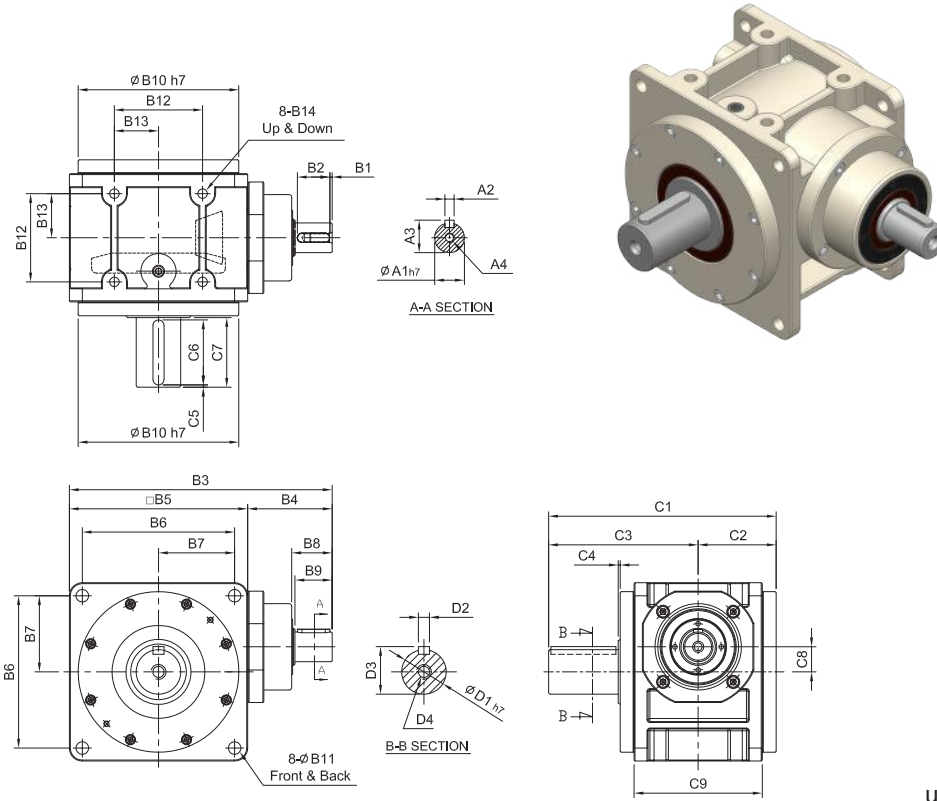


unit / birim: mm

	Model Code	55	75	90	115	130	140	160	190
A	A1	8 · 11	14	(14) · 19	19 · 24	28 · 32	32 · 35	32 · 35	38 · 42 · 48 · 55
	A2	30 · 40 · 50	50 · 60 · 70	50 · 70 · 80 · 95	70 · 80 · 95 · 110	95 · 110 · 130	110 · 130 · 180	110 · 130 · 180	114.3 · 180 · 230 · 250
	A3	M3 · M4 · M5	M4 · M5 · M6	M5 · M6	M5 · M6 · M8	M6 · M8 · M10	M8 · M10 · M12	M8 · M10 · M12	M12 · M16
	A4	46 · 60 · 63	70 · 75 · 90	70 · 90 · 100 · 115	90 · 100 · 115 · 145	115 · 145 · 165	145 · 165 · 200	145 · 165 · 200	200 · 215 · 265 · 300
	A5	46 · 55	64 · 70 · 80	80 · 92 · 110	92 · 110 · 130	122 · 130 · 150	146 · 150 · 190	146 · 150 · 190	182 · 200 · 250 · 265
	A6	M3 x P.05	M5 x P.0.8	M5 x P.0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5	M10 x P1.5	M10 x P1.5
B	B1	157	201	(224.5) · 237	287	340	405	430	508 · 510
	B2	67	86	(84.5) · 97	117	148	190	190	244 · 246
	B3	90	115	140	170	192	215	240	264
	B4	78	98	118	144	164	182	206	224
	B5	39	49	59	72	82	91	103	112
	B6	26	32	(33.5) · 45.5	59	67	84.5	84.5	114.5 · 116.5
	B7	5	6	(6) · 10	9	10	10	10	11.5 · 13.5
	B8	84	103	128	148	173	200	227	254
	B9	6.8	9	11	11	13.5	15	17.5	17.5
	B10	44	54	66	80	95	104	120	140
	B11	22	27	33	40	47.5	52	60	70
	B12	M6 x P1.0	M8 x P1.25	M10 x P1.5	M12 x P1.75	M12 x P1.75	M14 x P2.0	M16 x P2.0	M16 x P2.0
C	C1	121	146	180	214	245	275	310	350
	C2	42	52	64	76	84	91.5	103	118
	C3	79	94	120	138	161	183.5	206	231
	C4	2	2	2	2	2	2	2	2
	C5	5	2.5	2.5	2.5	2.5	5	5	5
	C6	25	35	45	55	70	80	90	100
	C7	35	40	50	60	75	90	100	110
	C8	9	14	18	23	27	32	38	42
	C9	60	80	100	120	138	146	166	196
D	D1	20	24	32	40	48	55	60	70
	D2	6	8	10	10	12	14	14	16
	D3	22.5	27	35	51.3	51	58.5	63	74
	D4	M6 x P1.0	M8 x P1.25	M10 x P1.5	M10 x P1.5	M12 x P1.75	M16 x P2.0	M20 x P2.5	M20 x P2.5
Weight / Ağırlık		3.8	6.3	10.9	17.7	29.6	45.2	57.4	94.6

HY-DS series / serileri

RATIO / ÇEVİRİM : 3.4.5.6.8.10.12.15 (1-Stage / Kademe)

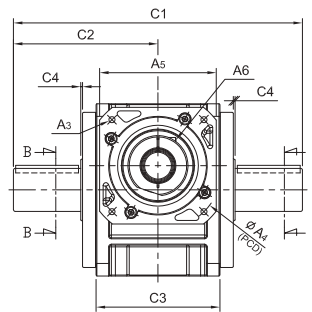
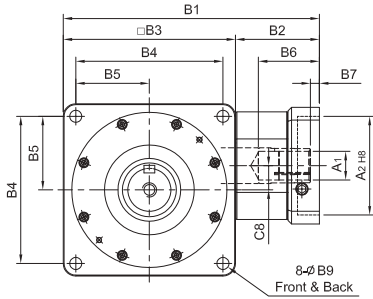
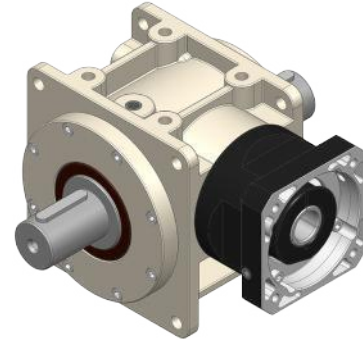
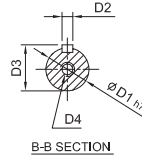
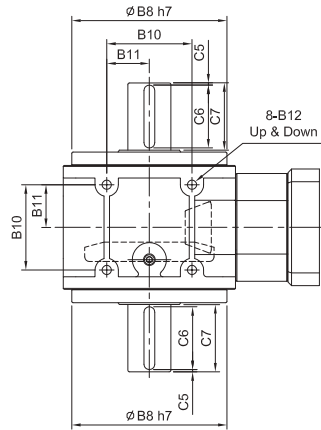


unit / birim: mm

Model Code	55	75	90	115	130	140	160	190
	55	75	90	115	130	140	160	190
A1	14	19	24	28	32	32	38	40
A2	5	6	8	8	10	10	12	12
A3	16	21.5	27	31	35	35	41	43
A4	M5 x P0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5	M10 x P1.5	M10 x P1.5	M12 x P1.75	M12 x P1.75
B1	2.5	2.5	2.5	2.5	5	5	5	5
B2	20	25	35	35	40	40	50	50
B3	147	180.5	218	260	293	315	367	402.5
B4	57	65.5	78	90	101	100	127	138.5
B5	90	115	140	170	192	215	240	264
B6	78	98	118	144	164	182	206	224
B7	39	49	59	72	82	91	103	112
B8	27	32	42.5	42.5	52.5	51.5	62	63.5
B9	25	30	40	40	50	50	60	60
B10	84	103	128	148	173	200	227	254
B11	6.8	9	11	11	13.5	15	17.5	17.5
B12	44	54	66	80	95	104	120	140
B13	22	27	33	40	47.5	52	60	70
B14	M6 x P1.0	M8 x P1.25	M10 x P1.5	M12 x P1.75	M12 x P1.75	M14 x P2.0	M16 x P2.0	M16 x P2.0
C1	121	146	180	214	245	275	310	350
C2	42	52	64	76	84	91.5	103	118
C3	79	94	120	138	161	183.5	206	231
C4	2	2	2	2	2	2	2	2
C5	5	2.5	2.5	2.5	2.5	5	5	5
C6	25	35	45	55	70	80	90	100
C7	35	40	50	60	75	90	100	110
C8	9	14	18	23	27	32	38	42
C9	60	80	100	120	138	146	166	196
D1	20	24	32	40	48	55	60	70
D2	6	8	10	10	12	14	14	16
D3	22.5	27	35	51.3	51	58.5	63	74
D4	M6 x P1.0	M8 x P1.25	M10 x P1.5	M10 x P1.5	M12 x P1.75	M16 x P2.0	M20 x P2.5	M20 x P2.5
Weight / Ağırlık	2.9	5.0	8.7	12.0	21.1	32.8	42.0	64.6

HY-FV series / serileri

RATIO / ÇEVİRİM : 3.4.5.6.8.10.12.15 (1-Stage / Kademe)

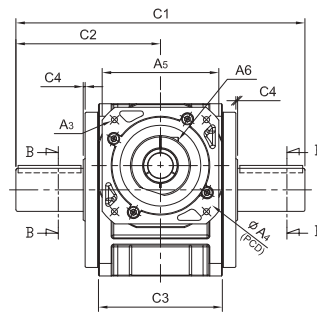
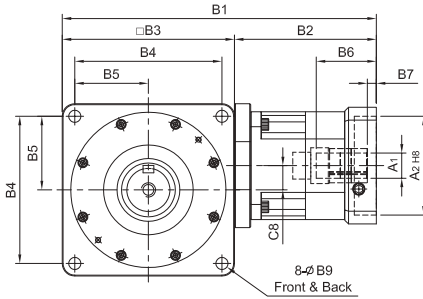
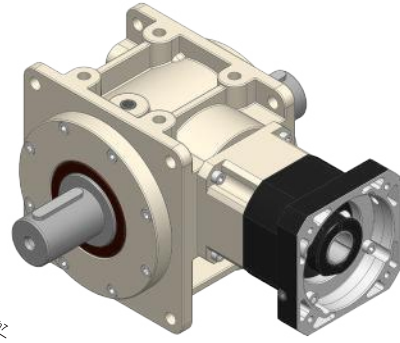
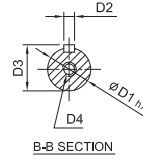
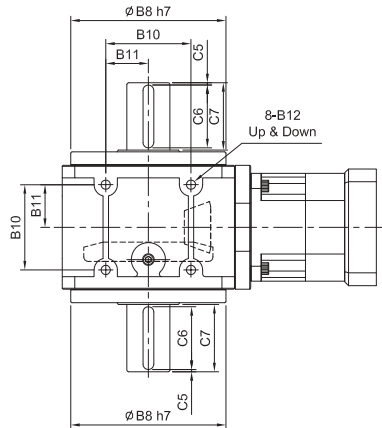


unit / birim: mm

	Model Code	55	75	90	115	130	140	160	190
A	A1	8 · 11	14	14 · 19	19 · 24	28 · 32	35	35 · 38	42 · 48
	A2	30 · 40 · 50	50 · 60 · 70	50 · 70 · 80 · 95	70 · 80 · 95 · 110	95 · 110 · 130	110 · 130 · 180	110 · 130 · 180	114.3 · 180 · 230 · 250
	A3	M3 · M4 · M5	M4 · M5 · M6	M5 · M6	M5 · M6 · M8	M6 · M8 · M10	M8 · M10 · M12	M8 · M10 · M12	M12 · M16
	A4	46 · 60 · 63	70 · 75 · 90	70 · 90 · 100 · 115	90 · 100 · 115 · 145	115 · 145 · 165	145 · 165 · 200	145 · 165 · 200	200 · 215 · 265 · 300
	A5	46 · 55	64 · 70 · 80	80 · 92 · 110	92 · 110 · 130	122 · 130 · 150	146 · 150 · 190	146 · 150 · 190	182 · 200 · 250 · 265
	A6	M3 x P.05	M5 x P0.8	M5 x P0.8	M8 x P1.25	M8 x P1.25	M10 x P1.5	M10 x P1.5	M10 x P1.5
B	B1	123	158	202	241	286	333	358	417 · 419
	B2	33	43	62	71	94	118	118	153 · 155
	B3	90	115	140	170	192	215	240	264
	B4	78	98	118	144	164	182	206	224
	B5	39	49	59	72	82	91	103	112
	B6	26	38	49	58	69.5	81.5	81.5	114.5 · 116.5
	B7	5	6	9	8	10	10	10	11.5 · 13.5
	B8	84	103	128	148	173	200	227	254
	B9	6.8	9	11	11	13.5	15	17.5	17.5
	B10	44	54	66	80	95	104	120	140
	B11	22	27	33	40	47.5	52	60	70
	B12	M6 x P1.0	M8 x P1.25	M10 x P1.5	M12 x P1.75	M12 x P1.75	M14 x P2.0	M16 x P2.0	M16 x P2.0
C	C1	158	188	232	276	322	367	412	462
	C2	79	94	116	138	161	183.5	206	231
	C3	60	80	100	120	138	146	166	196
	C4	2	2	2	2	2	2	2	2
	C5	5	2.5	2.5	2.5	2.5	5	5	5
	C6	25	35	45	55	70	80	90	100
	C7	35	40	50	60	75	90	100	110
	C8	9	14	18	23	27	32	38	42
D	D1	20	24	32	40	48	55	60	70
	D2	6	8	10	10	12	14	14	16
	D3	22.5	27	35	51.3	51	58.5	63	74
	D4	M6 x P1.0	M8 x P1.25	M10 x P1.5	M10 x P1.5	M12 x P1.75	M16 x P2.0	M20 x P2.5	M20 x P2.5
Weight / Ağırlık		3.4	5.4	9.7	15.3	23.1	34.7	47.1	74.0

HY-RV series / serileri

RATIO / ÇEVİRİM : 20.25.30.40.50.60.75.80.100.120.150 (2-Stage / Kademe)

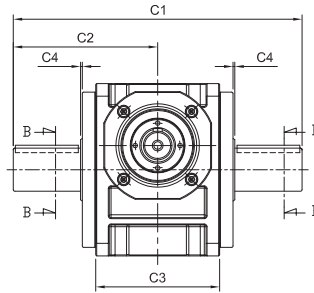
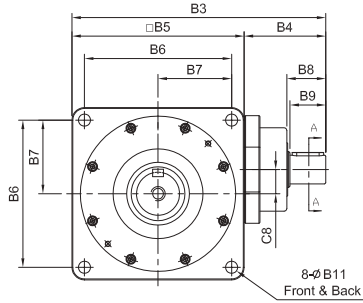
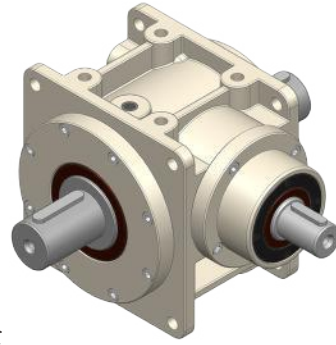
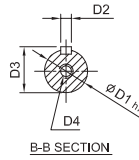
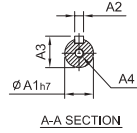
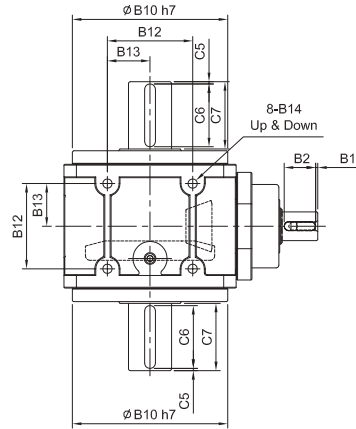


unit / birim: mm

	Model Code	55	75	90	115	130	140	160	190
	A1	8 ∙ 11	14	(14) ∙ 19	19 ∙ 24	28 ∙ 32	32 ∙ 35	32 ∙ 35	38 ∙ 42 ∙ 48 ∙ 55
A	A2	30 ∙ 40 ∙ 50	50 ∙ 60 ∙ 70	50 ∙ 70 ∙ 80 ∙ 95	70 ∙ 80 ∙ 95 ∙ 110	95 ∙ 110 ∙ 130	110 ∙ 130 ∙ 180	110 ∙ 130 ∙ 180	114.3 ∙ 180 ∙ 230 ∙ 250
	A3	M3 ∙ M4 ∙ M5	M4 ∙ M5 ∙ M6	M5 ∙ M6	M5 ∙ M6 ∙ M8	M6 ∙ M8 ∙ M10	M8 ∙ M10 ∙ M12	M8 ∙ M10 ∙ M12	M12 ∙ M16
	A4	46 ∙ 60 ∙ 63	70 ∙ 75 ∙ 90	70 ∙ 90 ∙ 100 ∙ 115	90 ∙ 100 ∙ 115 ∙ 145	115 ∙ 145 ∙ 165	145 ∙ 165 ∙ 200	145 ∙ 165 ∙ 200	200 ∙ 215 ∙ 265 ∙ 300
	A5	46 ∙ 55	64 ∙ 70 ∙ 80	80 ∙ 92 ∙ 110	92 ∙ 110 ∙ 130	122 ∙ 130 ∙ 150	146 ∙ 150 ∙ 190	146 ∙ 150 ∙ 190	182 ∙ 200 ∙ 250 ∙ 265
	A6	M3 x P.05	M5 x P0.8	M5 x P0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5	M10 x P1.5	M10 x P1.5
	B	B1	157	201	(224.5) ∙ 237	287	340	405	430
B2		67	86	(84.5) ∙ 97	117	148	190	190	244 ∙ 246
B3		90	115	140	170	192	215	240	264
B4		78	98	118	144	164	182	206	224
B5		39	49	59	72	82	91	103	112
B6		26	32	(33.5) ∙ 45.5	59	67	84.5	84.5	114.5 ∙ 116.5
B7		5	6	(6) ∙ 10	9	10	10	10	11.5 ∙ 13.5
B8		84	103	128	148	173	200	227	254
B9		6.8	9	11	11	13.5	15	17.5	17.5
B10		44	54	66	80	95	104	120	140
B11		22	27	33	40	47.5	52	60	70
B12		M6 x P1.0	M8 x P1.25	M10 x P1.5	M12 x P1.75	M12 x P1.75	M14 x P2.0	M16 x P2.0	M16 x P2.0
C	C1	158	188	232	276	322	367	412	462
	C2	79	94	116	138	161	183.5	206	231
	C3	60	80	100	120	138	146	166	196
	C4	2	2	2	2	2	2	2	2
	C5	5	2.5	2.5	2.5	2.5	5	5	5
	C6	25	35	45	55	70	80	90	100
	C7	35	40	50	60	75	90	100	110
	C8	9	14	18	23	27	32	38	42
D	D1	20	24	32	40	48	55	60	70
	D2	6	8	10	10	12	14	14	16
	D3	22.5	27	35	51.3	51	58.5	63	74
	D4	M6 x P1.0	M8 x P1.25	M10 x P1.5	M10 x P1.5	M12 x P1.75	M16 x P2.0	M20 x P2.5	M20 x P2.5
Weight / Ağırlık		4.0	6.6	11.5	18.9	31.7	41.2	61.6	100.6

HY-DV series / serileri

RATIO / ÇEVİRİM : 3.4.5.6.8.10.12.15 (1-Stage / Kademe)

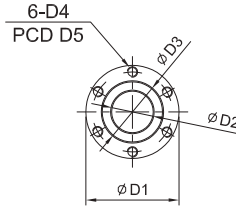
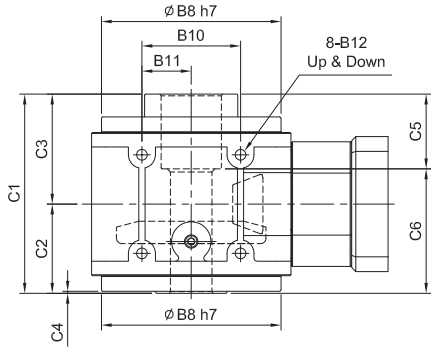


unit / birim: mm

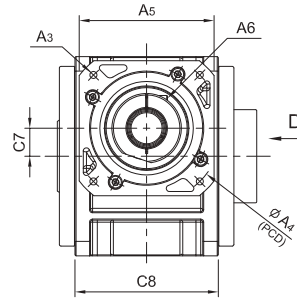
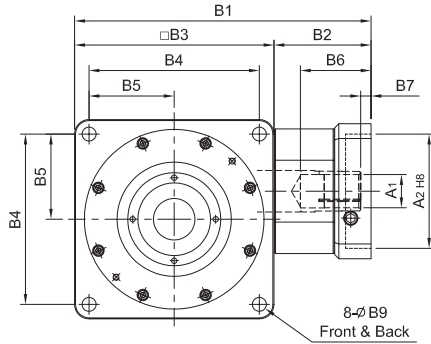
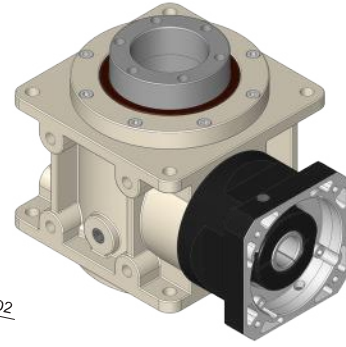
	Model Code	55	75	90	115	130	140	160	190
A	A1	14	19	24	28	32	32	38	40
	A2	5	6	8	8	10	10	12	12
	A3	16	21.5	27	31	35	35	41	43
	A4	M5 x P0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5	M10 x P1.5	M10 x P1.5	M12 x P1.75	M12 x P1.75
B	B1	2.5	2.5	2.5	2.5	5	5	5	5
	B2	20	25	35	35	40	40	50	50
	B3	147	181	218	260	293	315	367	403
	B4	57	66	78	90	101	100	127	139
	B5	90	115	140	170	192	215	240	264
	B6	78	98	118	144	164	182	206	224
	B7	39	49	59	72	82	91	103	112
	B8	27	32	42.5	42.5	52.5	51.5	62	63.5
	B9	25	30	40	40	50	50	60	60
	B10	84	103	128	148	173	200	227	254
	B11	6.8	9	11	11	13.5	15	17.5	17.5
	B12	44	54	66	80	95	104	120	140
	B13	22	27	33	40	47.5	52	60	70
	B14	M6 x P1.0	M8 x P1.25	M10 x P1.5	M12 x P1.75	M12 x P1.75	M14 x P2.0	M16 x P2.0	M16 x P2.0
C	C1	158	188	232	276	322	367	412	462
	C2	79	94	116	138	161	183.5	206	231
	C3	60	80	100	120	138	146	166	196
	C4	2	2	2	2	2	2	2	2
	C5	5	2.5	2.5	2.5	2.5	5	5	5
	C6	25	35	45	55	70	80	90	100
	C7	35	40	50	60	75	90	100	110
	C8	9	14	18	23	27	32	38	42
D	D1	20	24	32	40	48	55	60	70
	D2	6	8	10	10	12	14	14	16
	D3	22.5	27	35	51.3	51	58.5	63	74
	D4	M6 x P1.0	M8 x P1.25	M10 x P1.5	M10 x P1.5	M12 x P1.75	M16 x P2.0	M20 x P2.5	M20 x P2.5
Weight / Ağırlık		3.1	5.3	9.2	14.7	23.6	37.7	47.8	70.6

HY-FB series / serileri

RATIO / ÇEVİRİM : 3.4.5.6.8.10.12.15 (1-Stage / Kademe)



D VIEW

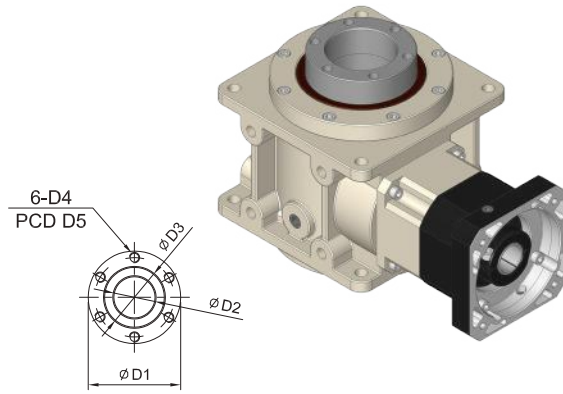
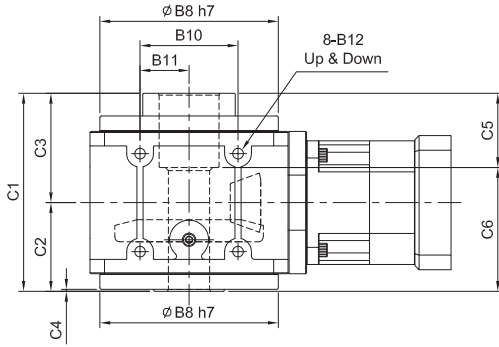


unit / birim: mm

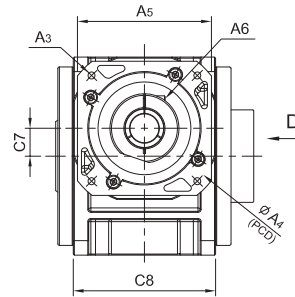
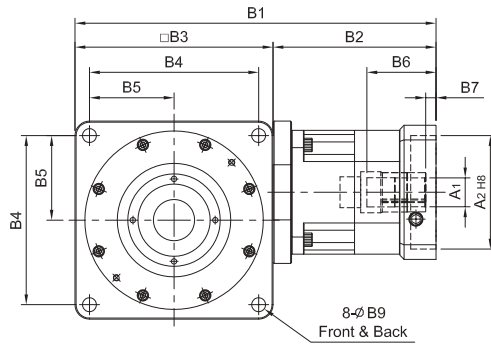
Model Code	75	90	115	130	140	160	190
A1	14	14 · 19	19 · 24	28 · 32	35	35 · 38	42 · 48
A2	50 · 60 · 70	50 · 70 · 80 · 95	70 · 80 · 95 · 110	95 · 110 · 130	110 · 130 · 180	110 · 130 · 180	114.3 · 180 · 230 · 250
A3	M4 · M5 · M6	M5 · M6	M5 · M6 · M8	M6 · M8 · M10	M8 · M10 · M12	M8 · M10 · M12	M12 · M16
A4	70 · 75 · 90	70 · 90 · 100 · 115	90 · 100 · 115 · 145	115 · 145 · 165	145 · 165 · 200	145 · 165 · 200	200 · 215 · 265 · 300
A5	64 · 70 · 80	80 · 92 · 110	92 · 110 · 130	122 · 130 · 150	146 · 150 · 190	146 · 150 · 190	182 · 200 · 250 · 265
A6	M5 x P0.8	M5 x P0.8	M8 x P1.25	M8 x P1.25	M10 x P1.5	M10 x P1.5	M10 x P1.5
B1	158	202	241	286	333	358	417 · 419
B2	43	62	71	94	118	118	153 · 155
B3	115	140	170	192	215	240	264
B4	98	118	144	164	182	206	224
B5	49	59	72	82	91	103	112
B6	38	49	58	69.5	81.5	81.5	114.5 · 116.5
B7	6	9	8	10	10	10	11.5 · 13.5
B8	103	128	148	173	200	227	254
B9	9	11	11	13.5	15	17.5	17.5
B10	54	66	80	95	104	120	140
B11	27	33	40	47.5	52	60	70
B12	M8 x P1.25	M10 x P1.5	M12 x P1.75	M12 x P1.75	M14 x P2.0	M16 x P2.0	M16 x P2.0
C1	125	140	177	193	205	230	260
C2	58	66	78.5	87	94	107	123
C3	67	74	98.5	106	111	123	137
C4	3.25	2	2.5	2	2.5	2.5	3
C5	50	58	72	72	82	92	117
C6	75	82	105	121	123	138	143
C7	14	18	23	27	32	38	42
C8	80	100	120	138	146	166	196
D1	54.7	64.7	89.7	89.7	99.7	117.7	129.7
D2	22	30	38	40	44	54	65
D3	34	40	58	58	64	75	90
D4	M5 x P0.8	M5 x P0.8	M10 x P1.5	M10 x P1.5	M10 x P1.5	M12 x P1.75	M12 x P1.75
D5	45	51	77	77	84	97	112
Weight / Ağırlık	4.3	8.3	12.7	18.7	26.9	37.9	58.9

HY-RB series / serileri

RATIO / ÇEVİRİM : 20.25.30.40.50.60.75.80.100.120.150 (2-Stage / Kademe)



D VIEW

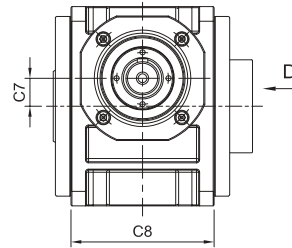
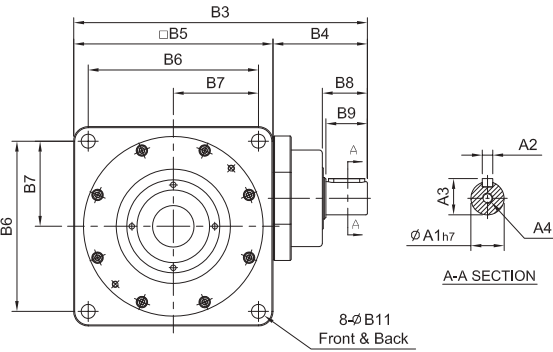
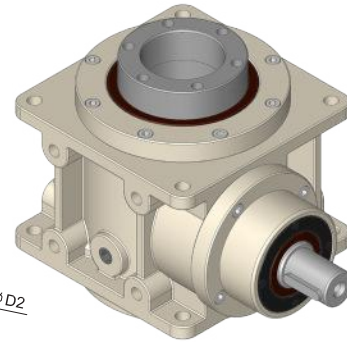
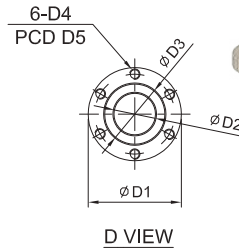
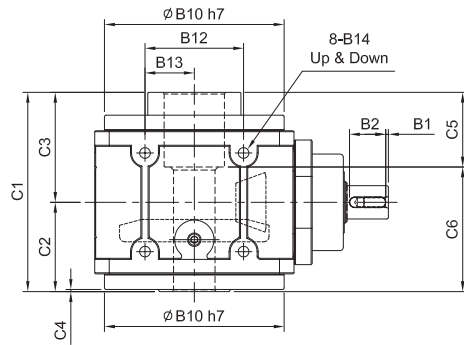


unit / birim: mm

	Model Code	75	90	115	130	140	160	190
	A1	14	(14) · 19	19 · 24	28 · 32	32 · 35	32 · 35	38 · 42 · 48 · 55
A	A2	50 · 60 · 70	50 · 70 · 80 · 95	70 · 80 · 95 · 110	95 · 110 · 130	110 · 130 · 180	110 · 130 · 180	114.3 · 180 · 230 · 250
	A3	M4 · M5 · M6	M5 · M6	M5 · M6 · M8	M6 · M8 · M10	M8 · M10 · M12	M8 · M10 · M12	M12 · M16
	A4	70 · 75 · 90	70 · 90 · 100 · 115	90 · 100 · 115 · 145	115 · 145 · 165	145 · 165 · 200	145 · 165 · 200	200 · 215 · 265 · 300
	A5	64 · 70 · 80	80 · 92 · 110	92 · 110 · 130	122 · 130 · 150	146 · 150 · 190	146 · 150 · 190	182 · 200 · 250 · 265
	A6	M5 x P0.8	M5 x P0.8	M6 x P1.0	M8 x P1.25	M10 x P1.5	M10 x P1.5	M10 x P1.5
	B	B1	201	(224.5) · 237	287	340	405	430
B2		86	(84.5) · 97	117	148	190	190	244 · 246
B3		115	140	170	192	215	240	264
B4		98	118	144	164	182	206	224
B5		49	59	72	82	91	103	112
B6		32	(33.5) · 45.5	59	67	84.5	84.5	114.5 · 116.5
B7		6	(6) · 10	9	10	10	10	11.5 · 13.5
B8		103	128	148	173	200	227	254
B9		9	11	11	13.5	15	17.5	17.5
B10		54	66	80	95	104	120	140
B11		27	33	40	47.5	52	60	70
B12		M8 x P1.25	M10 x P1.5	M12 x P1.75	M12 x P1.75	M14 x P2.0	M16 x P2.0	M16 x P2.0
C	C1	125	140	177	193	205	230	260
	C2	58	66	78.5	87	94	107	123
	C3	67	74	98.5	106	111	123	137
	C4	3.25	2	2.5	2	2.5	2.5	3
	C5	50	58	72	72	82	92	117
	C6	75	82	105	121	123	138	143
	C7	14	18	23	27	32	38	42
	C8	80	100	120	138	146	166	196
D	D1	54.7	64.7	89.7	89.7	99.7	117.7	129.7
	D2	22	30	38	40	44	54	65
	D3	34	40	58	58	64	75	90
	D4	M5 x P0.8	M5 x P0.8	M10 x P1.5	M10 x P1.5	M10 x P1.5	M12 x P1.75	M12 x P1.75
	D5	45	51	77	77	84	97	112
Weight / Ağırlık		5.5	10.1	16.4	27.3	41.5	52.5	85.5

HY-DB series / serileri

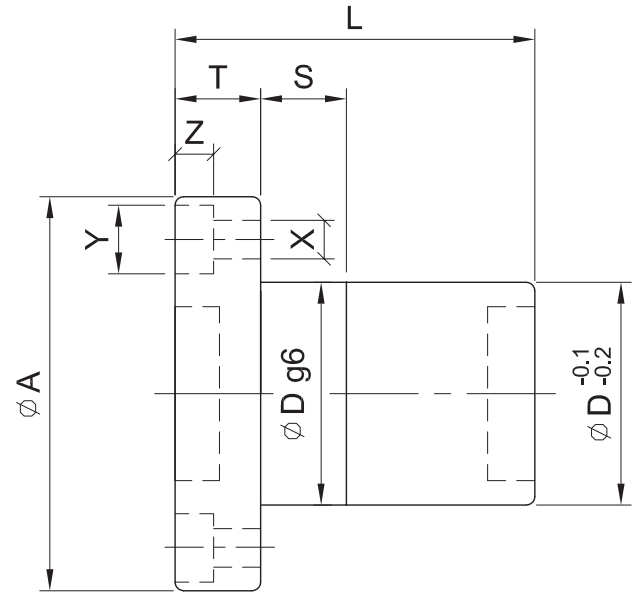
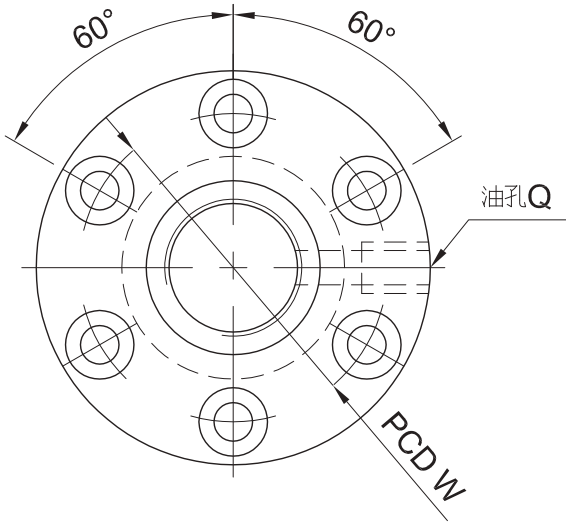
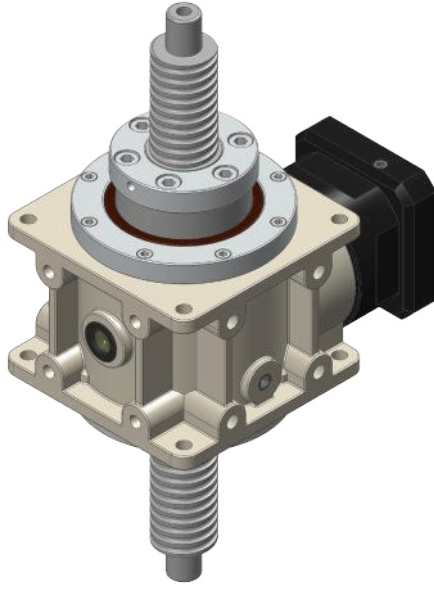
RATIO / ÇEVİRİM : 3.4.5.6.8.10.12.15 (1-Stage / Kademe)



unit / birim: mm

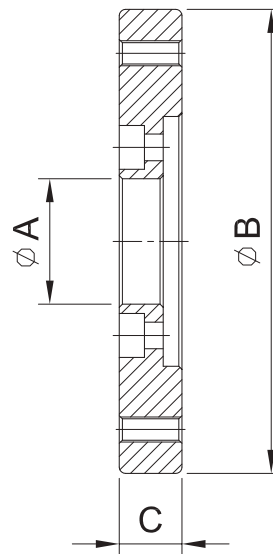
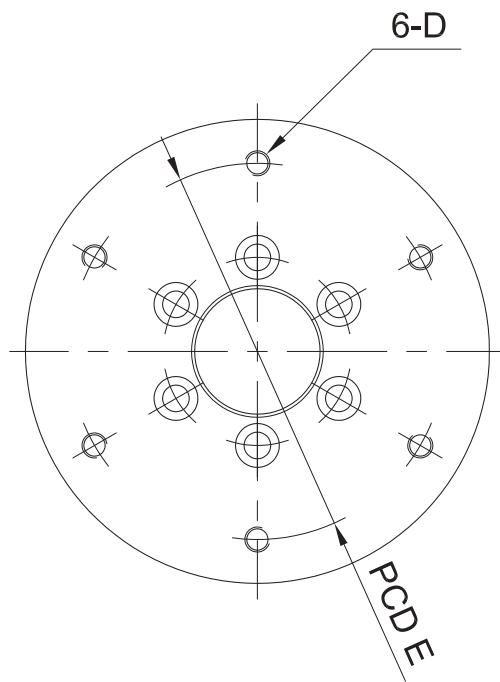
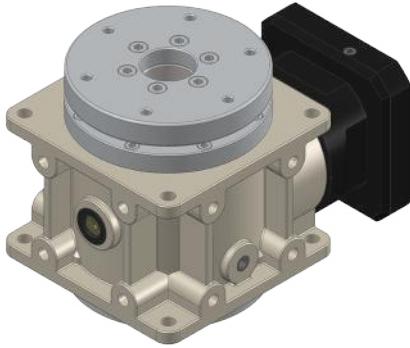
A	Model Code	75	90	115	130	140	160	190
	A1	19	24	28	32	32	38	40
	A2	6	8	8	10	10	12	12
	A3	21.5	27	31	35	35	41	43
	A4	M6 x P1.0	M8 x P1.25	M10 x P1.5	M10 x P1.5	M10 x P1.5	M12 x P1.75	M12 x P1.75
B	B1	2.5	2.5	2.5	5	5	5	5
	B2	25	35	35	40	40	50	50
	B3	181	218	260	293	315	367	403
	B4	66	78	90	101	100	127	139
	B5	115	140	170	192	215	240	264
	B6	98	118	144	164	182	206	224
	B7	49	59	72	82	91	103	112
	B8	32	42.5	42.5	52.5	51.5	62	63.5
	B9	30	40	40	50	50	60	60
	B10	103	128	148	173	200	227	254
	B11	9	11	11	13.5	15	17.5	17.5
	B12	54	66	80	95	104	120	140
	B13	27	33	40	47.5	52	60	70
	B14	M8 x P1.25	M10 x P1.5	M12 x P1.75	M12 x P1.75	M14 x P2.0	M16 x P2.0	M16 x P2.0
C	C1	125	140	177	193	205	230	260
	C2	58	66	78.5	87	94	107	123
	C3	67	74	98.5	106	111	123	137
	C4	3.25	2	2.5	2	2.5	2.5	3
	C5	50	58	72	72	82	92	117
	C6	75	82	105	121	123	138	143
	C7	14	18	23	27	32	38	42
	C8	80	100	120	138	146	166	196
D	D1	54.7	64.7	89.7	89.7	99.7	117.7	129.7
	D2	22	30	38	40	44	54	65
	D3	34	40	58	58	64	75	90
	D4	M5 x P0.8	M5 x P0.8	M10 x P1.5	M10 x P1.5	M10 x P1.5	M12 x P1.75	M12 x P1.75
	D5	45	51	77	77	84	97	112
Weight / Ağırlık		4.2	7.8	12.2	19.2	29.6	38.7	55.5

Reference Information of Ball Screw / Vidalı Mil Ölçüleri



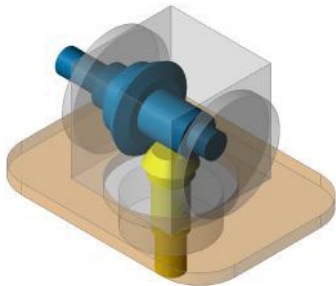
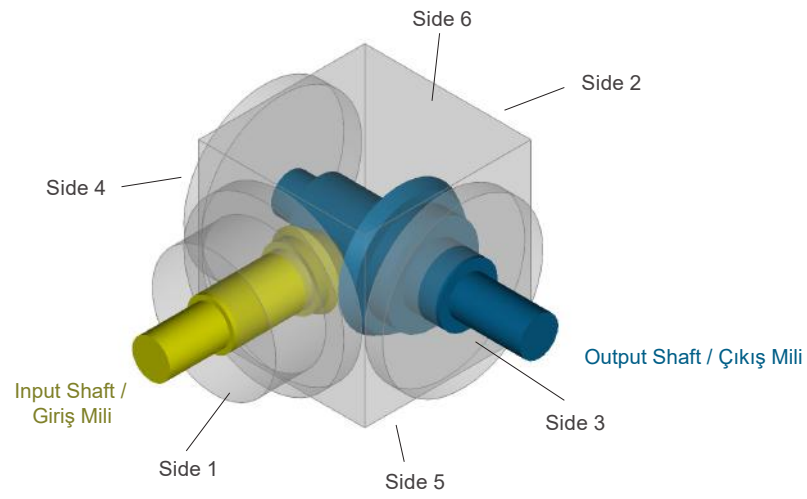
Model	Screw Size / Vidalı Mil Çapı		Basic Rate Load (kgf) /Yük Kapasitesi		Nut / Somun		Flange / Flanş			FIT	Screw Bolt / Vida Ölçüsü				Oil Hole / Yağlama Deliği	Length / Boy
	O.D. / Mil Çapı	Lead / Hatve	Dynamic / Dinamik	Static / Statik	Dg6	L	A	T	W		S	X	Y	Z	Q	
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75	20	6	1,380	2,730	34	61	57	12	45	12	5.5	9.5	5.5	11	M6 x P1	≤ 1500
90	25	8	1,630	3,650	40	69	63.5	12	51	15	5.5	9.5	5.5	11	M8 x P1	≤ 1500
115	36	10	3,600	8,280	58	89	98	18	77	20	11	17.5	11	11	M8 x P1	≤ 1500
130	36	10	3,600	8,280	58	89	98	18	77	20	11	17.5	11	11	M8 x P1	≤ 1500
140	40	10	4,670	11,830	64	99	106	18	84	20	11	17.5	11	11	M8 x P1	≤ 1500
160	50	12	5,770	14,870	75	111	121	22	97	20	14	20	13	13	1/8"PT	≤ 1500
190	63	12	9,320	29,150	90	136	136	22	112	20	14	20	13	13	1/8"PT	≤ 1500

Flange / Flanş

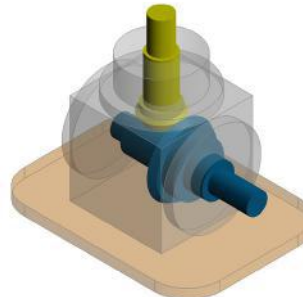


Model Code	55	75	90	115	130	140	160	190
A	-	25	30	40	45	50	55	60
B	-	102	128	148	168	198	228	248
C	-	15	16	20	23	24	23	27
D	-	M6 x P1.0	M8 x P1.25	M8 x P1.25	M10 x P1.5	M10 x P1.5	M10 x P1.5	M12 x P1.25
E	-	80	100	120	140	160	180	200

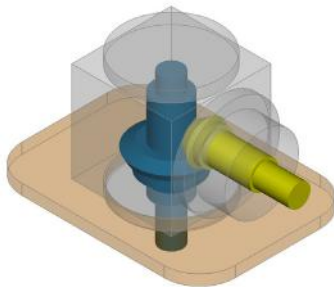
Selection Direction of Installation / Montaj Yönü Seçimi



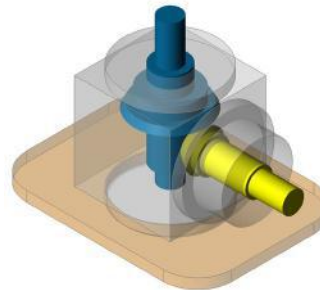
Side 1



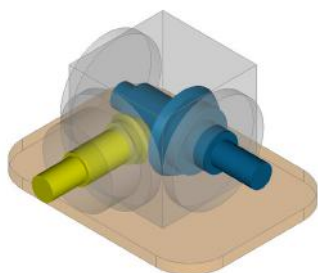
Side 2



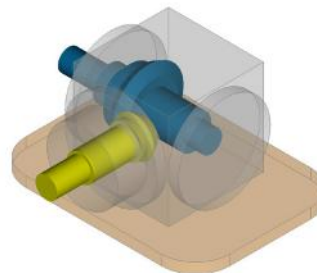
Side 3



Side 4



Side 5



Side 6