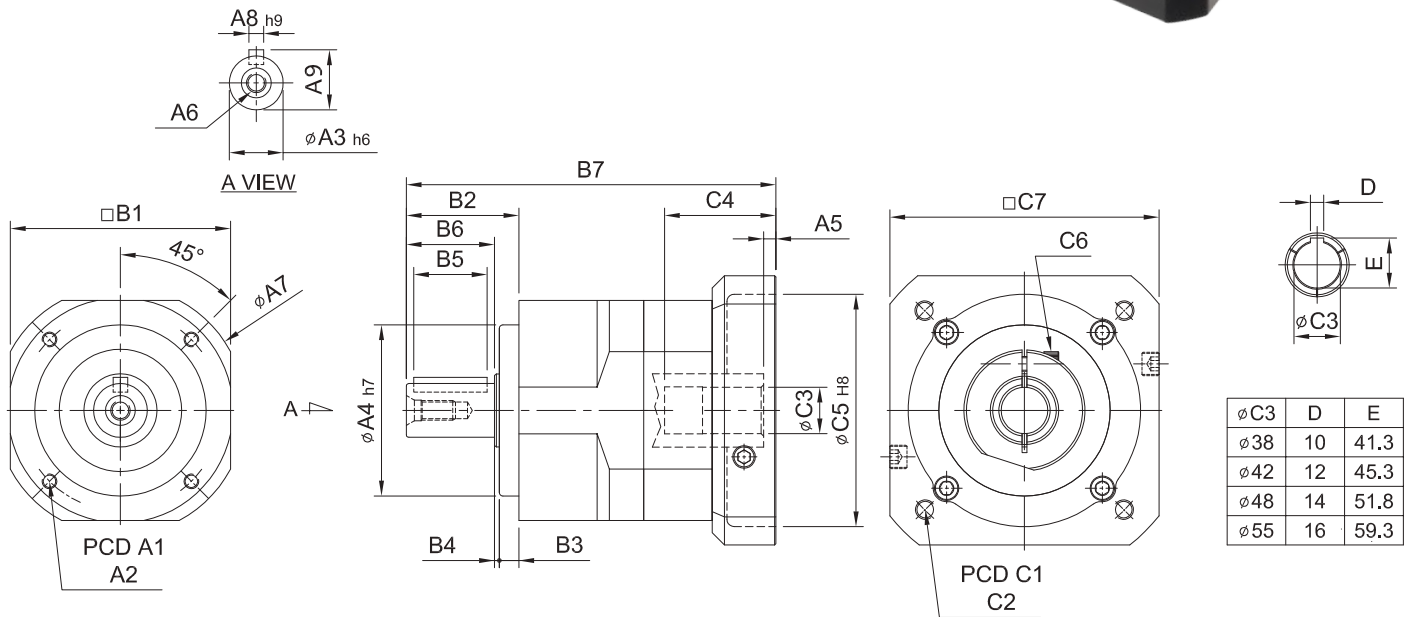


# SERVOBOX

## MODEL : SE

1-Stage / Kademe

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



unit / birim: mm

| Model Code | 44                | 62           | 90                   | 120             | 142             | 180               | 220               |
|------------|-------------------|--------------|----------------------|-----------------|-----------------|-------------------|-------------------|
| <b>A</b>   |                   |              |                      |                 |                 |                   |                   |
| A1         | 44                | 62           | 82                   | 110             | 140             | 184               | 218               |
| A2         | M4 x P0.7         | M5 x P0.8    | M6 x P1.0            | M8 x P1.25      | M10 x P1.5      | M12 x P1.75       | M16 x P2.0        |
| A3         | 13                | 16           | 22                   | 32              | 40              | 55                | 75                |
| A4         | 35                | 50           | 70                   | 90              | 120             | 160               | 180               |
| A5         | 5                 | 6            | 9 · 23.5             | 10 · 20         | 10              | 11.5 · 13.5       | 12.5 · 14.5       |
| A6         | M4 x P0.7         | M5 x P0.8    | M8 x P1.25           | M10 x P1.5      | M12 x P1.75     | M14 x P2.0        | M16 x P2.0        |
| A7         | 50                | 70           | 102                  | 134             | 166             | 215               | 252               |
| A8         | 5                 | 5            | 6                    | 10              | 12              | 16                | 20                |
| A9         | 15                | 18           | 24.5                 | 35              | 43              | 59                | 79.5              |
| <b>B</b>   |                   |              |                      |                 |                 |                   |                   |
| B1         | 44                | 62           | 90                   | 120             | 142             | 180               | 220               |
| B2         | 26                | 36           | 46                   | 65              | 92              | 106               | 139               |
| B3         | 5                 | 7            | 8                    | 12              | 15              | 20                | 30                |
| B4         | 1                 | 1            | 2                    | 3               | 3               | 4                 | 5                 |
| B5         | 15                | 20           | 30                   | 40              | 65              | 70                | 90                |
| B6         | 20                | 28           | 36                   | 50              | 74              | 82                | 104               |
| B7         | 95                | 115 · 123    | 164.5 · 179          | 205 · 215       | 260.5           | 323.5             | 367.5             |
| <b>C</b>   |                   |              |                      |                 |                 |                   |                   |
| C1         | 46 · 60 · 63 · 90 | 70 · 75 · 90 | 90 · 100 · 115 · 145 | 115 · 145 · 165 | 145 · 165 · 200 | 200 · 215 · 265   | 200 · 265 · 300   |
| C2         | M3 · M4 · M5      | M4 · M5 · M6 | M5 · M6 · M8         | M6 · M8 · M10   | M8 · M10 · M12  | M10 · M12         | M12 · M16         |
| C3         | 8 · 9 · 11        | 14 · 19      | 19 · 22 · 24         | 24 · 28 · 32    | 28 · 32 · 35    | 38 · 42 · 48 · 55 | 42 · 48 · 55      |
| C4         | 26                | 33.5 · 41.5  | 59 · 73.5            | 67 · 77         | 84.5            | 114.5 · 116.5     | 117.5 · 119.5     |
| C5         | 30 · 40 · 50      | 50 · 60 · 70 | 70 · 80 · 95 · 110   | 95 · 110 · 130  | 110 · 130 · 180 | 114.3 · 180 · 230 | 114.3 · 230 · 250 |
| C6         | M4 x P0.7         | M5 x P0.8    | M6 x P1.0            | M8 x P1.25      | M10 x P1.5      | M10 x P1.5        | M10 x P1.5        |
| C7         | 46 · 55           | 64 · 70 · 80 | 92 · 110 · 130       | 122 · 130 · 150 | 146 · 150 · 190 | 182 · 200 · 250   | 222 · 250 · 265   |



| Model No.                                       |            | Unit/Birim | Ratio<br>Çevrim | 44  | 62    | 90    | 120   | 142   | 180    | 220    |
|---|------------|------------|-----------------|---|-------|-------|-------|-------|--------|--------|
| Nominal output torque / Nominal Çıkış Torku     | $T_{2N}$   | Nm         | 3               | 19  | 59    | 165   | 335   | 625   | 1,206  | 2,030  |
|   |            |            | 4               | 16  | 51    | 146   | 300   | 555   | 1,069  | 1,804  |
|   |            |            | 5               | 16  | 48    | 160   | 333   | 618   | 1,189  | 2,010  |
|   |            |            | 6               | 15  | 45    | 151   | 311   | 583   | 1,118  | 1,911  |
|   |            |            | 7               | 15  | 45    | 149   | 309   | 573   | 1,108  | 1,870  |
|   |            |            | 8               | 14  | 43    | 143   | 298   | 553   | 1,070  | 1,824  |
|   |            |            | 9               | 13  | 44    | 145   | 278   | 516   | 993    | 1,694  |
|   |            |            | 10              | 14  | 43    | 141   | 294   | 549   | 1,059  | 1,779  |
| Max. Acceleration Torque / Max. İvmelenme Torku | $T_{2B}$   | Nm         | 3 ~ 10          | 1.8 Times of Rated Output Torque / 1,8 x Nominal Çıkış Torku  |       |       |       |       |        |        |
| Max. Output Torque / Max. Çıkış Torku           | $T_{2NOT}$ | Nm         | 3 ~ 10          | 3 Times of Rated Output Torque / 3 x Nominal Çıkış Torku  |       |       |       |       |        |        |
| Rated Input Speed / Nominal Giriş Devri         | $n_{1N}$   | rpm        | 3 ~ 10          | 3,000   | 3,000 | 3,000 | 3,000 | 3,000 | 3,000  | 2,000  |
| Max. Input Speed / Max. Giriş Devri             | $n_{1B}$   | rpm        | 3 ~ 10          | 6,000   | 6,000 | 6,000 | 5,000 | 5,000 | 4,000  | 3,000  |
| Backlash Ps / Min. Boşluk Oranı                 |            | arcmin     | 3 ~ 10          | -   | -     | ≤ 1   | ≤ 1   | ≤ 1   | ≤ 1    | ≤ 1    |
| Backlash P0 / Düşük Boşluk Oranı                |            | arcmin     | 3 ~ 10          | ≤ 3   | ≤ 3   | ≤ 3   | ≤ 3   | ≤ 3   | ≤ 3    | ≤ 3    |
| Backlash P1 / Azaltılmış Boşluk Oranı           |            | arcmin     | 3 ~ 10          | ≤ 5   | ≤ 5   | ≤ 5   | ≤ 5   | ≤ 5   | ≤ 5    | ≤ 5    |
| Backlash P2 / Standart Boşluk Oranı             |            | arcmin     | 3 ~ 10          | ≤ 7   | ≤ 7   | ≤ 7   | ≤ 7   | ≤ 7   | ≤ 7    | ≤ 7    |
| Torsional Rigidity / Burulma Direnci            |            | Nm/arcmin  | 3 ~ 10          | 3   | 6     | 14    | 27    | 60    | 140    | 240    |
| Max. Radial Force / Max. Radyal Yük             | $F_{2rB}$  | N          | 3 ~ 10          | 380   | 1,180 | 3,200 | 6,800 | 9,300 | 15,600 | 51,000 |
| Max. Axial Force / Max. Aksiyel Yük             | $F_{2aB}$  | N          | 3 ~ 10          | 190   | 590   | 1,600 | 3,400 | 4,650 | 7,800  | 25,500 |
| Service Life / Hizmet Ömrü                      | $L_H$      | hr         | 3 ~ 10          | S5 Döngüsel Çalışma: >30,000 (S1 Sürekli Çalışma: >15,000 saat)<br>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          | ≤ 56  | ≤ 58  | ≤ 60  | ≤ 63  | ≤ 65  | ≤ 67   | ≤ 70   |
| Weight / Ağırlık ±3%                            |            | Kg         | 3 ~ 10          | 0.58  | 1.32  | 3.4   | 7.88  | 14    | 29.16  | 39     |

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

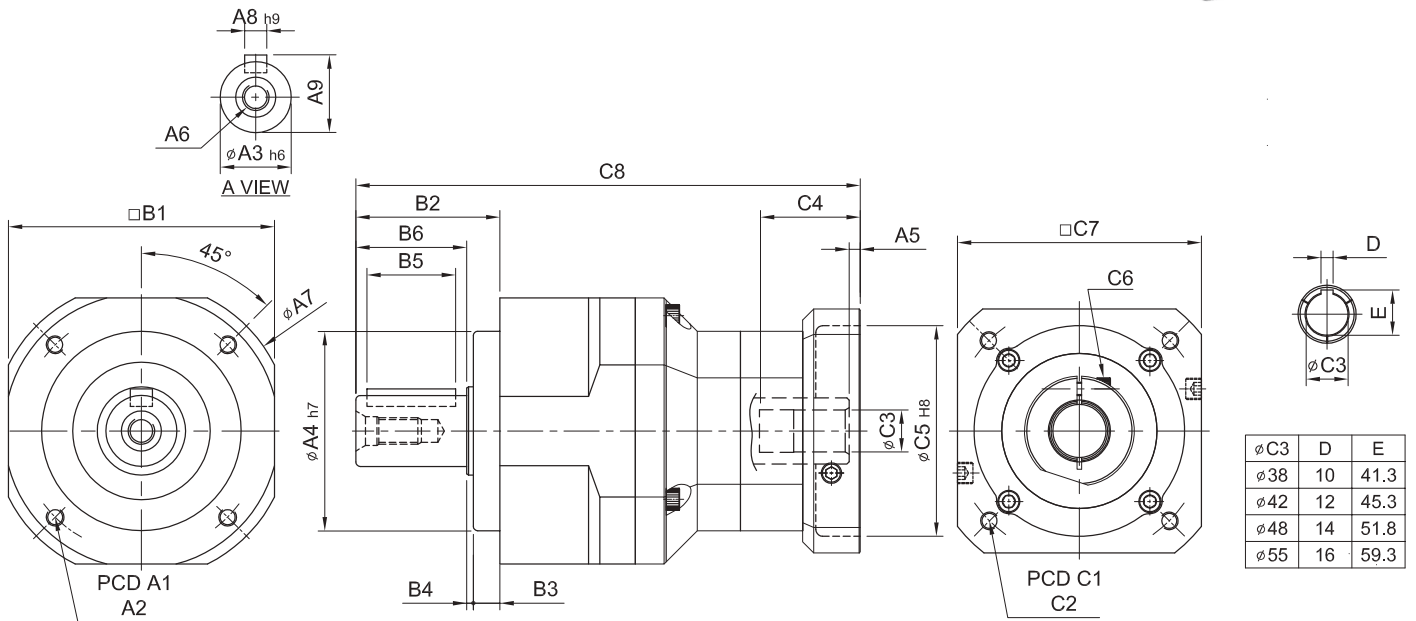
| Ratio / Çevrim | 44   | 62   | 90   | 120  | 142  | 180   | 220   |
|----------------|------|------|------|------|------|-------|-------|
| 3              | 0.03 | 0.16 | 0.61 | 3.25 | 9.21 | 28.98 | 69.61 |
| 4              | 0.03 | 0.14 | 0.48 | 2.74 | 7.54 | 23.67 | 54.37 |
| 5              | 0.03 | 0.13 | 0.47 | 2.71 | 7.42 | 23.29 | 53.27 |
| 6              | 0.03 | 0.13 | 0.45 | 2.65 | 7.25 | 22.75 | 51.72 |
| 7              | 0.03 | 0.13 | 0.45 | 2.62 | 7.14 | 22.48 | 50.97 |
| 8              | 0.03 | 0.13 | 0.44 | 2.58 | 7.07 | 22.59 | 50.84 |
| 9              | 0.03 | 0.13 | 0.44 | 2.57 | 7.04 | 22.53 | 50.63 |
| 10             | 0.03 | 0.13 | 0.44 | 2.57 | 7.03 | 22.51 | 50.56 |

# SERVOBOX

## MODEL : SE

2-Stage / Kademe

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



unit / birim: mm

| Model Code  | 62           | 90            | 120                  | 142             | 180             | 220               |
|-------------|--------------|---------------|----------------------|-----------------|-----------------|-------------------|
| <b>A</b> A1 | 62           | 82            | 110                  | 140             | 184             | 218               |
| A2          | M5 x P0.8    | M6 x P1.0     | M8 x P1.25           | M10 x P1.5      | M12 x P1.75     | M16 x P2.0        |
| A3          | 16           | 22            | 32                   | 40              | 55              | 75                |
| A4          | 50           | 70            | 90                   | 120             | 160             | 180               |
| A5          | 5            | 6             | 9 · 23.5             | 10 · 20         | 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      | M16 x P2.0        |
| A7          | 70           | 102           | 134                  | 166             | 215             | 252               |
| A8          | 5            | 6             | 10                   | 12              | 16              | 20                |
| A9          | 18           | 24.5          | 35                   | 43              | 59              | 79.5              |
| <b>B</b> B1 | 62           | 90            | 120                  | 142             | 180             | 220               |
| B2          | 36           | 46            | 65                   | 92              | 106             | 139               |
| B3          | 7            | 8             | 12                   | 15              | 20              | 30                |
| B4          | 1            | 2             | 3                    | 3               | 4               | 5                 |
| B5          | 20           | 30            | 40                   | 65              | 70              | 90                |
| B6          | 28           | 36            | 50                   | 74              | 82              | 104               |
| <b>C</b> C1 | 46 · 60 · 63 | 70 · 75 · 90  | 90 · 100 · 115 · 145 | 115 · 145 · 165 | 145 · 165 · 200 | 200 · 215 · 265   |
| C2          | M3 · M4 · M5 | M4 · M5 · M6  | M5 · M6 · M8         | M6 · M8 · M10   | M8 · M10 · M12  | M10 · M12         |
| C3          | 8 · 9 · 11   | 14 · 19       | 19 · 22 · 24         | 24 · 28 · 32    | 28 · 32 · 35    | 38 · 42 · 48 · 55 |
| C4          | 26           | 33.5 · 41.5   | 59 · 73.5            | 67 · 77         | 84.5            | 114.5 · 116.5     |
| C5          | 30 · 40 · 50 | 50 · 60 · 70  | 70 · 80 · 95 · 110   | 95 · 110 · 130  | 110 · 130 · 180 | 114.3 · 180 · 230 |
| C6          | M4 x P0.7    | M5 x P0.8     | M6 x P1.0            | M8 x P1.25      | M10 x P1.5      | M10 x P1.5        |
| C7          | 46 · 55      | 64 · 70 · 80  | 92 · 110 · 130       | 122 · 130 · 150 | 146 · 150 · 190 | 182 · 200 · 250   |
| C8          | 139.5        | 172.5 · 180.5 | 241 · 255.5          | 298.5 · 308.5   | 358.5           | 446.5             |



| Model No.   |            | Unit/Birim | Ratio<br>Çevrim | 62  | 90    | 120   | 142   | 180    | 220    |
|---|------------|------------|-----------------|---|-------|-------|-------|--------|--------|
| Nominal output torque / Nominal Çıkış Torku       | $T_{2N}$   | Nm         | 15              | 59  | 165   | 335   | 625   | 1,206  | 2,030  |
|   |            |            | 20              | 51  | 146   | 300   | 555   | 1,069  | 1,804  |
|   |            |            | 25              | 48  | 160   | 333   | 618   | 1,189  | 2,010  |
|   |            |            | 30              | 45  | 151   | 311   | 583   | 1,118  | 1,911  |
|   |            |            | 35              | 45  | 149   | 309   | 573   | 1,108  | 1,870  |
|   |            |            | 40              | 43  | 143   | 298   | 553   | 1,070  | 1,824  |
|   |            |            | 50              | 48  | 160   | 333   | 618   | 1,189  | 2,010  |
|   |            |            | 60              | 45  | 151   | 311   | 583   | 1,118  | 1,911  |
|   |            |            | 70              | 45  | 149   | 309   | 573   | 1,108  | 1,870  |
|   |            |            | 80              | 43  | 143   | 298   | 553   | 1,070  | 1,824  |
|   |            |            | 90              | 44  | 145   | 278   | 516   | 993    | 1,694  |
|   |            |            | 100             | 43  | 141   | 294   | 549   | 1,059  | 1,779  |
| 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           | $n_{IN}$   | rpm        | 15 ~ 100        | 3,000   | 3,000 | 3,000 | 3,000 | 3,000  | 2,000  |
| Max. Input Speed / Max.Giriş Devri                | $n_{IB}$   | rpm        | 15 ~ 100        | 6,000   | 6,000 | 5,000 | 5,000 | 4,000  | 4,000  |
| Backlash P <sub>s</sub> / Min.Boşluk Oranı        |            | arcmin     | 15 ~ 100        | -   | -     | ≤ 3   | ≤ 3   | ≤ 3    | ≤ 3    |
| Backlash P <sub>0</sub> / Düşük Boşluk Oranı      |            | arcmin     | 15 ~ 100        | ≤ 5   | ≤ 5   | ≤ 5   | ≤ 5   | ≤ 5    | ≤ 5    |
| Backlash P <sub>1</sub> / Azaltılmış Boşluk Oranı |            | arcmin     | 15 ~ 100        | ≤ 7   | ≤ 7   | ≤ 7   | ≤ 7   | ≤ 7    | ≤ 7    |
| Backlash P <sub>2</sub> / Standart Boşluk Oranı   |            | arcmin     | 15 ~ 100        | ≤ 9   | ≤ 9   | ≤ 9   | ≤ 9   | ≤ 9    | ≤ 9    |
| Torsional Rigidity / Burulma Direnci              |            | Nm/arcmin  | 15 ~ 100        | 6   | 14    | 27    | 60    | 140    | 240    |
| Max. Radial Force / Max. Radyal Yük               | $F_{2rB}$  | N          | 15 ~ 100        | 1,180   | 3,200 | 6,800 | 9,300 | 15,600 | 51,000 |
| Max. Axial Force / Max. Aksiyel Yük               | $F_{2aB}$  | N          | 15 ~ 100        | 590   | 1,600 | 3,400 | 4,650 | 7,800  | 25,500 |
| Service Life / Hizmet Ömrü                        | $L_H$      | hr         | 15 ~ 100        | S5 Döngüsel Çalışma: >30,000 (S1 Sürekli Çalışma: >15,000 saat)<br>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   | ≤ 70   |
| Weight / Ağırlık ±3%                              |            | Kg         | 15 ~ 100        | 1.68  | 4.4   | 9.3   | 15.5  | 34.8   | 56.5   |

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

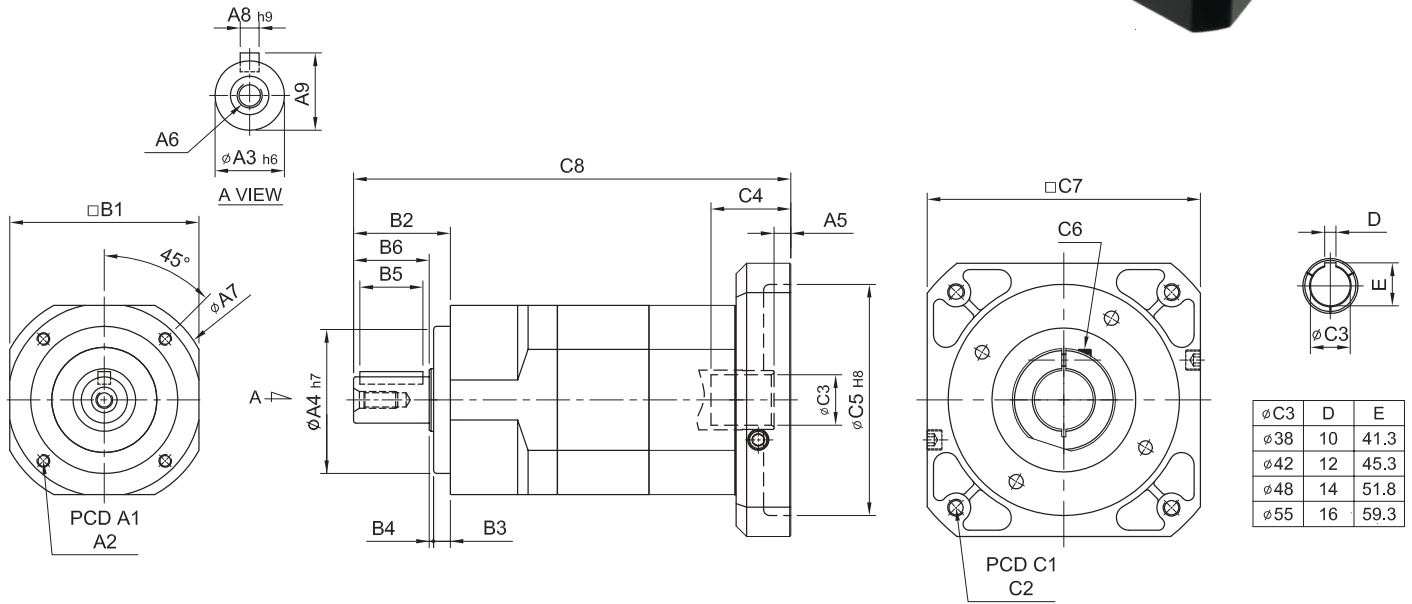
| Ratio / Çevrim | 62   | 90   | 120  | 142  | 180  | 220   |
|----------------|------|------|------|------|------|-------|
| 15             | 0.03 | 0.14 | 0.46 | 2.63 | 7.3  | 22.79 |
| 20             | 0.03 | 0.14 | 0.46 | 2.63 | 7.3  | 22.79 |
| 25             | 0.03 | 0.14 | 0.46 | 2.63 | 7.1  | 22.79 |
| 30             | 0.03 | 0.14 | 0.46 | 2.43 | 7.1  | 22.59 |
| 35             | 0.03 | 0.14 | 0.44 | 2.43 | 7.1  | 22.59 |
| 40             | 0.03 | 0.14 | 0.44 | 2.43 | 6.92 | 22.59 |
| 50             | 0.03 | 0.14 | 0.44 | 2.43 | 6.92 | 22.59 |
| 60             | 0.03 | 0.14 | 0.43 | 2.39 | 6.72 | 21.83 |
| 70             | 0.03 | 0.14 | 0.43 | 2.39 | 6.72 | 21.83 |
| 80             | 0.03 | 0.14 | 0.43 | 2.39 | 6.72 | 21.83 |
| 90             | 0.03 | 0.14 | 0.40 | 2.39 | 6.72 | 21.60 |
| 100            | 0.03 | 0.14 | 0.40 | 2.39 | 6.72 | 21.60 |

# SERVOBOX

## MODEL : SE-A

2-Stage / Kademe

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



unit / birim: mm

| Model Code | 44A | 62A          | 90A           | 120A                 | 142A            | 180A            | 220A              |                   |
|------------|-----|--------------|---------------|----------------------|-----------------|-----------------|-------------------|-------------------|
| A          | A1  | 44           | 62            | 82                   | 110             | 140             | 218               |                   |
|            | A2  | M4 x P0.7    | M5 x P0.8     | M6 x P1.0            | M8 x P1.25      | M10 x P1.5      | M12 x P1.75       | M16 x P2.0        |
|            | A3  | 13           | 16            | 22                   | 32              | 40              | 55                | 75                |
|            | A4  | 35           | 50            | 70                   | 90              | 120             | 160               | 180               |
|            | A5  | 5            | 6             | 9 · 23.5             | 10 · 20         | 10              | 11.5 · 13.5       | 12.5 · 14.5       |
|            | A6  | M4 x P0.7    | M5 x P0.8     | M8 x P1.25           | M10 x P1.5      | M12 x P1.75     | M14 x P2.0        | M16 x P2.0        |
|            | A7  | 50           | 70            | 102                  | 134             | 166             | 215               | 252               |
|            | A8  | 5            | 5             | 6                    | 10              | 12              | 16                | 20                |
|            | A9  | 15           | 18            | 24.5                 | 35              | 43              | 59                | 79.5              |
| B          | B1  | 44           | 62            | 90                   | 120             | 142             | 180               | 220               |
|            | B2  | 26           | 36            | 46                   | 65              | 92              | 106               | 139               |
|            | B3  | 5            | 7             | 8                    | 12              | 15              | 20                | 30                |
|            | B4  | 1            | 1             | 2                    | 3               | 3               | 4                 | 5                 |
|            | B5  | 15           | 20            | 30                   | 40              | 65              | 70                | 90                |
|            | B6  | 20           | 28            | 36                   | 50              | 74              | 82                | 104               |
| C          | C1  | 46 · 60 · 63 | 70 · 75 · 90  | 90 · 100 · 115 · 145 | 115 · 145 · 165 | 145 · 165 · 200 | 200 · 215 · 265   | 200 · 265 · 300   |
|            | C2  | M3 · M4 · M5 | M4 · M5 · M6  | M5 · M6 · M8         | M6 · M8 · M10   | M8 · M10 · M12  | M10 · M12         | M12 · M16         |
|            | C3  | 8 · 9 · 11   | 14 · 19       | 19 · 22 · 24         | 24 · 28 · 32    | 28 · 32 · 35    | 38 · 42 · 48 · 55 | 42 · 48 · 55      |
|            | C4  | 26           | 33.5 · 41.5   | 59 · 73.5            | 67 · 77         | 84.5            | 114.5 · 116.5     | 117.5 · 119.5     |
|            | C5  | 30 · 40 · 50 | 50 · 60 · 70  | 70 · 80 · 95 · 110   | 95 · 110 · 130  | 110 · 130 · 180 | 114.3 · 180 · 230 | 114.3 · 230 · 250 |
|            | C6  | M4 x P0.7    | M5 x P0.8     | M6 x P1.0            | M8 x P1.25      | M10 x P1.5      | M10 x P1.5        | M10 x P1.5        |
|            | C7  | 46 · 55      | 64 · 70 · 80  | 92 · 110 · 130       | 122 · 130 · 150 | 146 · 150 · 190 | 182 · 200 · 250   | 222 · 250 · 265   |
|            | C8  | 121          | 148.8 · 156.8 | 208 · 222.5          | 261 · 271       | 327             | 404.5             | 460.5             |



| Model No.                                       |            | Unit/Birim | Ratio<br>Çevrim | 44A   | 62A   | 90A   | 120A  | 142A  | 180A   | 220A   |
|---|------------|------------|-----------------|---|-------|-------|-------|-------|--------|--------|
| Nominal output torque / Nominal Çıkış Torku     | $T_{2N}$   | Nm         | 15              | 19  | 59    | 165   | 335   | 625   | 1,206  | 2,030  |
|   |            |            | 20              | 16  | 51    | 146   | 300   | 555   | 1,069  | 1,804  |
|   |            |            | 25              | 16  | 48    | 160   | 333   | 618   | 1,189  | 2,010  |
|   |            |            | 30              | 15  | 45    | 151   | 311   | 583   | 1,118  | 1,911  |
|   |            |            | 35              | 15  | 45    | 149   | 309   | 573   | 1,108  | 1,870  |
|   |            |            | 40              | 14  | 43    | 143   | 298   | 553   | 1,070  | 1,824  |
|   |            |            | 50              | 16  | 48    | 160   | 333   | 618   | 1,189  | 2,010  |
|   |            |            | 60              | 15  | 45    | 151   | 311   | 583   | 1,118  | 1,911  |
|   |            |            | 70              | 15  | 45    | 149   | 309   | 573   | 1,108  | 1,870  |
|   |            |            | 80              | 14  | 43    | 143   | 298   | 553   | 1,070  | 1,824  |
|   |            |            | 90              | 13  | 44    | 145   | 278   | 516   | 993    | 1,694  |
|   |            |            | 100             | 14  | 43    | 141   | 294   | 549   | 1,059  | 1,779  |
| 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         | $n_{IN}$   | rpm        | 15 ~ 100        | 3,000   | 3,000 | 3,000 | 3,000 | 3,000 | 3,000  | 2,000  |
| Max. Input Speed / Max. Giriş Devri             | $n_{IB}$   | rpm        | 15 ~ 100        | 6,000   | 6,000 | 6,000 | 5,000 | 5,000 | 4,000  | 3,000  |
| 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   | ≤ 5    | ≤ 5    |
| Backlash P1 / Azaltılmış Boşluk Oranı           |            | arcmin     | 15 ~ 100        | ≤ 7   | ≤ 7   | ≤ 7   | ≤ 7   | ≤ 7   | ≤ 7    | ≤ 7    |
| Backlash P2 / Standart Boşluk Oranı             |            | arcmin     | 15 ~ 100        | ≤ 9   | ≤ 9   | ≤ 9   | ≤ 9   | ≤ 9   | ≤ 9    | ≤ 9    |
| Torsional Rigidity / Burulma Direnci            |            | Nm/arcmin  | 15 ~ 100        | 3   | 6     | 14    | 27    | 60    | 140    | 240    |
| Max. Radial Force / Max. Radyal Yük             | $F_{2rB}$  | N          | 15 ~ 100        | 380   | 1,180 | 3,200 | 6,800 | 9,300 | 15,600 | 51,000 |
| Max. Axial Force / Max. Aksiyel Yük             | $F_{2aB}$  | N          | 15 ~ 100        | 190   | 590   | 1,600 | 3,400 | 4,650 | 7,800  | 25,500 |
| Service Life / Hizmet Ömrü                      | $L_H$      | hr         | 15 ~ 100        | S5 Döngüsel Çalışma: >30,000 (S1 Sürekli Çalışma: >15,000 saat)<br>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        | ≤ 56  | ≤ 58  | ≤ 60  | ≤ 63  | ≤ 65  | ≤ 67   | ≤ 70   |
| Weight / Ağırlık ±3%                            |            | Kg         | 15 ~ 100        | 0.9   | 2     | 6     | 10.2  | 22.5  | 42     | 59     |

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

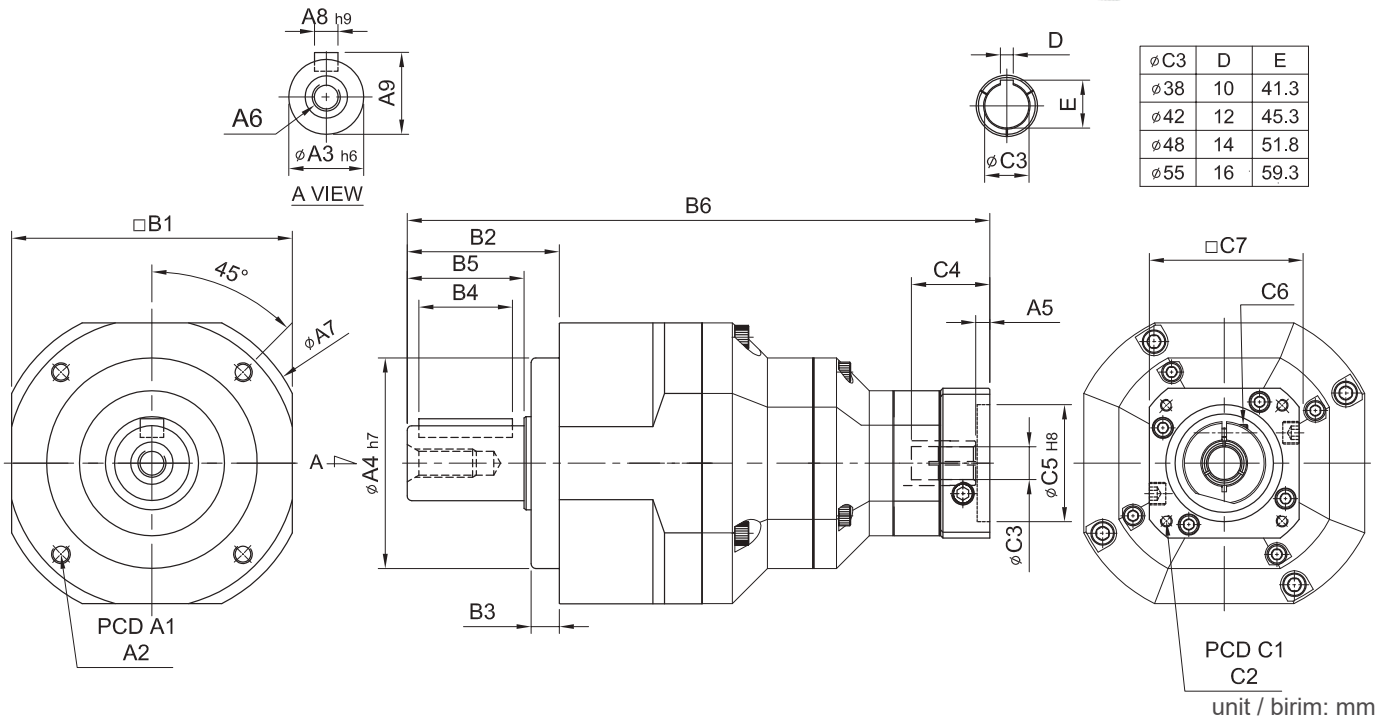
| Ratio / Çevrim | 44A  | 62A  | 90A  | 120A | 142A | 180A  | 220A  |
|----------------|------|------|------|------|------|-------|-------|
| 15             | 0.03 | 0.14 | 0.46 | 2.63 | 7.30 | 22.79 | 56.98 |
| 20             | 0.03 | 0.14 | 0.46 | 2.63 | 7.30 | 22.79 | 56.98 |
| 25             | 0.03 | 0.14 | 0.46 | 2.63 | 7.10 | 22.79 | 56.98 |
| 30             | 0.03 | 0.14 | 0.46 | 2.43 | 7.10 | 22.59 | 56.48 |
| 35             | 0.03 | 0.14 | 0.44 | 2.43 | 7.10 | 22.59 | 56.48 |
| 40             | 0.03 | 0.14 | 0.44 | 2.43 | 6.92 | 22.59 | 56.48 |
| 50             | 0.03 | 0.14 | 0.44 | 2.39 | 6.92 | 22.59 | 56.48 |
| 60             | 0.03 | 0.14 | 0.43 | 2.39 | 6.72 | 21.83 | 54.58 |
| 70             | 0.03 | 0.14 | 0.43 | 2.39 | 6.72 | 21.83 | 54.58 |
| 80             | 0.03 | 0.14 | 0.43 | 2.39 | 6.72 | 21.83 | 54.58 |
| 90             | 0.03 | 0.14 | 0.40 | 2.39 | 6.72 | 21.60 | 54.00 |
| 100            | 0.03 | 0.14 | 0.40 | 2.39 | 6.72 | 21.60 | 54.00 |

# SERVOBOX

## MODEL : SE

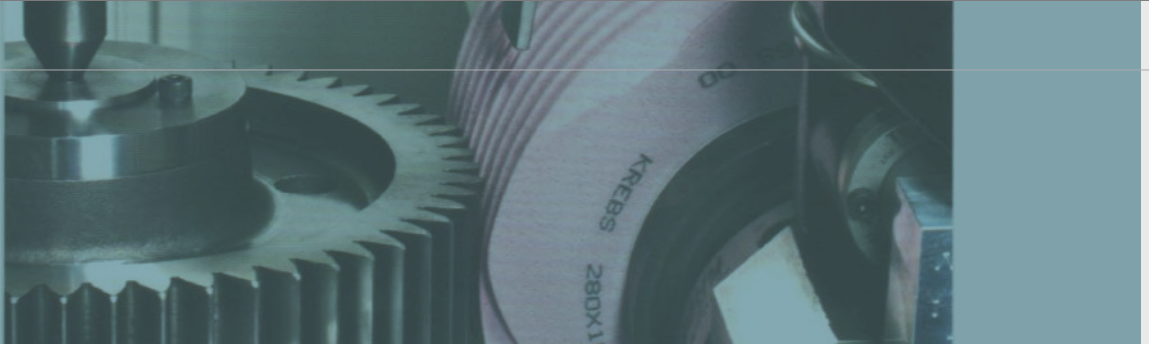
3-Stage / Kademe

RATIO / ÇEVİRİM : 125, 150, 175, 200, 250, 300, 350, 400  
450, 500, 600, 700, 800, 900, 1000



| Model Code | 90 | 120          | 142          | 180                  | 220             |                 |
|------------|----|--------------|--------------|----------------------|-----------------|-----------------|
| <b>A</b>   | A1 | 82           | 110          | 140                  | 184             | 218             |
|            | A2 | M6 x P1.0    | M8 x P1.25   | M10 x P1.5           | M12 x P1.75     | M16 x P2.0      |
|            | A3 | 22           | 32           | 40                   | 55              | 75              |
|            | A4 | 70           | 90           | 120                  | 160             | 180             |
|            | A5 | 5            | 6            | 9 · 23.5             | 10 · 20         | 10              |
|            | A6 | M8 x P1.25   | M10 x P1.5   | M12 x P1.75          | M14 x P2.0      | M16 x P2.0      |
|            | A7 | 102          | 134          | 166                  | 215             | 252             |
|            | A8 | 6            | 10           | 12                   | 16              | 20              |
|            | A9 | 24.5         | 35           | 43                   | 59              | 79.5            |
| <b>B</b>   | B1 | 90           | 120          | 142                  | 180             | 220             |
|            | B2 | 46           | 65           | 92                   | 106             | 139             |
|            | B3 | 8            | 12           | 15                   | 20              | 30              |
|            | B4 | 30           | 40           | 65                   | 70              | 90              |
|            | B5 | 36           | 50           | 74                   | 82              | 104             |
|            | B6 | 195          | 249 · 257    | 334.5 · 349          | 396.5 · 406.5   | 481.5           |
| <b>C</b>   | C1 | 46 · 60 · 63 | 70 · 75 · 90 | 90 · 100 · 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 · 19      | 19 · 22 · 24         | 24 · 28 · 32    | 35 · 38         |
|            | C4 | 26           | 33.5 · 41.5  | 59 · 73.5            | 67 · 77         | 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 |

unit / birim: mm



| Model No.                                       |            | Unit/Birim | Ratio<br>Çevrim | 90  | 120   | 142   | 180    | 220    |
|---|------------|------------|-----------------|---|-------|-------|--------|--------|
| Nominal output torque / Nominal Çıkış Torku     | $T_{2N}$   | Nm         | 125             | 160   | 333   | 618   | 1,189  | 2,010  |
|   |            |            | 150             | 165   | 335   | 625   | 1,206  | 2,030  |
|   |            |            | 175             | 149   | 309   | 573   | 1,108  | 1,870  |
|   |            |            | 200             | 146   | 300   | 555   | 1,069  | 1,804  |
|   |            |            | 250             | 160   | 333   | 618   | 1,189  | 2,010  |
|   |            |            | 300             | 151   | 311   | 583   | 1,118  | 1,911  |
|   |            |            | 350             | 149   | 309   | 573   | 1,108  | 1,870  |
|   |            |            | 400             | 143   | 298   | 553   | 1,070  | 1,824  |
|   |            |            | 450             | 145   | 278   | 516   | 993    | 1,694  |
|   |            |            | 500             | 160   | 333   | 618   | 1,189  | 2,010  |
|   |            |            | 600             | 151   | 311   | 583   | 1,118  | 1,911  |
|   |            |            | 700             | 149   | 309   | 573   | 1,108  | 1,870  |
| 800   | 143        | 298        | 553             | 1,070   | 1,824 |       |        |        |
| 900   | 145        | 278        | 516             | 993   | 1,694 |       |        |        |
| 1000  | 141        | 294        | 549             | 1,059   | 1,779 |       |        |        |
| Max. Acceleration Torque / Max. İvmelenme Torku | $T_{2B}$   | Nm         | 125 ~ 1000      | 1.8 Times of Rated Output Torque / 1,8 x Nominal Çıkış Torku  |       |       |        |        |
| Max. Output Torque / Max. Çıkış Torku           | $T_{2NOT}$ | Nm         | 125 ~ 1000      | 3 Times of Rated Output Torque / 3 x Nominal Çıkış Torku  |       |       |        |        |
| Rated Input Speed / Nominal Giriş Devri         | $n_{IN}$   | rpm        | 125 ~ 1000      | 3,000   | 3,000 | 3,000 | 3,000  | 2,000  |
| Max. Input Speed / Max. Giriş Devri             | $n_{IB}$   | rpm        | 125 ~ 1000      | 6,000   | 5,000 | 5,000 | 4,000  | 3,000  |
| Backlash Ps / Min. Boşluk Oranı                 |            | arcmin     | 125 ~ 1000      | -   | ≤ 5   | ≤ 5   | ≤ 5    | ≤ 5    |
| Backlash P0 / Düşük Boşluk Oranı                |            | arcmin     | 125 ~ 1000      | ≤ 7   | ≤ 7   | ≤ 7   | ≤ 7    | ≤ 7    |
| Backlash P1 / Azaltılmış Boşluk Oranı           |            | arcmin     | 125 ~ 1000      | ≤ 9   | ≤ 9   | ≤ 9   | ≤ 9    | ≤ 9    |
| Backlash P2 / Standart Boşluk Oranı             |            | arcmin     | 125 ~ 1000      | ≤ 11  | ≤ 11  | ≤ 11  | ≤ 11   | ≤ 11   |
| Torsional Rigidity / Burulma Direnci            |            | Nm/arcmin  | 125 ~ 1000      | 14  | 27    | 60    | 140    | 240    |
| Max. Radial Force / Max. Radyal Yük             | $F_{2rB}$  | N          | 125 ~ 1000      | 3,200   | 6,800 | 9,300 | 15,600 | 51,000 |
| Max. Axial Force / Max. Aksiyel Yük             | $F_{2aB}$  | N          | 125 ~ 1000      | 1,600   | 3,400 | 4,650 | 7,800  | 25,500 |
| Service Life / Hizmet Ömrü                      | $L_H$      | hr         | 125 ~ 1000      | S5 Döngüsel Çalışma: >30,000 (S1 Sürekli Çalışma: >15,000 saat)<br>S5 Cycle Operation: >30,000 (S1 Continuous Operation: >15,000 hrs) |       |       |        |        |
| Efficiency / Verim                              | $\eta$     | %          | 125 ~ 1000      | ≥ 90  |       |       |        |        |
| Operating Temperature / Çalışma Sıcaklığı       |            | °C         | 125 ~ 1000      | - 25° C ~ + 90° C   |       |       |        |        |
| Lubrication / Yağlama                           |            |            | 125 ~ 1000      | Synthetic Grease / Sentetik Gres  |       |       |        |        |
| Protection Class / Koruma Sınıfı                |            |            | 125 ~ 1000      | IP65  |       |       |        |        |
| Mounting Position / Montaj Pozisyonu            |            |            | 125 ~ 1000      | Any / Her Yönde   |       |       |        |        |
| Noise Level / Ses Seviyesi                      |            | dB         | 125 ~ 1000      | ≤ 60  | ≤ 63  | ≤ 65  | ≤ 67   | ≤ 70   |
| Weight / Ağırlık ±3%                            |            | Kg         | 125 ~ 1000      | 4.9   | 10    | 23    | 47     | 70     |

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

| Ratio / Çevrim | 90   | 120  | 142  | 180  | 220  |
|----------------|------|------|------|------|------|
| 125            | 0.01 | 0.04 | 0.71 | 1.42 | 3.29 |
| 150            | 0.01 | 0.04 | 0.51 | 0.92 | 2.15 |
| 175            | 0.01 | 0.04 | 0.40 | 0.83 | 1.26 |
| 200            | 0.01 | 0.04 | 0.21 | 0.65 | 0.98 |
| 250            | 0.01 | 0.04 | 0.11 | 0.52 | 0.82 |
| 300            | 0.01 | 0.04 | 0.09 | 0.21 | 0.82 |
| 350            | 0.01 | 0.04 | 0.09 | 0.21 | 0.82 |
| 400            | 0.01 | 0.04 | 0.09 | 0.21 | 0.82 |
| 450            | 0.01 | 0.04 | 0.09 | 0.21 | 0.51 |
| 500            | 0.01 | 0.04 | 0.08 | 0.12 | 0.51 |
| 600            | 0.01 | 0.04 | 0.08 | 0.12 | 0.25 |
| 700            | 0.01 | 0.04 | 0.08 | 0.12 | 0.25 |
| 800            | 0.01 | 0.04 | 0.08 | 0.12 | 0.25 |
| 900            | 0.01 | 0.04 | 0.08 | 0.12 | 0.25 |
| 1000           | 0.01 | 0.04 | 0.08 | 0.12 | 0.25 |

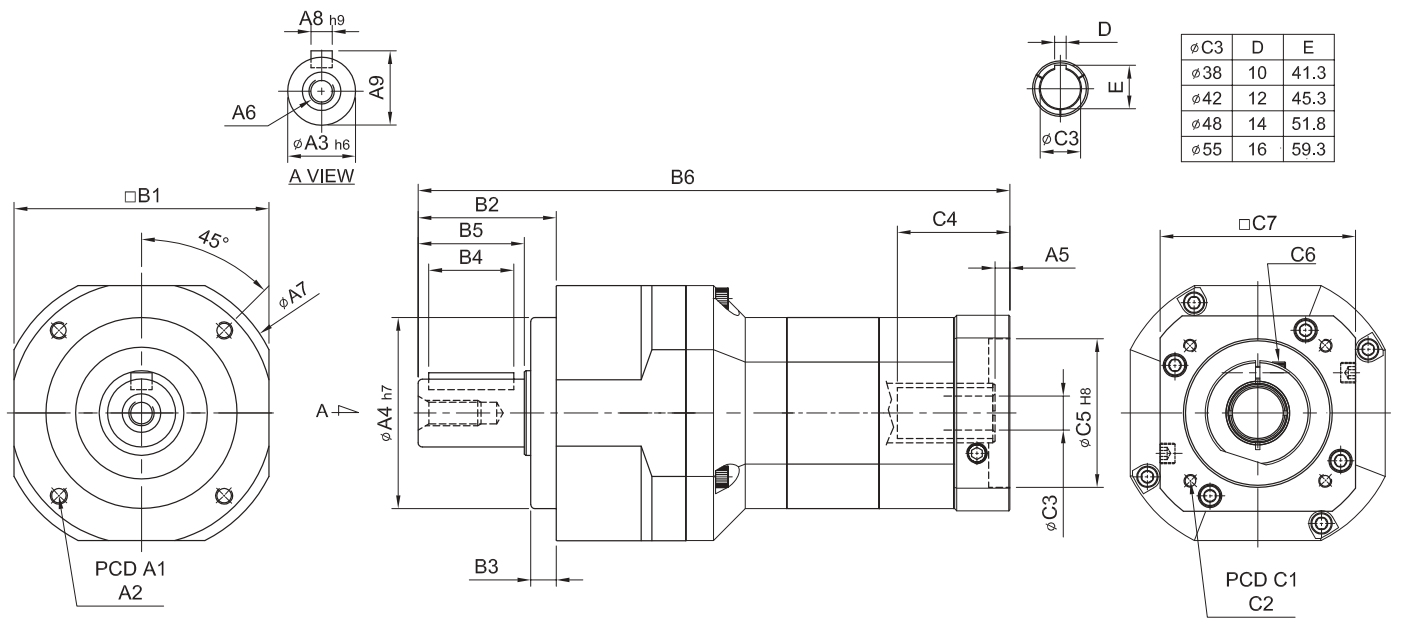


# SERVOBOX

## MODEL : SE-A

3-Stage / Kademe

RATIO / ÇEVİRİM : 125, 150, 175, 200, 250, 300, 350, 400, 450, 500, 600, 700, 800, 900, 1000



unit / birim: mm

| Model Code | 62A          | 90A           | 120A                 | 142A            | 180A            | 220A              |
|------------|--------------|---------------|----------------------|-----------------|-----------------|-------------------|
| <b>A</b>   |              |               |                      |                 |                 |                   |
| A1         | 62           | 82            | 110                  | 140             | 184             | 218               |
| A2         | M5 x P0.8    | M6 x P1.0     | M8 x P1.25           | M10 x P1.5      | M12 x P1.75     | M16 x P2.0        |
| A3         | 16           | 22            | 32                   | 40              | 55              | 75                |
| A4         | 50           | 70            | 90                   | 120             | 160             | 180               |
| A5         | 6.5          | 6             | 9 · 23.5             | 10 · 20         | 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      | M16 x P2.0        |
| A7         | 70           | 102           | 134                  | 166             | 215             | 252               |
| A8         | 5            | 6             | 10                   | 12              | 16              | 20                |
| A9         | 18           | 24.5          | 35                   | 43              | 59              | 79.5              |
| <b>B</b>   |              |               |                      |                 |                 |                   |
| B1         | 62           | 90            | 120                  | 142             | 180             | 220               |
| B2         | 36           | 46            | 65                   | 92              | 106             | 139               |
| B3         | 7            | 8             | 12                   | 15              | 20              | 30                |
| B4         | 20           | 30            | 40                   | 65              | 70              | 90                |
| B5         | 28           | 36            | 50                   | 74              | 82              | 104               |
| B6         | 165.5        | 204.5 · 212.5 | 284.5                | 354.5           | 425             | 527.5             |
| <b>C</b>   |              |               |                      |                 |                 |                   |
| C1         | 46 · 60 · 63 | 70 · 75 · 90  | 90 · 100 · 115 · 145 | 115 · 145 · 165 | 145 · 165 · 200 | 200 · 215 · 265   |
| C2         | M3 · M4 · M5 | M4 · M5 · M6  | M5 · M6 · M8         | M6 · M8 · M10   | M8 · M10 · M12  | M10 · M12         |
| C3         | 8 · 9 · 11   | 14 · 19       | 19 · 22 · 24         | 24 · 28 · 32    | 28 · 32 · 35    | 38 · 42 · 48 · 55 |
| C4         | 26           | 33.5 · 41.5   | 59 · 73.5            | 67 · 77         | 84.5            | 114.5 · 116.5     |
| C5         | 30 · 40 · 50 | 50 · 60 · 70  | 70 · 80 · 95 · 110   | 95 · 110 · 130  | 110 · 130 · 180 | 114.3 · 180 · 230 |
| C6         | M4 x P0.7    | M5 x P0.8     | M6 x P1.0            | M8 x P1.25      | M10 x P1.5      | M10 x P1.5        |
| C7         | 46 · 55      | 64 · 70 · 80  | 92 · 110 · 130       | 122 · 130 · 150 | 146 · 150 · 190 | 182 · 200 · 250   |



| Model No.   |            | Unit/Birim | Ratio<br>Çevrim | 62A   | 90A   | 120A  | 142A  | 180A   | 220A   |
|---|------------|------------|-----------------|---|-------|-------|-------|--------|--------|
| Nominal output torque / Nominal Çıkış Torku       | $T_{2N}$   | Nm         | 125             | 48  | 160   | 333   | 618   | 1,189  | 2,010  |
|   |            |            | 150             | 59  | 165   | 335   | 625   | 1,206  | 2,030  |
|   |            |            | 175             | 45  | 149   | 309   | 573   | 1,108  | 1,870  |
|   |            |            | 200             | 51  | 146   | 300   | 555   | 1,069  | 1,804  |
|   |            |            | 250             | 48  | 160   | 333   | 618   | 1,189  | 2,010  |
|   |            |            | 300             | 45  | 151   | 311   | 583   | 1,118  | 1,911  |
|   |            |            | 350             | 45  | 149   | 309   | 573   | 1,108  | 1,870  |
|   |            |            | 400             | 43  | 143   | 298   | 553   | 1,070  | 1,824  |
|   |            |            | 450             | 44  | 145   | 278   | 516   | 993    | 1,694  |
|   |            |            | 500             | 48  | 160   | 333   | 618   | 1,189  | 2,010  |
|   |            |            | 600             | 45  | 151   | 311   | 583   | 1,118  | 1,911  |
|   |            |            | 700             | 45  | 149   | 309   | 573   | 1,108  | 1,870  |
| 800   | 43         | 143        | 298             | 553   | 1,070 | 1,824 |       |        |        |
| 900   | 44         | 145        | 278             | 516   | 993   | 1,694 |       |        |        |
| 1000  | 43         | 141        | 294             | 549   | 1,059 | 1,779 |       |        |        |
| Max. Acceleration Torque / Max. İvmelenme Torku   | $T_{2B}$   | Nm         | 125 ~ 1000      | 1.8 Times of Rated Output Torque / 1,8 x Nominal Çıkış Torku  |       |       |       |        |        |
| Max. Output Torque / Max. Çıkış Torku             | $T_{2NOT}$ | Nm         | 125 ~ 1000      | 3 Times of Rated Output Torque / 3 x Nominal Çıkış Torku  |       |       |       |        |        |
| Rated Input Speed / Nominal Giriş Devri           | $n_{IN}$   | rpm        | 125 ~ 1000      | 3,000   | 3,000 | 3,000 | 3,000 | 3,000  | 2,000  |
| Max. Input Speed / Max. Giriş Devri               | $n_{IB}$   | rpm        | 125 ~ 1000      | 6,000   | 6,000 | 5,000 | 5,000 | 4,000  | 3,000  |
| Backlash P <sub>s</sub> / Min. Boşluk Oranı       |            | arcmin     | 125 ~ 1000      | -   | -     | ≤ 5   | ≤ 5   | ≤ 5    | ≤ 5    |
| Backlash P <sub>0</sub> / Düşük Boşluk Oranı      |            | arcmin     | 125 ~ 1000      | ≤ 7   | ≤ 7   | ≤ 7   | ≤ 7   | ≤ 7    | ≤ 7    |
| Backlash P <sub>1</sub> / Azaltılmış Boşluk Oranı |            | arcmin     | 125 ~ 1000      | ≤ 9   | ≤ 9   | ≤ 9   | ≤ 9   | ≤ 9    | ≤ 9    |
| Backlash P <sub>2</sub> / Standart Boşluk Oranı   |            | arcmin     | 125 ~ 1000      | ≤ 11  | ≤ 11  | ≤ 11  | ≤ 11  | ≤ 11   | ≤ 11   |
| Torsional Rigidity / Burulma Direnci              |            | Nm/arcmin  | 125 ~ 1000      | 6   | 14    | 27    | 60    | 140    | 240    |
| Max. Radial Force / Max. Radyal Yük               | $F_{2rB}$  | N          | 125 ~ 1000      | 1,180   | 3,200 | 6,800 | 9,300 | 15,600 | 51,000 |
| Max. Axial Force / Max. Aksiyel Yük               | $F_{2aB}$  | N          | 125 ~ 1000      | 590   | 1,600 | 3,400 | 4,650 | 7,800  | 25,500 |
| Service Life / Hizmet Ömrü                        | $L_H$      | hr         | 125 ~ 1000      | S5 Döngüsel Çalışma: >30,000 (S1 Sürekli Çalışma: >15,000 saat)<br>S5 Cycle Operation: >30,000 (S1 Continuous Operation: >15,000 hrs) |       |       |       |        |        |
| Efficiency / Verim                                | $\eta$     | %          | 125 ~ 1000      | ≥ 90  |       |       |       |        |        |
| Operating Temperature / Çalışma Sıcaklığı         |            | °C         | 125 ~ 1000      | - 25° C ~ + 90° C   |       |       |       |        |        |
| Lubrication / Yağlama                             |            |            | 125 ~ 1000      | Synthetic Grease / Sentetik Gres  |       |       |       |        |        |
| Protection Class / Koruma Sınıfı                  |            |            | 125 ~ 1000      | IP65  |       |       |       |        |        |
| Mounting Position / Montaj Pozisyonu              |            |            | 125 ~ 1000      | Any / Her Yönde   |       |       |       |        |        |
| Noise Level / Ses Seviyesi                        |            | dB         | 125 ~ 1000      | ≤ 58  | ≤ 60  | ≤ 63  | ≤ 65  | ≤ 67   | ≤ 70   |
| Weight / Ağırlık ±3%                              |            | Kg         | 125 ~ 1000      | 2.5   | 6.5   | 13    | 26    | 56.5   | 86     |

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

| Ratio / Çevrim | 62A  | 90A  | 120A | 142A | 180A | 220A |
|----------------|------|------|------|------|------|------|
| 125            | 0.01 | 0.01 | 0.04 | 0.71 | 1.42 | 3.29 |
| 150            | 0.01 | 0.01 | 0.04 | 0.51 | 0.92 | 2.15 |
| 175            | 0.01 | 0.01 | 0.04 | 0.4  | 0.83 | 1.26 |
| 200            | 0.01 | 0.01 | 0.04 | 0.21 | 0.65 | 0.98 |
| 250            | 0.01 | 0.01 | 0.04 | 0.11 | 0.52 | 0.82 |
| 300            | 0.01 | 0.01 | 0.04 | 0.09 | 0.21 | 0.82 |
| 350            | 0.01 | 0.01 | 0.04 | 0.09 | 0.21 | 0.82 |
| 400            | 0.01 | 0.01 | 0.04 | 0.09 | 0.21 | 0.82 |
| 450            | 0.01 | 0.01 | 0.04 | 0.09 | 0.21 | 0.51 |
| 500            | 0.01 | 0.01 | 0.04 | 0.08 | 0.12 | 0.51 |
| 600            | 0.01 | 0.01 | 0.04 | 0.08 | 0.12 | 0.25 |
| 700            | 0.01 | 0.01 | 0.04 | 0.08 | 0.12 | 0.25 |
| 800            | 0.01 | 0.01 | 0.04 | 0.08 | 0.12 | 0.25 |
| 900            | 0.01 | 0.01 | 0.04 | 0.08 | 0.12 | 0.25 |
| 1000           | 0.01 | 0.01 | 0.04 | 0.08 | 0.12 | 0.25 |