



leaderdrive®

leaderdrive®

苏州绿的谐波传动科技股份有限公司

Leader Harmonious Drive Systems Co.,Ltd

LCS Standard Cup-Shaped Flexspline Strain Wave Gear  
Product Introduction Manual



## LCS-I series



For LCS-I series, their flexible gear is of standard cup-shaped tube structure. Their input shaft matches with the inner hole of wave transformer directly and are connected by flat key. In general, the series are used with the rigid gear end fixed and flexible gear outputting.

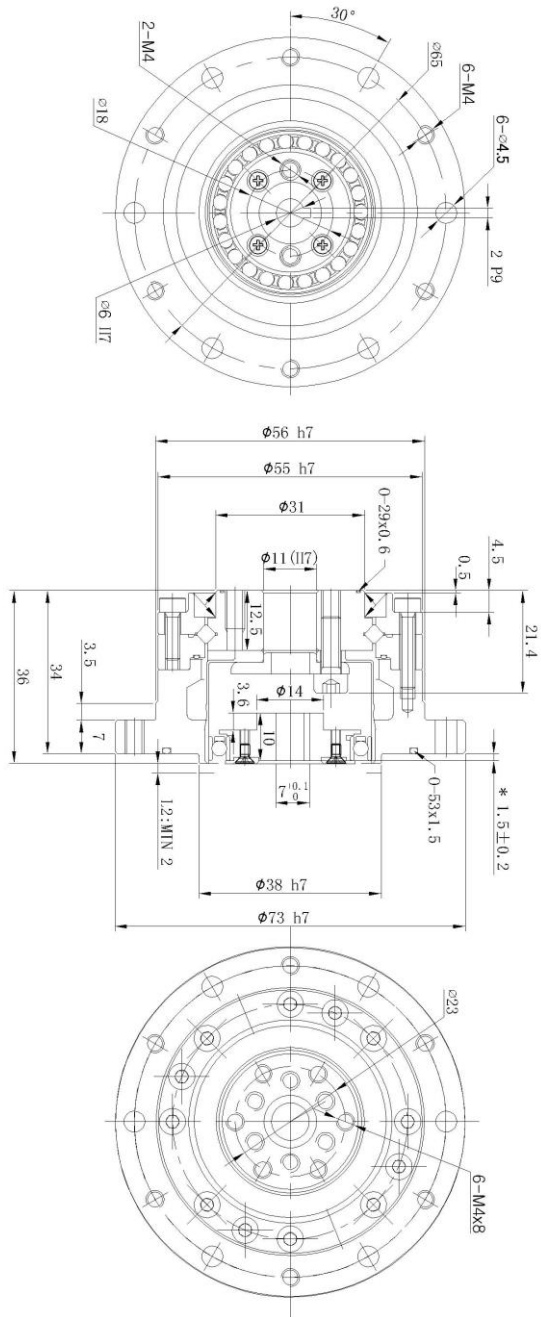
### Parameter Table

| Item     | Reduction Ratio | Rated Torque at 2000r/min | Allowable Peak Torque at Start and Stop | Allowable Average Torque | Allowable Maximum Momentary Torque | Maximum Input Speed | Allowable Average Input Speed | Backlash | Weight | Design Life |
|----------|-----------------|---------------------------|-----------------------------------------|--------------------------|------------------------------------|---------------------|-------------------------------|----------|--------|-------------|
| Model No |                 | Nm                        | Nm                                      | Nm                       | Nm                                 | r/min               | r/min                         | Arc sec  | Kg     | Hour        |
| 14       | 30              | 3.8                       | 8.5                                     | 6.5                      | 16                                 | 8000                | 3500                          | ≤20      | 0.51   | 10000       |
|          | 50              | 5.1                       | 17.1                                    | 6.6                      | 33                                 |                     |                               | ≤20      |        | 10000       |
|          | 80              | 7.4                       | 22                                      | 10.5                     | 44                                 |                     |                               | ≤10      |        | 15000       |
|          | 100             | 7.4                       | 26                                      | 10.5                     | 51                                 |                     |                               | ≤10      |        | 15000       |
| 17       | 30              | 8.4                       | 15                                      | 11.5                     | 28                                 | 7000                | 3500                          | ≤20      | 0.68   | 10000       |
|          | 50              | 15.2                      | 32                                      | 25                       | 66                                 |                     |                               | ≤20      |        | 10000       |
|          | 80              | 21                        | 41                                      | 26                       | 83                                 |                     |                               | ≤10      |        | 15000       |
|          | 100             | 23                        | 51                                      | 37                       | 103                                |                     |                               | ≤10      |        | 15000       |
|          | 120             | 23                        | 51                                      | 37                       | 82                                 |                     |                               | ≤10      |        | 15000       |
| 20       | 30              | 14                        | 26                                      | 19                       | 48                                 | 6000                | 3500                          | ≤20      | 0.98   | 10000       |
|          | 50              | 24                        | 53                                      | 32                       | 93                                 |                     |                               | ≤20      |        | 10000       |
|          | 80              | 32                        | 70                                      | 45                       | 121                                |                     |                               | ≤10      |        | 15000       |
|          | 100             | 38                        | 78                                      | 47                       | 140                                |                     |                               | ≤10      |        | 15000       |
|          | 120             | 38                        | 83                                      | 47                       | 140                                |                     |                               | ≤10      |        | 15000       |
|          | 160             | 38                        | 87                                      | 47                       | 140                                |                     |                               | ≤10      |        | 15000       |
| 25       | 30              | 26                        | 48                                      | 36                       | 90                                 | 5500                | 3500                          | ≤20      | 1.47   | 10000       |
|          | 50              | 37                        | 93                                      | 52                       | 177                                |                     |                               | ≤20      |        | 10000       |
|          | 80              | 60                        | 130                                     | 83                       | 242                                |                     |                               | ≤10      |        | 15000       |
|          | 100             | 64                        | 149                                     | 103                      | 270                                |                     |                               | ≤10      |        | 15000       |
|          | 120             | 64                        | 159                                     | 103                      | 289                                |                     |                               | ≤10      |        | 15000       |
|          | 160             | 64                        | 167                                     | 103                      | 298                                |                     |                               | ≤10      |        | 15000       |
| 32       | 30              | 51                        | 95                                      | 71                       | 190                                | 4500                | 3500                          | ≤20      | 3.19   | 10000       |
|          | 50              | 72                        | 205                                     | 103                      | 363                                |                     |                               | ≤20      |        | 10000       |
|          | 80              | 112                       | 289                                     | 159                      | 540                                |                     |                               | ≤10      |        | 15000       |
|          | 100             | 130                       | 316                                     | 205                      | 615                                |                     |                               | ≤10      |        | 15000       |
|          | 120             | 130                       | 335                                     | 205                      | 652                                |                     |                               | ≤10      |        | 15000       |
|          | 160             | 130                       | 353                                     | 205                      | 652                                |                     |                               | ≤10      |        | 15000       |
| 40       | 50              | 130                       | 382                                     | 186                      | 652                                | 4000                | 3000                          | ≤20      | 5.0    | 10000       |
|          | 80              | 196                       | 493                                     | 270                      | 931                                |                     |                               | ≤10      |        | 15000       |
|          | 100             | 252                       | 540                                     | 353                      | 1026                               |                     |                               | ≤10      |        | 15000       |
|          | 120             | 279                       | 586                                     | 429                      | 1121                               |                     |                               | ≤10      |        | 15000       |
|          | 160             | 279                       | 615                                     | 429                      | 1121                               |                     |                               | ≤10      |        | 15000       |
| 50*      | 50              | 233                       | 679                                     | 333                      | 1358                               | 3000                | 2500                          | ≤20      | 9.8    | 10000       |
|          | 80              | 353                       | 894                                     | 493                      | 1767                               |                     |                               | ≤10      |        | 15000       |
|          | 100             | 446                       | 931                                     | 633                      | 1957                               |                     |                               | ≤10      |        | 15000       |
|          | 120             | 503                       | 1026                                    | 772                      | 1957                               |                     |                               | ≤10      |        | 15000       |
|          | 160             | 503                       | 1121                                    | 801                      | 2327                               |                     |                               | ≤10      |        | 15000       |
| 58*      | 80              | 522                       | 1406                                    | 732                      | 2328                               | 3000                | 2200                          | ≤10      | 14.8   | 15000       |
|          | 100             | 661                       | 1511                                    | 1007                     | 3021                               |                     |                               | ≤10      |        | 15000       |
|          | 120             | 708                       | 1634                                    | 1131                     | 3164                               |                     |                               | ≤10      |        | 15000       |
|          | 160             | 708                       | 1748                                    | 1150                     | 3259                               |                     |                               | ≤10      |        | 15000       |

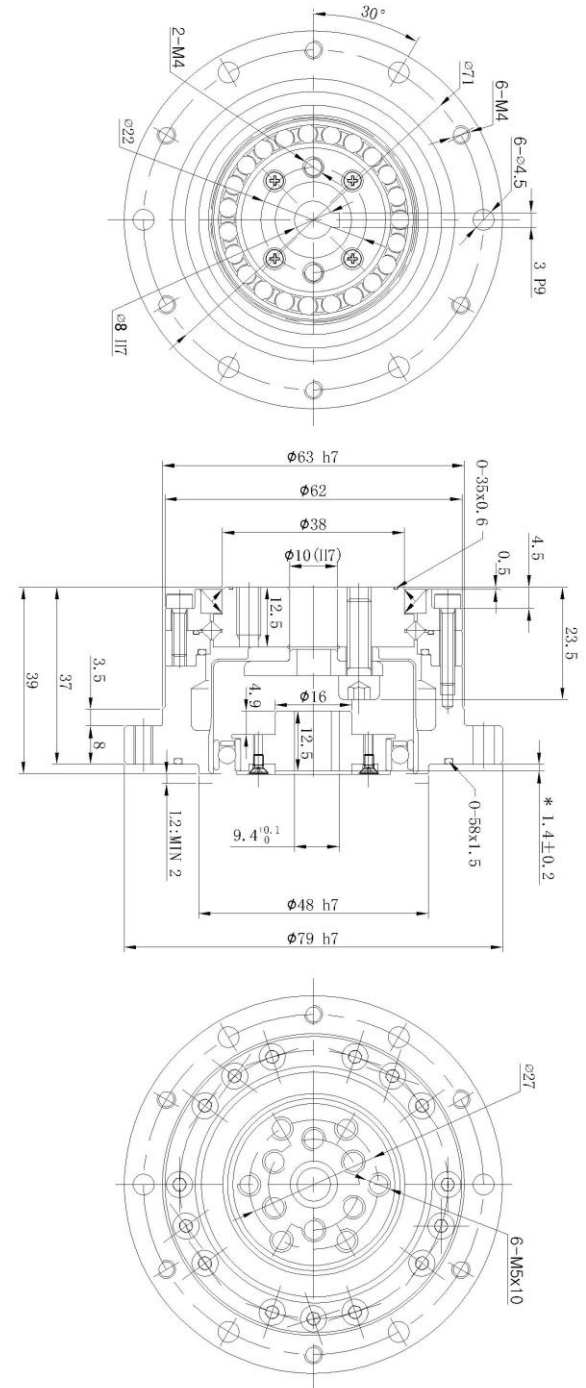
\* Consult factory

## LCS-I Series Drawings

LCS-14-XXX-C-I

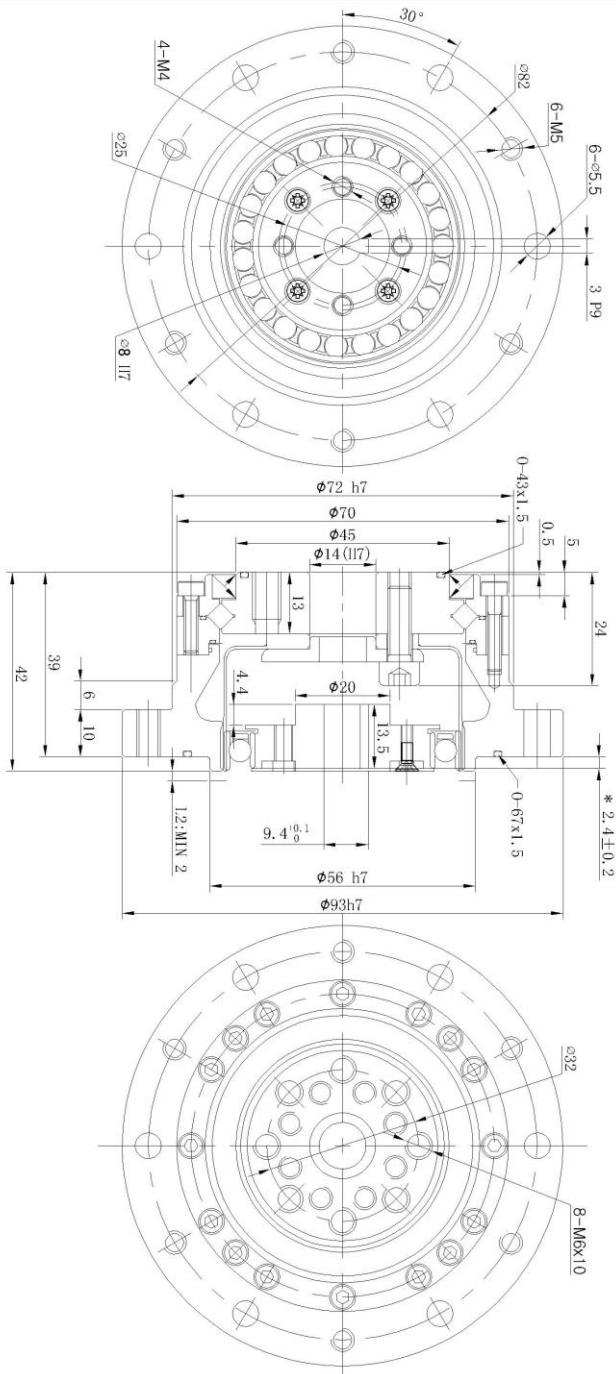


LCS-17-XXX-C-I

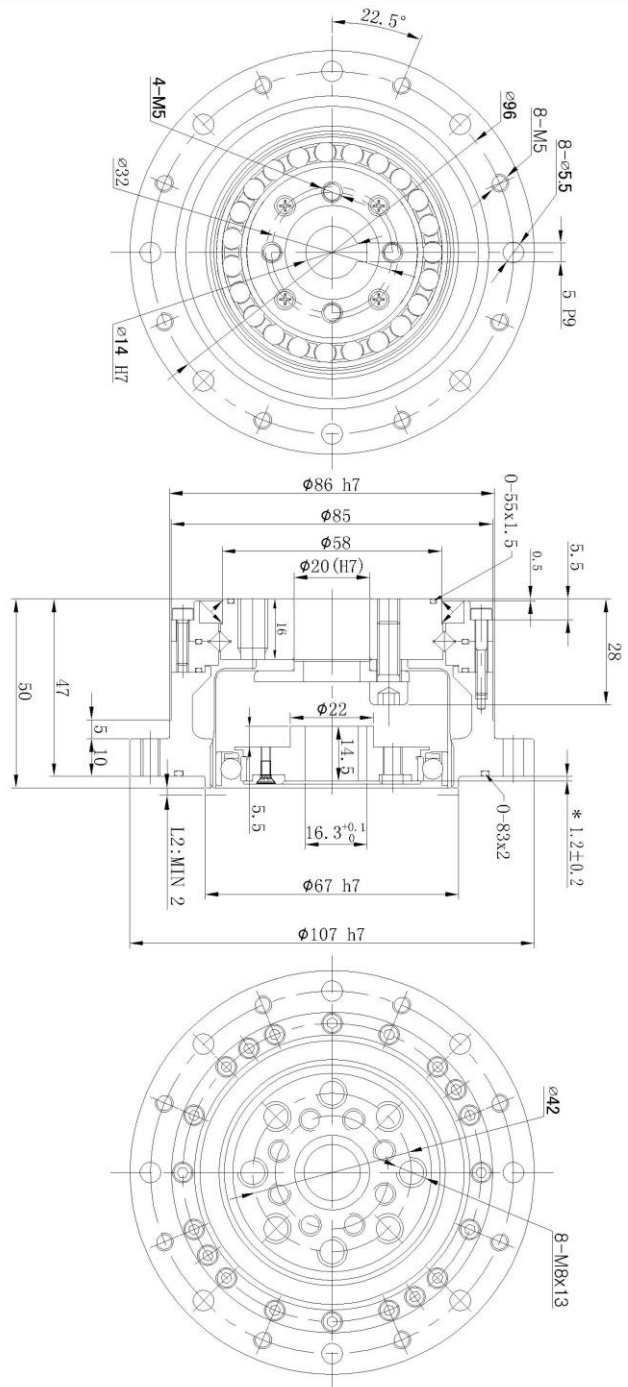


## LCS-I Series Drawings

LCS-20-XXX-C-I

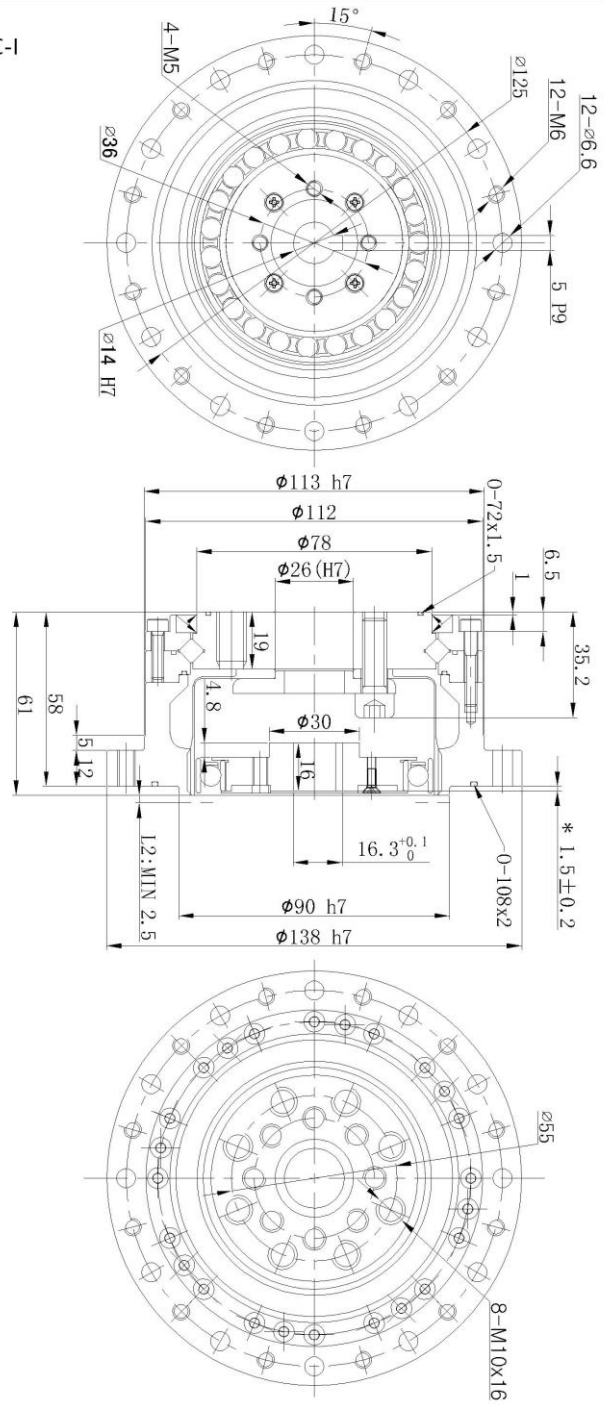


LCS-25-XXX-C-I

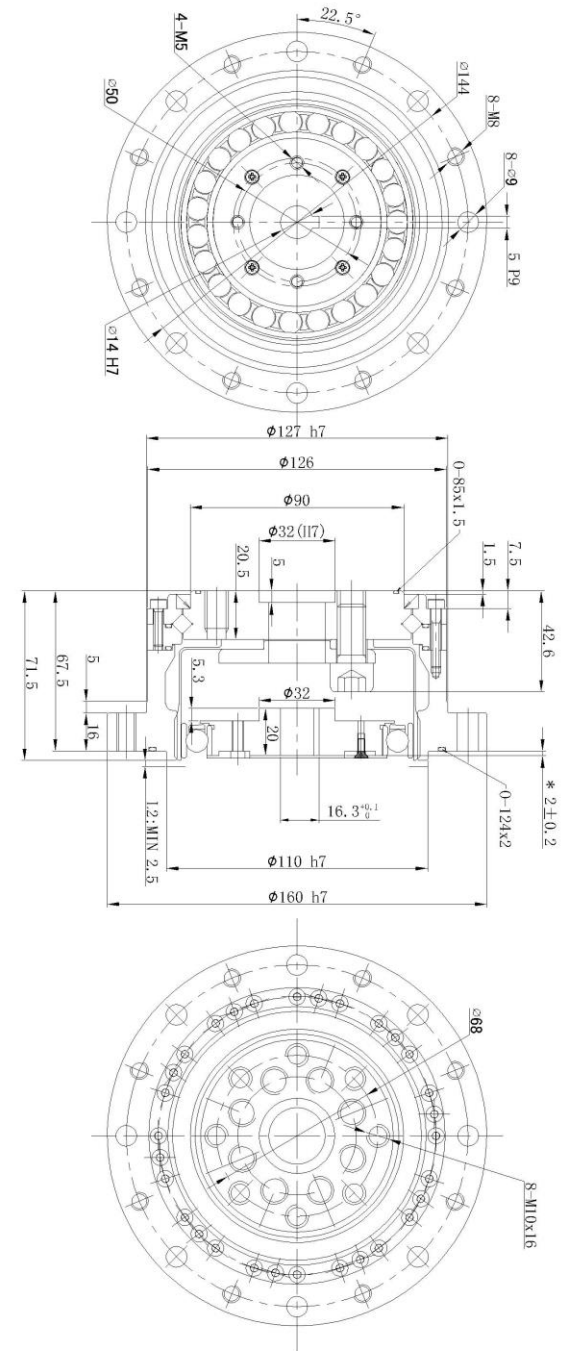


# LCS-I Series Drawings

LCS-32-XXX-C-I



LCS-40-XXX-C-I



## LCS-II series



For LCS-II series, their input shaft is connected with the inner hole of wave generator by double slider coupling.

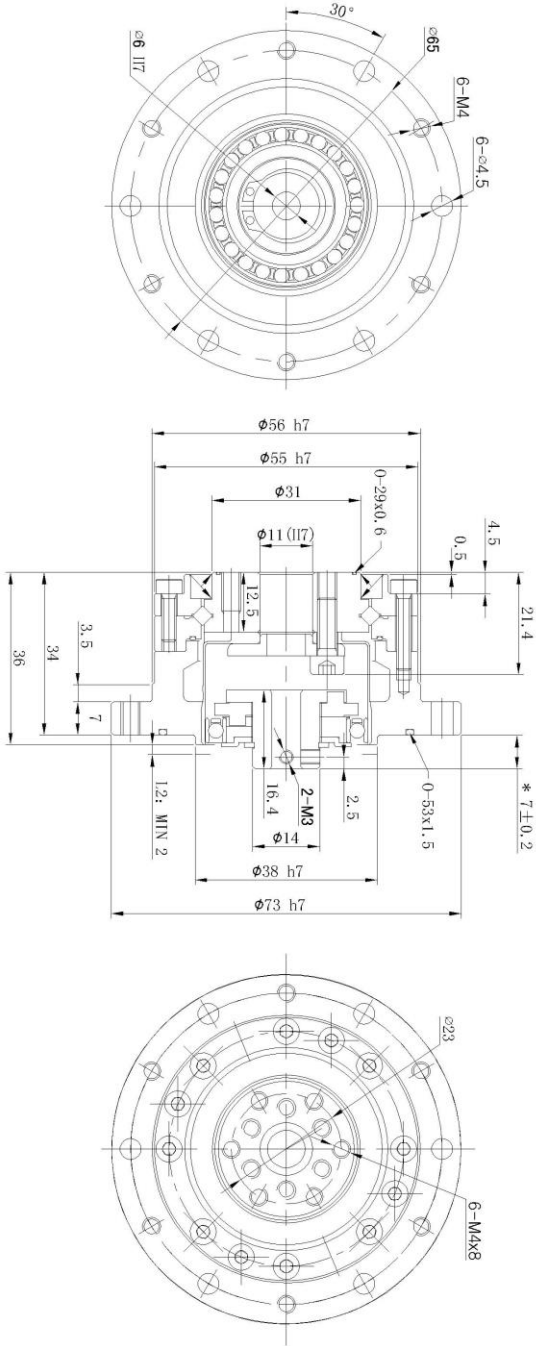
Parameter Table

| Item<br>Model No | Reduction Ratio | Rated Torque at 2000r/min | Allowable Peak Torque at Start and Stop | Allowable Average Torque | Allowable Maximum Momentary Torque | Maximum Input Speed | Allowable Average Input Speed | Back lash | Weight | Design Life |
|------------------|-----------------|---------------------------|-----------------------------------------|--------------------------|------------------------------------|---------------------|-------------------------------|-----------|--------|-------------|
|                  |                 | Nm                        | Nm                                      | Nm                       | Nm                                 | r/min               | r/min                         | Arc sec   | Kg     | Hour        |
| 14               | 30              | 3.8                       | 8.5                                     | 6.5                      | 16                                 | 8000                | 3500                          | ≤20       | 0.52   | 10000       |
|                  | 50              | 5.1                       | 17.1                                    | 6.6                      | 33                                 |                     |                               | ≤20       |        | 10000       |
|                  | 80              | 7.4                       | 22                                      | 10.5                     | 44                                 |                     |                               | ≤20       |        | 15000       |
|                  | 100             | 7.4                       | 26                                      | 10.5                     | 51                                 |                     |                               | ≤20       |        | 15000       |
| 17               | 30              | 8.4                       | 15                                      | 11.5                     | 28                                 | 7000                | 3500                          | ≤20       | 0.69   | 10000       |
|                  | 50              | 15.2                      | 32                                      | 25                       | 66                                 |                     |                               | ≤20       |        | 10000       |
|                  | 80              | 21                        | 41                                      | 26                       | 83                                 |                     |                               | ≤20       |        | 15000       |
|                  | 100             | 23                        | 51                                      | 37                       | 103                                |                     |                               | ≤20       |        | 15000       |
|                  | 120             | 23                        | 51                                      | 37                       | 82                                 |                     |                               | ≤20       |        | 15000       |
| 20               | 30              | 14                        | 26                                      | 19                       | 48                                 | 6000                | 3500                          | ≤20       | 0.99   | 10000       |
|                  | 50              | 24                        | 53                                      | 32                       | 93                                 |                     |                               | ≤20       |        | 10000       |
|                  | 80              | 32                        | 70                                      | 45                       | 121                                |                     |                               | ≤20       |        | 15000       |
|                  | 100             | 38                        | 78                                      | 47                       | 140                                |                     |                               | ≤20       |        | 15000       |
|                  | 120             | 38                        | 83                                      | 47                       | 140                                |                     |                               | ≤20       |        | 15000       |
| 25               | 30              | 26                        | 48                                      | 36                       | 90                                 | 5500                | 3500                          | ≤20       | 1.48   | 10000       |
|                  | 50              | 37                        | 93                                      | 52                       | 177                                |                     |                               | ≤20       |        | 10000       |
|                  | 80              | 60                        | 130                                     | 83                       | 242                                |                     |                               | ≤20       |        | 15000       |
|                  | 100             | 64                        | 149                                     | 103                      | 270                                |                     |                               | ≤20       |        | 15000       |
|                  | 120             | 64                        | 159                                     | 103                      | 289                                |                     |                               | ≤20       |        | 15000       |
| 32               | 30              | 51                        | 95                                      | 71                       | 190                                | 4500                | 3500                          | ≤20       | 3.2    | 10000       |
|                  | 50              | 72                        | 205                                     | 103                      | 363                                |                     |                               | ≤20       |        | 10000       |
|                  | 80              | 112                       | 289                                     | 159                      | 540                                |                     |                               | ≤20       |        | 15000       |
|                  | 100             | 130                       | 316                                     | 205                      | 615                                |                     |                               | ≤20       |        | 15000       |
|                  | 120             | 130                       | 335                                     | 205                      | 652                                |                     |                               | ≤20       |        | 15000       |
| 40               | 30              | 130                       | 353                                     | 205                      | 652                                | 4000                | 3000                          | ≤20       | 5.0    | 10000       |
|                  | 50              | 196                       | 493                                     | 270                      | 931                                |                     |                               | ≤20       |        | 15000       |
|                  | 80              | 252                       | 540                                     | 353                      | 1026                               |                     |                               | ≤20       |        | 15000       |
|                  | 120             | 279                       | 586                                     | 429                      | 1121                               |                     |                               | ≤20       |        | 15000       |
|                  | 160             | 279                       | 615                                     | 429                      | 1121                               |                     |                               | ≤20       |        | 15000       |
| 50*              | 30              | 233                       | 679                                     | 333                      | 1358                               | 3000                | 2500                          | ≤20       | 9.0    | 10000       |
|                  | 50              | 353                       | 894                                     | 493                      | 1767                               |                     |                               | ≤20       |        | 15000       |
|                  | 80              | 446                       | 931                                     | 633                      | 1957                               |                     |                               | ≤20       |        | 15000       |
|                  | 120             | 503                       | 1026                                    | 772                      | 1957                               |                     |                               | ≤20       |        | 15000       |
|                  | 160             | 503                       | 1121                                    | 801                      | 2327                               |                     |                               | ≤20       |        | 15000       |
| 58*              | 30              | 522                       | 1406                                    | 732                      | 2328                               | 3000                | 2200                          | ≤10       | 14.8   | 15000       |
|                  | 50              | 661                       | 1511                                    | 1007                     | 3021                               |                     |                               | ≤10       |        | 15000       |
|                  | 80              | 708                       | 1634                                    | 1131                     | 3164                               |                     |                               | ≤10       |        | 15000       |
|                  | 160             | 708                       | 1748                                    | 1150                     | 3259                               |                     |                               | ≤10       |        | 15000       |

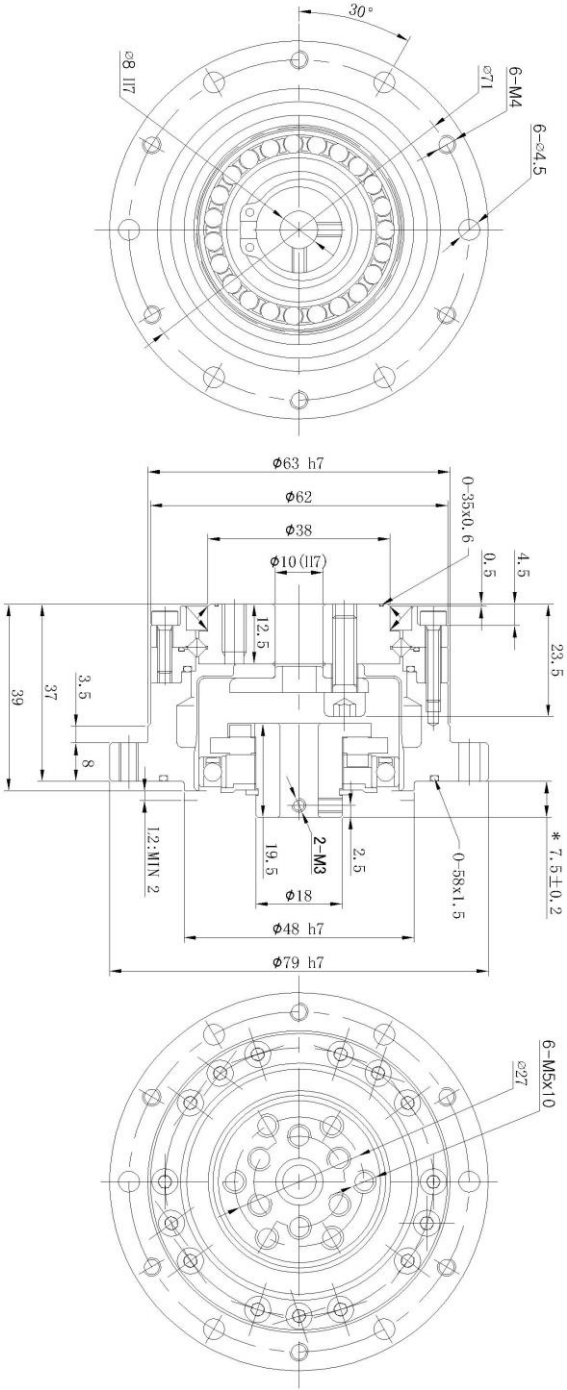
\* Consult factory

LCS-II Series Drawings

LCS-14-XXX-C-II

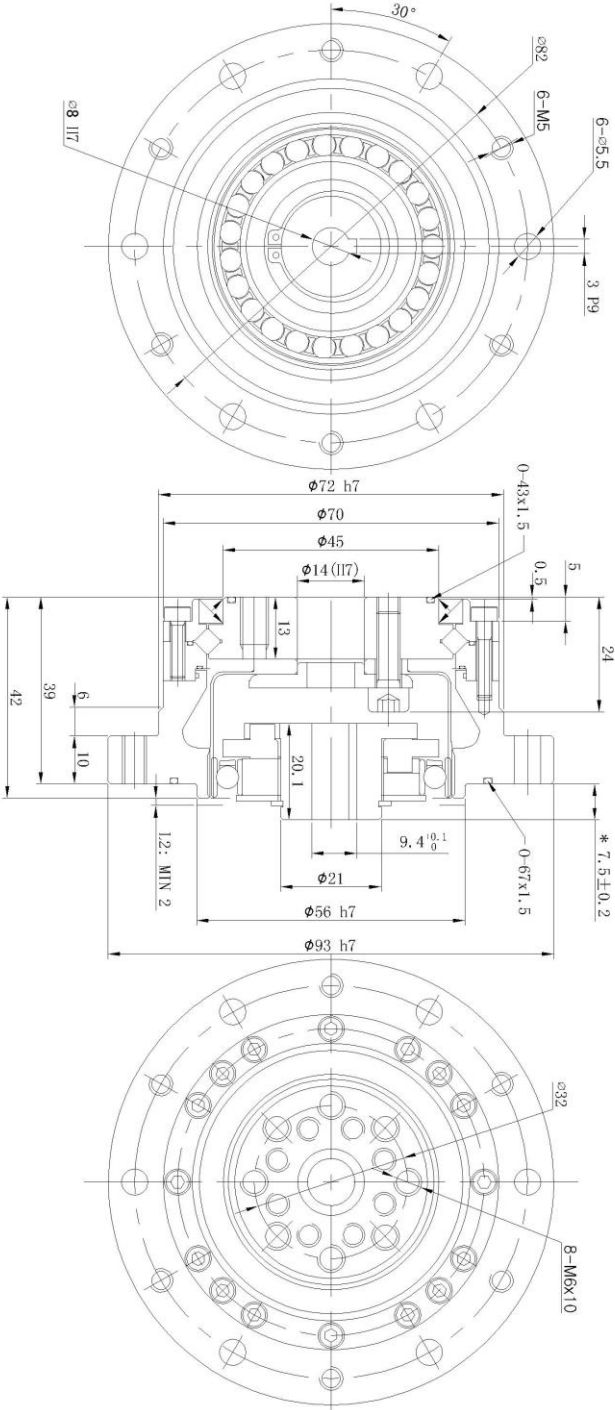


LCS-17-XXX-C-II

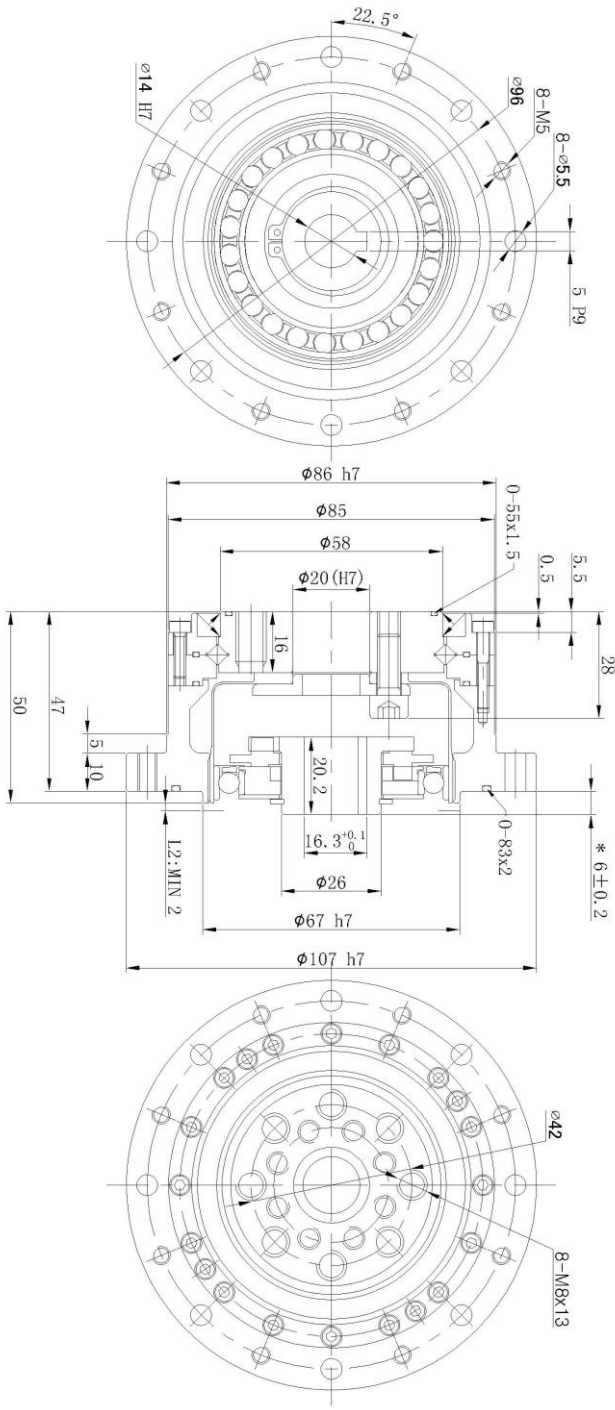


LCS-II Series Drawings

LCS-20-XXX-C-II

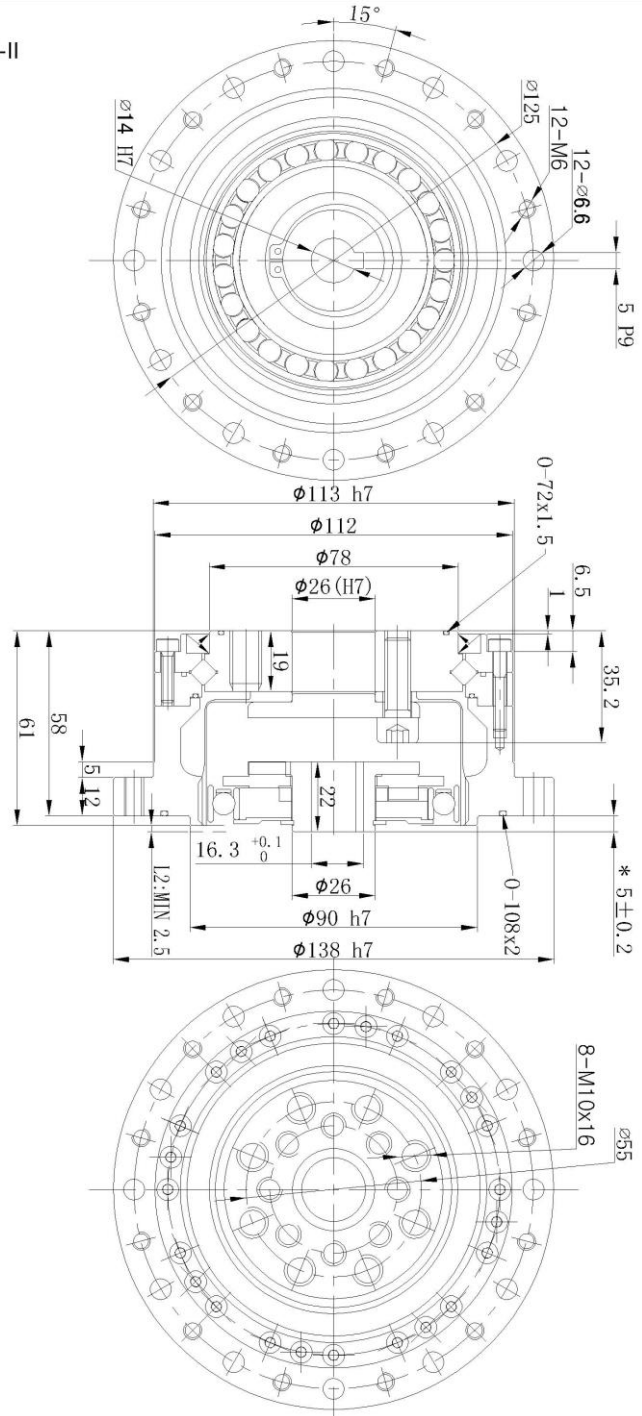


LCS-25-XXX-C-II



## LCS-II Series Drawings

LCS-32-XXX-C-II



LCS-40-XXX-C-II

