

Compact acme screw linear actuator with integral electric motor suitable for push and pull motions.

- Electric AC 1-phase, 3-phase or DC motors, available with or without brake.
- Internal safety clutch (FS), available on request, to prevent damage caused by dynamic overloads.
- The dimensional drawings in this catalogue show the standard motor mounting position on the right side. On request the motor can be mounted on the left side, at 180° with respect to the standard position.
- Rear fixing attachment can be also supplied mounted at 90° with respect to the motor axis.

|             |                                  |                                  |
|-------------|----------------------------------|----------------------------------|
| ACCESSORIES | Electric stroke limit device FCE | Magnetic stroke limit device FCM |
|             | Rear bracket SP                  | Wide range of front attachments  |

**PERFORMANCE with: Duty Cycle Fi = 30 % over 10 min. at 25 °C environment**

Max. static loads admitted: pull load 3000 N - push load 4000 N.

The linear speeds and dynamic loads stated below are performances achievable both at the same time during a working condition.

| PERFORMANCE WITH AC 3-PHASE MOTOR |                     |                           |       |                             |
|-----------------------------------|---------------------|---------------------------|-------|-----------------------------|
| LINEAR SPEED<br>[mm/s]            | DYNAMIC LOAD [N]    |                           | RATIO | SELF-LOCKING<br>COEFFICIENT |
|                                   | AC MOTOR<br>0.06 kW | AC BRAKE-MOTOR<br>0.09 kW |       |                             |
| 93                                | 390                 | 580                       | RH2   | 0.40                        |
| 60                                | 590                 | 880                       | RV2   | 0.41                        |
| 35                                | 730                 | 1100                      | RH1   | 0.25                        |
| 30                                | 1000                | 1550                      | RN2   | 0.35                        |
| 22                                | 1050                | 1600                      | RV1   | 0.25                        |
| 15                                | 1750                | 2650                      | RL2   | 0.27                        |
| 11                                | 1850                | 2800                      | RN1   | 0.22                        |
| 7.5                               | 2800                | 3000                      | RXL2  | 0.18                        |
| 5.5                               | 3000                | 3000                      | RL1   | 0.16                        |
| 2.8                               | 3000                | 3000                      | RXL1  | 0.11                        |

| PERFORMANCE WITH AC 1-PHASE MOTOR |                     |       |                             |
|-----------------------------------|---------------------|-------|-----------------------------|
| LINEAR SPEED<br>[mm/s]            | DYNAMIC LOAD<br>[N] | RATIO | SELF-LOCKING<br>COEFFICIENT |
| 90                                | 580                 | RH2   | 0.40                        |
| 58                                | 880                 | RV2   | 0.41                        |
| 35                                | 1100                | RH1   | 0.25                        |
| 28                                | 1550                | RN2   | 0.35                        |
| 21                                | 1600                | RV1   | 0.25                        |
| 14                                | 2650                | RL2   | 0.27                        |
| 11                                | 2800                | RN1   | 0.22                        |
| 7                                 | 3000                | RXL2  | 0.18                        |
| 5                                 | 3000                | RL1   | 0.16                        |
| 2.5                               | 3000                | RXL1  | 0.11                        |

| PERFORMANCE WITH DC MOTOR 24 V or 12 V |                     |       |                             |                   |      |
|--|---------------------|-------|-----------------------------|-------------------|------|
| LINEAR SPEED<br>[mm/s]                 | DYNAMIC<br>LOAD [N] | RATIO | SELF-LOCKING<br>COEFFICIENT | MOTOR CURRENT [A] |      |
|  |                     |       |                             | 24 V              | 12 V |
| 100                                    | 430                 | RH2   | 0.40                        | 4                 | 9    |
| 64                                     | 650                 | RV2   | 0.41                        | 4                 | 9    |
| 37                                     | 800                 | RH1   | 0.25                        | 4                 | 9    |
| 32                                     | 1150                | RN2   | 0.35                        | 4                 | 9    |
| 24                                     | 1200                | RV1   | 0.25                        | 4                 | 9    |
| 16                                     | 1950                | RL2   | 0.27                        | 4                 | 9    |
| 12                                     | 2000                | RN1   | 0.22                        | 4                 | 9    |
| 8                                      | 3000                | RXL2  | 0.18                        | 4                 | 9    |
| 6                                      | 3000                | RL1   | 0.16                        | 3.5               | 8    |
| 3                                      | 3000                | RXL1  | 0.11                        | 2                 | 4.5  |

**3.2 ACME SCREW LINEAR ACTUATORS Series ATL with AC 3-PHASE MOTORS**  
**PERFORMANCE with: Duty Cycle Fi = 30 % over 10 min. at 25 °C environment**

| ATL 20              |                  |       |  |                          |
|---------------------|------------------|-------|--|--------------------------|
| LINEAR SPEED [mm/s] | DYNAMIC LOAD [N] | RATIO | MOTOR POWER [kW]<br>NUMBER OF POLES<br>SPEED [rpm] | SELF-LOCKING COEFFICIENT |
| 93                  | 600              | RH2   | 0.12 kW 2 poles 2800                               | 0.40                     |
| 60                  | 1000             | RV2   | 0.12 kW 2 poles 2800                               | 0.41                     |
| 46                  | 850              | RH2   | 0.09 kW 4 poles 1400                               | 0.40                     |
| 35                  | 1100             | RH1   | 0.12 kW 2 poles 2800                               | 0.25                     |
| 30                  | 1750             | RN2   | 0.12 kW 2 poles 2800                               | 0.35                     |
| 22                  | 1500             | RV1   | 0.12 kW 2 poles 2800                               | 0.25                     |
| 15                  | 3000             | RL2   | 0.12 kW 2 poles 2800                               | 0.27                     |
| 11                  | 4000             | RN1   | 0.12 kW 2 poles 2800                               | 0.22                     |
| 7.5                 | 4000             | RL2   | 0.09 kW 4 poles 1400                               | 0.27                     |
| 5.5                 | 4000             | RL1   | 0.12 kW 2 poles 2800                               | 0.16                     |
| 2.8                 | 4000             | RL1   | 0.09 kW 4 poles 1400                               | 0.16                     |
| 1.4                 | 4000             | RXL1  | 0.09 kW 4 poles 1400                               | 0.11                     |

| ATL 25              |                  |       |  |                          |
|---------------------|------------------|-------|--|--------------------------|
| LINEAR SPEED [mm/s] | DYNAMIC LOAD [N] | RATIO | MOTOR POWER [kW]<br>NUMBER OF POLES<br>SPEED [rpm] | SELF-LOCKING COEFFICIENT |
| 93                  | 830              | RH2   | 0.12 kW 2 poles 2800                               | 0.38                     |
| 60                  | 1250             | RV2   | 0.12 kW 2 poles 2800                               | 0.38                     |
| 46                  | 1300             | RH1   | 0.12 kW 2 poles 2800                               | 0.27                     |
| 30                  | 2200             | RN2   | 0.12 kW 2 poles 2800                               | 0.33                     |
| 23                  | 1650             | RH1   | 0.09 kW 4 poles 1400                               | 0.27                     |
| 15                  | 3750             | RL2   | 0.12 kW 2 poles 2800                               | 0.25                     |
| 7.5                 | 5550             | RL1   | 0.12 kW 2 poles 2800                               | 0.18                     |
| 3.5                 | 6000             | RL1   | 0.09 kW 4 poles 1400                               | 0.18                     |
| 1.9                 | 6000             | RXL1  | 0.09 kW 4 poles 1400                               | 0.12                     |

| ATL 30              |                  |       |  |                          |
|---------------------|------------------|-------|--|--------------------------|
| LINEAR SPEED [mm/s] | DYNAMIC LOAD [N] | RATIO | MOTOR POWER [kW]<br>NUMBER OF POLES<br>SPEED [rpm] | SELF-LOCKING COEFFICIENT |
| 93                  | 1650             | RV2   | 0.25 kW 2 poles 2800                               | 0.37                     |
| 46                  | 2550             | RV1   | 0.25 kW 2 poles 2800                               | 0.25                     |
| 23                  | 5200             | RN2   | 0.25 kW 2 poles 2800                               | 0.28                     |
| 15                  | 6850             | RL2   | 0.25 kW 2 poles 2800                               | 0.22                     |
| 11                  | 7500             | RN1   | 0.25 kW 2 poles 2800                               | 0.20                     |
| 7.5                 | 10000            | RL1   | 0.25 kW 2 poles 2800                               | 0.16                     |
| 5.5                 | 9500             | RN1   | 0.18 kW 4 poles 1400                               | 0.20                     |
| 4                   | 10000            | RL1   | 0.18 kW 4 poles 1400                               | 0.16                     |

| ATL 40              |                  |       |  |                          |
|---------------------|------------------|-------|--|--------------------------|
| LINEAR SPEED [mm/s] | DYNAMIC LOAD [N] | RATIO | MOTOR POWER [kW]<br>NUMBER OF POLES<br>SPEED [rpm] | SELF-LOCKING COEFFICIENT |
| 93                  | 3500             | RV2   | 0.55 kW 2 poles 2800                               | 0.37                     |
| 46                  | 5400             | RV1   | 0.55 kW 2 poles 2800                               | 0.26                     |
| 23                  | 10500            | RN2   | 0.55 kW 2 poles 2800                               | 0.25                     |
| 18                  | 12000            | RL2   | 0.55 kW 2 poles 2800                               | 0.24                     |
| 11                  | 12000            | RN1   | 0.55 kW 2 poles 2800                               | 0.18                     |
| 9                   | 12000            | RL2   | 0.37 kW 4 poles 1400                               | 0.24                     |
| 5.5                 | 12000            | RN1   | 0.37 kW 4 poles 1400                               | 0.18                     |
| 4.5                 | 12000            | RL1   | 0.37 kW 4 poles 1400                               | 0.17                     |

**3.2 ACME SCREW LINEAR ACTUATORS Series ATL with AC 1-PHASE MOTORS**  
**PERFORMANCE with: Duty Cycle Fi = 30 % over 10 min. at 25 °C environment**

| ATL 20              |                  |       |  |                          |
|---------------------|------------------|-------|--|--------------------------|
| LINEAR SPEED [mm/s] | DYNAMIC LOAD [N] | RATIO | MOTOR POWER [kW]<br>NUMBER OF POLES<br>SPEED [rpm] | SELF-LOCKING COEFFICIENT |
| 93                  | 600              | RH2   | 0.12 kW 2 poles 2800                               | 0.40                     |
| 60                  | 1000             | RV2   | 0.12 kW 2 poles 2800                               | 0.41                     |
| 46                  | 850              | RH2   | 0.09 kW 4 poles 1400                               | 0.40                     |
| 35                  | 1100             | RH1   | 0.12 kW 2 poles 2800                               | 0.25                     |
| 30                  | 1750             | RN2   | 0.12 kW 2 poles 2800                               | 0.35                     |
| 22                  | 1500             | RV1   | 0.12 kW 2 poles 2800                               | 0.25                     |
| 15                  | 2500             | RL2   | 0.12 kW 2 poles 2800                               | 0.27                     |
| 11                  | 3750             | RN1   | 0.12 kW 2 poles 2800                               | 0.22                     |
| 7.5                 | 4000             | RL2   | 0.09 kW 4 poles 1400                               | 0.27                     |
| 5.5                 | 4000             | RL1   | 0.12 kW 2 poles 2800                               | 0.16                     |
| 2.8                 | 4000             | RL1   | 0.09 kW 4 poles 1400                               | 0.16                     |
| 1.4                 | 4000             | RXL1  | 0.09 kW 4 poles 1400                               | 0.11                     |

| ATL 25              |                  |       |  |                          |
|---------------------|------------------|-------|--|--------------------------|
| LINEAR SPEED [mm/s] | DYNAMIC LOAD [N] | RATIO | MOTOR POWER [kW]<br>NUMBER OF POLES<br>SPEED [rpm] | SELF-LOCKING COEFFICIENT |
| 93                  | 770              | RH2   | 0.12 kW 2 poles 2800                               | 0.38                     |
| 60                  | 1100             | RV2   | 0.12 kW 2 poles 2800                               | 0.38                     |
| 46                  | 1200             | RH1   | 0.12 kW 2 poles 2800                               | 0.27                     |
| 28                  | 2050             | RN2   | 0.12 kW 2 poles 2800                               | 0.33                     |
| 23                  | 1600             | RH1   | 0.09 kW 4 poles 1400                               | 0.27                     |
| 14                  | 3450             | RL2   | 0.12 kW 2 poles 2800                               | 0.25                     |
| 7                   | 5100             | RL1   | 0.12 kW 2 poles 2800                               | 0.18                     |
| 3.5                 | 6000             | RL1   | 0.09 kW 4 poles 1400                               | 0.18                     |
| 1.9                 | 6000             | RXL1  | 0.09 kW 4 poles 1400                               | 0.12                     |

| ATL 30              |                  |       |  |                          |
|---------------------|------------------|-------|--|--------------------------|
| LINEAR SPEED [mm/s] | DYNAMIC LOAD [N] | RATIO | MOTOR POWER [kW]<br>NUMBER OF POLES<br>SPEED [rpm] | SELF-LOCKING COEFFICIENT |
| 93                  | 1500             | RV2   | 0.25 kW 2 poles 2800                               | 0.37                     |
| 46                  | 2350             | RV1   | 0.25 kW 2 poles 2800                               | 0.25                     |
| 23                  | 4800             | RN2   | 0.25 kW 2 poles 2800                               | 0.28                     |
| 15                  | 6300             | RL2   | 0.25 kW 2 poles 2800                               | 0.22                     |
| 11                  | 6950             | RN1   | 0.25 kW 2 poles 2800                               | 0.20                     |
| 7.5                 | 9200             | RL1   | 0.25 kW 2 poles 2800                               | 0.16                     |
| 5.5                 | 9500             | RN1   | 0.18 kW 4 poles 1400                               | 0.20                     |
| 4                   | 10000            | RL1   | 0.18 kW 4 poles 1400                               | 0.16                     |

| ATL 40              |                  |       |  |                          |
|---------------------|------------------|-------|--|--------------------------|
| LINEAR SPEED [mm/s] | DYNAMIC LOAD [N] | RATIO | MOTOR POWER [kW]<br>NUMBER OF POLES<br>SPEED [rpm] | SELF-LOCKING COEFFICIENT |
| 93                  | 3400             | RV2   | 0.55 kW 2 poles 2800                               | 0.37                     |
| 46                  | 5400             | RV1   | 0.55 kW 2 poles 2800                               | 0.26                     |
| 23                  | 10000            | RN2   | 0.55 kW 2 poles 2800                               | 0.25                     |
| 18                  | 12000            | RL2   | 0.55 kW 2 poles 2800                               | 0.24                     |
| 11                  | 12000            | RN1   | 0.55 kW 2 poles 2800                               | 0.18                     |
| 9                   | 12000            | RL2   | 0.37 kW 4 poles 1400                               | 0.24                     |
| 5.5                 | 12000            | RN1   | 0.37 kW 4 poles 1400                               | 0.18                     |
| 4.5                 | 12000            | RL1   | 0.37 kW 4 poles 1400                               | 0.17                     |

**3.2 ACME SCREW LINEAR ACTUATORS Series ATL with DC MOTORS**  
**PERFORMANCE with: Duty Cycle Fi = 30 % over 10 min. at 25 °C environment**

| ATL 20                 |                     |       |  |                             |
|------------------------|---------------------|-------|--|-----------------------------|
| LINEAR SPEED<br>[mm/s] | DYNAMIC LOAD<br>[N] | RATIO | MOTOR 24 V 100 W 3000 rpm<br>CURRENT [A] | SELF-LOCKING<br>COEFFICIENT |
| 100                    | 600                 | RH2   | 5.5                                      | 0.40                        |
| 64                     | 920                 | RV2   | 5.5                                      | 0.41                        |
| 37                     | 1150                | RH1   | 5.5                                      | 0.25                        |
| 32                     | 1650                | RN2   | 5.5                                      | 0.35                        |
| 24                     | 1700                | RV1   | 5.5                                      | 0.25                        |
| 16                     | 2800                | RL2   | 5.5                                      | 0.27                        |
| 12                     | 2900                | RN1   | 5.5                                      | 0.22                        |
| 8                      | 4000                | RXL2  | 5  | 0.18                        |
| 6                      | 4000                | RL1   | 4.5                                      | 0.16                        |
| 3                      | 4000                | RXL1  | 3  | 0.11                        |

| ATL 25                 |                     |       |  |                             |
|------------------------|---------------------|-------|--|-----------------------------|
| LINEAR SPEED<br>[mm/s] | DYNAMIC LOAD<br>[N] | RATIO | MOTOR 24 V 150 W 3000 rpm<br>CURRENT [A] | SELF-LOCKING<br>COEFFICIENT |
| 100                    | 900                 | RH2   | 8.5                                      | 0.38                        |
| 64                     | 1330                | RV2   | 8.5                                      | 0.38                        |
| 50                     | 1450                | RH1   | 6.5                                      | 0.27                        |
| 32                     | 2100                | RV1   | 6.5                                      | 0.27                        |
| 16                     | 4000                | RL2   | 8.5                                      | 0.25                        |
| 8                      | 6000                | RL1   | 8.5                                      | 0.18                        |
| 4                      | 6000                | RXL1  | 5.5                                      | 0.12                        |

| ATL 30                 |                     |       |  |                             |
|------------------------|---------------------|-------|--|-----------------------------|
| LINEAR SPEED<br>[mm/s] | DYNAMIC LOAD<br>[N] | RATIO | MOTOR 24 V 300 W 3000 rpm<br>CURRENT [A] | SELF-LOCKING<br>COEFFICIENT |
| 100                    | 1750                | RV2   | 15.6                                     | 0.37                        |
| 50                     | 2750                | RV1   | 15.6                                     | 0.25                        |
| 25                     | 5600                | RN2   | 15.6                                     | 0.28                        |
| 16                     | 7500                | RL2   | 15.6                                     | 0.22                        |
| 12                     | 8400                | RN1   | 15.6                                     | 0.20                        |
| 8                      | 10000               | RL1   | 15.6                                     | 0.16                        |

| ATL 40                 |                     |       |  |                             |
|------------------------|---------------------|-------|--|-----------------------------|
| LINEAR SPEED<br>[mm/s] | DYNAMIC LOAD<br>[N] | RATIO | MOTOR 24 V 500 W 3000 rpm<br>CURRENT [A] | SELF-LOCKING<br>COEFFICIENT |
| 100                    | 3000                | RV2   | 26                                       | 0.37                        |
| 50                     | 4700                | RV1   | 26                                       | 0.26                        |
| 25                     | 9200                | RN2   | 26                                       | 0.25                        |
| 20                     | 11000               | RL2   | 26                                       | 0.24                        |
| 12                     | 12000               | RN1   | 23                                       | 0.18                        |
| 10                     | 12000               | RL1   | 19                                       | 0.17                        |

**3.3 ACME SCREW LINEAR ACTUATORS Series ATL with AC 3-PHASE MOTORS**  
**PERFORMANCE with: Duty Cycle Fi = 30 % over 10 min. at 25 °C environment**

| ATL 50              |                   |       |  |         |      |                          |
|---------------------|-------------------|-------|--|---------|------|--------------------------|
| LINEAR SPEED [mm/s] | DYNAMIC LOAD [kN] | RATIO | MOTOR POWER [kW]<br>NUMBER OF POLES<br>SPEED [rpm] |         |      | SELF-LOCKING COEFFICIENT |
| 93                  | 13,7              | RV2   | 2.2 kW   | 2 poles | 2800 | 0.34                     |
| 46                  | 17                | RV2   | 1.5 kW   | 4 poles | 1400 | 0.34                     |
| 30                  | 25                | RN2   | 2.2 kW   | 2 poles | 2800 | 0.26                     |
| 23                  | 25                | RV1   | 1.5 kW   | 4 poles | 1400 | 0.24                     |
| 15                  | 25                | RN2   | 1.5 kW   | 4 poles | 1400 | 0.26                     |
| 11                  | 25                | RL2   | 0.75 kW  | 4 poles | 1400 | 0.23                     |
| 7.5                 | 25                | RN1   | 0.75 kW  | 4 poles | 1400 | 0.18                     |
| 5.5                 | 25                | RL1   | 0.75 kW  | 4 poles | 1400 | 0.15                     |

| ATL 63              |                   |       |  |         |      |                          |
|---------------------|-------------------|-------|--|---------|------|--------------------------|
| LINEAR SPEED [mm/s] | DYNAMIC LOAD [kN] | RATIO | MOTOR POWER [kW]<br>NUMBER OF POLES<br>SPEED [rpm] |         |      | SELF-LOCKING COEFFICIENT |
| 93                  | 18                | RV2   | 3 kW   | 2 poles | 2800 | 0.32                     |
| 46                  | 33                | RV2   | 3 kW   | 4 poles | 1400 | 0.32                     |
| 23                  | 45                | RV1   | 3 kW   | 4 poles | 1400 | 0.21                     |
| 11                  | 40                | RN1   | 1.5 kW   | 4 poles | 1400 | 0.18                     |
| 5.5                 | 50                | RL1   | 1.5 kW   | 4 poles | 1400 | 0.13                     |

| ATL 80              |                   |       |  |         |      |                          |
|---------------------|-------------------|-------|--|---------|------|--------------------------|
| LINEAR SPEED [mm/s] | DYNAMIC LOAD [kN] | RATIO | MOTOR POWER [kW]<br>NUMBER OF POLES<br>SPEED [rpm] |         |      | SELF-LOCKING COEFFICIENT |
| 140                 | 17                | RV2   | 4 kW   | 2 poles | 2800 | 0.34                     |
| 70                  | 31                | RV2   | 4 kW   | 4 poles | 1400 | 0.34                     |
| 46                  | 41                | RN2   | 4 kW   | 2 poles | 2800 | 0.24                     |
| 35                  | 48                | RV1   | 4 kW   | 4 poles | 1400 | 0.23                     |
| 23                  | 73                | RN2   | 4 kW   | 4 poles | 1400 | 0.24                     |
| 17                  | 80                | RL2   | 4 kW   | 4 poles | 1400 | 0.22                     |
| 11                  | 80                | RN1   | 4 kW   | 4 poles | 1400 | 0.16                     |
| 8.5                 | 80                | RL1   | 3 kW   | 4 poles | 1400 | 0.15                     |