



# AIR TORQUE

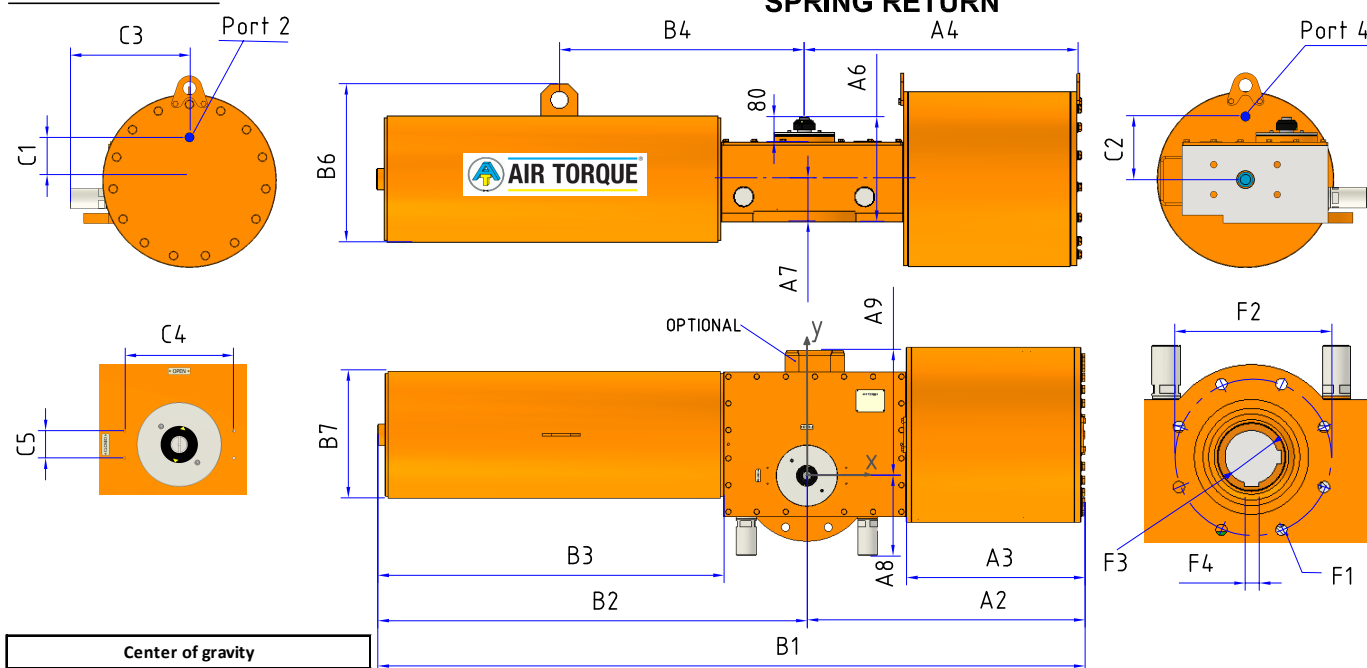
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**Model**  
**AT-HD-130-P535I**

T.D.S. n° AT-HD-130-P535I

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## Dimensions in inches



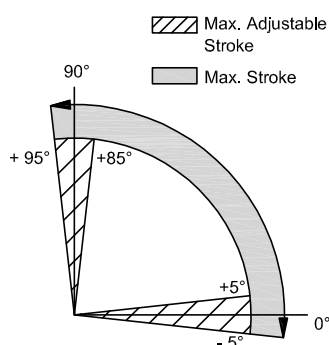
| Center of gravity |     |       |      |
|-------------------|-----|-------|------|
|                   | SET | X     | Y    |
| DA                | -   | 15,12 | 4,33 |
| SR                | 02  | -3,23 | 4,69 |
|                   | 04  | -7,91 | 4,76 |
|                   | 06  | -8,19 | 4,80 |
|                   | 08  | -9,65 | 4,80 |

| Actuator dimension |       |       |       |       |       |
|--------------------|-------|-------|-------|-------|-------|
| SPRING SET         | 02    | 04    | 06    | 08    | DA    |
| A1                 | 22,01 | 22,01 | 22,01 | 22,01 | 22,01 |
| A2                 | 34,80 | 34,80 | 34,80 | 34,80 | 34,80 |
| A3                 | 22,36 | 22,36 | 22,36 | 22,36 | 22,36 |
| A4                 | 34,45 | 34,45 | 34,45 | 34,45 | 34,45 |
| A5                 | 24,33 | 24,33 | 24,33 | 24,33 | 24,33 |
| A6                 | 13,23 | 13,23 | 13,23 | 13,23 | 13,23 |
| A7                 | 5,39  | 5,39  | 5,39  | 5,39  | 5,39  |
| A8                 | 9,96  | 9,96  | 9,96  | 9,96  | 9,96  |
| A9                 | 15,67 | 15,67 | 15,67 | 15,67 | 15,67 |
| B1                 | 88,58 | 92,91 | 90,75 | 92,91 | -     |
| B2                 | 53,78 | 58,11 | 55,94 | 58,11 | -     |
| B3                 | 43,35 | 47,68 | 45,51 | 47,68 | -     |
| B4                 | 30,75 | 32,52 | 30,35 | 32,52 | 11,61 |
| BDA                | -     | -     | -     | -     | 47,09 |
| B6                 | 19,92 | 23,94 | 23,94 | 23,94 | -     |
| B7                 | 15,98 | 20,00 | 20,00 | 20,00 | -     |
| WEIGHT (lbs)       | 1941  | 2249  | 2315  | 2401  | 1178  |

| Pressure connection  |       |
|----------------------|-------|
| PORT 2 AND 4         | G1"   |
|                      | 1"NPT |
| C1                   | 5,51  |
| C2                   | 7,87  |
| C3                   | 15,08 |
| Ancillary Attachment |       |
| SIZE                 | -     |
| C4                   | 9,84  |
| C5                   | 1,97  |
| HOLES                | M6    |

| ISO 5211 Interface          |          |          |
|-----------------------------|----------|----------|
|                             | STD      | OPTIONAL |
| ISO 5211                    | F35      | F30      |
| F1                          | M30X1,18 | M20X1,18 |
| F2                          | 14,02    | 11,73    |
| F3                          | 4,72H7   | 4,72H7   |
| F4                          | 1,26D10  | 1,26D10  |
| Connection keyed bore depth | 10,43    | 10,43    |

## Rotation and stroke adjustment



## Technical data

| Rotation STD | Air volume (in <sup>3</sup> ) |         |         |         | Approx. Moving time (sec.)(A) |         |           |           | Operating temperature range (°F) |            |   |
|--------------|-------------------------------|---------|---------|---------|-------------------------------|---------|-----------|-----------|----------------------------------|------------|---|
|              | Symmetric                     |         | Canted  |         | DA                            |         | SR        |           | Operating temperature range (°F) |            |   |
|              | opening                       | closing | opening | closing | opening                       | closing | opening   | closing   | S                                | H          | L |
| 0°-90°       | 5065                          | 4333    | 4821    | 4699    | 1,1                           | 1,0     | 2,6 ÷ 3,9 | 2,6 ÷ 3,3 | -40 to +176                      | +5 to +302 | - |

## Note:

A- Moving time test conditions: 90° stroke; Kv Supply system 7,3; no resistance load applied.

B- For operation, maintenance and services refer to the manual instruction IMAT AT-HD.

C- Maximum transmissible torque: 265.522 lbin (see M.O.P. for different configuration).

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**SYMMETRIC YOKE**
**DOUBLE ACTING OUTPUT TORQUE (Lb-in)**

| Supply pressure | 40 PSI  |         | 50 PSI  |         | 60 PSI  |         | 70 PSI  |         | 80 PSI  |         | 100 PSI         |         | 120 PSI |         | 150 PSI |         |
|-----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-----------------|---------|---------|---------|---------|---------|
| Position        | opening | closing | opening | closing | opening | closing | opening | closing | opening | closing | opening         | closing | opening | closing | opening | closing |
| Start           | 102.071 | 101.335 | 127.589 | 126.669 | 153.106 | 152.002 | 178.624 | 177.336 | 204.142 | 202.670 | M.O.P. exceeded |         |         |         |         |         |
| Run             | 59.506  | 59.077  | 74.383  | 73.847  | 89.259  | 88.616  | 104.136 | 103.385 | 119.013 | 118.155 |                 |         |         |         |         |         |
| End             | 113.412 | 112.594 | 141.765 | 140.743 | 170.118 | 168.892 | 198.471 | 197.040 | 226.824 | 225.189 |                 |         |         |         |         |         |

**SPRING RETURN OUTPUT TORQUE (Lb-in)**

|               | Position | Spring - torque | Supply pressure - opening |        |         |         |         |         |         |         |                 |  |
|---------------|----------|-----------------|---------------------------|--------|---------|---------|---------|---------|---------|---------|-----------------|--|
|               |          |                 | 40 PSI                    | 50 PSI | 60 PSI  | 70 PSI  | 80 PSI  | 100 PSI | 120 PSI | 150 PSI |                 |  |
| SPRING SET 02 | Start    | 75.231          | 50.914                    | 76.431 | 101.949 |         |         |         |         |         | M.O.P. exceeded |  |
|               | Run      | 32.825          | 26.681                    | 41.558 | 56.434  |         |         |         |         |         |                 |  |
|               | End      | 51.157          | 38.180                    | 66.533 | 94.886  |         |         |         |         |         |                 |  |
| SPRING SET 04 | Start    | 106.209         | 29.849                    | 55.366 | 80.884  | 106.402 | 131.920 |         |         |         | M.O.P. exceeded |  |
|               | Run      | 46.341          | 13.165                    | 28.041 | 42.918  | 57.795  | 72.671  |         |         |         |                 |  |
|               | End      | 72.222          | 7.203                     | 35.556 | 63.909  | 92.262  | 120.615 |         |         |         |                 |  |
| SPRING SET 06 | Start    | 132.761         |                           |        |         | 85.691  | 111.209 | 162.244 |         |         | M.O.P. exceeded |  |
|               | Run      | 58.707          |                           |        |         | 45.429  | 60.306  | 90.059  |         |         |                 |  |
|               | End      | 92.933          |                           |        |         | 65.710  | 94.062  | 150.768 |         |         |                 |  |
| SPRING SET 08 | Start    | 159.313         |                           |        |         |         | 95.809  | 146.844 | 197.879 |         | M.O.P. exceeded |  |
|               | Run      | 69.512          |                           |        |         |         | 49.500  | 79.254  | 109.007 |         |                 |  |
|               | End      | 108.333         |                           |        |         |         | 67.510  | 124.216 | 180.922 |         |                 |  |

**CANTED YOKE**
**DOUBLE ACTING OUTPUT TORQUE (Lb-in)**

| Supply pressure | 40 PSI  |         | 50 PSI  |         | 60 PSI  |         | 70 PSI          |         | 80 PSI  |         | 100 PSI |         | 120 PSI |         | 150 PSI |         |
|-----------------|---------|---------|---------|---------|---------|---------|-----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Position        | opening | closing | opening | closing | opening | closing | opening         | closing | opening | closing | opening | closing | opening | closing | opening | closing |
| Start           | 158.179 | 78.028  | 197.724 | 97.535  | 237.269 | 117.042 | M.O.P. exceeded |         |         |         |         |         |         |         |         |         |
| Run             | 58.114  | 58.071  | 72.643  | 72.588  | 87.172  | 87.106  |                 |         |         |         |         |         |         |         |         |         |
| End             | 84.835  | 169.153 | 106.044 | 211.442 | 127.252 | 253.730 |                 |         |         |         |         |         |         |         |         |         |

**SPRING RETURN OUTPUT TORQUE (Lb-in)**

|               | Position | Spring - torque | Supply pressure - opening |         |         |         |         |         |         |         |                 |  |
|---------------|----------|-----------------|---------------------------|---------|---------|---------|---------|---------|---------|---------|-----------------|--|
|               |          |                 | 40 PSI                    | 50 PSI  | 60 PSI  | 70 PSI  | 80 PSI  | 100 PSI | 120 PSI | 150 PSI |                 |  |
| SPRING SET 02 | Start    | 59.309          | 77.227                    | 116.772 | 156.317 |         |         |         |         |         | M.O.P. exceeded |  |
|               | Run      | 35.187          | 22.927                    | 37.456  | 51.984  |         |         |         |         |         |                 |  |
|               | End      | 80.952          | 25.526                    | 46.735  | 67.944  |         |         |         |         |         |                 |  |
| SPRING SET 04 | Start    | 83.843          |                           | 83.285  | 122.830 | 162.375 | 201.919 |         |         |         | M.O.P. exceeded |  |
|               | Run      | 49.743          |                           | 22.900  | 37.428  | 51.957  | 66.486  |         |         |         |                 |  |
|               | End      | 114.439         |                           | 22.201  | 43.409  | 64.618  | 85.827  |         |         |         |                 |  |
| SPRING SET 06 | Start    | 104.430         |                           |         |         | 130.194 | 169.739 | 248.828 |         |         | M.O.P. exceeded |  |
|               | Run      | 62.520          |                           |         |         | 39.180  | 53.709  | 82.766  |         |         |                 |  |
|               | End      | 146.619         |                           |         |         | 44.031  | 65.240  | 107.657 |         |         |                 |  |
| SPRING SET 08 | Start    | 125.760         |                           |         |         |         | 144.706 | 223.795 |         |         | M.O.P. exceeded |  |
|               | Run      | 74.612          |                           |         |         |         | 41.617  | 70.674  |         |         |                 |  |
|               | End      | 171.652         |                           |         |         |         | 43.910  | 86.327  |         |         |                 |  |

- M.O.P.: Maximun Operating Pressure.

- Torque values refer to: Counterclockwise rotation for opening and Clockwise rotation for closing (top view).

- TORQUES / POSITIONS:

