



# AIR TORQUE

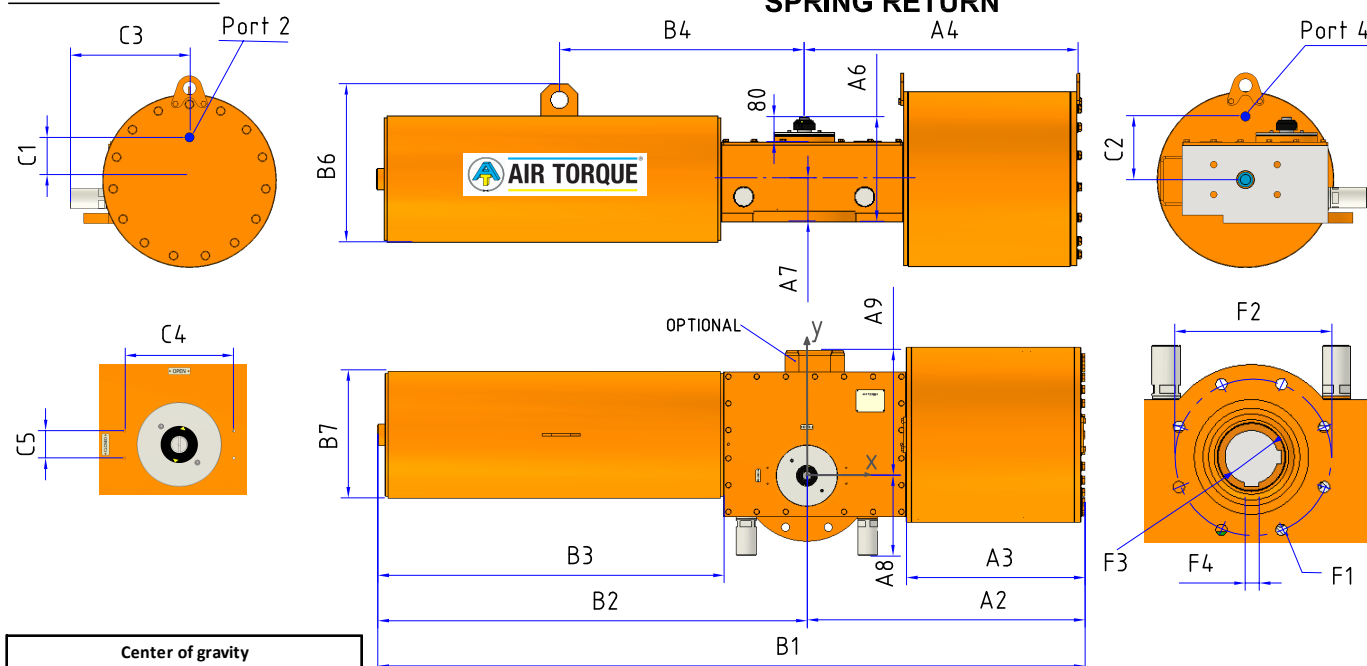
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**Model**  
**AT-HD-130-P485I**

T.D.S. n° AT-HD-130-P485I

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## Dimensions in inches

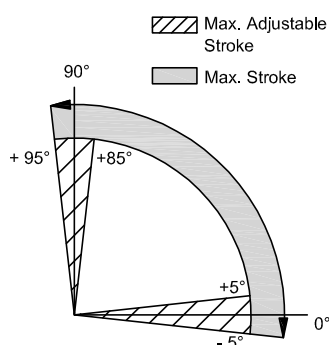


| Center of gravity |     |        |      |
|-------------------|-----|--------|------|
|                   | SET | X      | Y    |
| DA                | -   | 13,92  | 4,22 |
| SR                | 02  | -5,16  | 4,66 |
|                   | 04  | -9,83  | 4,75 |
|                   | 06  | -10,07 | 4,76 |
|                   | 08  | -11,51 | 4,78 |

| Actuator dimension |       |       |       |       |       |
|--------------------|-------|-------|-------|-------|-------|
| SPRING SET         | 02    | 04    | 06    | 08    | DA    |
| A1                 | 20,00 | 20,00 | 20,00 | 20,00 | 20,00 |
| A2                 | 34,88 | 34,88 | 34,88 | 34,88 | 34,88 |
| A3                 | 22,44 | 22,44 | 22,44 | 22,44 | 22,44 |
| A4                 | 34,45 | 34,45 | 34,45 | 34,45 | 34,45 |
| A5                 | 22,32 | 22,32 | 22,32 | 22,32 | 22,32 |
| 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                 | 88,66 | 92,99 | 90,83 | 92,99 | -     |
| 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                | -     | -     | -     | -     | 47,17 |
| B6                 | 19,92 | 23,94 | 23,94 | 23,94 | -     |
| B7                 | 15,98 | 20,00 | 20,00 | 20,00 | -     |
| WEIGHT (lbs)       | 1817  | 2126  | 2194  | 2278  | 1056  |

| Pressure connection  |         | ISO 5211 Interface                |          |          |
|----------------------|---------|-----------------------------------|----------|----------|
| PORT 2<br>AND 4      | G3/4"   |                                   | STD      | OPTIONAL |
|                      | 3/4"NPT |                                   |          |          |
| C1                   | 4,72    | ISO 5211                          | F35      | F30      |
| C2                   | 7,28    | F1                                | M30X1,18 | M20X1,18 |
| C3                   | 15,08   | F2                                | 14,02    | 11,73    |
| Ancillary Attachment |         | F3                                | 4,72H7   | 4,72H7   |
| SIZE                 | -       | F4                                | 1,26D10  | 1,26D10  |
| C4                   | 9,84    | Connection<br>keyed bore<br>depth | 10,43    | 10,43    |
| C5                   | 1,97    |                                   |          |          |
| HOLES                | M6      |                                   |          |          |

## Rotation and stroke adjustment



## Technical data

| Rotation<br>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°          | 4109                          | 3570    | 3932    | 3876    | 1,6                           | 1,4     | 3,9 ÷ 5,7 | 3,4 ÷ 5,0 | -40 to +176                      | +5 to +302 | - |

## Note:

A- Moving time test conditions: 90° stroke; Kv Supply system 4,0; 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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**SIMMETRIC 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           | 83.721  | 82.985  | 104.651 | 103.731 | 125.581 | 124.477 | 146.511 | 145.223 | 167.441 | 165.969 | 209.302 | 207.462 | M.O.P. exceeded |         |         |         |
| Run             | 48.808  | 48.379  | 61.010  | 60.474  | 73.212  | 72.569  | 85.414  | 84.664  | 97.617  | 96.759  | 122.021 | 120.948 |                 |         |         |         |
| End             | 93.023  | 92.205  | 116.278 | 115.257 | 139.534 | 138.308 | 162.790 | 161.359 | 186.045 | 184.411 | 232.557 | 230.513 |                 |         |         |         |

**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          | 32.563                    | 53.493 | 74.424 | 95.354 | 116.284 |         |         |         | M.O.P. exceeded |  |
|               | Run      | 32.825          | 15.983                    | 28.185 | 40.387 | 52.589 | 64.791  |         |         |         |                 |  |
|               | End      | 51.157          | 17.791                    | 41.047 | 64.303 | 87.558 | 110.814 |         |         |         |                 |  |
| SPRING SET 04 | Start    | 106.209         |                           |        | 53.359 | 74.289 | 95.219  | 137.079 |         |         |                 |  |
|               | Run      | 46.341          |                           |        | 26.871 | 39.073 | 51.275  | 75.679  |         |         |                 |  |
|               | End      | 72.222          |                           |        | 33.325 | 56.581 | 79.837  | 126.348 |         |         |                 |  |
| SPRING SET 06 | Start    | 132.761         |                           |        |        |        | 74.508  | 116.369 | 158.229 |         |                 |  |
|               | Run      | 58.707          |                           |        |        |        | 38.910  | 63.314  | 87.718  |         |                 |  |
|               | End      | 92.933          |                           |        |        |        | 53.284  | 99.796  | 146.307 |         |                 |  |
| SPRING SET 08 | Start    | 159.313         |                           |        |        |        |         | 100.968 | 142.829 | 205.619 |                 |  |
|               | Run      | 69.512          |                           |        |        |        |         | 52.509  | 76.913  | 113.519 |                 |  |
|               | End      | 108.333         |                           |        |        |        |         | 73.243  | 119.755 | 189.522 |                 |  |

**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           | 129.742 | 63.899  | 162.177 | 79.873  | 194.613 | 95.848  | 227.048 | 111.822 | M.O.P. exceeded |         |         |         |         |         |         |         |
| Run             | 47.667  | 47.555  | 59.583  | 59.444  | 71.500  | 71.332  | 83.417  | 83.221  |                 |         |         |         |         |         |         |         |
| End             | 69.583  | 138.522 | 86.979  | 173.153 | 104.375 | 207.783 | 121.771 | 242.414 |                 |         |         |         |         |         |         |         |

**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          | 48.790                    | 81.226 | 113.661 | 146.096 |         |         | M.O.P. exceeded |                 |
|               | Run      | 35.187          | 12.479                    | 24.396 | 36.313  | 48.229  |         |         |                 |                 |
|               | End      | 80.952          | 10.275                    | 27.670 | 45.066  | 62.462  |         |         |                 |                 |
| SPRING SET 04 | Start    | 83.843          |                           |        | 80.174  | 112.609 | 145.045 | 209.916 | M.O.P. exceeded |                 |
|               | Run      | 49.743          |                           |        | 21.757  | 33.673  | 45.590  | 69.423  |                 |                 |
|               | End      | 114.439         |                           |        | 20.532  | 37.928  | 55.324  | 90.115  |                 |                 |
| SPRING SET 06 | Start    | 104.430         |                           |        |         |         | 112.864 | 177.735 | 242.606         | M.O.P. exceeded |
|               | Run      | 62.520          |                           |        |         |         | 32.813  | 56.646  | 80.480          |                 |
|               | End      | 146.619         |                           |        |         |         | 34.737  | 69.529  | 104.320         |                 |
| SPRING SET 08 | Start    | 125.760         |                           |        |         |         |         | 152.702 | 217.573         | M.O.P. exceeded |
|               | Run      | 74.612          |                           |        |         |         |         | 44.554  | 68.388          |                 |
|               | End      | 171.652         |                           |        |         |         |         | 48.198  | 82.990          |                 |

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

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

- TORQUES / POSITIONS:

