

IR offers the broadest selection of air winches in the world, including utility and personnel lifting winches. Here's how IR air winches are rated:

n Utility rated air winches

- Used for lifting, pulling or tensioning of materials, up to the rated capacity of the winch.
- Meet ANSI / ASME B30.7
- Rated with a 5:1 design factor for lifting and lowering loads and a 3.5:1 design factor for pulling loads
- Versions available to meet the European Machinery Directives
- Clutches for free spooling wire rope are allowed in the U.S.A. for both lifting and pulling; in Europe, they are allowed for pulling applications only .
- Applications include construction, mining, offshore oil, heavy industrial, refineries, utilities, shipbuilding, petrochemical
- Not to be used for lifting people

n Offshore Man Rider™

- Offshore Man Riders have Type Approval and can be certified by one or more of the following independent third party organizations for the offshore oil and drilling industry:
 - Det Norske Veritas (DNV)
 - American Bureau of Shipping (ABS)
 - Lloyd’s Register of Shipping (LRS)
- Offshore Man Riders have been designed according to the regulations of one or more of the following regulatory bodies:
 - Norwegian Petroleum Directorate (NPD)
 - Norwegian Maritime Directorate (NMD)
 - UK HSE
- Type Approved for lifting and lowering of people with 8:1 design factor
- Force 5 models are dual rated for utility lifting at 5:1 design factor
- Dual brakes: one automatic and one manual or dual automatic

J -E = Compliance with the European Machinery Directive. Includes as standard on utility rated winches:

- 1 Main air supply shutoff located at the winch for throttle control models and on the pendant for remote control models.
- 2 Overload device for lift rated winches
- 3 Drum guard
- 4 Muffler
- 5 CE documentation

n “Gulf” Man Rider™

The Gulf Man Rider was specifically designed to meet the requirements for a personnel lifting winch for use on offshore rigs in the Gulf of Mexico. Additionally, the design has been type approved by DNV. The Gulf Man Rider is backed by IR’s experience and comes with a Det Norske Veritas (DNV) witness to our load test.

n Onshore Man Rider™

- Onshore Man Riders have been designed to meet the requirements of ANSI / ASME A10.22-1990 for “Rope Guided and Nonguided Worker’s Hoists - Safety Requirements”.
 - Addresses OSHA requirements where applicable
 - Typical applications include tower and chimney construction and maintenance, dams, mines, building construction

- Upper/lower limit switches, speed indicator, battery pack and dual brakes—one automatic and one manual—are standard
- Dual rated for personnel and material lifting—8:1 design factor for personnel; 5:1 design factor for materials
 - Line pulls are rated at top layer and line speeds at mid layer.
 - Third party Type Approved by ABS

Man Rider air winch series quick selection guide

| Man Rider series | Rated line capacity/ lifting at top layer | | | | Rated line speed/ lifting at top layer | | | |
|---|--|------|----------------|------|---|-------|----------------|-------|
| | personnel 8:1 DF | | utility 5:1 DF | | personnel 8:1 DF | | utility 5:1 DF | |
| | lbs | kg | lbs | kg | fpm | m/min | fpm | m/min |
| Meets Offshore requirements for one or more of the following: ABS, DNV, LRS, NMD, NPD and UK HSE | | | | | | | | |
| FA150KGMR (-E) | 330 | 150 | n/a | n/a | 95 | 29 | n/a | n/a |
| LS150RLP (-E) | 330 | 150 | – | – | 98 | 30 | – | – |
| LS500RLP (-E) | 1100 | 500 | – | – | 85 | 26 | – | – |
| LS1000RLP (-E) | 2200 | 1000 | – | – | 85 | 26 | – | – |
| FA2BMR (1) | 2500 | 1136 | 4000 | 1818 | 168 | 51 | 118 | 36 |
| FA2MR (-E) | 3180 | 1445 | 4400 | 2000 | 64 | 20 | 55 | 17 |
| FA2.5AMR (-E) (1) | 3125 | 1420 | 5000 | 2273 | 173 | 53 | 135 | 41 |
| FA2.5MR (-E) | 3180 | 1445 | 5000 | 2273 | 118 | 36 | 140 | 43 |
| FA5AMR (-E) (1) | 6250 | 2841 | 10000 | 4545 | 102 | 31 | 62 | 19 |
| FA5MR (-E) | 6875 | 3125 | 11000 | 5000 | 77 | 23 | 65 | 20 |
| Meets onshore requirements of ANSI / ASME A10.22-1990 | | | | | | | | |
| FA2MRA | 2200 | 1000 | 3520 | 1600 | 91 | 28 | 66 | 20 |
| FA2.5MRA | 2200 | 1000 | 3520 | 1600 | 195 | 59 | 157 | 48 |
| FA5MRA | 4400 | 2000 | 7040 | 3200 | 87 | 26 | 74 | 22 |

(1) Rated at mid layer

n Piston motor or gear motor?

IR air winches have a worldwide reputation for being rugged, durable and dependable in a vast array of applications. To meet the various needs of our customers, we offer two powerful yet different motors to power the winch.

- **Piston motors**—used in the Third Generation Force 5 Series, original Force 5 Series and IR Classics. Piston motors have great lugging characteristics—that is, they allow an operator to slowly move a load at an inching crawl for excellent spotting. Relatively high speeds are attained for moving loads long distances. Piston motors have internal “splash” lubrication and are fairly tolerant of “dirty” air. The new MP150 used on the FA2B air winch is lube-free!
- **Gear motors**—used exclusively in the Pullstar™ (PS) and Liftstar™ (LS) Series. Gear motors have only two moving parts, which reduces the complexity of motor maintenance, and are “lube-free”. The high torque feature provides outstanding steady slow speed characteristics. High speeds are not obtained with this type of motor. Gear motors will tolerate the wet and dirty air supply typically found in mines, foundries, steel mills, etc.

Air Winch Selection Guide

330 to 22000 lb (150 to 10000 kg) capacity



Utility air winch quick selection guide

(See specific series for complete technical information)

LIFTING: ANSI/ASME B30.16 allowable rated line pulls (5:1 design factor)

| Utility models | First layer | | | | Mid Layer | | | | Top Layer | | | | Average flow required | |
|------------------------|-------------|-------|-------|-------|-----------|-------|-------|-------|-----------|-------|-------|-------|-----------------------|----------------------|
| | Capacity | | Speed | | Capacity | | Speed | | Capacity | | Speed | | cfm | m ³ /min. |
| | lbs | kg | fpm | m/min | lbs | kg | fpm | m/min | lbs | kg | fpm | m/min | | |
| LS150R | 455 | 207 | 103 | 31 | 380 | 173 | 115 | 35 | 330 | 150 | 138 | 42 | 78 | 2.2 |
| LS300R | 840 | 382 | 56 | 17 | 740 | 336 | 63 | 19 | 660 | 300 | 69 | 21 | 78 | 2.2 |
| BU7A | 1200 | 545 | 36 | 11 | 1000 | 454 | 43 | 13 | 1000 | 454 | 39 | 12 | 50 | 1.4 |
| LS600R | 1680 | 764 | 26 | 8 | 1480 | 673 | 30 | 9 | 1325 | 600 | 34 | 10 | 78 | 2.2 |
| EU, EUL | 2100 | 955 | 62 | 19 | 2000 | 909 | 68 | 21 | 2000 | 909 | 64 | 20 | 100 | 2.8 |
| LS1500R ⁽¹⁾ | 4000 | 1818 | 19 | 6 | 3600 | 1636 | 21 | 6 | 3300 | 1500 | 23 | 7 | 125 | 3.5 |
| FA2B | 5000 | 2273 | 79 | 24 | 4000 | 1818 | 96 | 29 | 3200 | 1455 | 122 | 37 | 350 | 9.9 |
| FA2.5A | 5000 | 2273 | 119 | 36 | 5000 | 2273 | 114 | 35 | 4100 | 1864 | 141 | 43 | 700 | 19.8 |
| HU40A | 5000 | 2273 | 44 | 14 | 4000 | 1818 | 57 | 18 | 3200 | 1455 | 70 | 22 | 291 | 8.2 |
| LS2000R | 6200 | 2818 | 47 | 14 | 5150 | 2341 | 56 | 17 | 4400 | 2000 | 66 | 20 | 354 | 10.0 |
| FA2 | 6600 | 3000 | 31 | 9 | 5200 | 2364 | 40 | 12 | 4400 | 2000 | 47 | 14 | 280 | 7.9 |
| FA2.5 | 7000 | 3182 | 97 | 30 | 5800 | 2636 | 117 | 36 | 5000 | 2273 | 132 | 40 | 700 | 19.8 |
| FA5A | 11400 | 5182 | 40 | 12 | 10000 | 4545 | 50 | 15 | 8000 | 3636 | 62 | 19 | 700 | 19.8 |
| FA5T | 12500 | 5682 | 47 | 14 | 11300 | 5136 | 52 | 16 | 8400 | 3818 | 70 | 21 | 700 | 19.8 |
| FA5 | 12500 | 5682 | 47 | 14 | 12500 | 5682 | 48 | 15 | 11000 | 5000 | 54 | 16 | 700 | 19.8 |
| LS5000R | 15600 | 7091 | 23 | 7 | 12900 | 5864 | 28 | 9 | 11000 | 5000 | 33 | 10 | 354 | 10.0 |
| FA7T | 18800 | 8545 | 32 | 10 | 16700 | 7591 | 37 | 11 | 12600 | 5727 | 48 | 15 | 750 | 21.2 |
| FA7 | 18800 | 8545 | 32 | 10 | 18800 | 8545 | 33 | 10 | 15400 | 7000 | 40 | 12 | 750 | 21.2 |
| FA10 | 27200 | 12364 | 28 | 9 | 27100 | 12319 | 19 | 6 | 22000 | 10000 | 23 | 7 | 800 | 22.7 |

PULLING: ANSI/ASME B30.7 allowable rated line pulls (3.5:1 design factor)

| Utility models | First layer | | | | Mid Layer | | | | Top Layer | | | | Average flow required | |
|------------------------|-------------|-------|-------|-------|-----------|-------|-------|-------|-----------|-------|-------|-------|-----------------------|----------------------|
| | Capacity | | Speed | | Capacity | | Speed | | Capacity | | Speed | | cfm | m ³ /min. |
| | lbs | kg | fpm | m/min | lbs | kg | fpm | m/min | lbs | kg | fpm | m/min | | |
| BU7A | 1500 | 682 | 26 | 8 | 1200 | 545 | 34 | 10 | 1000 | 454 | 39 | 12 | 50 | 1.4 |
| PS1000R | 2200 | 1000 | 15 | 5 | 1950 | 886 | 17 | 5 | 1740 | 791 | 19 | 6 | 78 | 2.2 |
| EU, EUL | 3000 | 1364 | 45 | 14 | 2600 | 1182 | 49 | 15 | 2000 | 909 | 64 | 20 | 100 | 2.8 |
| FA2B | 5100 | 2318 | 76 | 23 | 4000 | 1818 | 96 | 29 | 3200 | 1455 | 122 | 37 | 350 | 9.9 |
| PS2400R ⁽¹⁾ | 5280 | 2400 | 12 | 4 | 4800 | 2182 | 13 | 4 | 4370 | 1986 | 14 | 4 | 125 | 3.5 |
| FA2 | 6800 | 3091 | 29 | 9 | 5400 | 2455 | 37 | 11 | 4500 | 2045 | 44 | 13 | 280 | 7.9 |
| FA2.5A | 7100 | 3227 | 67 | 20 | 6400 | 2909 | 42 | 13 | 5400 | 2455 | 45 | 14 | 700 | 19.8 |
| FA2.5 | 8000 | 3636 | 79 | 24 | 6600 | 3000 | 42 | 13 | 5300 | 2409 | 119 | 36 | 700 | 19.8 |
| HU40A | 5100 | 2318 | 42 | 13 | 4000 | 1818 | 54 | 17 | 3200 | 1455 | 68 | 21 | 291 | 8.2 |
| PS4000R | 8800 | 4000 | 13 | 4 | 7300 | 3318 | 16 | 5 | 6200 | 2818 | 18 | 5 | 354 | 10.0 |
| FA5A | 13100 | 5955 | 26/8 | 8 | 10000 | 4545 | 50 | 15 | 8000 | 3636 | 62 | 19 | 700 | 19.8 |
| FA5T | 18000 | 8182 | 32 | 10 | 11600 | 5273 | 50 | 15 | 8600 | 3909 | 67 | 20 | 700 | 19.8 |
| FA5 | 18000 | 8182 | 32 | 10 | 14100 | 6409 | 41 | 12 | 11600 | 5273 | 50 | 15 | 700 | 19.8 |
| PS10000R | 22000 | 10000 | 8 | 2 | 18300 | 8318 | 10 | 3 | 15600 | 7091 | 11 | 3 | 354 | 10.0 |
| FA7T | 27000 | 12273 | 23 | 7 | 18100 | 8227 | 32 | 10 | 13600 | 6182 | 46 | 14 | 750 | 21.2 |
| FA7 | 27000 | 12273 | 23 | 7 | 18100 | 8227 | 32 | 10 | 13600 | 6182 | 46 | 14 | 750 | 21.2 |
| FA10 | 34000 | 15455 | 17 | 5 | 27100 | 12319 | 19 | 6 | 22000 | 10000 | 23 | 7 | 800 | 22.7 |

(1) Standard cable is overwound; LS1500R and PS2400R are underwound.

Note: Adding "-E" to model states compliance with European Machinery Directive. See previous page for explanation of compliance.

It is the user's responsibility to determine the suitability of these winches for any particular use and to check for compliance with applicable regulations.