



OEM Manual

MODEL 5305™ HYDRAULIC
SINGLE CYLINDER SCALE

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These instructions generally describe the installation, operation, and maintenance of subject equipment. The manufacturer reserves the right to make engineering refinements that have not been described herein. Should any questions arise that may not be answered specifically by these instructions, they should be directed to **Scaleton Industries Ltd., Or Our Sales Agent** for a response.

All possible precautions were taken in packaging each piece of equipment to prevent shipping damage. Carefully inspect each item and report damages immediately. Report all damage claims to the shipping agent involved for equipment shipped F.O.B. job site. Do not install any damaged equipment.

All instructions given on any labels, or attached tags, should be followed. Carefully inspect all packing material before discarding to prevent the loss of accessories, mounting hardware, spare parts, or instructions.

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I. General Description:

The Model 5305™ Hydraulic Cylinder Scale provides a means of measuring the weight of a liquefied gas under pressure, in order to determine a cylinder's content level. This scale is ideally suited for use in Class 1 thru 3, Division 1, Group A thru D environments because no electric power is used. It is intended for use in chlorination and other gas feeding applications. More specifically, the Model 5305™ can be used to weigh liquefied chlorine, sulfur dioxide, ammonia, hydrogen chloride, or carbon dioxide packaged in cylinders. For operation, the scale employs a hydraulic load cell. It offers high accuracy of 1% of capacity. Capacity ranges for each platform are as follows: Gross, 0-300 lb., or 0-136 kg.

The Model 5305™ comes complete with the following features standard. One single scale base complete with a fixed backstop to center standard U.S. cylinders ranging from 10 ¼ to 10 ½ inch diameter, 8 feet of hydraulic hose, and a 4 ½ inch dial indicator sealed in a plastic housing. The indicator has an adjustable tare knob for cylinders whose tare weight may vary. Each unit is provided with an accessory tray / cylinder restraint, "S" Hooks for hanging necessary tools, and "S" hooks and a chain as a means of securing the gas cylinder. This chain should hang easily around the cylinder as not to interfere with the reading of the weight of the cylinder. Optional features available for this unit include a quick disconnect fitting set that is applied at the factory for use in areas where the hose must pass through a hole in a wall to mount indicator outside of chemical room, or hose must pass through a restricted sized area that the dial will not fit through; it is for installation purposes only. Other options include an additional length of hydraulic hose (beyond 8 feet) specified by the customer at the time of order placement, and an optional dual cylinder version of this unit with the two bases sharing a center pivot foot, but having two bases, two cells, two hoses and two dials for reading out separately.

II. Specifications:

Indicator:	4 ½ inch Dial Type
Platform Height:	1.875 inch (48mm)
Accuracy:	+ / - 1% Capacity Full Scale
Gross Capacity:	0-300 lb. (0-136 kg)
Product Capacity:	0-150 lb. (0-68 kg)
Tare Range:	0-150 lb. (0-68 kg)
Cylinder Diameter:	10 ¼ to 10 ½ inches (267 mm)
Platform Dimension:	10 ½ in. x 14 ¾ in. (267 mm x 375 mm)
Shipping Weight:	20 lb. each single unit

III. Assembly and Start-Up:

The Model 5305™ Hydraulic Cylinder Scale is shipped from the factory completely assembled and calibrated! There is no need to recalibrate or take this unit apart before usage.

This unit arrives complete, only needing to be leveled, and anchored properly.

1. Unpack all materials in box, including scale unit, manual, accessory tray / cylinder restraint, S hooks, and chain. Inspect all pieces for damage. **Any shipping damage must be reported to the carrier immediately upon receipt of damaged goods for a claim to be honored. Scaleton Industries Ltd. ships the unit with insurance to protect our customers from shipping damage costs. Please report damage, hidden or obvious, to carrier before signing for material.**
2. Clean all debris from a level area where scale base will be placed. Floor should be clean of any debris that may make base bottom out onto floor and affect the readings of the weight.
3. Attempt to level the base using the washers between the load cell and the base, and if needed, apply shims (not supplied) under the anchoring feet to lift base off of floor. There are two washers between the piston and the base – if the base is too high at loadcell end, remove one or two of the washers. Using the level supplied on the base, determine which end needs to be raised in order to achieve a level platform and base clearance with the floor.
4. Once the base is level, the pivot feet should be anchored to the floor with a ¼ inch bolt. There are four bolts needed total (not supplied).
5. **If quick disconnect option is installed**, you may disconnect the hose from the indicator end of the quick disconnect, and feed hose through the area to where the indicator will be mounted. This purpose of this option is for ease of installation in cases where hose may need to pass through a wall or restricted space to then mount indicator outside of a room, or in an area other than directly in front of the scale area. Do not kink or pinch hose as this may damage the system. Hose should not be pinched or forced into an unnatural bend in any way, or the scale may not operate properly. Once hose is fed through restricted space, and a place for the dial has been established, then you may reconnect the quick disconnect portion of the hose to the dial.
6. When base is attached to floor securely, mount the indicator dial on the wall. Hole diameter for mounting the indicator is approximately 0.250 inches (in three places. Please use appropriate size and type bolt to attach to mounting area.

7. Mount accessory tray / cylinder restraint to wall in area where cylinders will be surrounded by the chains without interfering with weight readings. Chains should hang slightly around the cylinders. The chains are to restrain a cylinder from tipping. Please use appropriate hardware to mount the accessory tray / cylinder restraint to the wall. Hole diameter in accessory tray / cylinder restraint is approximately 0.312 inches (8.0 mm) in two places. This will provide clearance for a ¼ inch (or 6.35mm) sized bolt.
8. Apply “S” hooks to the holes in the accessory tray / cylinder restraint. In the two holes closest to the edge of the accessory tray, apply an “S” hook to the tray and one end of the chain. Loop chain around the cylinder and hook at opposite end of tray, the hole closest to the edge of the tray.

IV. General Use Instructions:

There are two ways to use the Model 5305™ Hydraulic Cylinder Scale. Depending on if you have a cylinder that tells you the tare weight, or if you know there is a certain net weight, you will follow one of the following methods of usage. The most common usage method is the known net weight method.

KNOWN NET WEIGHT: If you know the net weight (weight of the contents in the cylinder) you may load the cylinder on to the platform, and then adjust the dial to reflect the weight of the contents. The pounds are listed in black type on the dial, and kilograms are listed in red type. You will not need to adjust the knob again during the use of the cylinder. When the dial reads 0, you have used the contents of the cylinder, and it is time to change your cylinder.

The second method of usage is as follows:

KNOWN TARE WEIGHT: If the tare weight of the cylinder is stamped on the cylinder, you can start the dial at 0 / 200 lbs. line, and turn the knob on the dial until the dial reads negative the same number of pounds as the tare weight. For instance, if you have a cylinder with a tare weight of 85 lbs., you would turn the dial to the number 115 lbs. ($200 - 85 = 115$ lbs.) If using kilograms. The line for 90 kgs is not the exact conversion for 200 lbs. Starting at the zero line, turn the knob to reflect the tare weight by using the following equation: ($90.7\text{kg} - \text{tare weight} = \text{net weight}$). For example, if the tare weight is 38 kg, use the following equation: ($90.7\text{ kg} - 38\text{ kg (tare)} = 52.7\text{ kg}$). Turn the knob to read the number 52.7 kg (numbers in red). This adjustment of 7 tenths compensates for the difference in the fact that 90 kg line is not exactly the same as the 0 kg, line.

V. Troubleshooting:

If the scale weight is too low, please check the following items before calling the factory:

1. Check that cylinder is centered by sitting directly against the backstop, and is the proper diameter.
2. Check for debris under base platform that may restrict the movement of the hydraulic cylinder.

If the scale weight is higher than expected, please check the following:

1. Check that the cylinder is a diameter of 10 ¼ or 10 ½ inches. If less, the cylinder is not centered because it is smaller diameter, it will appear to weigh heavy.

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Notice: Do not return any equipment without first contacting the factory. A return authorization number will be issued and it must be marked on all materials returned to the factory, accompanying a letter that explains the problem **specifically**. A Serial Number will also be required. It is located on a silver sticker on the side of the dial.