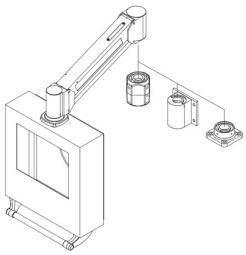
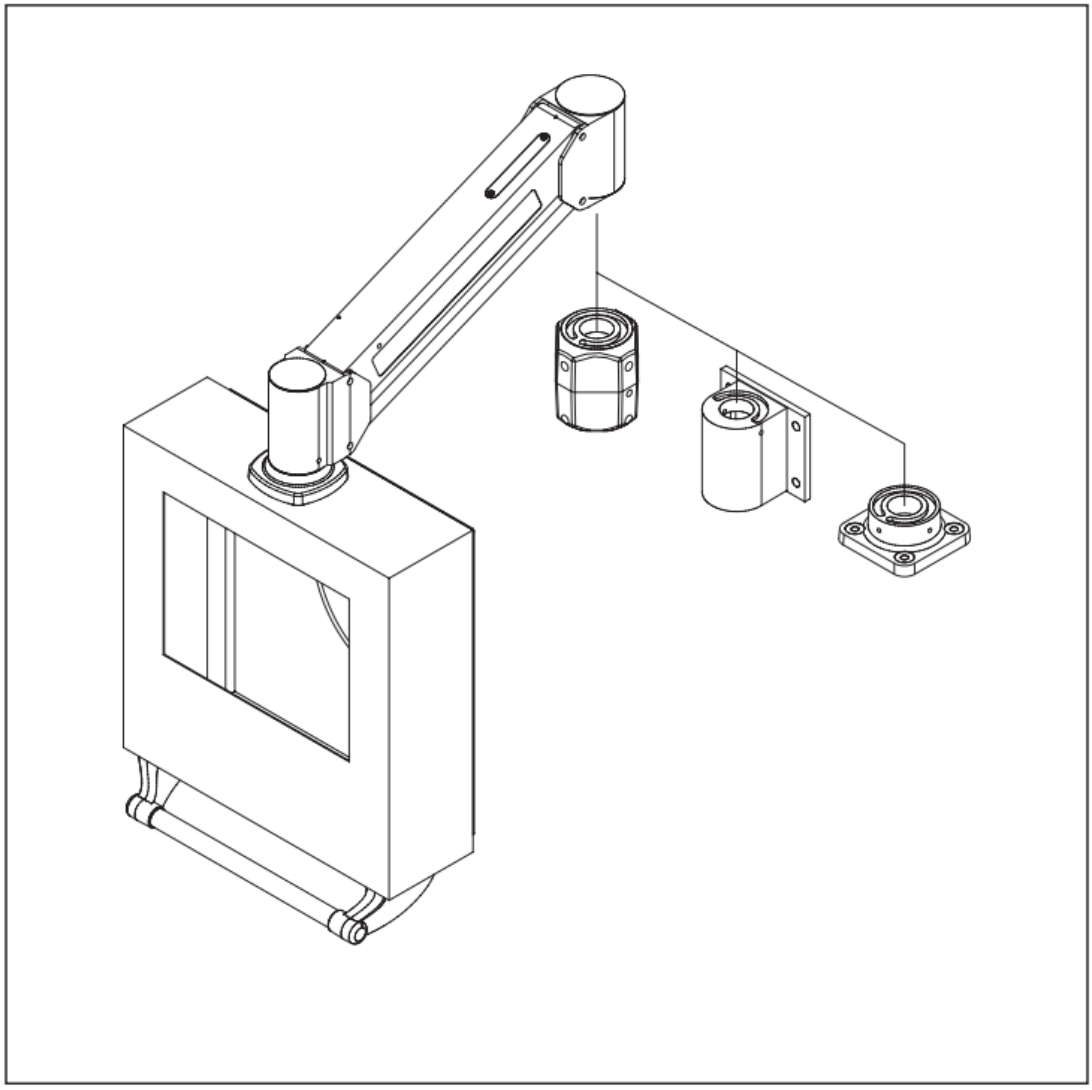


# nVent HOFFMAN SYSPEND VL-Motion Arm Instruction Manual



**SYSPEND™**
**VL-Motion Arm**



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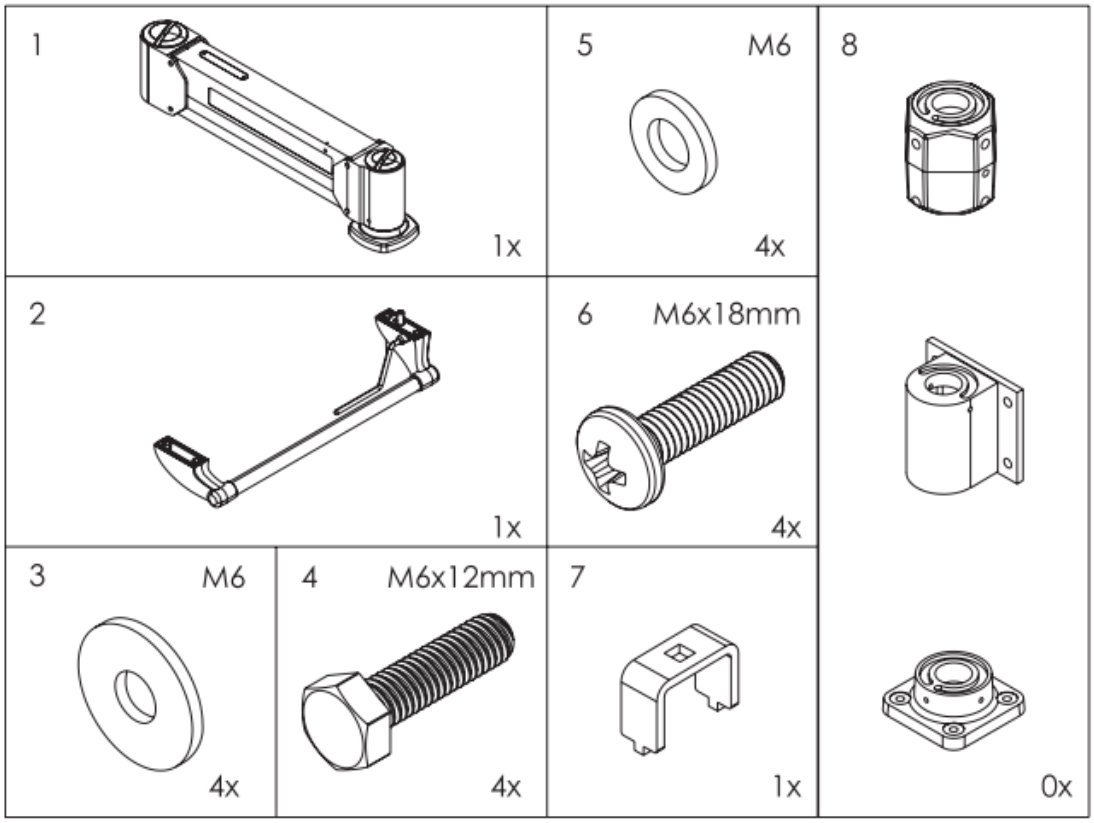
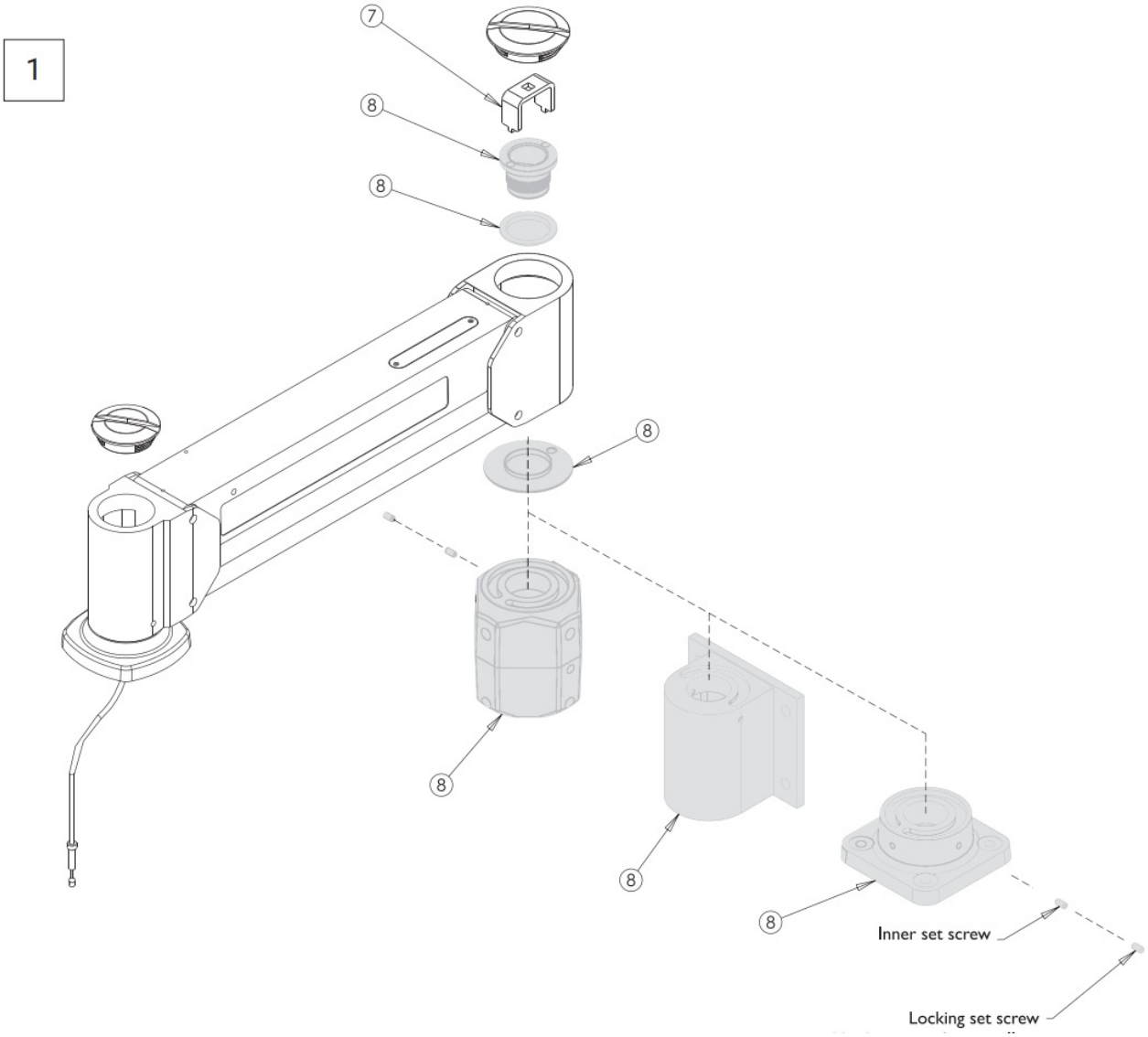
## SYSPEND VL-Motion Arm



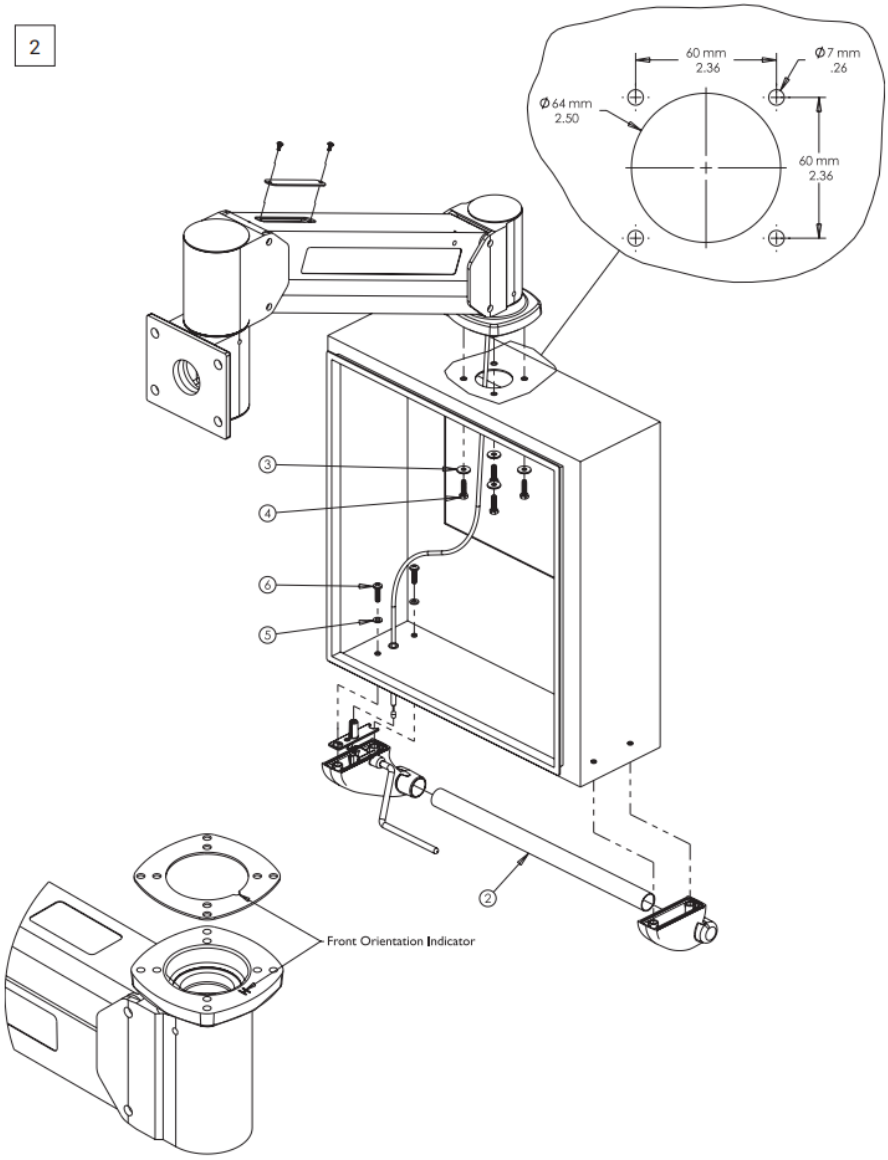

Maintains Type 4 enclosure rating when installed per these instructions.



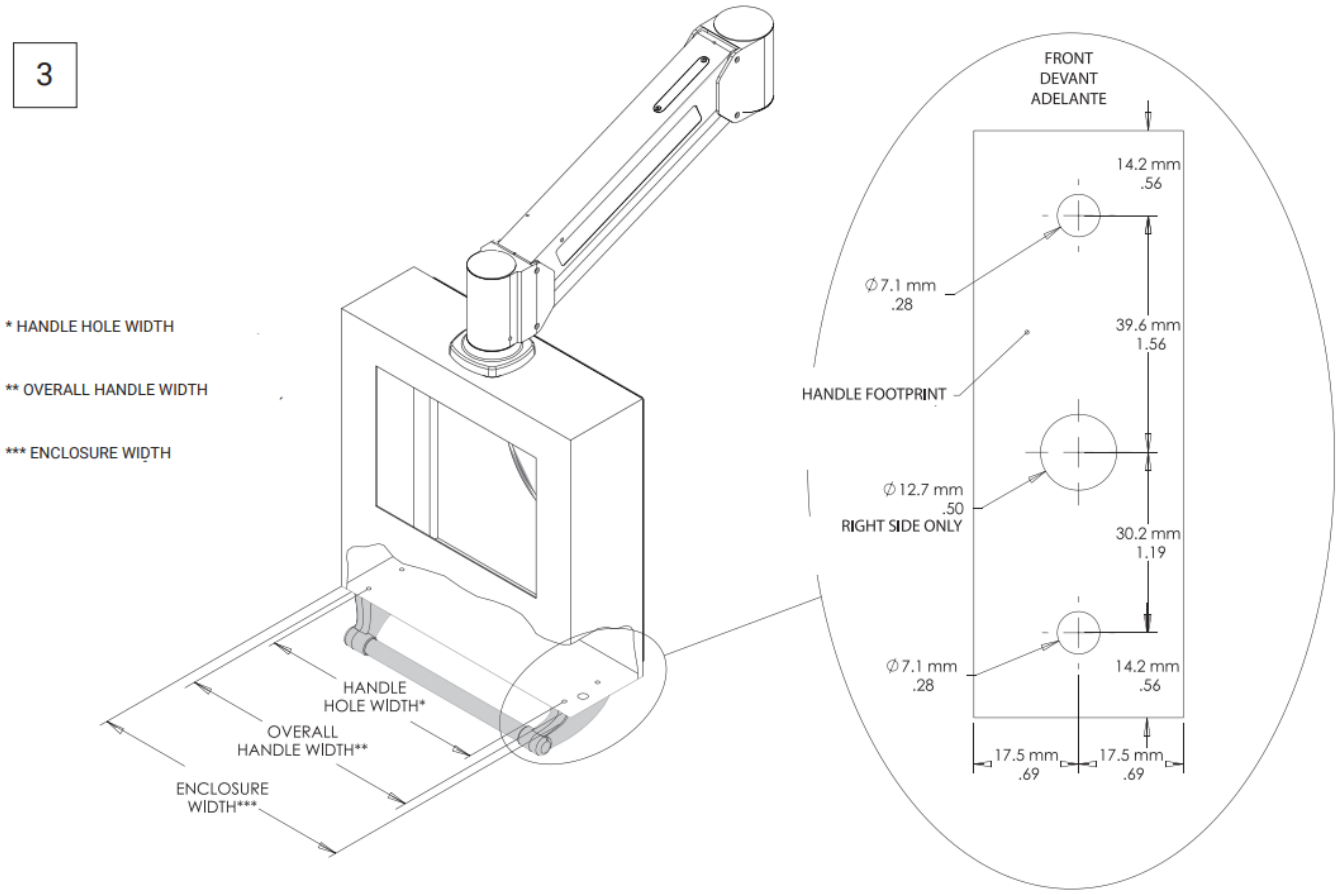

**Install correct style mounting end**:

1. With access cap removed, pass Flange Axle through the plastic Bushing and through the Arm.
2. Install bronze Bushing between the Arm and the Mount, and screw the Flange Axle into the Mount.
3. Spanner Wrench uses 3/8 in. drive socket wrench extension.
4. Use 1/8 inch Allen wrench to tighten 2 side set screws. “Locking” set screws do not need to be installed until after final friction adjustment.
5. Torque of the Flange Axle should be “finger tight” initially. This will be adjusted at a later step (See fig. 4).

**Install Enclosure**




**Install Release Handle**




TUBE LENGTH = OVERALL HANDLE WIDTH – 72 mm
HANDLE HOLE WIDTH = OVERALL HANDLE WIDTH – 35 mm
(TUBE FROM FACTORY IS 491 mm LONG TO SUPPORT A 563 mm OVERALL HANDLE WIDTH)

Release Cable Adjustment:

1. The cable end has a threaded element for adjusting the cable length.
2. The cable runs inside the arm to remotely release the locking mechanism.
3. Adjusting the cable should require no tools. To adjust, turn the black cable adjuster screw until the free-play in the release handle is approximately 3/8 in. (9.5 mm).
4. Too much free-play may prevent the locking spring from releasing, while too little free-play will prevent the spring from locking.
5. The cable may stretch over time, and may require re-adjustment

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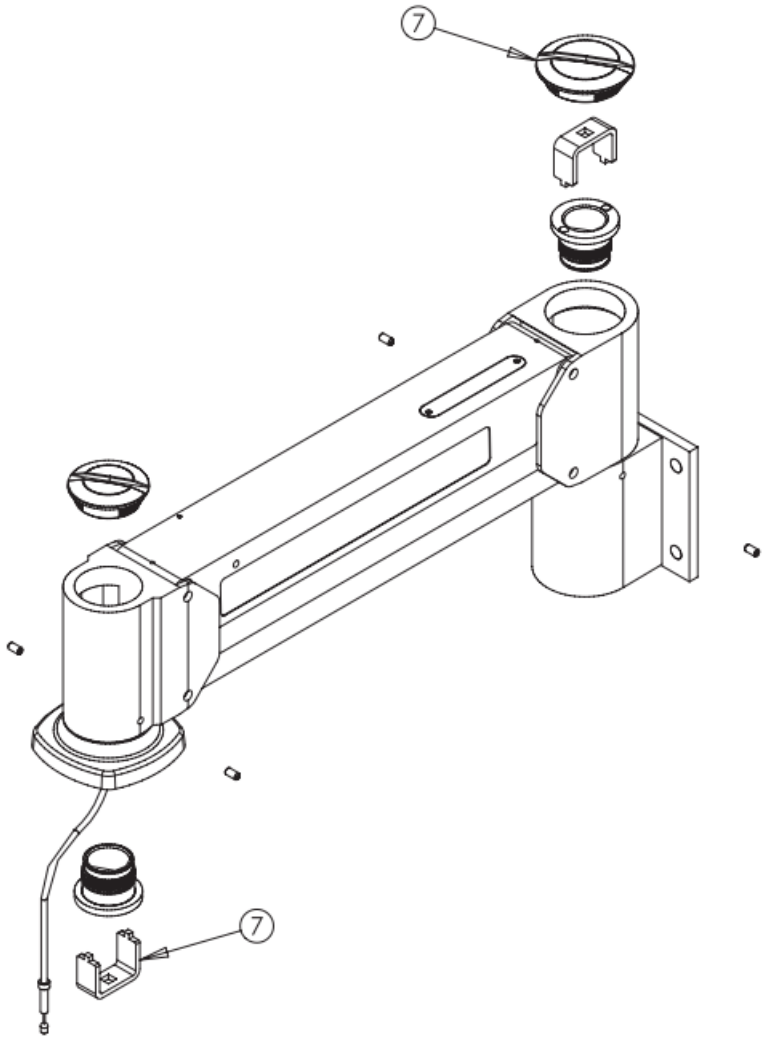
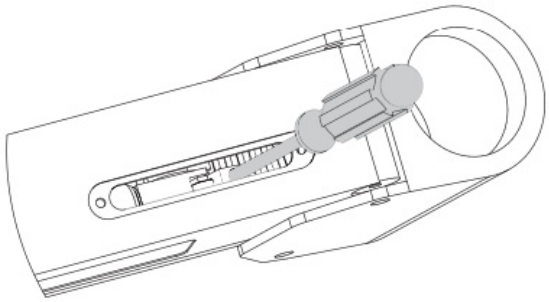



Swivel Friction Adjustment:

1. Each end of the arm has a swivel that allows rotation and a cable passage.
2. The friction at this swivel is adjusted by how tight the Flange Axle is threaded into the Arm End.
3. Set screws in the side of the Arm End lock the Flange Axle in place.
4. Adjusting the swivel friction is the same for each end of the arm, however the two Flange Axles are in opposite orientation.
5. To adjust the swivel friction, remove locking set screws using a 1/8 in. Allen wrench.
6. Loosen the inner set screw approximately 3 turns with a 1/8 in. Allen Wrench.
7. From inside the enclosure (or above the Arm Base), turn the Flange Axle using the Spanner Wrench until the desired force to swing the Arm or turn the enclosure is obtained.
8. The weight of the enclosure on the arm may have to be temporarily supported to adjust the swivel friction.
9. Keep in mind the Axle holds the cantilever load of the enclosure, and a minimum tightness is required to support the arm properly.
10. The thread on the Flange Axle is “right-hand” (turn clockwise to increase friction).
11. Re-tighten the inner set screws to 30 in-lbs (3.4 N-M).
12. Re-check the torque of the set screws again after manipulating the arm. Then install the second locking set screws, and torque to 30 in-lbs (3.4 N-M). Follow the same procedure for the opposite end.



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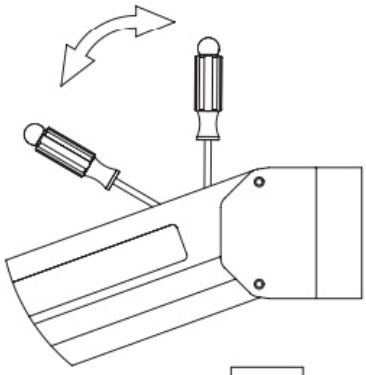

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Counterbalance Adjustment:

1. The Arm is supported with internal gas-charged springs. These springs are at a maximum force at the time of installation (approximately 100 lbs/45 kg lifting force).
2. The counterbalance force can be lowered to approximately 30 lbs (14 kg) by releasing gas from the spring. USE CAUTION when adjusting the springs: once the gas has been released it cannot be reversed and a replacement spring set will be required. Always wear safety glasses when adjusting the counterbalance spring force. The release system is designed to protect the operator from any debris that may be expelled, however the gas pressures are very large (2200 psi/1.5 kg/sq mm) and proper safety precautions should be taken.
3. Before adjusting the counterbalance spring force, be sure that all the weight intended to be supported is in the HMI enclosure, including wires and accessories. The arm, enclosure, and release handle need to be installed and the enclosure free to articulate up and down.
4. The springs are charged with lubricating oil as well as the gas. Springs need to be angled down such that the oil is low in the springs and does not release with the gas. This is done by lowering the arm before adjusting the spring.
5. Operate arm system by squeezing the release handle and lowering the enclosure about half-way. The counterbalance force is at its maximum and will have to be overcome with additional downward force on the handle. With the arm down approximately 25 egrees, release the trigger. The arm will stay in place.
6. Insert a #2 Phillips screwdriver (or similar 1/4 in. diameter tool) in the valve actuator hole. See Fig. 5. If the arm is not lowered properly, the valve actuator hole will not be accessible. Operate the valve by gently moving the screwdriver towards the enclosure, then gently back, similar to a pump jack. See Fig. 6. You will hear the burst of gas escaping.
7. Each burst of gas will lower the counterbalance lifting force. It takes approximately 10 pumps to reduce lifting force from 100 to 90 lbs (45 to 41 kg). As the pressure in the gas spring is reduced, it takes more pumps to reduce the lifting force (example: it ay take approximately 150 pumps to reduce the lifting force to 50 lbs/21 kg).
8. Remove the screwdriver from the actuator hole. Hold the enclosure down so as not to allow the enclosure to raise quickly, then squeeze the release handle to operate the arm up and down and test the adjustment.
9. Repeat the adjustment as needed until the counterbalance force is optimal.

## Documents / Resources

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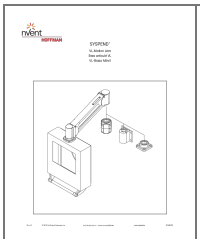
|---|---|
|  | nVent HOFFMAN SYSPEND VL-Motion Arm [pdf] Instruction Manual<br>SYSPEND VL-Motion Arm, SYSPEND, VL-Motion Arm, Arm |

## References

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Manuals+,