Installation Manual

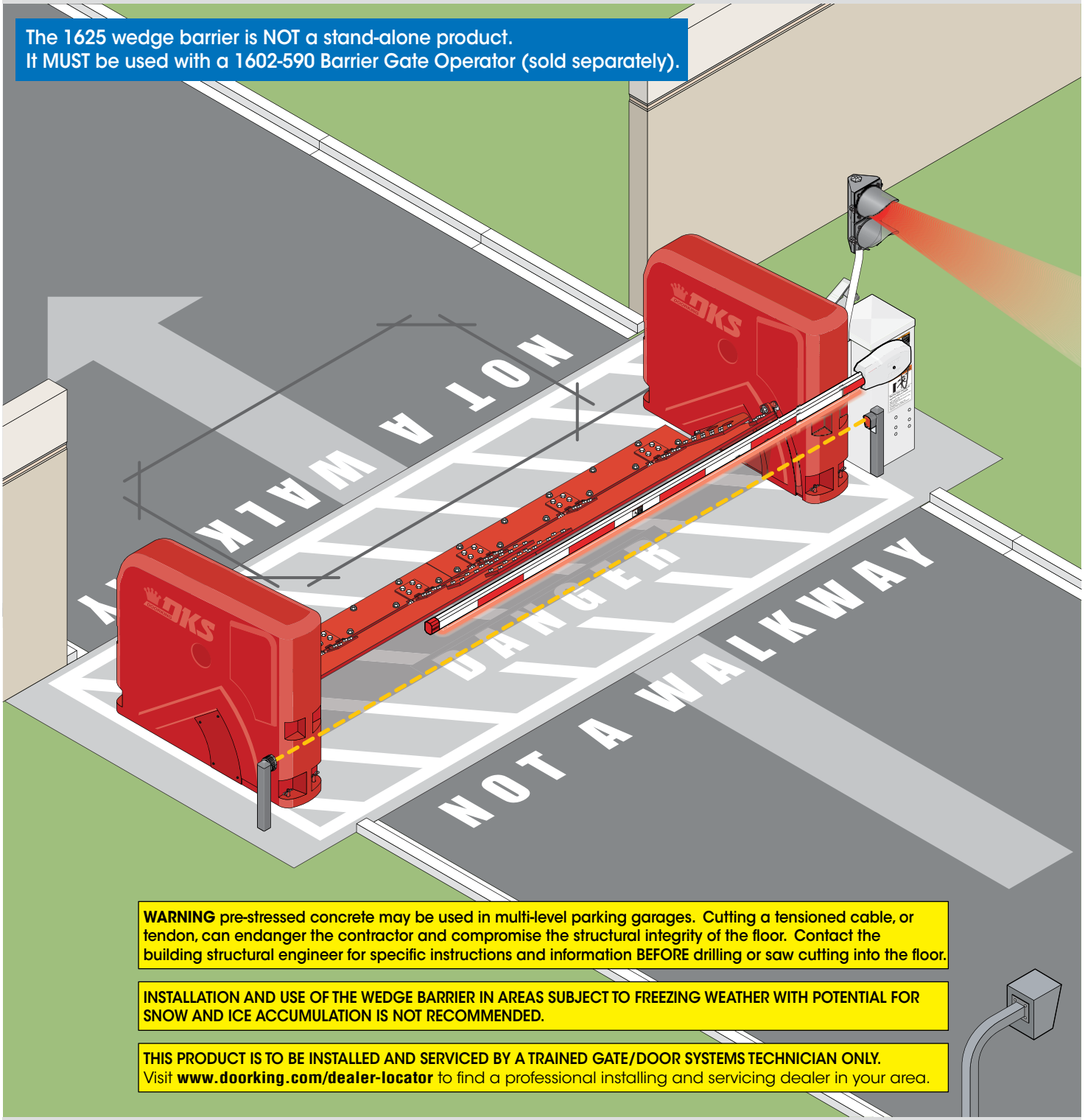
1625 Wedge Barrier

Surface Mount Vehicular Wedge Barrier System

Use this manual for circuit board 1601-010 Revision AK or higher.

1625-065-R-5-26

The 1625 wedge barrier is NOT a stand-alone product.
It MUST be used with a 1602-590 Barrier Gate Operator (sold separately).



WARNING pre-stressed concrete may be used in multi-level parking garages. Cutting a tensioned cable, or tendon, can endanger the contractor and compromise the structural integrity of the floor. Contact the building structural engineer for specific instructions and information BEFORE drilling or saw cutting into the floor.

INSTALLATION AND USE OF THE WEDGE BARRIER IN AREAS SUBJECT TO FREEZING WEATHER WITH POTENTIAL FOR SNOW AND ICE ACCUMULATION IS NOT RECOMMENDED.

THIS PRODUCT IS TO BE INSTALLED AND SERVICED BY A TRAINED GATE/DOOR SYSTEMS TECHNICIAN ONLY.
Visit **www.doorking.com/dealer-locator** to find a professional installing and servicing dealer in your area.

The 1625 is crash rated (ASTM F2656 PU-30-(P1, P2).
It is intended to provide a more formidable barrier in conjunction with a standard barrier arm operator system.
The 1625 is ideally used to control passenger vehicles and lightduty trucks.

DOORKING®

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WEDGE BARRIER OPERATOR and ARM OPTIONS

1602-590 Wedge Barrier Operator

Class of Operation - UL 325 Class II, III, IV – ETL Listed

Type of Gate - Use with 1625 Series Wedge Barriers Only

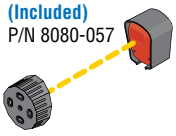
Arm Types - **Octagon Arm ONLY** – **Straight** or **Folding** (**NO** Break-Away or 3-Piece Arm)

Gate Cycles - Low Cycle

Pedestrian Protection -

Inherent entrapment sensing system - **Type A**
Provision for connection of a non-contact sensor - **Type B1** and/or contact sensor - **Type B2**

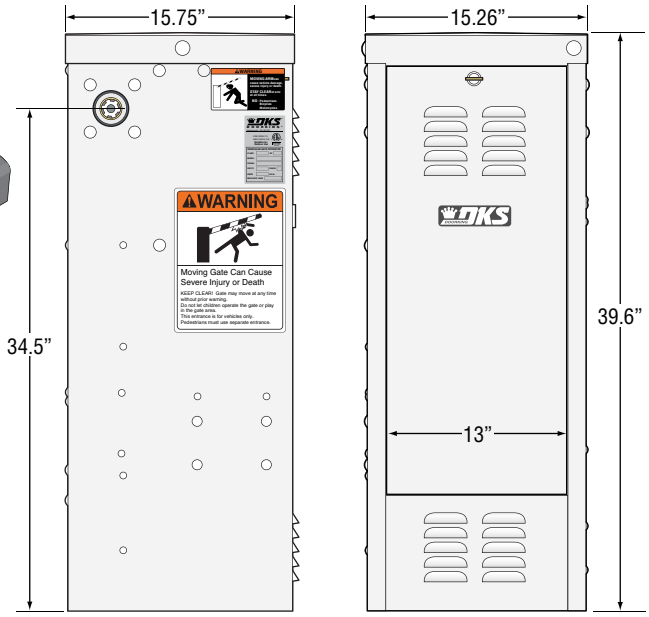
DKS Reflective Photocell (Included)
P/N 8080-057



Model #	Convenience Open	Manual Release	Horsepower - Volts	Amp	Max Arm Length	Speed 90°
1602-590	No	Yes	1 HP - 115 VAC	9.7	17 Ft	3.5 Sec

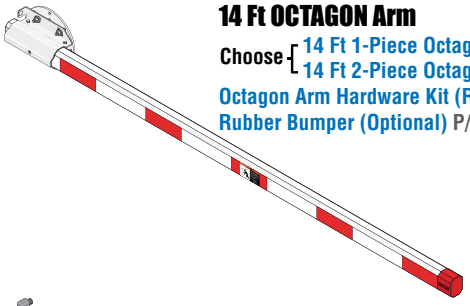
Note: 208/230/460/575 VAC input voltage can be connected to the operator by installing an "**Optional**" High Voltage Kit (P/N 2600-266).

Type of wiring to be used on ALL external devices:
A) Type **CL2**, **CL2P**, **CL2R**, or **CL2X**.
B) Other cable with **equivalent** or **better** electrical, mechanical, and flammability ratings.



Drawings not to scale

Wedge Barrier Operator Arm Options

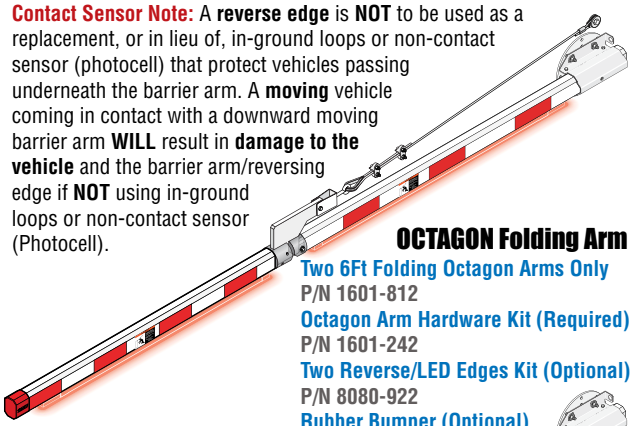


14 Ft OCTAGON Arm

Choose { 14 Ft 1-Piece Octagon Arm Only P/N 1601-555
14 Ft 2-Piece Octagon Arm Only P/N 1601-567

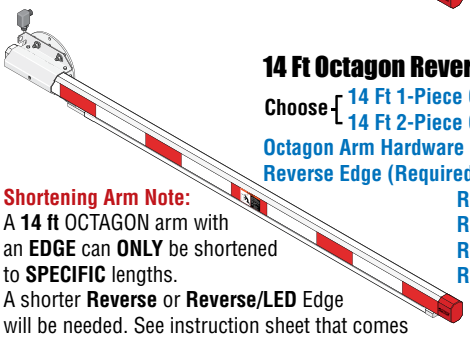
Octagon Arm Hardware Kit (Required) P/N 1601-242
Rubber Bumper (Optional) P/N 8080-089

Contact Sensor Note: A **reverse edge** is **NOT** to be used as a replacement, or in lieu of, in-ground loops or non-contact sensor (photocell) that protect vehicles passing underneath the barrier arm. A **moving** vehicle coming in contact with a downward moving barrier arm **WILL** result in **damage to the vehicle** and the barrier arm/reversing edge if **NOT** using in-ground loops or non-contact sensor (Photocell).



OCTAGON Folding Arm

Two 6Ft Folding Octagon Arms Only P/N 1601-812
Octagon Arm Hardware Kit (Required) P/N 1601-242
Two Reverse/LED Edges Kit (Optional) P/N 8080-922
Rubber Bumper (Optional) P/N 8080-089

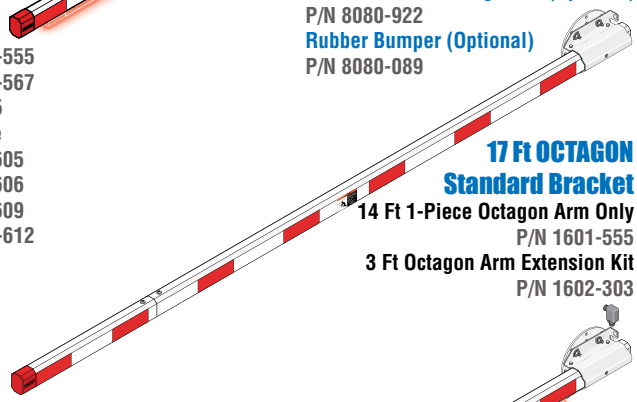


14 Ft Octagon Reverse Edge Arm

Choose { 14 Ft 1-Piece Octagon Arm Only P/N 1601-555
14 Ft 2-Piece Octagon Arm Only P/N 1601-567

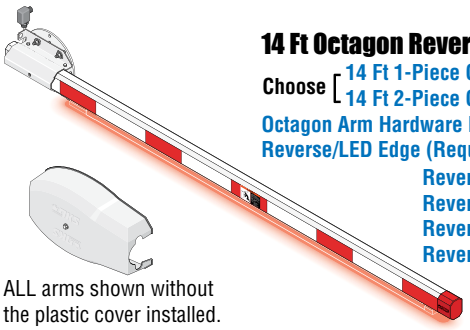
Octagon Arm Hardware Kit (Required) P/N 8080-235
Reverse Edge (Required) different lengths available
Reverse Edge 5 Ft P/N 8080-605
Reverse Edge 6 Ft P/N 8080-606
Reverse Edge 9 Ft P/N 8080-609
Reverse Edge 12 Ft P/N 8080-612

Shortening Arm Note:
A **14 ft** OCTAGON arm with an **EDGE** can **ONLY** be shortened to **SPECIFIC** lengths.
A shorter **Reverse** or **Reverse/LED** Edge will be needed. See instruction sheet that comes with the **STANDARD Arm Bracket** installation for more information **1601-268.pdf**.



17 Ft OCTAGON Standard Bracket

14 Ft 1-Piece Octagon Arm Only P/N 1601-555
3 Ft Octagon Arm Extension Kit P/N 1602-303

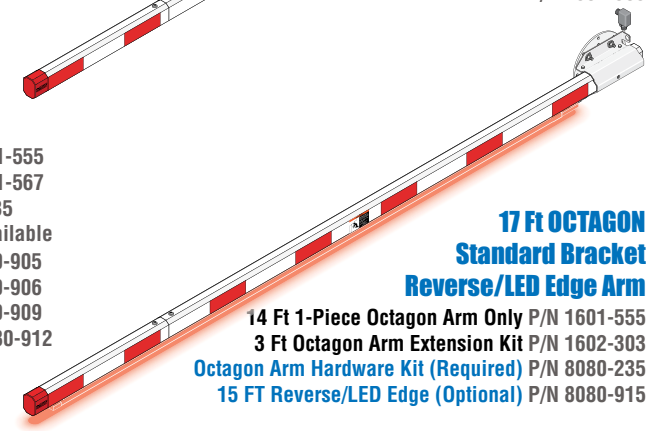


14 Ft Octagon Reverse/LED Edge Arm

Choose { 14 Ft 1-Piece Octagon Arm Only P/N 1601-555
14 Ft 2-Piece Octagon Arm Only P/N 1601-567

Octagon Arm Hardware Kit (Required) P/N 8080-235
Reverse/LED Edge (Required) different lengths available
Reverse/LED Edge 5 Ft P/N 8080-905
Reverse/LED Edge 6 Ft P/N 8080-906
Reverse/LED Edge 9 Ft P/N 8080-909
Reverse/LED Edge 12 Ft P/N 8080-912

ALL arms shown without the plastic cover installed.



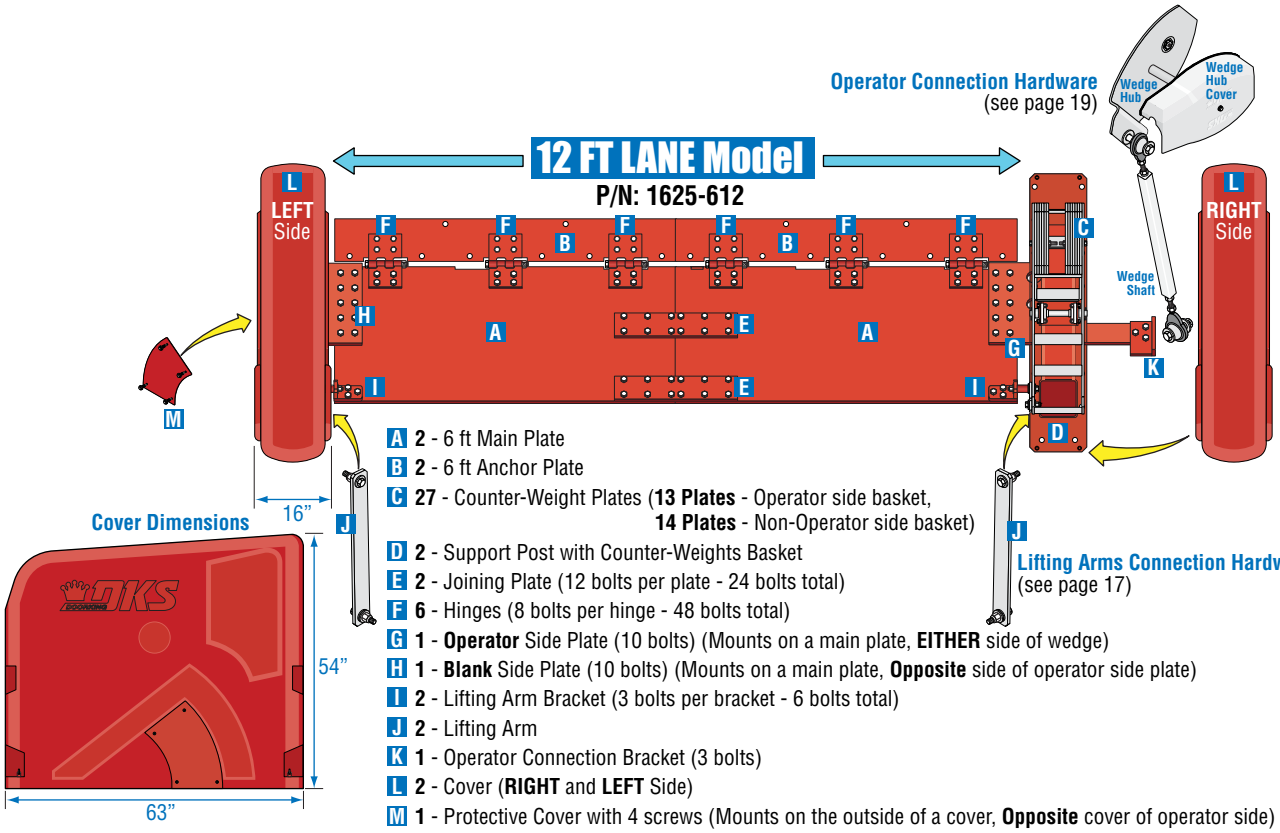
17 Ft OCTAGON Standard Bracket Reverse/LED Edge Arm

14 Ft 1-Piece Octagon Arm Only P/N 1601-555
3 Ft Octagon Arm Extension Kit P/N 1602-303
Octagon Arm Hardware Kit (Required) P/N 8080-235
15 FT Reverse/LED Edge (Optional) P/N 8080-915

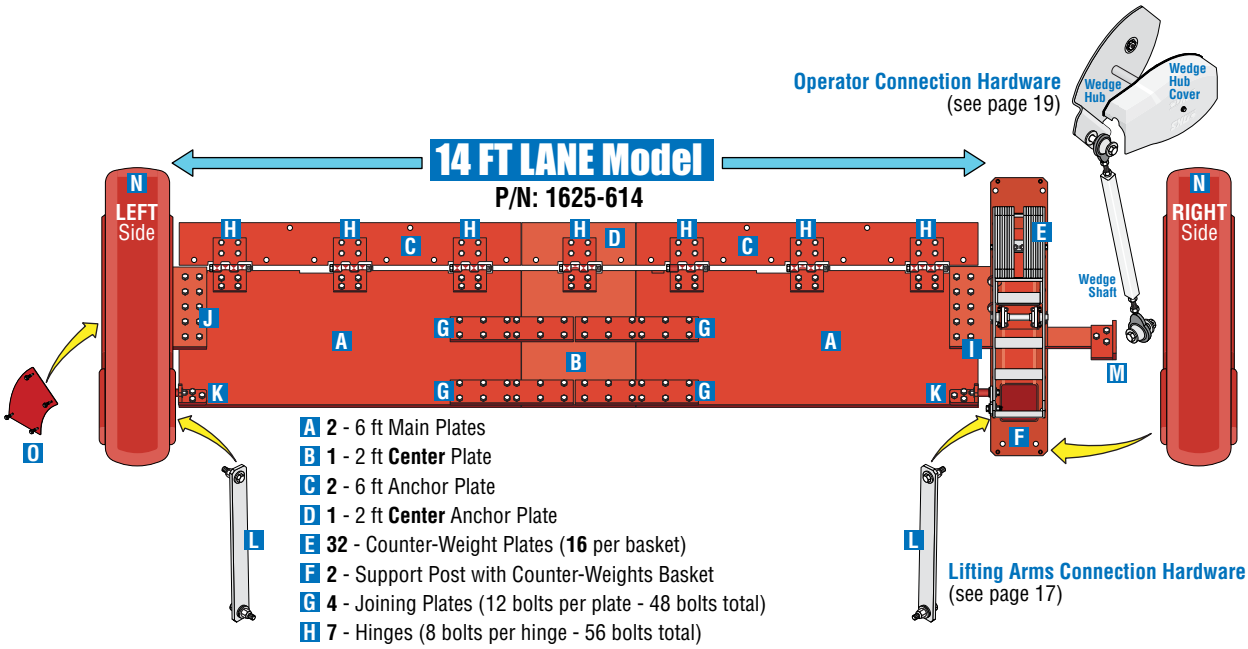
WEDGE BARRIER MODELS and PARTS CONFIGURATIONS

Prior to beginning the installation of the wedge barrier, we suggest that you become familiar with the instructions, illustrations, and wiring guide-lines in this manual. This will help insure that your installation is performed in an efficient and professional manner.

Barrier operator 1602-590 can be Installed on EITHER side of wedge plates



- **A** **2** - 6 ft Main Plate
- **B** **2** - 6 ft Anchor Plate
- **C** **27** - Counter-Weight Plates (**13 Plates** - Operator side basket, **14 Plates** - Non-Operator side basket)
- **D** **2** - Support Post with Counter-Weights Basket
- **E** **2** - Joining Plate (12 bolts per plate - 24 bolts total)
- **F** **6** - Hinges (8 bolts per hinge - 48 bolts total)
- **G** **1** - **Operator** Side Plate (10 bolts) (Mounts on a main plate, **EITHER** side of wedge)
- **H** **1** - **Blank** Side Plate (10 bolts) (Mounts on a main plate, **Opposite** side of operator side plate)
- **I** **2** - Lifting Arm Bracket (3 bolts per bracket - 6 bolts total)
- **J** **2** - Lifting Arm
- **K** **1** - Operator Connection Bracket (3 bolts)
- **L** **2** - Cover (**RIGHT** and **LEFT** Side)
- **M** **1** - Protective Cover with 4 screws (Mounts on the outside of a cover, **Opposite** cover of operator side)

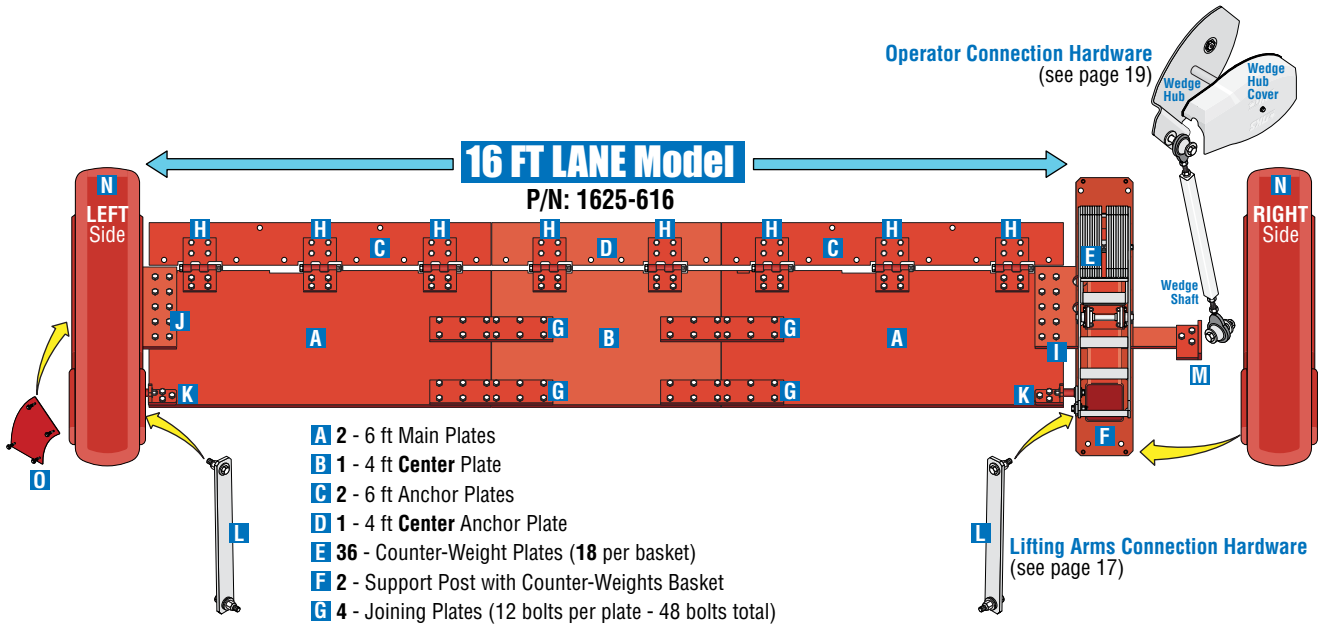


- **A** **2** - 6 ft Main Plates
- **B** **1** - 2 ft **Center** Plate
- **C** **2** - 6 ft Anchor Plate
- **D** **1** - 2 ft **Center** Anchor Plate
- **E** **32** - Counter-Weight Plates (**16** per basket)
- **F** **2** - Support Post with Counter-Weights Basket
- **G** **4** - Joining Plates (12 bolts per plate - 48 bolts total)
- **H** **7** - Hinges (8 bolts per hinge - 56 bolts total)
- **I** **1** - **Operator** Side Plate (10 bolts) (Mounts on a main plate, **EITHER** side of wedge)
- **J** **1** - **Blank** Side Plate (10 bolts) (Mounts on a main plate, **Opposite** side of operator side plate)
- **K** **2** - Lifting Arm Brackets (3 bolts per bracket - 6 bolts total)
- **L** **2** - Lifting Arm
- **M** **1** - Operator Connection Bracket (3 bolts)
- **N** **2** - Cover (**RIGHT** and **LEFT** Side)
- **O** **1** - Protective Cover with 4 screws (Mounts on the outside of a cover, **Opposite** cover of operator side)

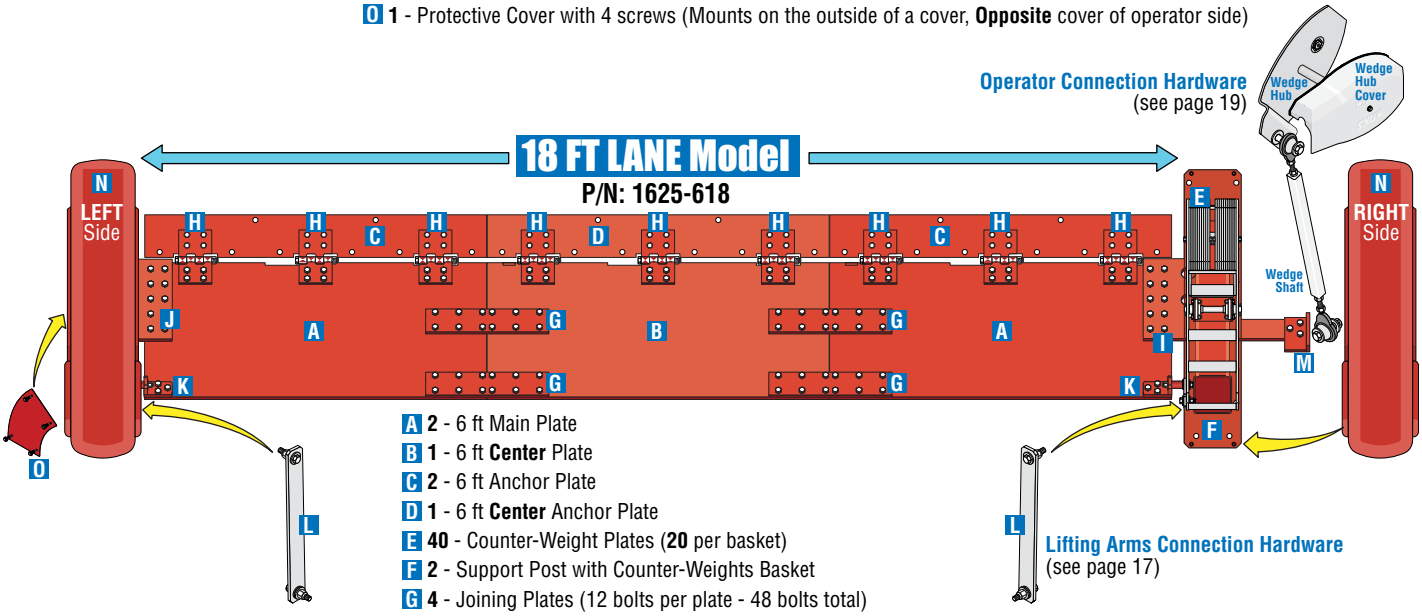
WEDGE BARRIER MODELS and PARTS CONFIGURATIONS

Prior to beginning the installation of the wedge barrier, we suggest that you become familiar with the instructions, illustrations, and wiring guide-lines in this manual. This will help insure that your installation is performed in an efficient and professional manner.

Barrier operator 1602-590 can be Installed on EITHER side of wedge plates



A **2** - 6 ft Main Plates
B **1** - 4 ft **Center** Plate
C **2** - 6 ft Anchor Plates
D **1** - 4 ft **Center** Anchor Plate
E **36** - Counter-Weight Plates (**18** per basket)
F **2** - Support Post with Counter-Weights Basket
G **4** - Joining Plates (12 bolts per plate - 48 bolts total)
H **8** - Hinges (8 bolts per hinge - 64 bolts total)
I **1** - **Operator** Side Plate (10 bolts) (Mounts on a main plate, **EITHER** side of wedge)
J **1** - **Blank** Side Plate (10 bolts) (Mounts on a main plate, **Opposite** side of operator side plate)
K **2** - Lifting Arm Bracket (3 bolts per bracket - 6 bolts total)
L **2** - Lifting Arm
M **1** - Operator Connection Bracket (3 bolts)
N **2** - Cover (**RIGHT** and **LEFT** Side)
O **1** - Protective Cover with 4 screws (Mounts on the outside of a cover, **Opposite** cover of operator side)



A **2** - 6 ft Main Plate
B **1** - 6 ft **Center** Plate
C **2** - 6 ft Anchor Plate
D **1** - 6 ft **Center** Anchor Plate
E **40** - Counter-Weight Plates (**20** per basket)
F **2** - Support Post with Counter-Weights Basket
G **4** - Joining Plates (12 bolts per plate - 48 bolts total)
H **9** - Hinges (8 bolts per hinge - 72 bolts total)
I **1** - **Operator** Side Plate (10 bolts) (Mounts on a main plate, **EITHER** side of wedge)
J **1** - **Blank** Side Plate (10 bolts) (Mounts on a main plate, **Opposite** side of operator side plate)
K **2** - Lifting Arm Bracket (3 bolts per bracket - 6 bolts total)
L **2** - Lifting Arm
M **1** - Operator Connection Bracket (3 bolts)
N **2** - Cover (**RIGHT** and **LEFT** Side)
O **1** - Protective Cover with 4 screws (Mounts on the outside of a cover, **Opposite** cover of operator side)

1.2 Important Safety Instructions

English	French
IMPORTANT SAFETY INSTRUCTIONS WARNING – To reduce the risk of severe injury or death: **1.** READ AND FOLLOW ALL INSTRUCTIONS. **2.** Never let children operate or play with gate controls. Keep the remote control away from children. **3.** Always keep people and objects away from the gate. NO ONE SHOULD CROSS THE PATH OF THE MOVING GATE. **4.** Test the gate operator monthly. The gate MUST reverse on contact with a rigid object or stop when an object activates the non-contact sensors. After adjusting the force or the limit of travel, retest the gate operator. Failure to adjust and retest the gate operator properly can increase the risk of injury or death. **5.** Use the manual release only when the gate is not moving. **6.** KEEP GATES PROPERLY MAINTAINED. Read the user's manual. Have a qualified service person make repairs to gate hardware. **7.** The entrance is for vehicles only. Pedestrians must use separate entrance. **8.** SAVE THESE INSTRUCTIONS.	**AVERTISSEMENT DE CONSIGNES DE SÉCURITÉ IMPORTANTES** – Pour réduire le risques de blessures graves ou mortelles : **1.** LIRE ET SUIVRE TOUTES LES INSTRUCTIONS. **2.** Ne jamais laisser les enfants faire fonctionner la porte ou jouer avec les commandes de la barrière. Garder la télécommande hors de la portée des enfants. **3.** Toujours garder les personnes et les objets loin de la barrière. PERSONNE NE DEVRAIT FRANCHIR LA BARRIÈRE EN MOUVEMENT. **4.** Vérifier l'ouvre-barrière une fois par mois. La barrière DOIT inverser son mouvement au contact d'un objet rigide, lorsque celui-ci active les capteurs sans contact. Après avoir réglé la force ou la limite du déplacement, vérifier de nouveau l'ouvre-barrière. Si l'ouvre-barrière est mal réglé ou n'est pas vérifié de manière appropriée, le risque de ou de blessures graves ou mortelles est accru. **5.** Utiliser le dispositif de dégagement manuel uniquement si la barrière est immobilisée. **6.** ASSURER L'ENTRETIEN ADÉQUAT DE LA BARRIÈRE. Lire le guide d'utilisation. Demander à un professionnel qualifié de réparer la quincaillerie de la barrière . **7.** L'entrée est réservée aux véhicules . Les piétons doivent avoir une entrée distincte. **8.** CONSERVER CES INSTRUCTIONS.

1.3 Instructions regarding intended installation:

English	French
a) Install the gate operator only when: **1)** The operator is appropriate for the construction of the gate and the usage Class of the gate, **2)** All openings of a horizontal slide gate are guarded or screened from the bottom of the gate to a minimum of 1.83 m (6 ft) above the ground to prevent a 57.2 mm (2-1/4 inch) diameter sphere from passing through the openings anywhere in the gate, and in that portion of the adjacent fence that the gate covers in the open position, **3)** All areas of the moving vertical pivot gate panel from the bottom of the gate to the top of the gate or a minimum of 1.83 m (72 in) above grade, whichever is less, that pass by a fixed stationary object, and in the area of the adjacent fence that the gate covers during the travel of the gate, shall be designed, guarded or screened to prevent a 57 mm (2-1/4 in) diameter sphere from passing through such areas. **4)** All exposed pinch points are eliminated or guarded, and **5)** Guarding is supplied for exposed rollers. **6)** The operator instructions shall list the maximum number of open and close entrapment protection devices capable of being connected to the operator.	**a)** Installer l'ouvre-barrière uniquement si : **1)** L'ouvre-barrière convient à la construction et la classe d'utilisation de la barrière. **2)** Toutes les ouvertures de la barrière coulissante horizontale sont protégées ou grillagées du bas de la barrière jusqu'à au moins 1,83 m (6 pi) du sol si bien qu'une sphère de 57,2 mm (2 1/4 po) de diamètre ne peut passer par aucune ouverture dans la barrière ou dans la portion de la clôture adjacente que la barrière couvre en position ouverte. **3)** Toutes les zones du panneau d'une barrière à pivot verticale du bas jusqu'au haut de la barrière ou jusqu'à au moins 1,83 m (72 po) au-dessus du sol (la hauteur la plus basse prévalant) qui passe par un objet immobile et dans la portion de la clôture adjacente que la barrière couvre pendant sa course sont conçues, protégées ou grillagées si bien qu'une sphère de 57 mm (2 1/4 po) de diamètre ne peut passer par de telles zones. **4)** Tous les points de pincement sont éliminés ou protégés . **5)** Des protections sont fournies pour les galets exposés. **6)** Les instructions de l'ouvre-barrière doivent indiquer le nombre maximal de dispositifs de protection contre le coincement à l'ouverture ou à la fermeture.

1.3 Instructions regarding installation cont:

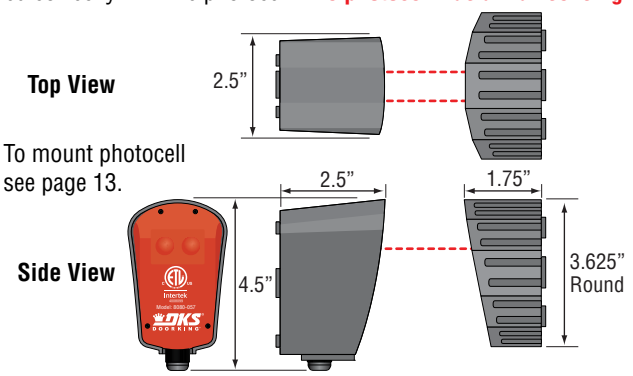
English	French
b) The operator is intended for installation only on gates used for vehicles. Pedestrians must be supplied with a separate access opening. The pedestrian access opening shall be designed to promote pedestrian usage. Locate the gate such that persons will not come in contact with the vehicular gate during the entire path of travel of the vehicular gate.	**b)** L'ouvre-barrière doit être installé uniquement sur des barrières utilisées pour les véhicules. Les piétons doivent avoir une entrée distincte. Celle-ci doit être conçue pour inciter les piétons à l'utiliser. L'accès doit se trouver dans un endroit où les piétons n'entreront pas en contact avec une barrière pour véhicules en mouvement pendant le déplacement de la barrière.
c) The gate must be installed in a location so that enough clearance is supplied between the gate and adjacent structures when opening and closing to reduce the risk of entrapment. Swinging gates shall not open into public access areas.	**c)** Pour réduire le risque de coincement lors de l'ouverture et de la fermeture, la barrière doit être installée dans un endroit où elle est suffisamment éloignée des structures avoisinantes . Les barrières basculantes ne doivent pas s'ouvrir dans des endroits accessibles au public.
d) The gate must be properly installed and work freely in both directions prior to the installation of the gate operator. Do not over-tighten the operator clutch or pressure relief valve to compensate for an improperly installed, improperly functioning, or damaged gate.	**d)** S'assurer que la barrière est bien installée et fonctionne librement dans les deux directions avant d'entreprendre l'installation de l'ouvre-barrière. Ne pas trop serrer l'embrayage de l'ouvre-barrière ou la soupape de décharge de l'ouvre-barrière pour compenser une barrière mal installée, qui ne fonctionne pas correctement ou qui est endommagée.
e) For a gate operator utilizing Type D entrapment protection:	**e)** Pour un ouvre-barrière utilisant une protection contre le coincement de type D:
1) The gate operator controls must be placed so that the user has full view of the gate area when the gate is moving,	**1)** les commandes de l'ouvre-barrière doivent être placées de sorte que l'utilisateur voit l'ensemble de la zone de la barrière lorsque cette dernière est en mouvement.
2) The placard shall be placed adjacent to the controls,	**2)** La plaque exigée doit être placée à côté des commandes.
3) An automatic closing device (such as a timer, loop sensor, or similar device) shall not be employed, and	**3)** Ne pas utiliser de dispositif de fermeture automatique (comme une minuterie, une boucle de détection ou un dispositif similaire).
4) No other activation device shall be connected.	**4)** Ne brancher aucun autre dispositif d'activation.
f) Permanently mounted controls intended for user activation must be located at least 1.83 m (6 ft) away from any moving part of the gate and where the user is prevented from reaching over, under, around or through the gate to operate the controls.	**f)** Les commandes permanentes destinées à l'activation par l'utilisateur doivent être situées à au moins 1,83 m (6 pi) des pièces mobiles de la barrière et à un endroit que l'utilisateur ne peut atteindre pour actionner les commandes par -dessus ou sous la barrière, ou à côté ou au travers de la barrière.
Exception: Emergency access controls only accessible by authorized personnel (e.g. fire, police, EMS) may be placed at any location in the line-of-sight of the gate.	**Exception:** Les commandes d'accès d'urgence accessibles au personnel autorisé seulement (p. ex. pompiers, policiers, ambulanciers) peuvent être placées n'importe où, du moment qu'elles sont en vue de la barrière.
g) The Stop and/or Reset button must be located in the line-of-sight of the gate. Activation of the reset control shall not cause the operator to start.	**g)** Le bouton d'arrêt, ou de réinitialisation doit être situé en vue de la barrière. L'activation de la commande de réinitialisation ne doit pas entraîner l'activation de l'ouvre-barrière.
h) A minimum of two (2) WARNING SIGNS shall be installed, in the area of the gate. Each placard is to be visible by persons located on the side of the gate on which the placard is installed.	**h)** Au moins deux (2) PANNEAUX D'AVERTISSEMENT doivent être installés dans la zone de la barrière. Toutes les plaques d'avertissement doivent être visibles des personnes situées à côté de la barrière sur laquelle les plaques sont installées.
i) For a gate operator utilizing Type B1, non-contact entrapment protection:	**i)** Pour un ouvre-barrières utilisant un capteur sans contact pour la protection contre le coincement de type B1:
1) See instructions on the placement of non-contact sensors for each Type of application,	**1)** Voir les instructions sur l'emplacement des capteurs sans contact pour chaque type d'application.
2) Care shall be exercised to reduce the risk of nuisance tripping, such as when a vehicle, trips the sensor while the gate is still moving, and	**2)** Des précautions doivent être prises pour réduire les risques de déclenchement inutile, comme lorsqu'un véhicule déclenche le capteur pendant que la barrière est encore en mouvement.
3) One or more non-contact sensors shall be located where the risk of entrapment or obstruction exists, such as the perimeter reachable by a moving gate or barrier.	**3)** Au moins un capteur sans contact ou plus doit être situé où il existe un risque de coincement ou d'obstruction, comme dans l'espace que peuvent atteindre le bras et la barrière lorsqu'ils sont en mouvement.
j) For a gate operator utilizing Type B2, contact entrapment protection:	**j)** Pour un ouvre-barrière utilisant un capteurs de contact pour la protection contre le coincement de type B2:
1) One or more contact sensors shall be located where the risk of entrapment or obstruction exists, such as at the leading edge, trailing edge, and postmounted both inside and outside of a vehicular horizontal slide gate.	**1)** Au moins un capteur de contact doit être situé où il existe un risque de coincement ou d'obstruction, comme sur le bord d'attaque, sur le bord de fuite et sur les poteaux montés sur l'intérieur et l'extérieur d'une barrière coulissante horizontale pour véhicules.

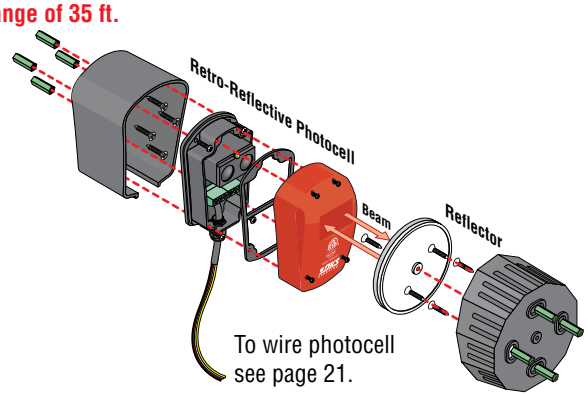
1.3 Instructions regarding installation cont:

English	French
2) One or more contact sensors shall be located at the bottom edge of a vehicular vertical lift gate.	**2)** Au moins un capteur de contact doit être situé sur le bord inférieur d'une barrière levante verticale pour véhicules.
3) One or more contact sensors shall be located at the pinch point of a vehicular vertical pivot gate.	**3)** Au moins un capteur de contact doit être situé au point de pincement d'une barrière à pivot vertical pour véhicules.
4) A hardwired contact sensor shall be located and its wiring arranged so that the communication between the sensor and the gate operator is not subjected to mechanical damage.	**4)** Un capteur de contact doit être installé et câblé de sorte à éviter que la communication entre le capteur et l'ouvre-barrière soit gênée par des dommages mécaniques.
5) A wireless device such as one that transmits radio frequency (RF) signals to the gate operator for entrapment protection functions shall be located where the transmission of the signals are not obstructed or impeded by building structures, natural landscaping or similar obstruction. A wireless device shall function under the intended end-use conditions.	**5)** Un dispositif sans fil, comme un appareil qui transmet des signaux de radiofréquence (RF) à l'ouvre- barrière pour prévenir le coincement, doit être situé à un endroit où la transmission des signaux ne sera pas obstruée ou gênée par des structures, des arbres ou d'autres obstacles similaires. Un dispositif sans fil doit fonctionner dans les conditions pour lesquelles il a été conçu.
6) One or more contact sensors shall be located on the inside and outside leading edge of a swing gate. Additionally, if the bottom edge of a swing gate is greater than 101.6 mm (4 in) but less than 406 mm (16 inches) above the ground at any point in its arc of travel, one or more contact sensors shall be located on the bottom edge.	**6)** Au moins un capteur de contact doit être situé à l'intérieur et à l'extérieur du bord d'attaque d'une barrière battante. De plus, si le bord inférieur de la barrière battante est situé à plus de 101 ,6 mm (4 po), mais à moins de 406 mm (16 po) du sol à l'un des points de sa trajectoire, au moins un capteur de contact doit être situé sur le bord inférieur.
7) For a vertical barrier (arm) operator utilizing Type B2 contact entrapment protection, one or more contact sensors shall be located at the bottom edge of a vertical barrier (arm).	**7)** Pour un ouvre-barrière à bras levant utilisant un capteur de contact pour la protection contre le coincement de type B2, au moins un capteur de contact doit être situé sur le bord inférieur de la barrière à bras levant.
8) One or more contact sensors shall be located where the risk of entrapment or obstruction exists on a bifold gate, such as:	**8)** Au moins un capteur de contact doit être situé où il existe un risque de coincement ou d'obstruction sur une barrière pliante, comme :
i) At the inner and outer leading edge,	**i)** Au bord d'attaque intérieur et extérieur;
ii) Between the outer column panel and the inner bifold panel of an opening bifold gate,	**ii)** Entre le panneau de colonne extérieur et le panneau interne à deux volets d'une barrière pliante;
iii) Between the outer/column panel and any obstruction within 406mm (16 in) of the gate panel when it is in the fully open position,	**iii)** Entre le panneau de colonne extérieur et tout obstacle se trouvant à moins de 406 mm (16 po) du panneau de barrière lorsqu'il est en position complètement ouverte;
iv) At hinge points depending on the construction of the gate,	**iv)** Aux points de charnière selon la construction de la barrière;
v) On the bottom edge(s),if the bottom edge(s) of a bifold gate is/are greater than 152 mm (4 in) but less than 406 mm (16 in) above the ground at any point in its arc of travel.	**v)** Sur les bords inférieurs d'une barrière pliante, s'ils sont situés à plus de 152 mm (4 po), mais à moins de 406 mm (16 po) du sol à l'un des points de la trajectoire de la barrière.

1.4 DoorKing 8080-057 Photocell Type B-1- INCLUDED

This retro-reflective photocell (UL 325 Type B-1) works with A**LL** DoorKing gate operators to comply with the 2018 UL 325 standards. It **must** be wired to the gate operator using the photocell's **NORMALLY OPEN** input so the gate operator can **monitor the photocell**. The photocell is powered by 18-32 VAC **OR** VDC from the gate operator if desired. The relay output is rated for 1 Amp @ 24 VAC **OR** VDC maximum.
It **MUST** be mounted vertically as shown and not horizontally to protect it from the weather. The green LED will remain lit when the reflector is aligned correctly with the photocell. **The photocell has a max sensing range of 35 ft.**

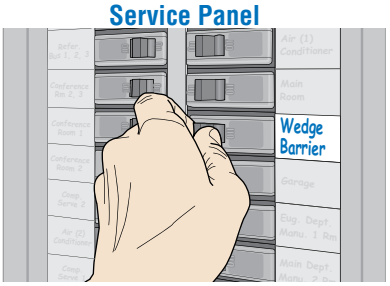




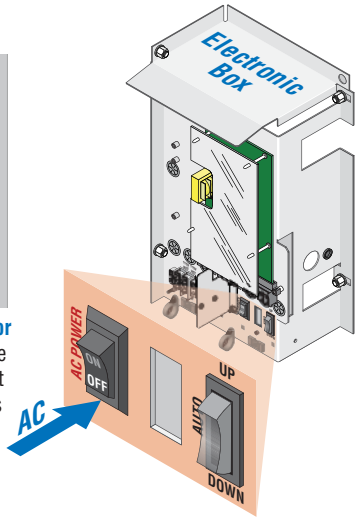
1.5 IMPORTANT Safety Information for Wedge Barrier System

Shut OFF Power

Service Panel



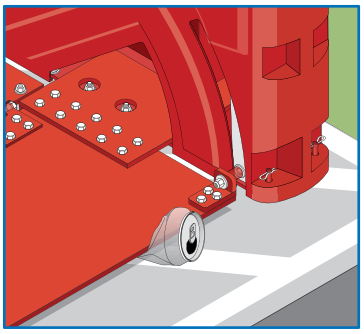
• When **removing the wedge barrier operator from service**, move the arm and wedge to the **full open position** and **Shut-OFF AC power** at the operator's **AC power switch** on operator's electronic box **AND** at the **service panel**.



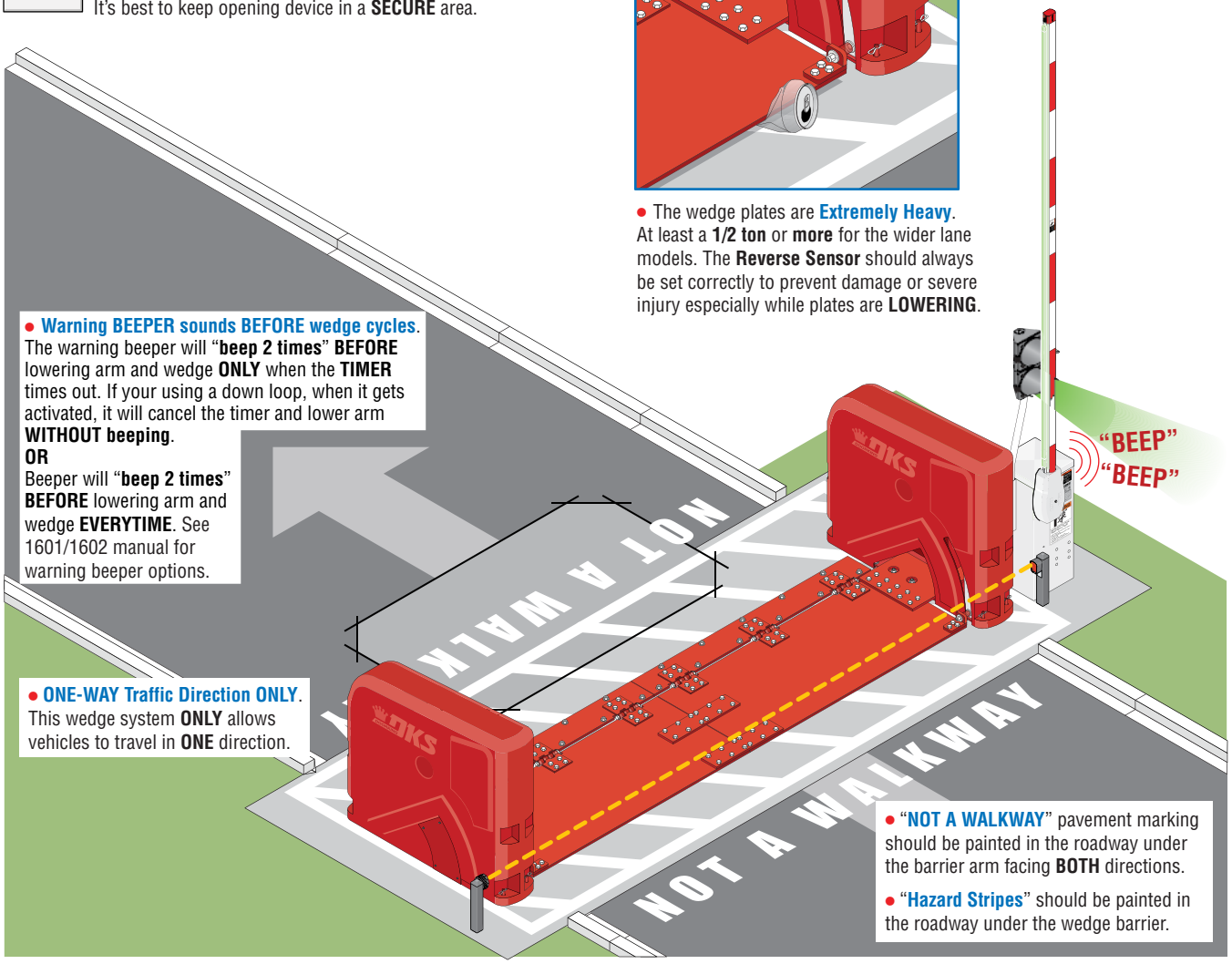
• **Speed limit through barrier area is 5 MPH**. Install speed bumps, warning signs and hazard stripes where visible in the area of the barrier gate, failure to do so may result in injury, damage to operator and vehicle.

• **Emergency Access Controls** only accessible by authorized personnel (e.g., fire, police, EMS) may be placed at any location in the **line-of-sight of the barrier gate**.

• **Access Controls** intended for user activation must be located **at least six feet (6') away from any moving part of the barrier gate** and where the user is prevented from reaching over, under or around the barrier gate to operate the controls. It's best to keep opening device in a **SECURE** area.



• The wedge plates are **Extremely Heavy**. At least a **1/2 ton** or **more** for the wider lane models. The **Reverse Sensor** should always be set correctly to prevent damage or severe injury especially while plates are **LOWERING**.



• **Warning BEEPER sounds BEFORE wedge cycles**. The warning beeper will "**beep 2 times**" **BEFORE** lowering arm and wedge **ONLY** when the **TIMER** times out. If your using a down loop, when it gets activated, it will cancel the timer and lower arm **WITHOUT beeping**.
OR
Beeper will "**beep 2 times**" **BEFORE** lowering arm and wedge **EVERYTIME**. See 1601/1602 manual for warning beeper options.

• **ONE-WAY Traffic Direction ONLY**. This wedge system **ONLY** allows vehicles to travel in **ONE** direction.

• "**NOT A WALKWAY**" pavement marking should be painted in the roadway under the barrier arm facing **BOTH** directions.

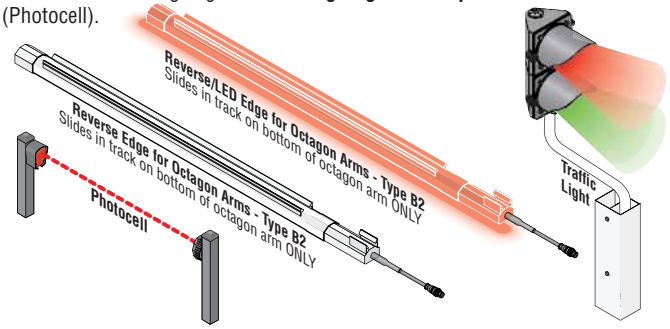
• "**Hazard Stripes**" should be painted in the roadway under the wedge barrier.

1.5 IMPORTANT Safety Information Continued

• Pedestrians **MUST** be provided with a **separate access opening**.

• Make sure all **WARNING SIGNS** are on operator and arm. Warning signs are to be permanently installed in the area of the gate in such a manner that at least one warning sign is visible by persons located on **each** side of the gate, for both the secure and unsecure sides of the gate.

• A **Reverse Edge** is **NOT** to be used as a replacement, or in lieu of, **in-ground loops or non-contact sensor (photocell)** that protect vehicles passing underneath the barrier arm. A moving vehicle coming in contact with a downward moving barrier arm **WILL result in damage** to the vehicle and the barrier arm/reversing edge if **NOT using in-ground loops or non-contact sensor** (Photocell).



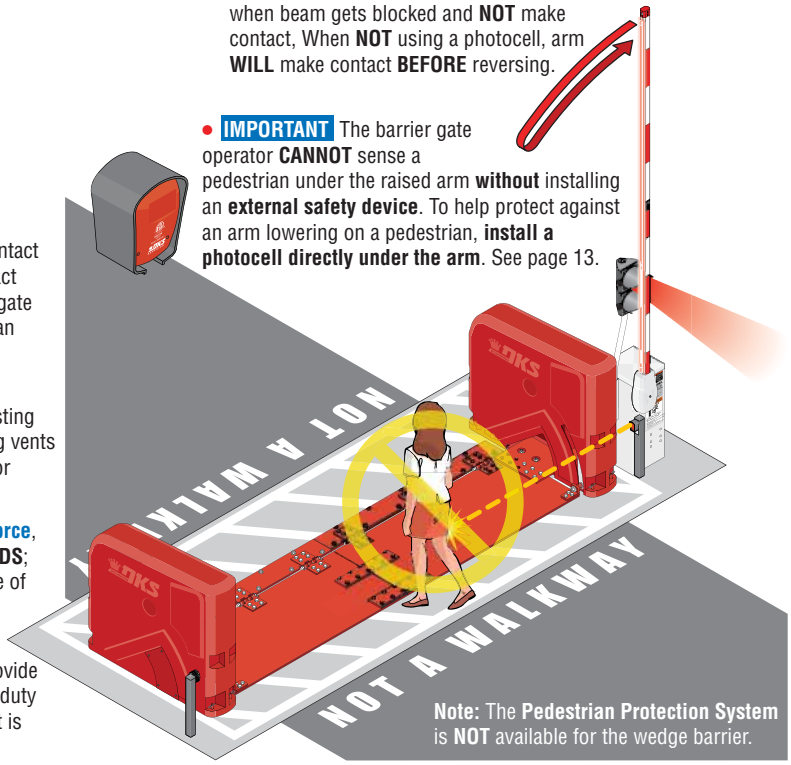
• **IMPORTANT** **ALL** debris and trash needs to be kept from underneath wedge plate.

• **DO NOT** Attach **ANY** **external sign** on the arm. A lowering sign **WILL cause damage** to a vehicle or injure a person.This scenario is **VERY DANGEROUS** and **MUST NEVER OCCUR!!**

• **Wedge Barrier System Safety Devices:** They **should** have **reverse/LED edge** on arm, **traffic light** and **photocell** installed. If any of these devices are **NOT functioning**, remove barrier system from service until repairs can be made.

When using a photocell, arm **will reverse** when beam gets blocked and **NOT** make contact, When **NOT** using a photocell, arm **WILL** make contact **BEFORE** reversing.

• **IMPORTANT** The barrier gate operator **CANNOT** sense a pedestrian under the raised arm **without** installing an **external safety device**. To help protect against an arm lowering on a pedestrian, **install a photocell directly under the arm**. See page 13.



Note: The **Pedestrian Protection System** is **NOT** available for the wedge barrier.

• **Test the gate operator monthly.** The gate **MUST reverse** on contact with a rigid object or **stop** when an object activates the non-contact sensors. After adjusting the force or the limit of travel, retest the gate operator. Failure to adjust and retest the gate operator properly can increase **the risk of severe injury or death**.

• **Operators and components should be properly installed and maintained** following the recommended service schedule and testing the operator monthly. Keep all debris away from operator housing vents and off of arm. Contact your service dealer for any maintenance or repairs.

• **Vehicular barrier gate operators can produce high levels of force**, it is important that **you are aware** and eliminate **possible HAZARDS**; Pinch Points, Entrapment Areas, Overhead Power Wires, Absence of Controlled Pedestrian Access, Traffic Backup.

• **Wedge Barrier System Crash Rating:** DKS Wedge Barrier **is crash rated** (ASTM F2656 PU-30-(P1, P2). It is intended to provide a formidable barrier to help prevent passenger vehicles and light-duty trucks from driving through a controlled traffic lane. A traffic light is **HIGHLY** recommended with this system.

1.6 Safety and Traffic Management for Wedge Barrier System

Vehicular wedge barrier gate operator can produce high levels of force. It is important that you are aware and eliminate possible HAZARDS; Pinch Points, Entrapment Areas, Overhead Power Wires, Absence of Controlled Pedestrian Access, and Traffic Management.

A Separate Pedestrian Walkway
Located so pedestrians **CANNOT** come in contact with the wedge barrier system.

B In-Ground Loop(s)
Loops minimize the potential of the arm closing when a vehicle is present. Number and placement of loop(s) is dependent on the application.

C Non-Contact Sensor - Photocell
(Photo Beam) Minimizes the potential of the arm or the wedge lowering on vehicular or other traffic that loops cannot sense. **Located directly under arm.**

D Contact Sensor - Reverse Edge
Minimizes the potential of the arm lowering on vehicular or other traffic that loops cannot sense.

Contact Sensor Note: A reverse edge is **NOT** to be used as a replacement, or in lieu of, in-ground loops or non-contact sensor (Photo Beam) that protect vehicles passing underneath the barrier arm. A **moving** vehicle coming in contact with a downward moving barrier arm **WILL** result in **damage to the vehicle** and the barrier arm/reversing edge if **NOT** using in-ground loops or non-contact sensor (Photo Beam).

E "BEEP BEEP" BEFORE Cycling Arm
Used to alert pedestrians that barrier arm is about to cycle. See 1601/1602 Owner's manual 1601-065.pdf for warning beeper options.

F Warning Signs


Permanently mounted on **operator** and **arm** and easily visible. Warning signs are to be **permanently installed** in the area of the gate in such a manner that at least one warning sign is visible by persons located on each side of the gate, for both the **secure** and **unsecure** sides of the gate.

G Hazard Stripes
NO stopping or standing "Hazard Stripes". Permanently painted WHITE on pavement on both sides of arm.

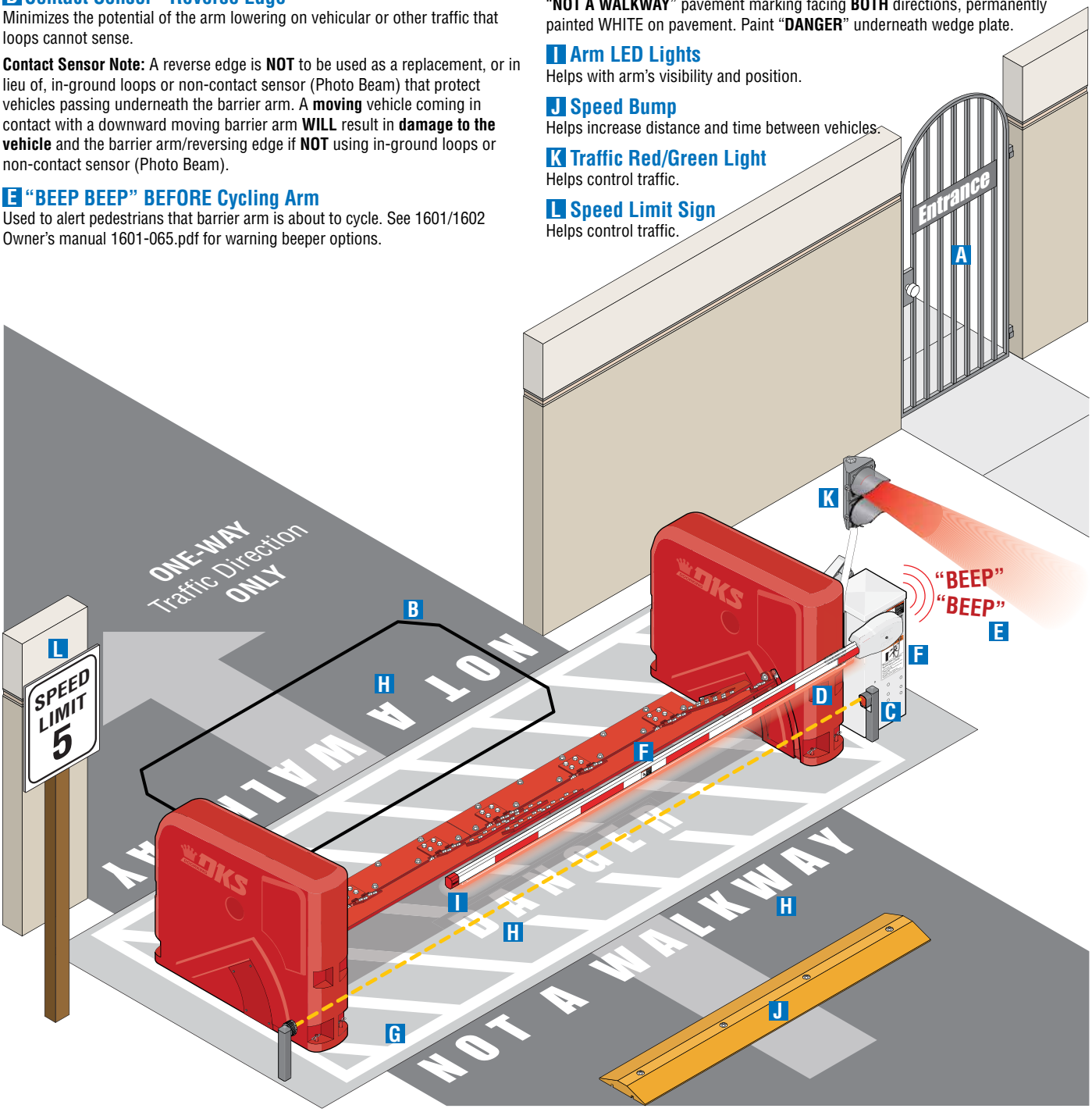
H Pedestrian Alert Warning:
"**NOT A WALKWAY**" pavement marking facing **BOTH** directions, permanently painted WHITE on pavement. Paint "**DANGER**" underneath wedge plate.

I Arm LED Lights
Helps with arm's visibility and position.

J Speed Bump
Helps increase distance and time between vehicles.

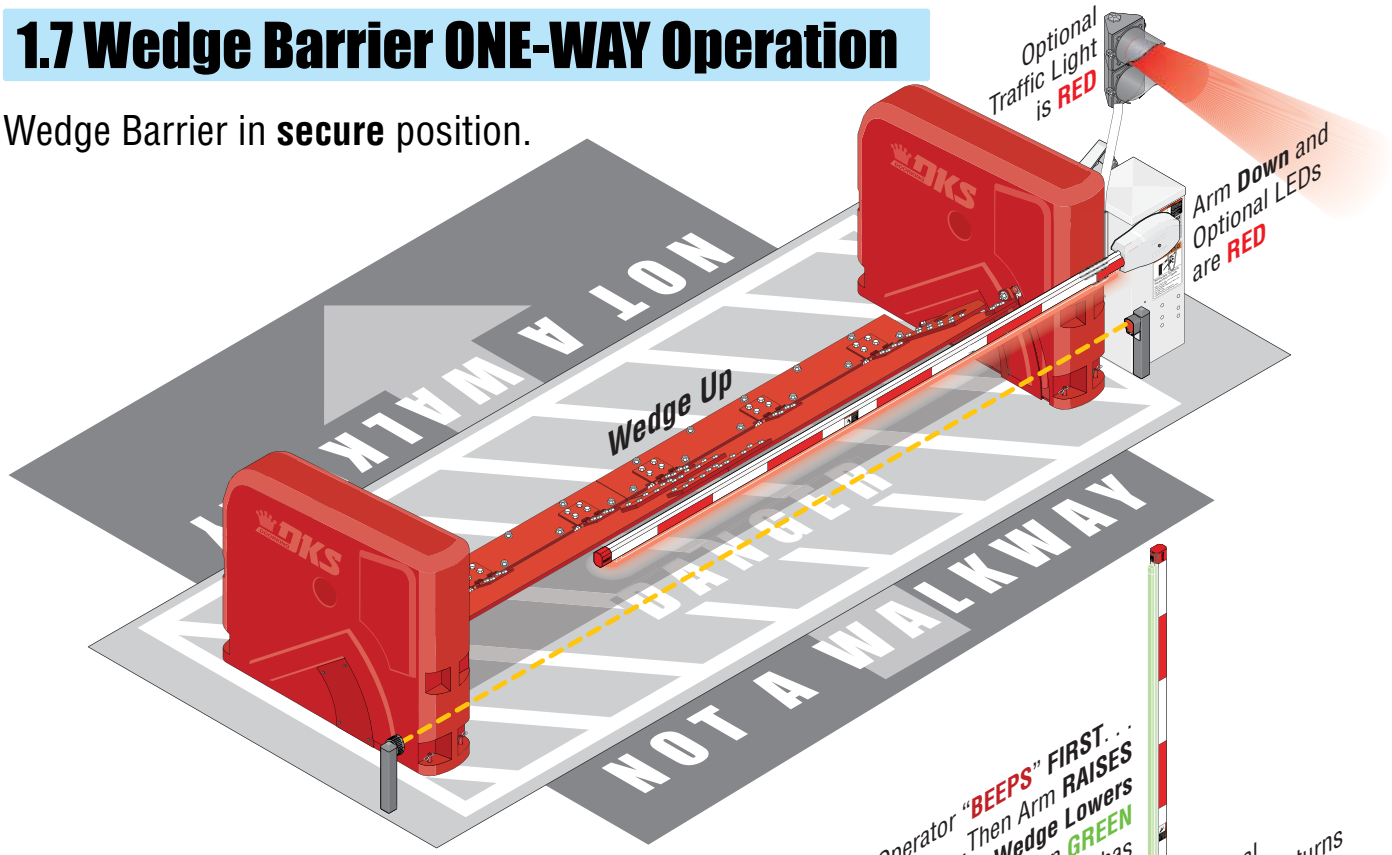
K Traffic Red/Green Light
Helps control traffic.

L Speed Limit Sign
Helps control traffic.

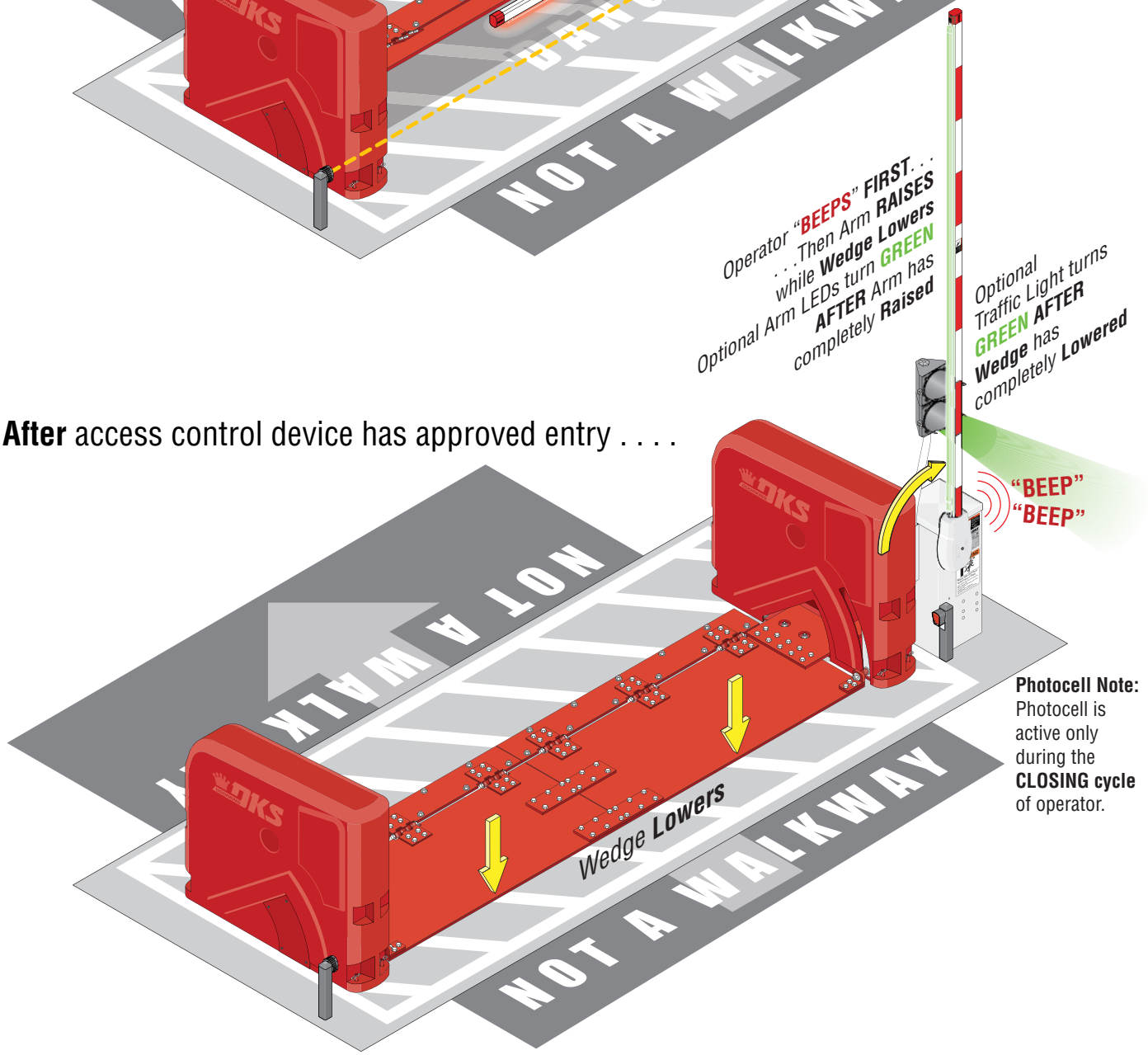


1.7 Wedge Barrier ONE-WAY Operation

Wedge Barrier in **secure** position.



After access control device has approved entry . . . .



Photocell Note: Photocell is active only during the **CLOSING cycle** of operator.

After traffic has cleared, arm LEDs and traffic light turn **RED**, arm lowers and wedge raises.

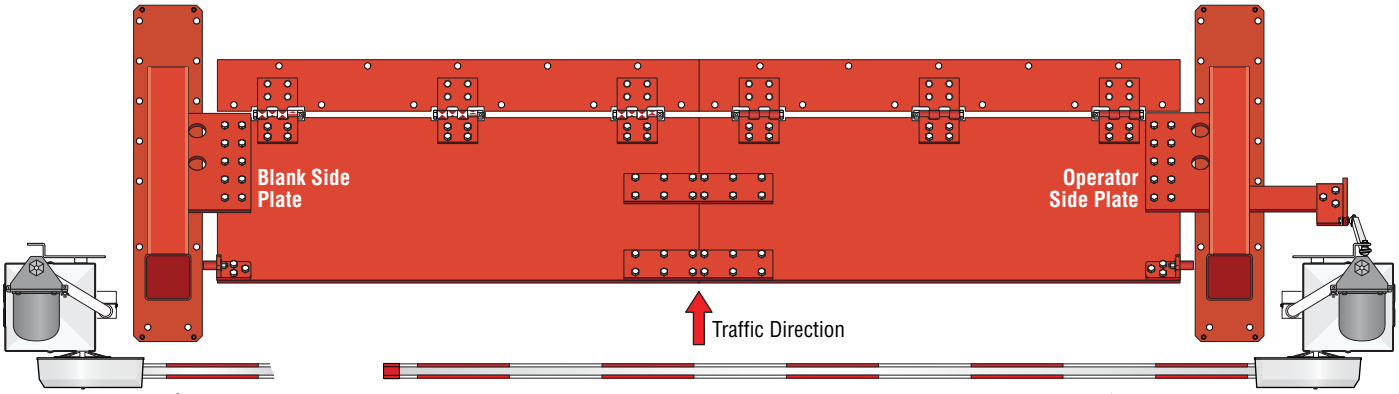
SECTION 2 - "CONCRETE ONLY" SETUP OPTIONS

EXISTING Concrete

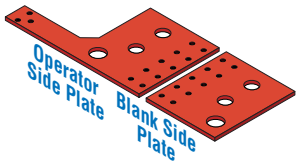
WARNING for Precast Concrete: Drilling into precast concrete is **NOT recommended** without professional advice or assistance. If you don't know where the prestressed wire strands are located, **you risk damaging the structural integrity of the precast concrete** and the drilling equipment you use. If you need to drill into precast concrete to anchor the wedge barrier to it, you must contact the building engineer before proceeding.

NEW Concrete Pad

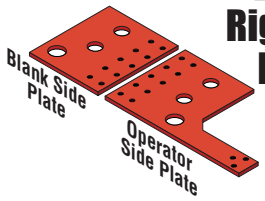
Select which side of wedge barrier the operator will be installed on (manual shows installation on the **RIGHT side** of wedge. To install operator on **LEFT side** of wedge, simply flip the **BLANK SIDE PLATE** and **OPERATOR SIDE PLATE** to the opposide sides as shown and flip **MEASUREMENTS** to the opposite side of concrete pad throughout manual.



Left Side Position



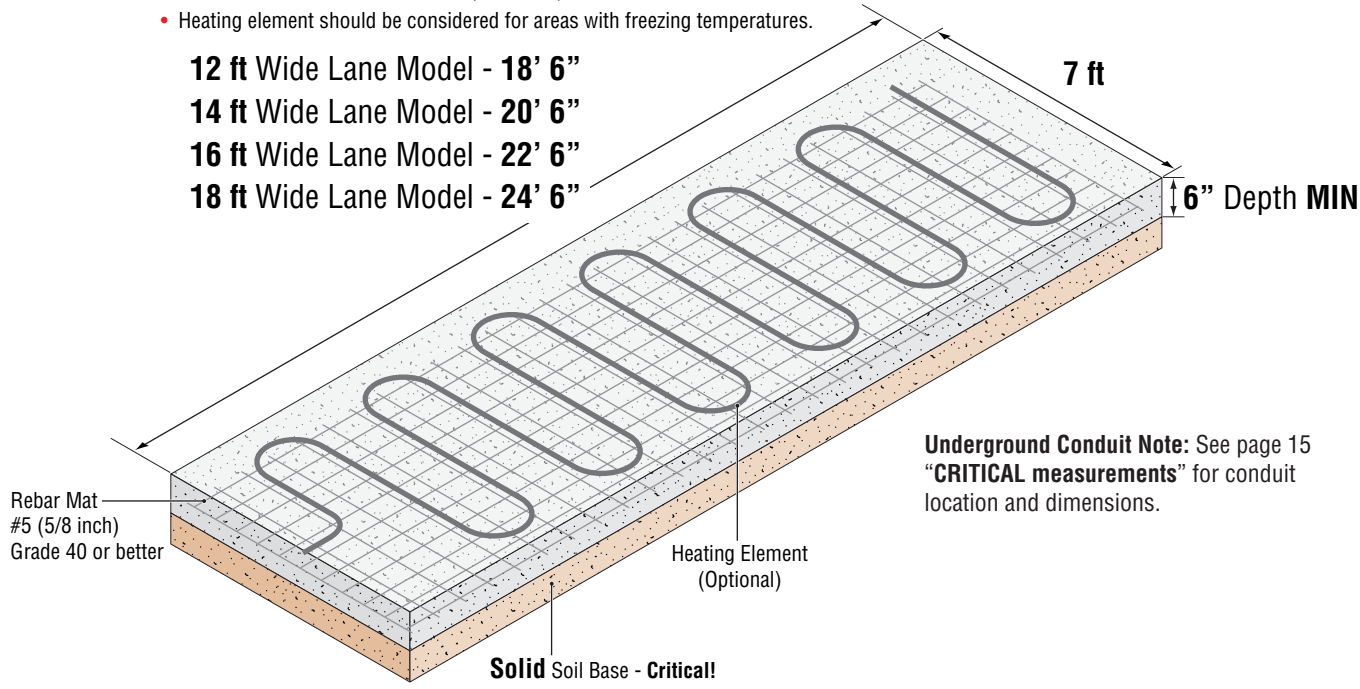
Right Side Position



Concrete Requirements and Dimensions

- Concrete Pad 4,000 PSI. At least 6" deep.
- Soil compression under and around the foundation shall be compacted to a soil density of 95% of standard ASTM-698.
- Add gravel where necessary to insure a solid base. Soil must be stable and able to support the weight of the concrete pad.
- The 1625 Wedge Barrier must be installed on a **flat and level concrete surface on grade with the roadway surface**.
- Place one layer **rebar mat** at eight (8) inch on-center. Use #5 (5/8 inch) Grade 40 or better.
- Cure concrete properties 4000 psi (minimum) with smooth finish and proper drainage.
- Heating element should be considered for areas with freezing temperatures.

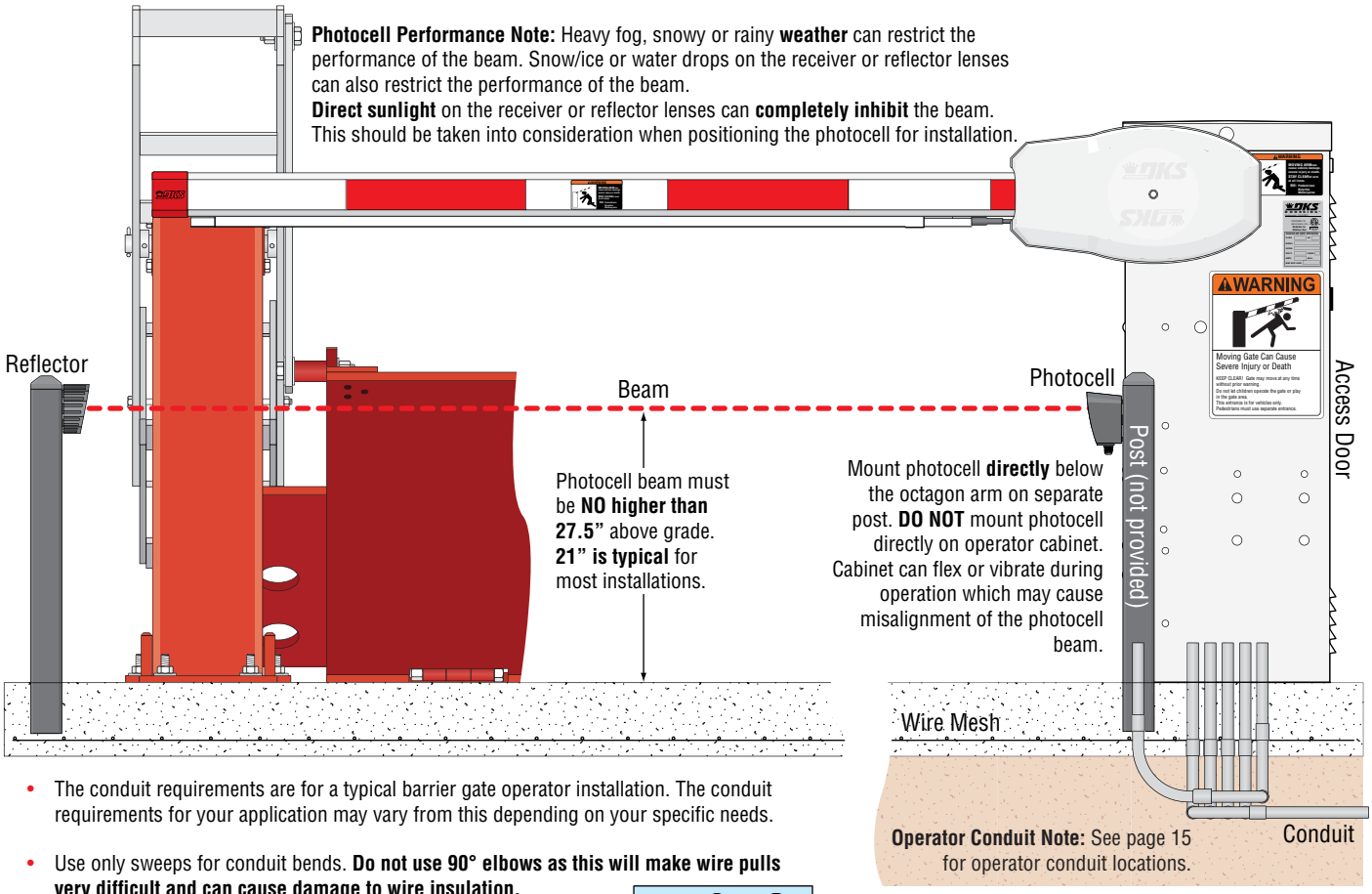
12 ft Wide Lane Model - **18' 6"**
14 ft Wide Lane Model - **20' 6"**
16 ft Wide Lane Model - **22' 6"**
18 ft Wide Lane Model - **24' 6"**



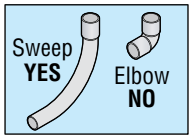
Underground Conduit Note: See page 15 "**CRITICAL measurements**" for conduit location and dimensions.

Underground Conduit and 8080-057 Photocell Position

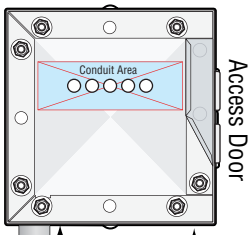
Photocell Performance Note: Heavy fog, snowy or rainy **weather** can restrict the performance of the beam. Snow/ice or water drops on the receiver or reflector lenses can also restrict the performance of the beam.
Direct sunlight on the receiver or reflector lenses can **completely inhibit** the beam. This should be taken into consideration when positioning the photocell for installation.

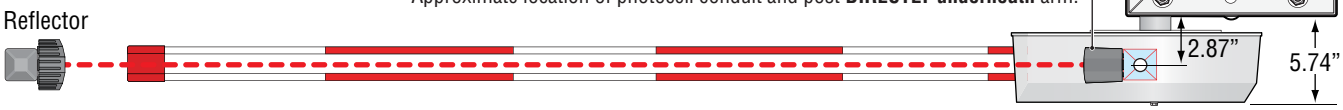


- The conduit requirements are for a typical barrier gate operator installation. The conduit requirements for your application may vary from this depending on your specific needs.
- Use only sweeps for conduit bends. **Do not use 90° elbows as this will make wire pulls very difficult and can cause damage to wire insulation.**
- DoorKing recommends using 3/4-inch conduit.
- Be sure that all conduits are installed in accordance with local codes.
- **Never** run low voltage rated wire insulation in the same conduit as high voltage rated wire insulation.

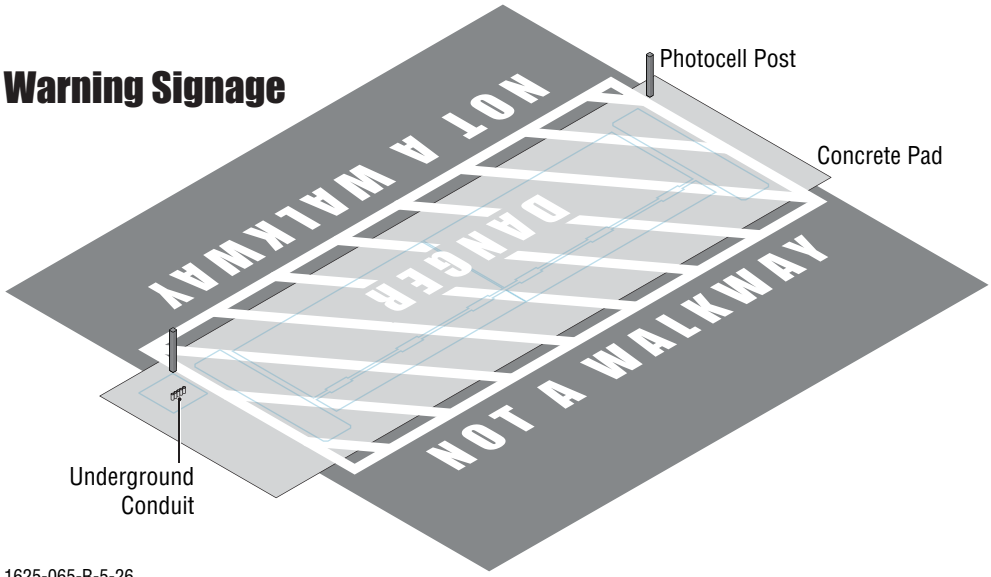


Conduit Options:
- AC Power
- Low Voltage Accessories
- Earth Ground
- Vehicle Loops
- Photocell





Warning Signage



AFTER concrete pad has been poured but **BEFORE** wedge and operator have been installed, warning stripes and verbage can be painted on the surface to discourage pedestrians from walking in the general area. It's much easier to paint now rather than after the installation. "**DANGER**" can be painted underneath the wedge plates that only shows when wedge plates are raised for better safety awareness. Chalk lines can be snapped on the concrete to layout where all components will be located to help when painting stripes. See **CRITICAL measurements** on page 15 to help layout chalk lines.

2.1 Anchoring Wedge Barrier to Concrete Pad Detail

Wedge Barrier Model's Anchor Requirements

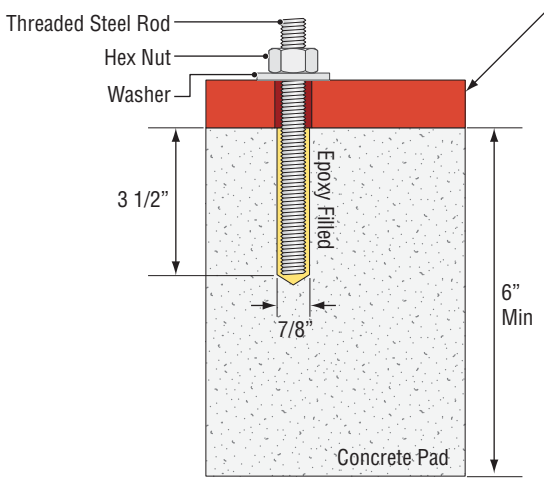
Total number of threaded rods needed for each wedge barrier model's anchor plates and support posts to secure them to the concrete pad.

12 ft Wide Lane Model - **Threaded Steel Rods Needed: 54**
14 ft Wide Lane Model - **Threaded Steel Rods Needed: 57**
16 ft Wide Lane Modell - **Threaded Steel Rods Needed: 61**
18 ft Wide Lane Model - **Threaded Steel Rods Needed: 65**

NOTE: An **additional 6 anchors** are needed to secure the operator to the concrete pad. However, these can be **simple sleeve anchors** if desired as the barrier operator offers **NO crash resistance** for the wedge system, see page 16.

IMPORTANT: Anchor Specifications

Certification to ASTM F2656-23, PU-30 (P1,P2). A vehicle weighing 5,070 lbs. traveling at 30 mph will not shear or budge the 1625 Wedge on direct impact when **using these specifications** to anchor wedge barrier.



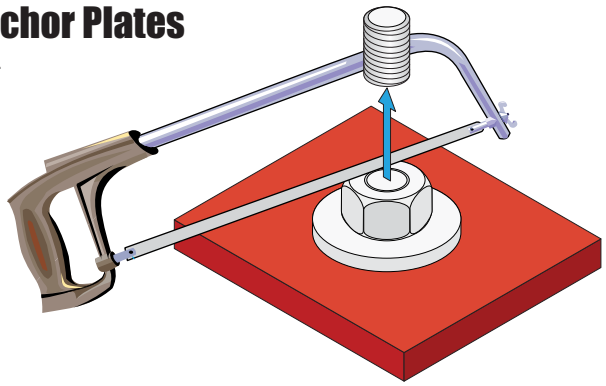
Anchor Specifications		
Item	**Description**	**McMaster-Carr P/N**
Threaded Steel Rod	Grade B7 Steel- ¾"-10 x 5½"	98750A315
Washer	Grade 8 Steel - 2" O.D.	98026A036
Hex Nut	Grade 5 Steel - ¾"-10	95505A608
Epoxy	HIT-RE500 Epoxy Adhesive	

IMPORTANT: Torque hex nuts to 100 Ft Lbs.

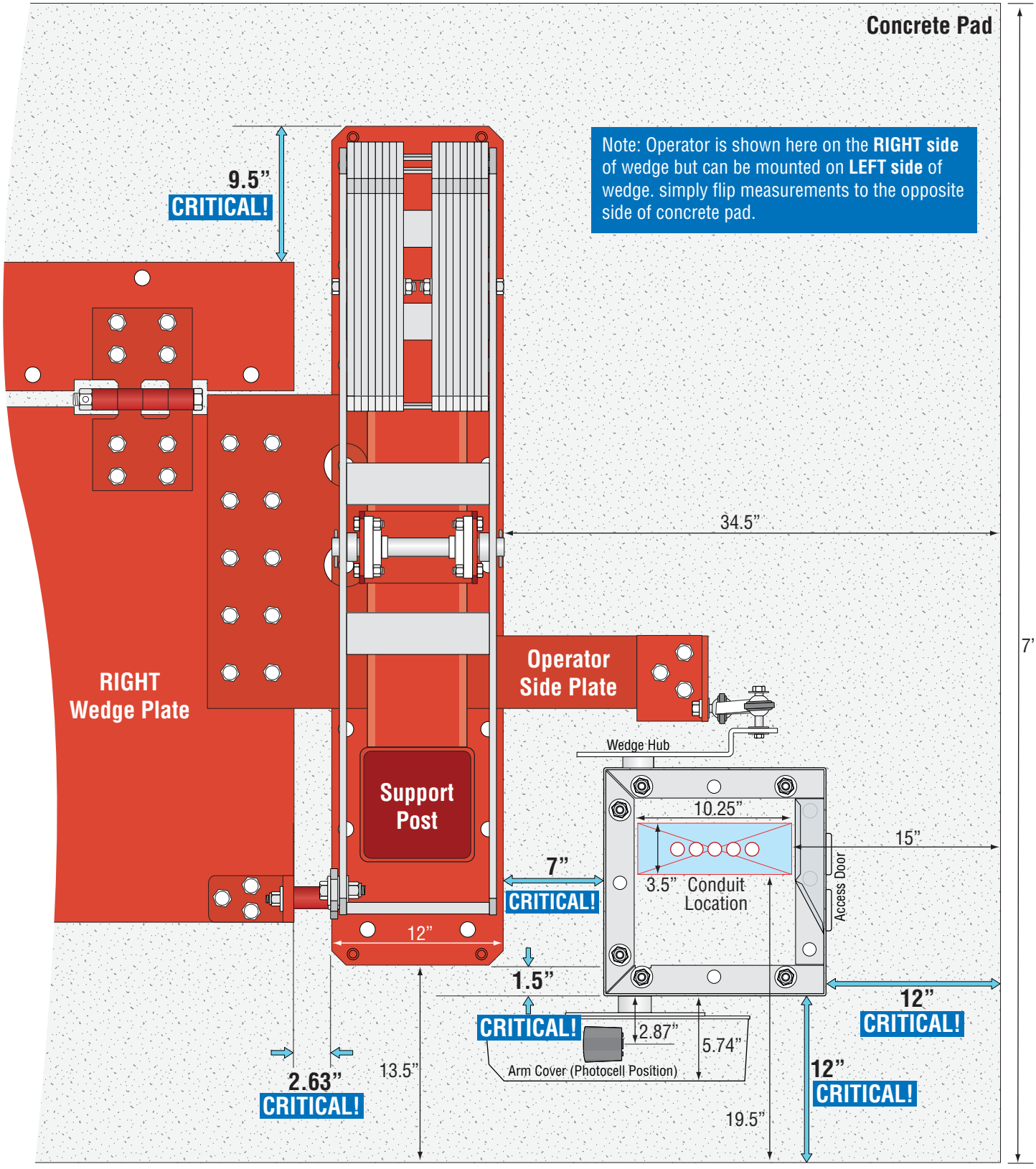
- Drill 7/8-inch holes to anchor the **support posts** and **anchor plates** to a depth of 3-½ inches.
- Use a ¼-inch bit to drill pilot holes if necessary.
- Use **Grade B7 ¾-inch threaded steel rod (5.5 inch length)** and **HIT-RE500 Epoxy adhesive**. Follow epoxy manufacturer's instructions. Epoxy requires minimum 12 hours to cure.
- After the required cure time, install **washers** and **nuts** onto the threaded steel rods and torque to 100 Ft Lbs.

Cut Off Excess Threaded Rod on the Anchor Plates

To protect vehicle tires, grind or cut any steel rod extending past the nuts.



2.2 Critical Measurements

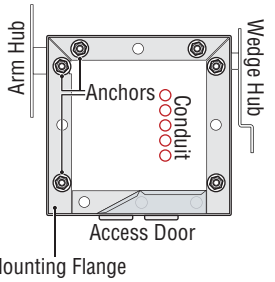


SECTION 3 - MOUNTING OPERATOR AND WEDGE STEPS

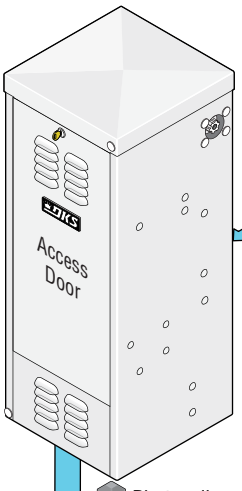
1 Permanently Mount Operator

Permanently mount operator to concrete pad using the **CRITICAL measurements** on page 14.

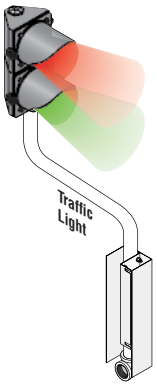
The installation shown has the operator mounted on the **RIGHT SIDE** of the wedge but the operator can be mounted on **either side** of the wedge depending on the Side Plates position.
See "**Bolt plates Together**" on next page.

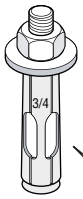


At least 6 anchors are needed to secure the operator to the concrete pad.



Traffic Light Installation Note: IF installing a traffic light, a " **7/8" HOLE**" **MUST** be drilled into the **back side** of the operator cabinet. Access **will be limited** to drill the hole **AFTER** the support post has been installed **right next to the operator**.
See **YOUR chosen** traffic light kit instruction sheet for specific hole location and drill it **NOW**. The traffic light installation is **NOT** necessary at this time, just the hole.

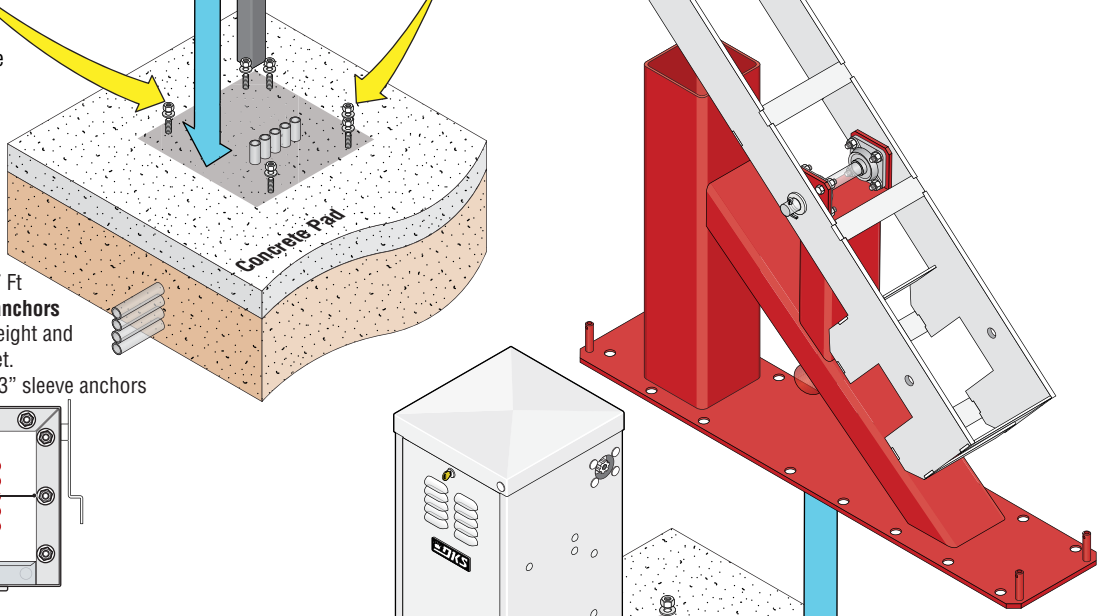




When using sleeve anchors, secure the mounting flange to concrete pad with 3/4" x 3" **Min** (not supplied).

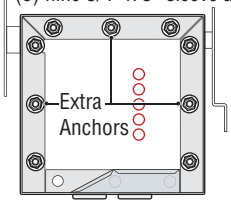
Photocell Post

Sleeve Anchors **OR** Threaded Steel Rods can be used, see page 14 for more information.



17 Ft Arm Note: 17 Ft arm needs **MORE anchors** because of extra weight and stress to the cabinet.

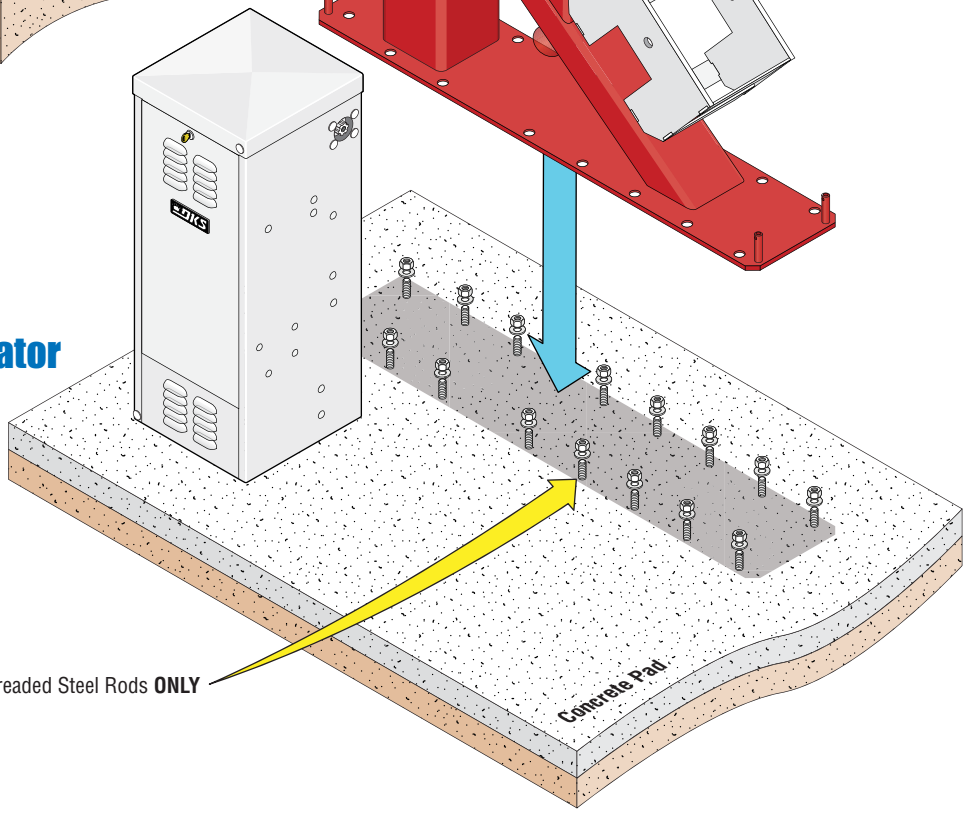
(9) nine 3/4" x 3" sleeve anchors



2 Permanently Mount Support Post Next to Operator

Use the **CRITICAL measurements** on page 15 for support post location.

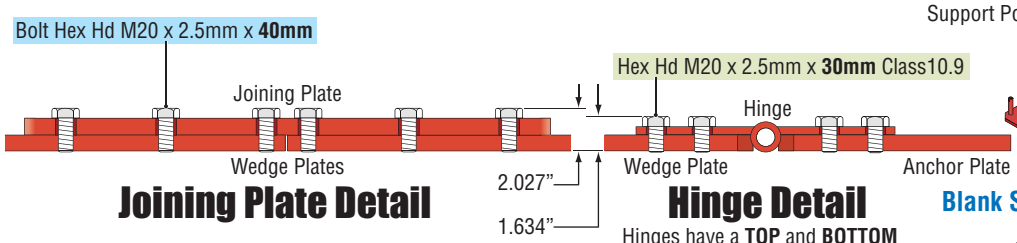
ONLY use threaded steel rods to attach support post to concrete pad, see page 14 for more information.



IMPORTANT: Threaded Steel Rods **ONLY**
See page 14.

3 Bolt Plates Together

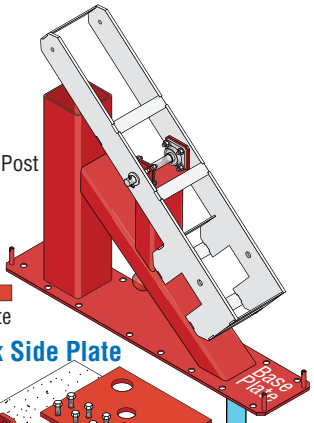
Position wedge plates and the other support post approximately where they will be located on concrete pad. Bolt the hinges, bar connectors, side plates etc. to the wedge plates depending on the model wedge barrier you have selected (see pages 3-4 for specific **part configurations**). The side plates lay on top of the support post base plate.



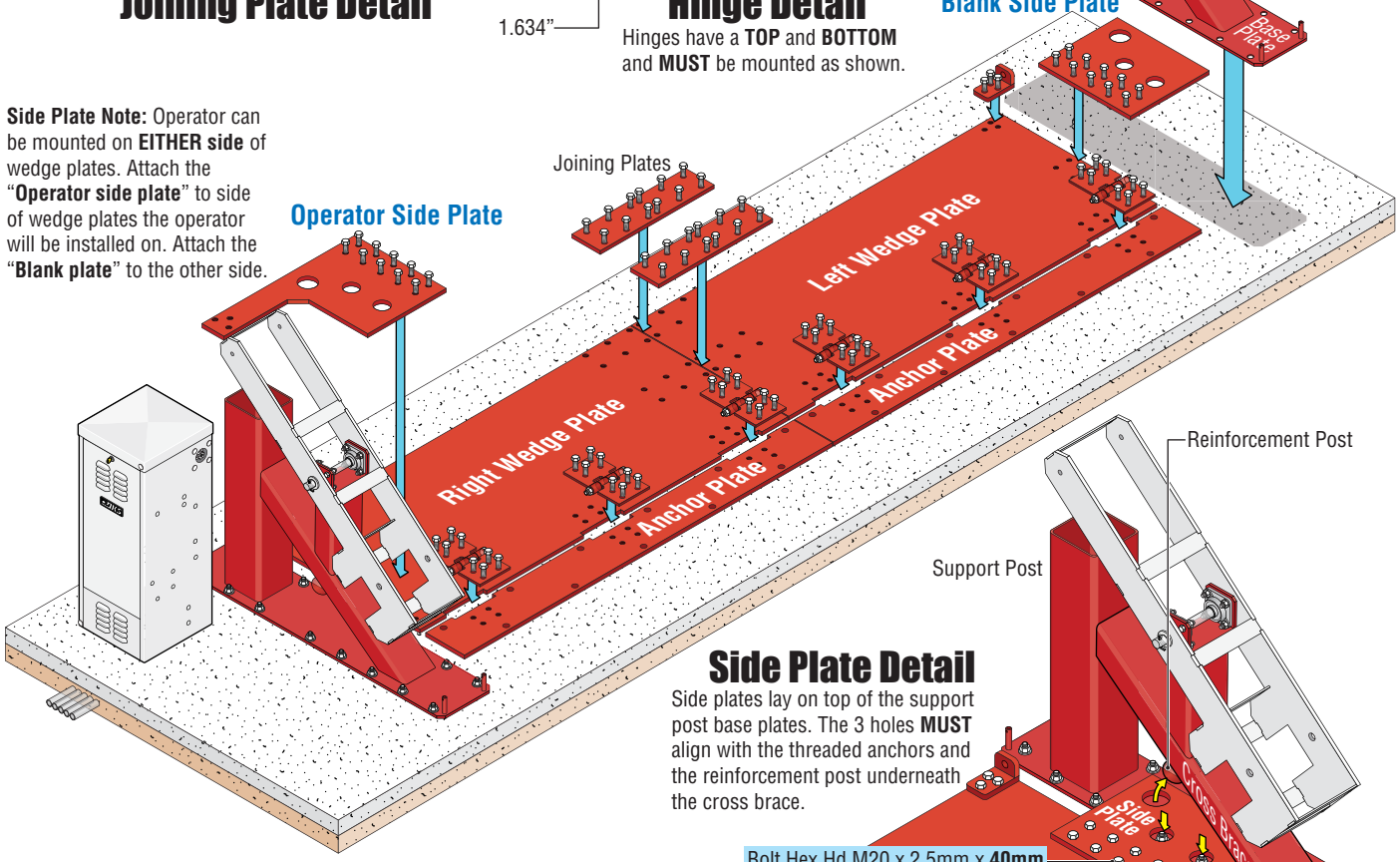
Joining Plate Detail

Hinge Detail

Hinges have a **TOP** and **BOTTOM** and **MUST** be mounted as shown.



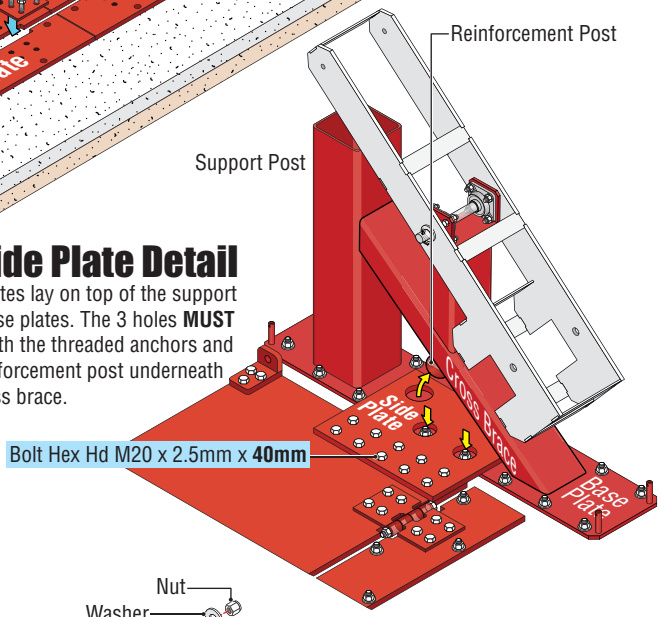
Side Plate Note: Operator can be mounted on **EITHER side** of wedge plates. Attach the "**Operator side plate**" to side of wedge plates the operator will be installed on. Attach the "**Blank plate**" to the other side.



TIP: Use Lock-Tite to secure **ALL** bolts to help prevent them from loosening over time.

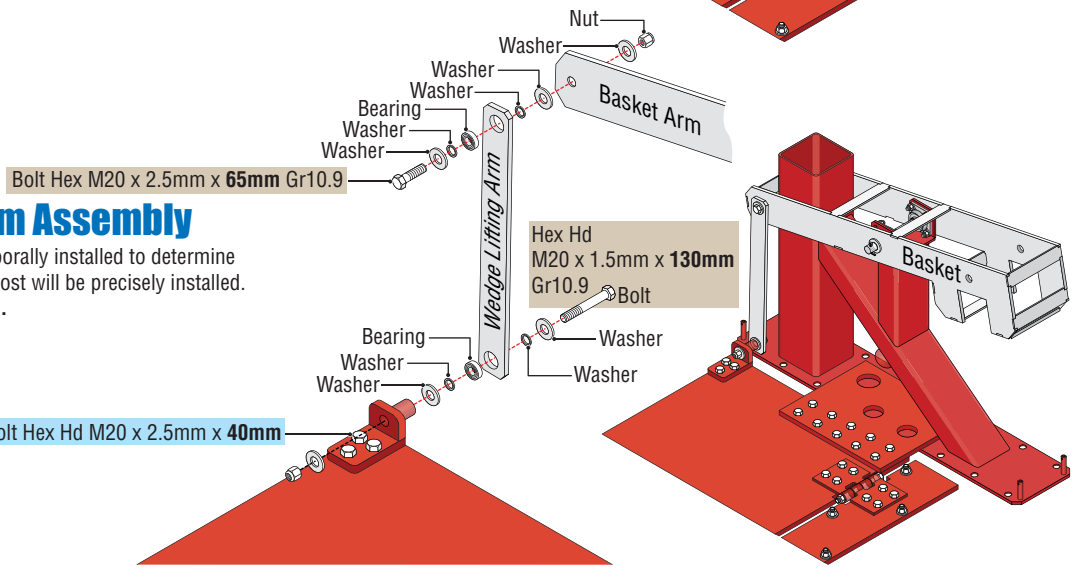
Side Plate Detail

Side plates lay on top of the support post base plates. The 3 holes **MUST** align with the threaded anchors and the reinforcement post underneath the cross brace.



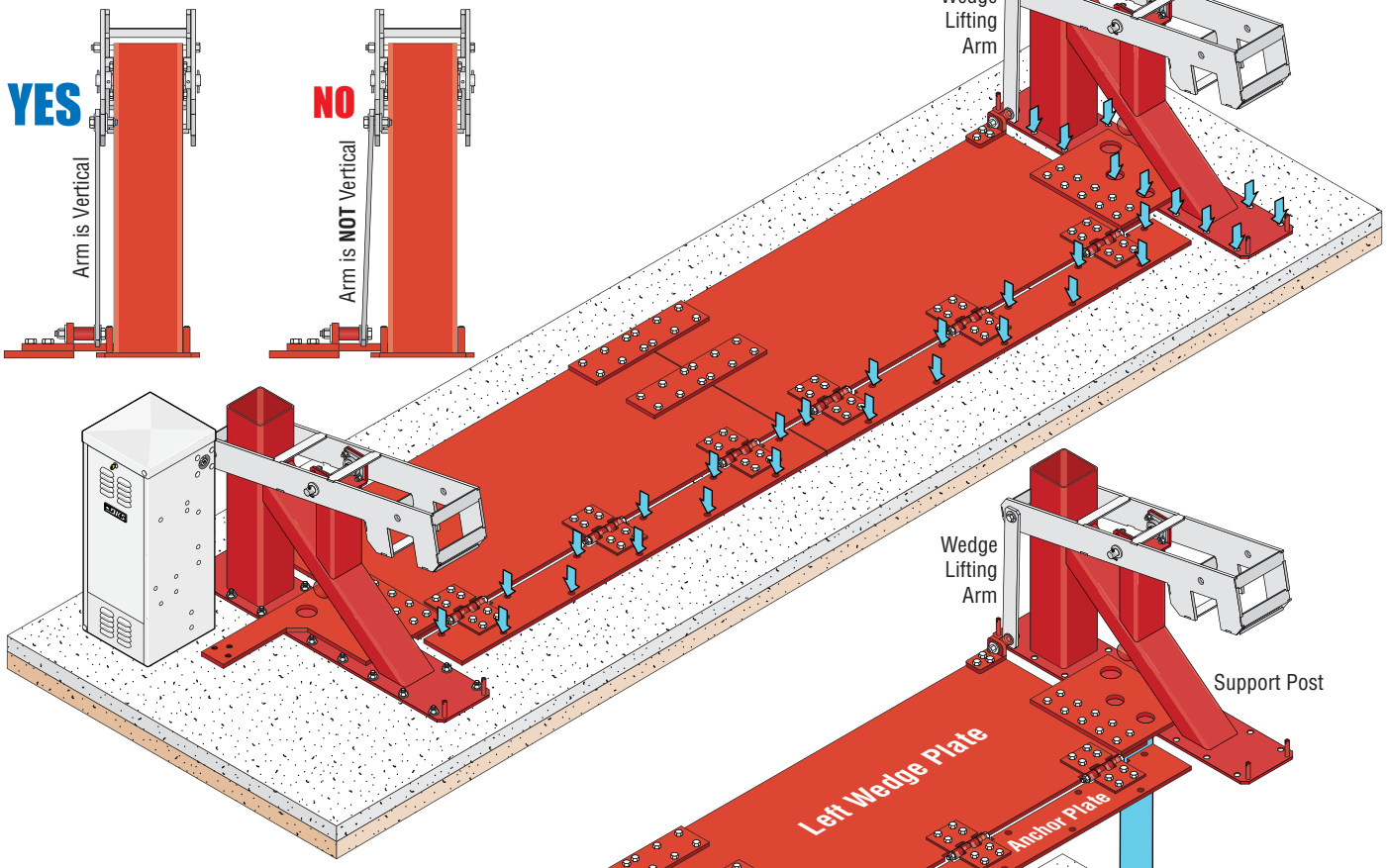
4 Wedge Lifting Arm Assembly

The wedge lifting arms **MUST** be temporally installed to determine where the wedge plates and support post will be precisely installed. **Wedge lifting arms MUST be vertical.**



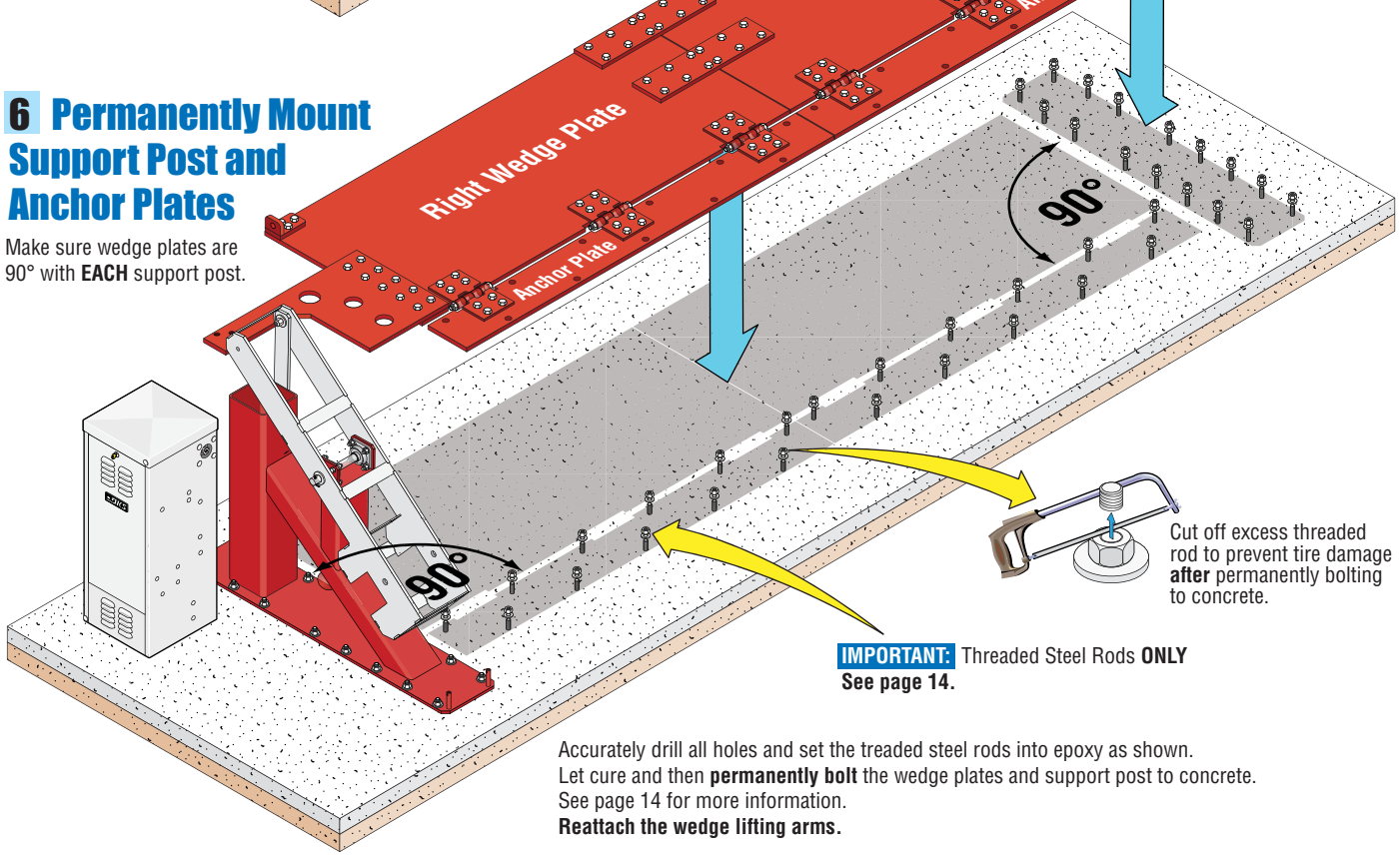
5 Precisely Mark Anchors

Fine tune the positions of the wedge plates and support post using the **CRITICAL measurements** (See page 15) making sure the side plates holes are in alignment (see previous page). **Make sure wedge lifting arms are VERTICAL.** When satisfied with the positioning of the parts, precisely mark all anchor locations for the wedge plates and support post.



6 Permanently Mount Support Post and Anchor Plates

Make sure wedge plates are 90° with **EACH** support post.

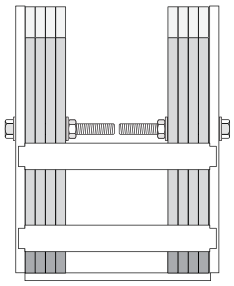


IMPORTANT: Threaded Steel Rods **ONLY**
See page 14.

Accurately drill all holes and set the treaded steel rods into epoxy as shown.
Let cure and then **permanently bolt** the wedge plates and support post to concrete.
See page 14 for more information.
Reattach the wedge lifting arms.

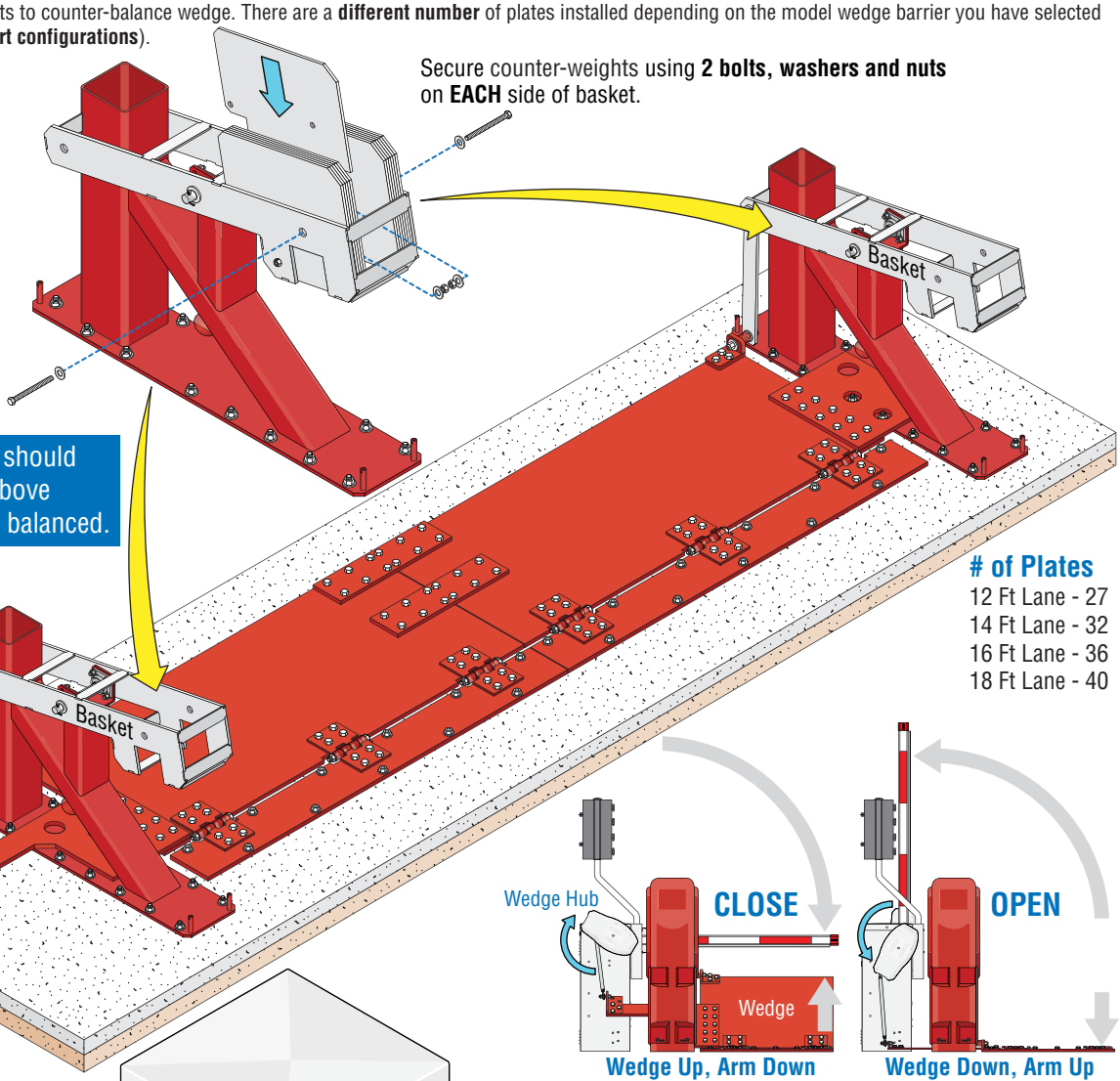
7 Add Counter-Weights

Add counter-weights to baskets to counter-balance wedge. There are a **different number** of plates installed depending on the model wedge barrier you have selected (see pages 3-4 for specific **part configurations**).



Back View of Basket

Secure counter-weights using **2 bolts, washers and nuts** on **EACH** side of basket.



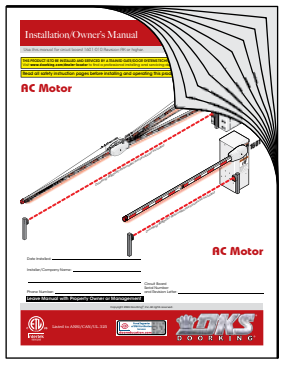
IMPORTANT: Wedge should "**Float**" a few inches above ground when properly balanced.

# of Plates
12 Ft Lane - 27
14 Ft Lane - 32
16 Ft Lane - 36
18 Ft Lane - 40

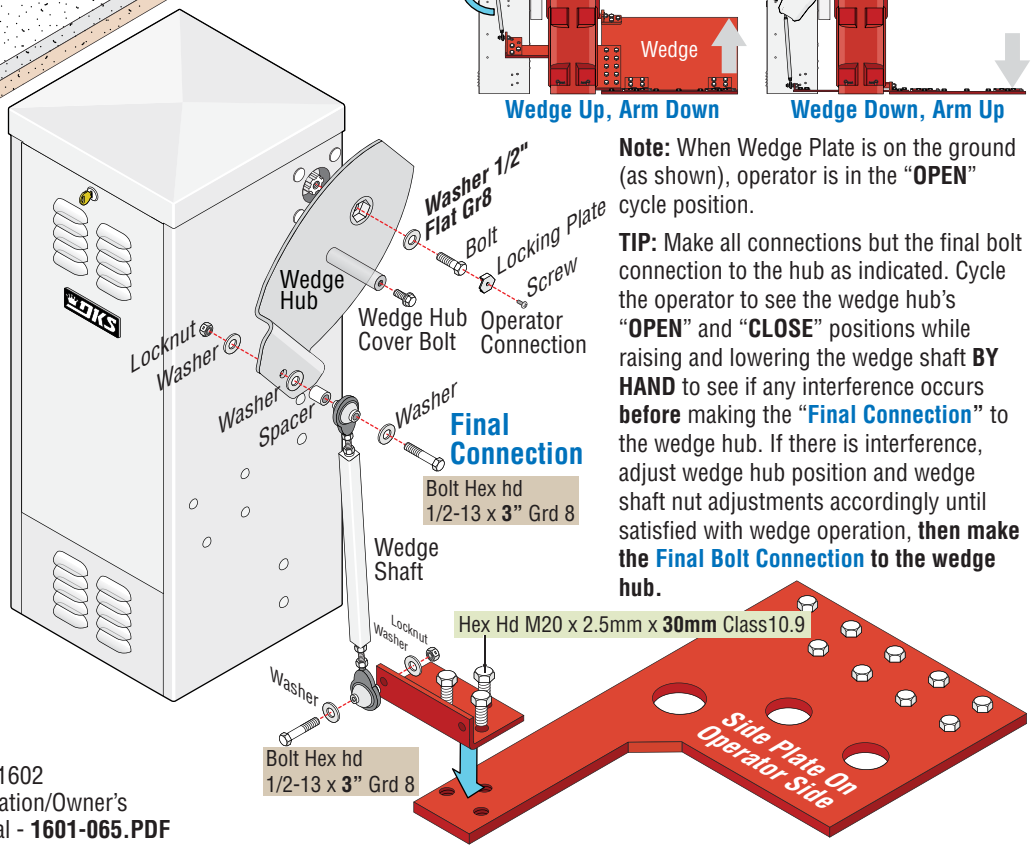
8 Connect Operator to Operator Side Plate

DO NOT operate wedge **WITHOUT** counter-balance weights installed. Make sure hub is installed on operator in the correct **Open** and **Close** positions. Test these positions **BEFORE** making the "**Final Connection**".

Note: Operator will **require power** when preforming this step. Refer to 1601 manual for power wiring info.



1601/1602 Installation/Owner's Manual - **1601-065.PDF**

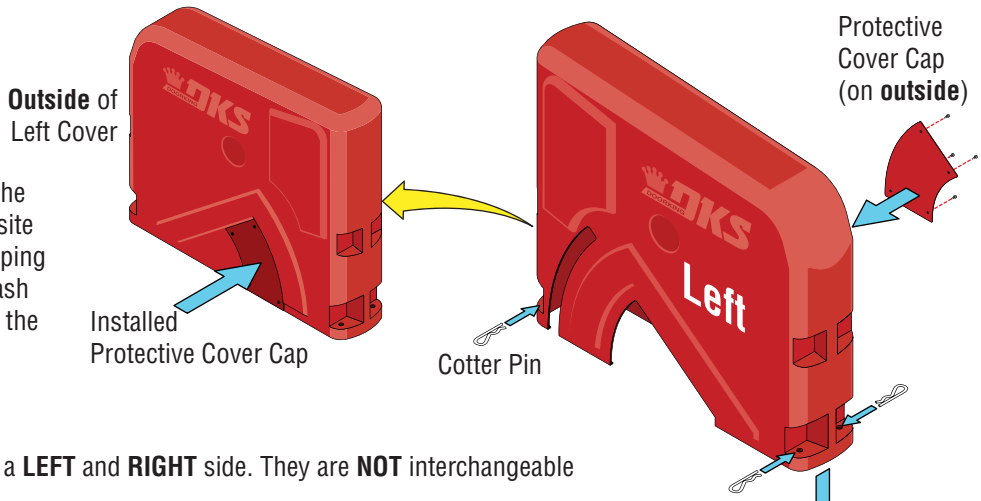


Note: When Wedge Plate is on the ground (as shown), operator is in the "**OPEN**" cycle position.

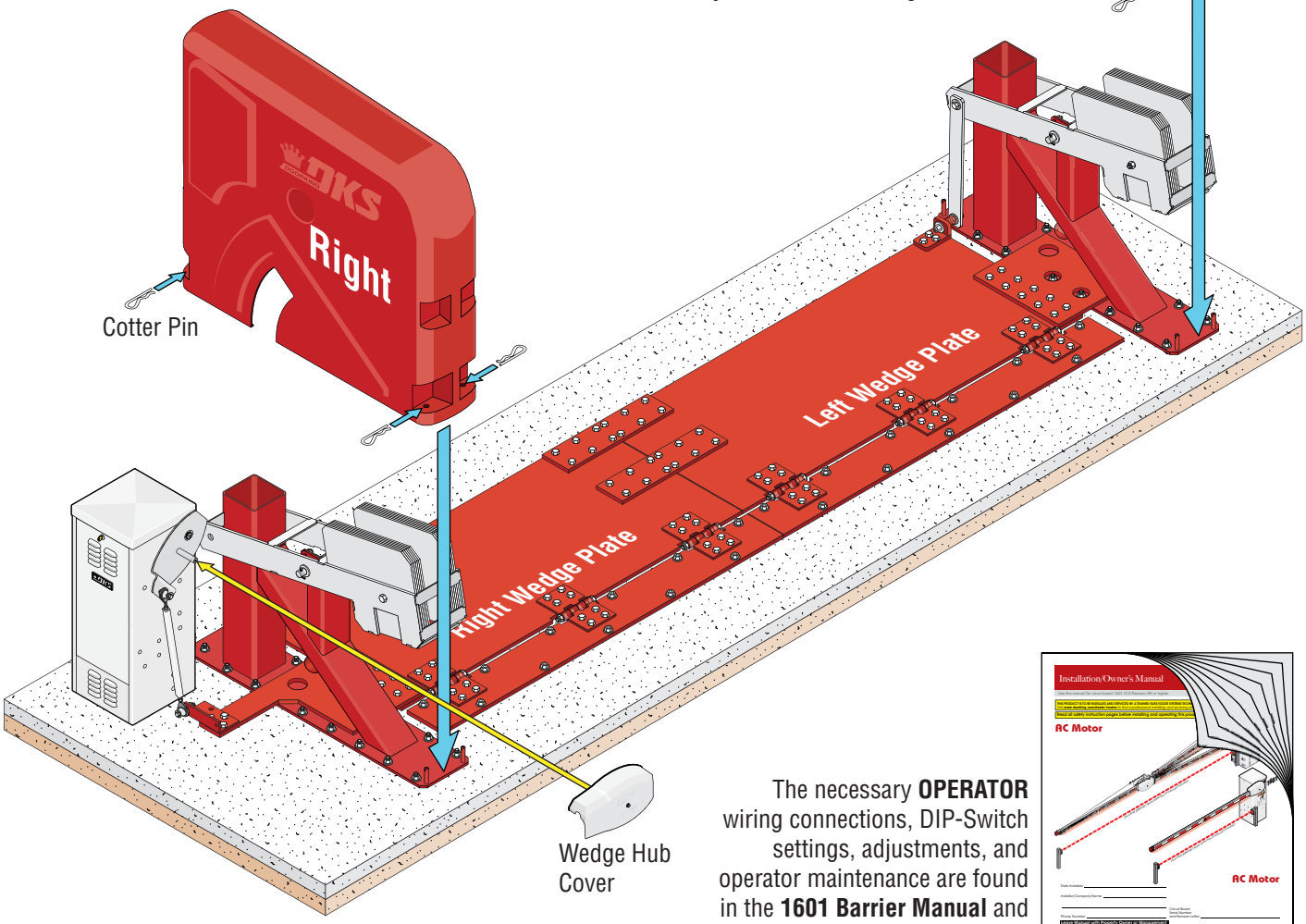
TIP: Make all connections but the final bolt connection to the hub as indicated. Cycle the operator to see the wedge hub's "**OPEN**" and "**CLOSE**" positions while raising and lowering the wedge shaft **BY HAND** to see if any interference occurs **before** making the "**Final Connection**" to the wedge hub. If there is interference, adjust wedge hub position and wedge shaft nut adjustments accordingly until satisfied with wedge operation, **then make the Final Bolt Connection to the wedge hub.**

9 Install Covers

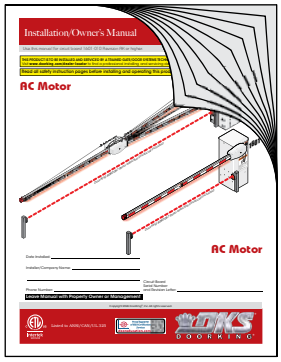
Protective Cover Cap: Only one. Install on the outside of the cover as shown, on the opposite cover from the operator side. Use 4 self-tapping screws. Helps protect against debris and trash getting inside the cover and interfering with the moving parts of the wedge.



Note: Covers have a **LEFT** and **RIGHT** side. They are **NOT** interchangeable



The necessary **OPERATOR** wiring connections, DIP-Switch settings, adjustments, and operator maintenance are found in the **1601 Barrier Manual** and will be needed to **COMPLETE** the installation.



1601/1602 Installation/Owner's Manual - **1601-065.PDF**

10 Install Arm and OPTIONAL Traffic Light

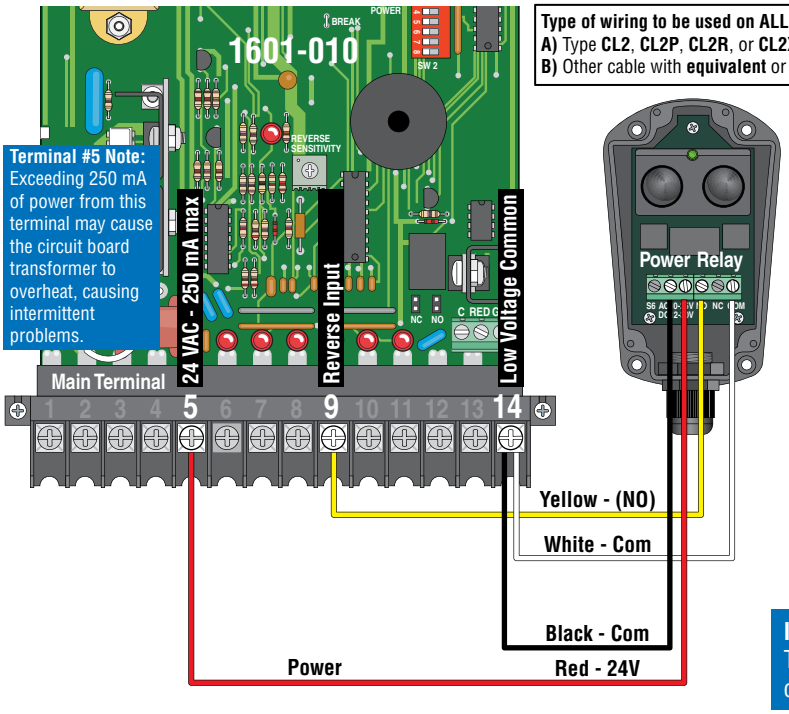
Install **YOUR Chosen** arm, see instruction sheet that comes with it.
The **OPTIONAL** traffic light can be installed and is **HIGHLY** recommended, see instruction sheet that comes with it.

Regular Maintenance of Wedge System

Regular inspection and removal of trash, debris, gravel, and rock is required in order to keep wedge barrier functioning properly.
Neglecting to regularly clean trash and debris **UNDERNEATH WEDGE PLATE** is the number one cause of breakage and malfunctions.
Check all bolts for tightness which can loosen over time from normal operation.
Make sure **ALL** moving parts are functioning normally. If they are **NOT**, remove wedge barrier from service immediately until it can be repaired.

SECTION 4 - PHOTOCELL

Mount photocell **directly** below the octagon arm on separate posts as shown (see pages 7 and 13), mounting brackets and mounting posts **NOT** provided.



Type of wiring to be used on ALL external devices:
A) Type **CL2**, **CL2P**, **CL2R**, or **CL2X**.
B) Other cable with **equivalent** or **better** electrical, mechanical, and flammability ratings.

DoorKing Retro-Reflective Photocell (P/N 8080-057)

If using **other** photocells refer to the manufacturer's manual for wiring installation.

Fine Tune Photocell
After photocell has been mounted, spring mounted beam sensors can be precisely adjusted "**Fine Tune**" using the 3 screws to help keep the **GREEN** LED **ON** if necessary.

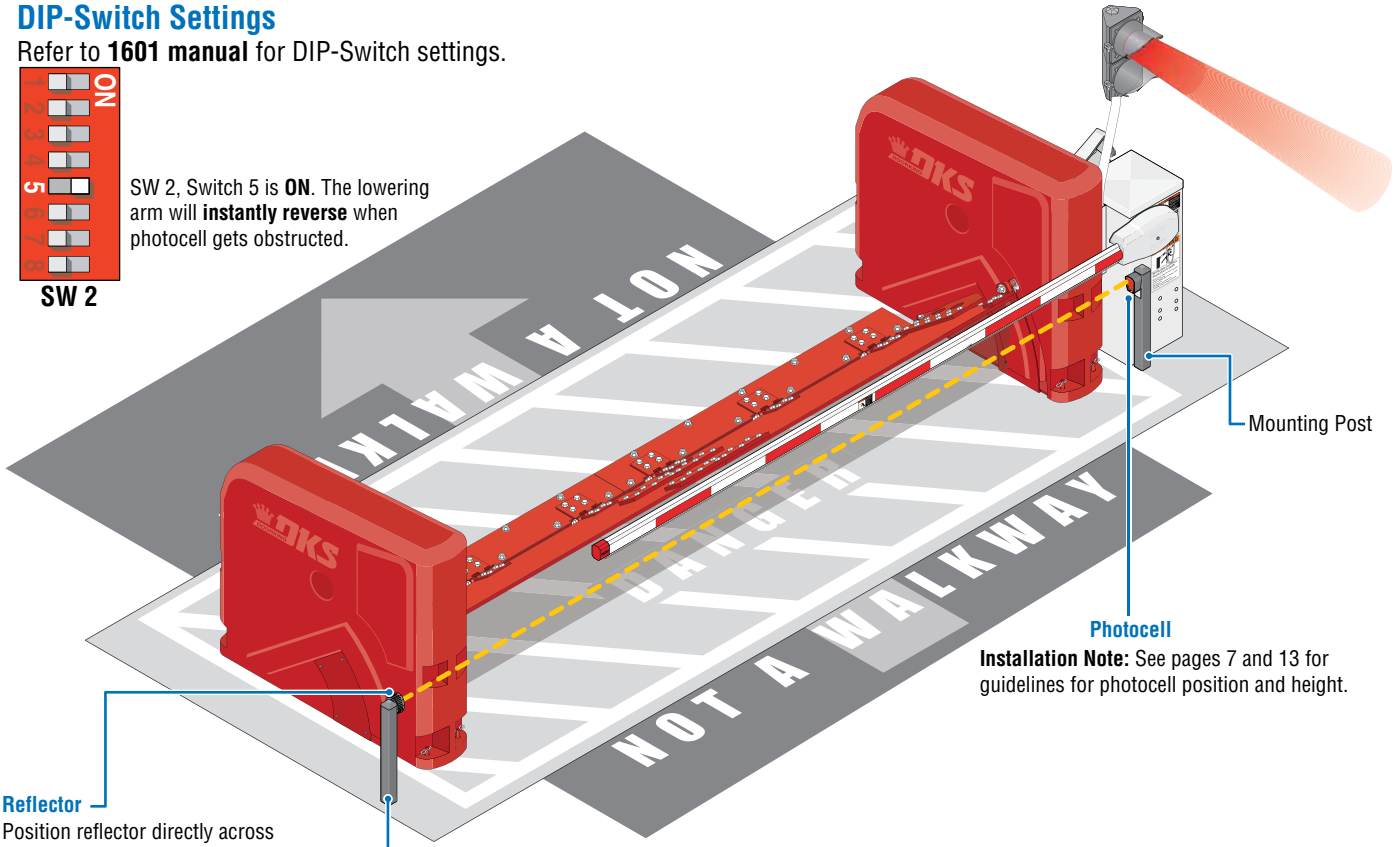
IMPORTANT: DO NOT mount photocell to the operator cabinet. The cabinet can flex or vibrate during operation which may cause misalignment of the photocell beam.

DIP-Switch Settings

Refer to **1601 manual** for DIP-Switch settings.

SW 2

SW 2, Switch 5 is **ON**. The lowering arm will **instantly reverse** when photocell gets obstructed.



Installation Note: See pages 7 and 13 for guidelines for photocell position and height.

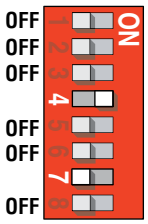
Reflector
Position reflector directly across from mounted and wired photocell. Green LED on photocell will remain lit when reflector is in correct position. Permanently mount reflector making sure LED remains lit. "Fine Tune" photocell alignment if necessary, see above.

Photocell Performance Note: Heavy fog, snowy or rainy **weather** can restrict the performance of the beam. Snow/ice or water drops on the receiver or reflector lenses can also restrict the performance of the beam.
Direct sunlight on the receiver or reflector lenses can **completely inhibit** the beam. This should be taken into consideration when positioning the photocell for installation.

SECTION 5 - IN-GROUND LOOP OPTIONS

Typical DIP-Switch Settings

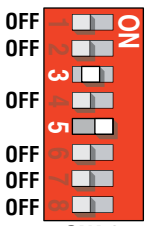
Refer to **1601 manual** for DIP-Switch settings.



Switch 4 is **ON**.

Switch 7 is **OFF** (Timer). The arm will rotate down after the vehicle clears the **down loop**. See timer note below.

A



Switch 3, see next page.

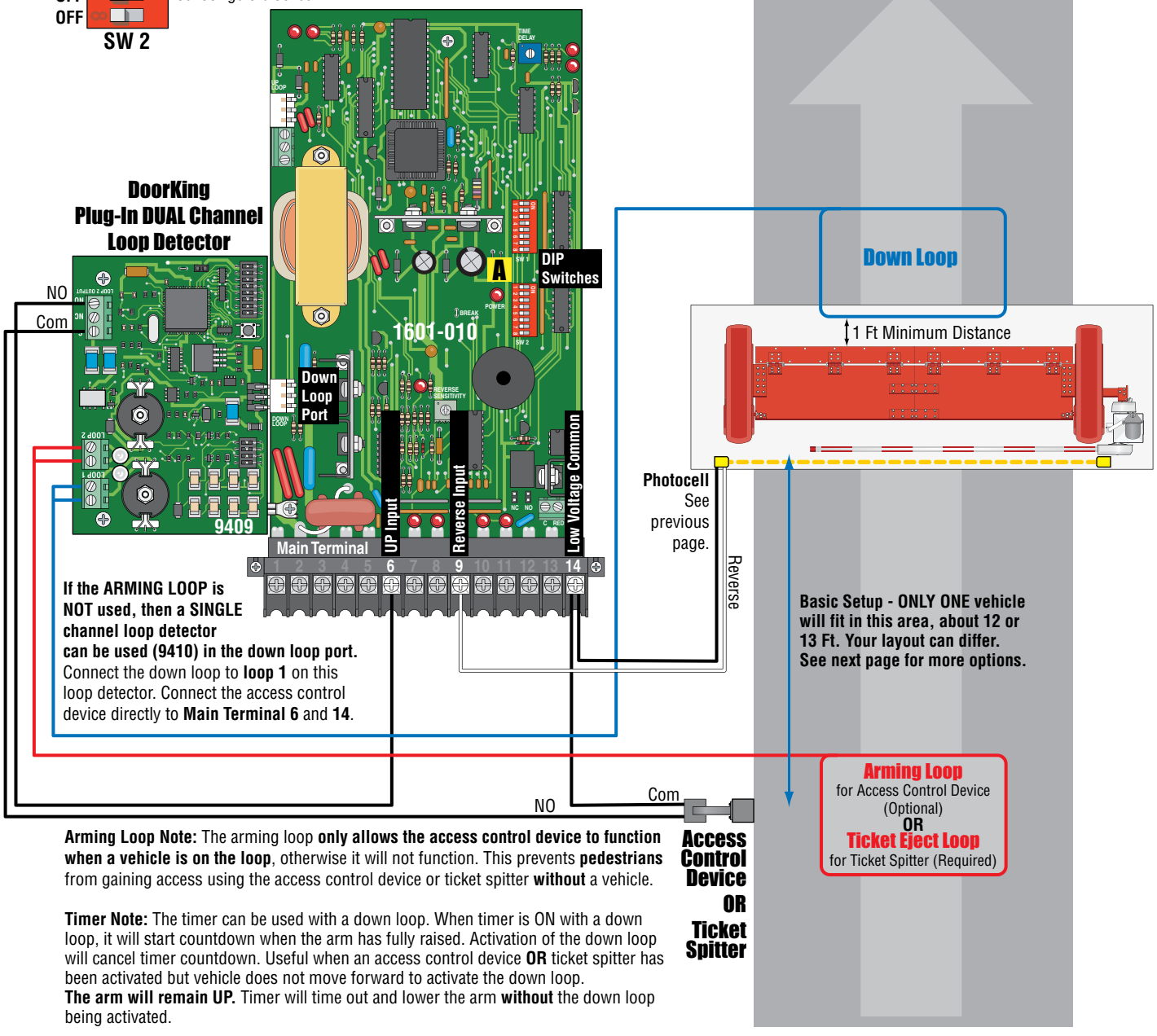
Switch 5 is **ON**. The lowering arm will **instantly reverse** when photo sensor gets blocked.

Before attempting to connect any wiring to the operator, be sure that the circuit breaker in the electrical panel is in the **OFF** position. Permanent wiring must be installed to the operator as required by local electrical codes. It is **recommended** that a licensed electrical contractor perform this work.

Loop detector wiring shown is for DoorKing model 9409 Dual Channel plug-In loop detector only.
If using other loop detectors refer to their Loop Information Manual for installation instructions, loops/preformed loops and wiring diagrams.
All inputs to the main terminal are NORMALLY OPEN.

Type of wiring to be used on ALL external devices:
A) Type **CL2**, **CL2P**, **CL2R**, or **CL2X**.
B) Other cable with **equivalent** or **better** electrical, mechanical, and flammability ratings.

DoorKing offers a free "**Loop and Loop-Detectors Information Manual**" PDF located at DoorKing's web site for more information. **www.doorking.com**



Arming Loop Note: The arming loop **only allows the access control device to function when a vehicle is on the loop**, otherwise it will not function. This prevents **pedestrians** from gaining access using the access control device or ticket spitter **without** a vehicle.

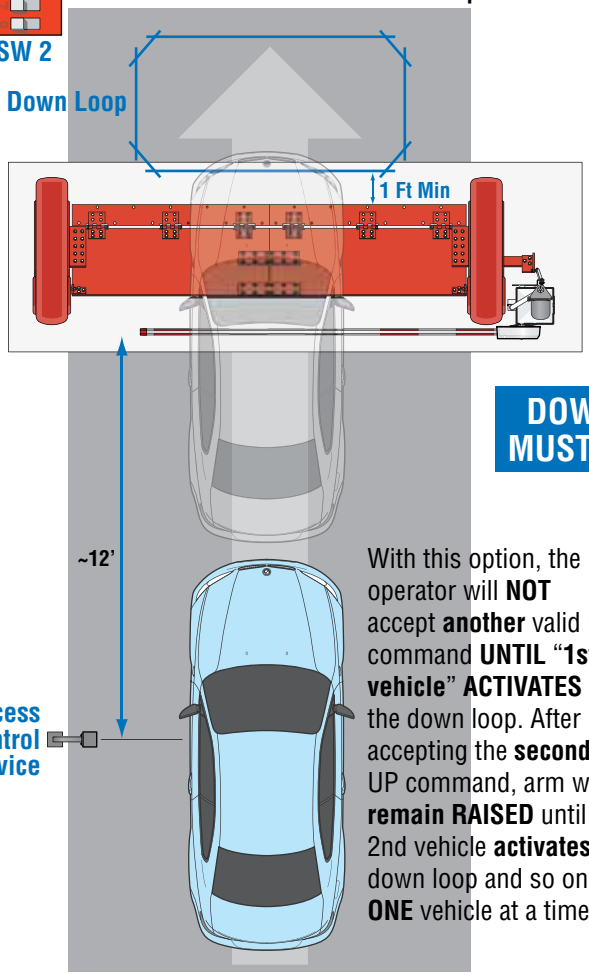
Timer Note: The timer can be used with a down loop. When timer is ON with a down loop, it will start countdown when the arm has fully raised. Activation of the down loop will cancel timer countdown. Useful when an access control device **OR** ticket spitter has been activated but vehicle does not move forward to activate the down loop.
The arm will remain UP. Timer will time out and lower the arm **without** the down loop being activated.

SW2 DIP-Switch 3 - Override DOWN Loop Commands Layout

The **BASIC UP/DOWN** operation of a operator using a **DOWN LOOP** will raise the arm when a valid UP command is received and lower the arm **AFTER** the vehicle clears the **DOWN LOOP**. **NO** additional valid UP commands will be accepted during this process. **AFTER** the arm lowers, another UP command will be accepted and so on. This is a **slow** process during heavy traffic periods. A **FASTER ENTRY** process uses the **SW2 DIP-Switch 3 ON/OFF** options to allow the **Access Control Device** and the **Wedge Barrier System** to control **MULTIPLE** valid UP commands during the arm cycling, allowing the arm to **remain raised** while **multiple vehicles** enter the property, speeding up the entry process by a considerable amount. This is very desirable during heavy traffic periods and decreases the wear and tear on the wedge components. The layouts below show typical **distance restriction, YOUR** layout may vary.

OPTION 1: SW2 DIP-Switch 3 OFF

ONLY ONE vehicle will fit **BETWEEN** the **access control device** and the **down loop**.



With this option, the operator will **NOT** accept **another** valid UP command **UNTIL** "**1st vehicle**" **ACTIVATES** the down loop. After accepting the **second** UP command, arm will **remain RAISED** until 2nd vehicle **activates** down loop and so on, **ONE** vehicle at a time.

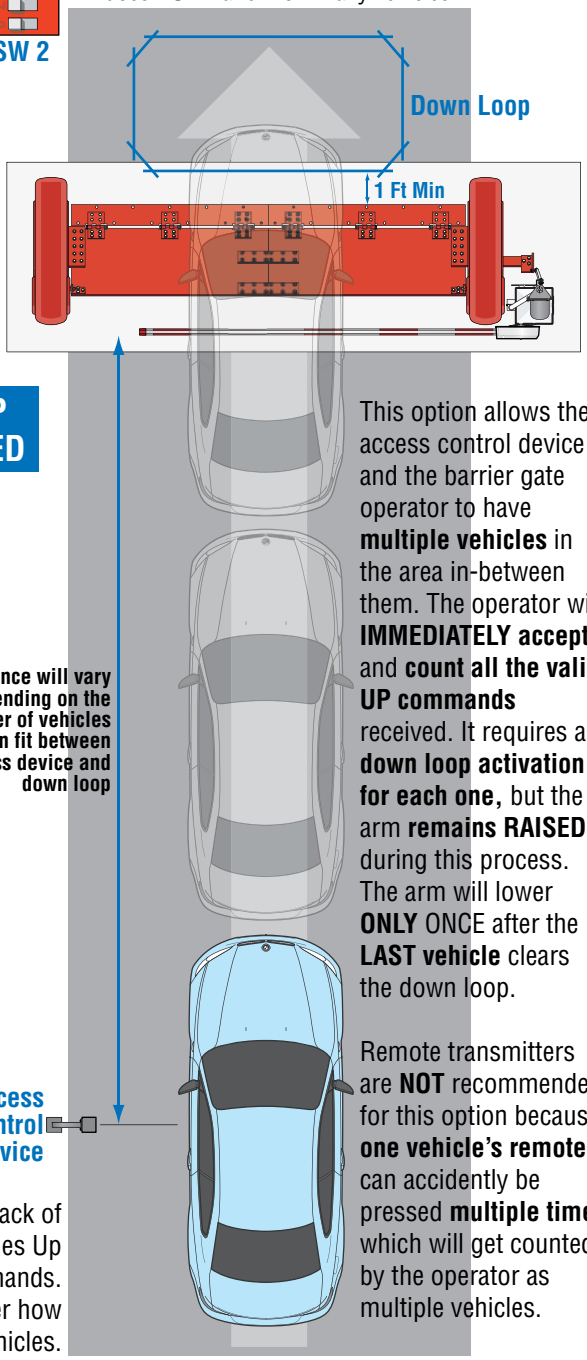
Option 1 **ONLY** controls **ONE vehicle at a time**. It **WILL NOT** keep track of **multiple** vehicles Up commands.

Remote transmitters **are** recommended for this option. If remote is accidently pressed multiple times, it will **ONLY** be counted **ONCE**.

Note:
If a valid **UP command** is given while the arm is lowering, the arm will instantly raise with either option.

OPTION 2: SW2 DIP-Switch 3 ON

MULTIPLE vehicles will fit **BETWEEN** the access control device and the down loop. It does **NOT** matter how many vehicles.



DOWN LOOP MUST BE USED

This option allows the access control device and the barrier gate operator to have **multiple vehicles** in the area in-between them. The operator will **IMMEDIATELY accept** and **count all the valid UP commands** received. It requires a **down loop activation for each one,** but the arm **remains RAISED** during this process. The arm will lower **ONLY** ONCE after the **LAST vehicle** clears the down loop.

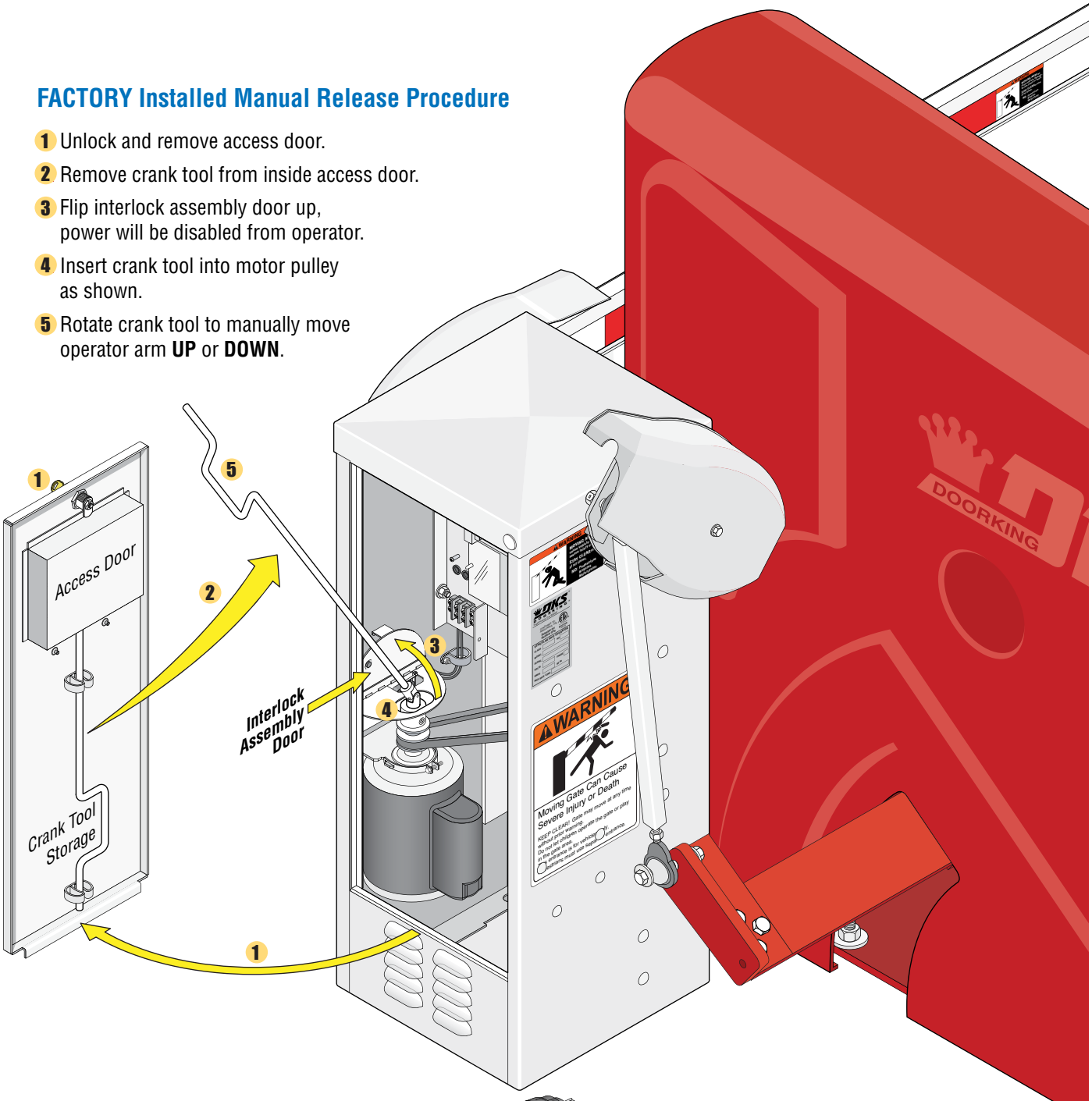
Remote transmitters are **NOT** recommended for this option because **one vehicle's remote** can accidently be pressed **multiple times** which will get counted by the operator as multiple vehicles.

Option 2 **WILL** keep track of **multiple** vehicles Up commands. It does **NOT** matter how many vehicles.

SECTION 6 - MANUAL RELEASE OPTIONS

FACTORY Installed Manual Release Procedure

1. Unlock and remove access door.
2. Remove crank tool from inside access door.
3. Flip interlock assembly door up, power will be disabled from operator.
4. Insert crank tool into motor pulley as shown.
5. Rotate crank tool to manually move operator arm **UP** or **DOWN**.



A **Cordless Drill** can be used to manually crank the arm and wedge.

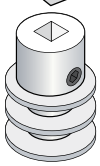
BE CAREFUL if using a cordless drill.

Take it slow, **damage could occur**. DoorKing does **NOT** recommend using a cordless drill because of damage that **could** occur.

Hardware **NOT** provided.

At least a **12" Drill Extension** is needed.

3/8" Male Universal Joint Socket Adapter is needed.



3/8" Female Socket on top of **Operator's Double Motor Pulley**.

1625-065-R-5-26

Installation Manual

1625 Wedge Barrier

Surface Mount Vehicular Wedge Barrier System

Use this manual for circuit board 1601-010 Revision AK or higher.

1625-065-R-5-26

The 1625 wedge barrier is NOT a stand-alone product.
It MUST be used with a 1602-590 Barrier Gate Operator (sold separately).

WARNING pre-stressed concrete may be used in multi-level parking garages. Cutting a tensioned cable, or tendon, can endanger the contractor and compromise the structural integrity of the floor. Contact the building structural engineer for specific instructions and information BEFORE drilling or saw cutting into the floor.

INSTALLATION AND USE OF THE WEDGE BARRIER IN AREAS SUBJECT TO FREEZING WEATHER WITH POTENTIAL FOR SNOW AND ICE ACCUMULATION IS NOT RECOMMENDED.

THIS PRODUCT IS TO BE INSTALLED AND SERVICED BY A TRAINED GATE/DOOR SYSTEMS TECHNICIAN ONLY.
Visit **www.doorking.com/dealer-locator** to find a professional installing and servicing dealer in your area.

www.doorking.com

The 1625 wedge barrier is not a stand-alone product. It must be used with a 1602-590 Barrier Gate Operator (sold separately). The 1625 is crash rated (ASTM F2656 PU-30-(P1, P2). It is intended to provide a more formidable barrier in conjunction with a standard barrier arm operator system. The 1625 is ideally used to control passenger vehicles and lightduty trucks.