

# Retrofill Door Assemblies for AKD-5, AKD-6, AKD-8 and AKD-10

New doors can be ordered for ABB Switchgear based on Switchgear type, Legacy Breaker type being replaced, and door size. Doors are available with & without cutouts for accommodating original lamps and ammeters.

## Table of Contents

Related Publications .....	2
Doors, Retrofit Ordering and Replacement .....	3
Danger .....	3
AKD-5, AK25 Retrofit Door .....	4
20-Inch, 22-Inch, 27-Inch Door (AKD5, AK25) .....	4,6 7, 8
AKD-5, AK50, AK-75, AK-100 Retrofit Door .....	9,10,11
Replace AKD5 Door .....	12
Modify Existing Door .....	12,13, 14
AKD-6, AKR-75, AKR-100 Retrofit Door .....	15, 16, 17
Replacing AKD6 Doors .....	18
Modifying Existing Doors .....	18
AKD-8 / 10, AKR30S, AKR30H, AKR 30/50, AKR-75, AKRH-75,AKRH-100, AKR-125 Retrofit Door Assemblies .....	19,20,21
Replacing AKD8/10 Door Assembly .....	22
Modifying Existing Door .....	23
Retrofill Escutcheon Kit—Spare .....	25
Notes .....	26

## Related Publications

Related Publications	Publication Number
Brochure	DEA-532
Snapshot	DEE-543
Installation Manual AKD8	DEH-41549
Installation Manual AKD10	DEH-41550
Installation Manual AKD6	DEH-41548
Installation Manual AKD5	DEH-41547
Accessory: Door Interlock (Door Interlock Kit)	DEH-41529
Accessory Retrofill Doors Assembly	DEH-41563
Accessory: Position Switch Plate & Position Switch Assembly & Wiring (Position Switch Kit)	DEH-41530
Accessory: Neutral Rogowski CT Disconnect (Neutral Assemblies)	DEH-41531
Accessory: Programmer Disconnects	DEH-41532
Accessory: Finger Clusters (Cluster Assemblies)	DEH-41533
Accessory: Secondary Disconnects	DEH-41534
FAQ	DEQ-171
Application Guide	DET-753
Guideform Spec	DET-754
Spare/Renewal Parts Guide	DET-755

## Doors, Retrofit Ordering and Replacement

### Danger



- Turn off all power to switchgear. Tagout and lockout main source, up-stream or main breaker.
- Failure to comply with these instructions will result in death or serious injury from severe burns caused by arc flashing that has exceedingly high temperatures.
- Always wear personal protection equipment according to OSHA standards and appropriate to the severity of potential burns.

- Ensure only qualified personnel install, operate, service, and maintain all electrical equipment.

It takes about 5 to 15 minutes to install the retrofill door(s) in the switchgear, but does not include the 20-minute timing claimed for the roll-in replacement.

AKD-5, AK25 Retrofit Door

Retrofit doors for the can be ordered as required, depending on door size and if you want door cutouts for accommodating lamps and ammeters (Figure 1 and Figure 2). In this section, the particular wireframe figures feature different door sizes. Table 1 lets you specify a door type. It can be ordered by catalogue number by referring to the last column in the table. Some doors allow cutouts for lamps and/or ammeters; some do not. All the doors in Table 1 are right-hand doors.

20-Inch Door (AKD5, AK25)

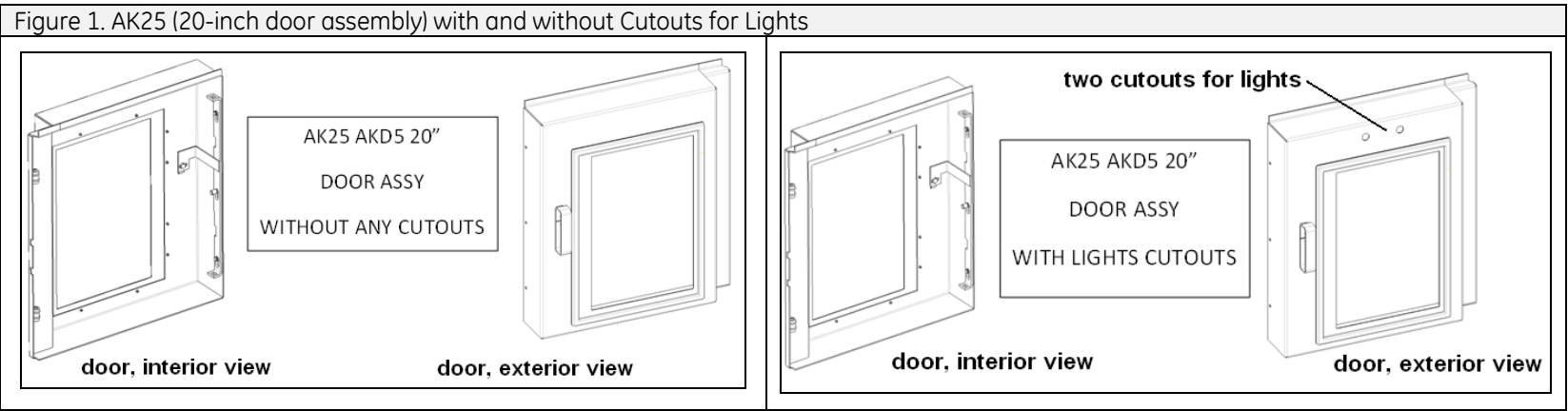
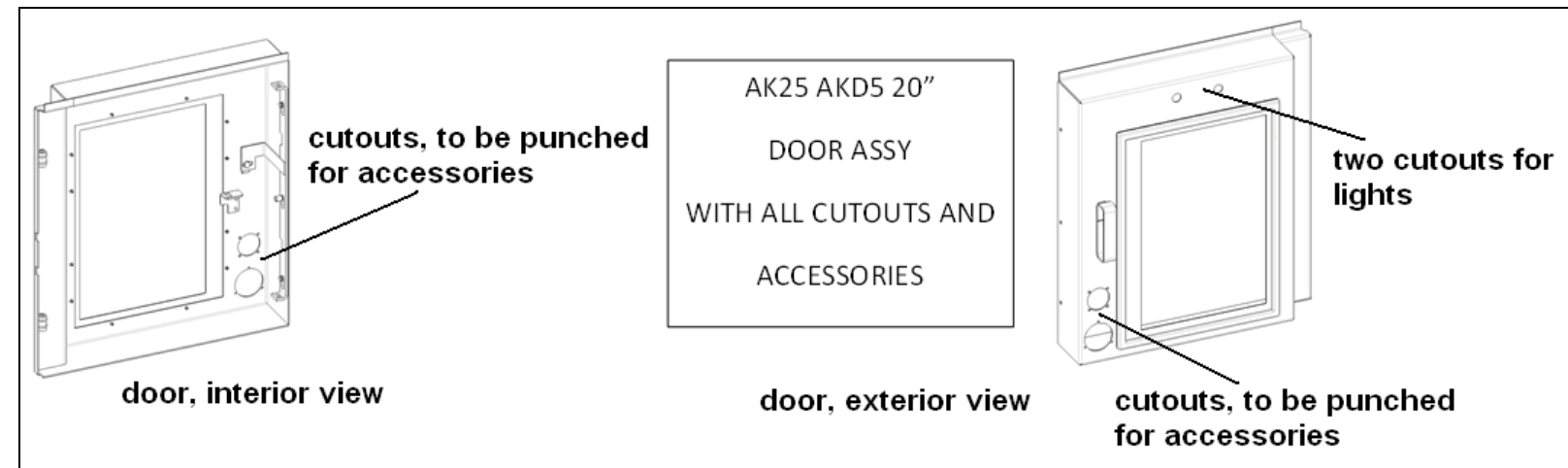


Figure 2. AK25 (20-inch door assembly) with Cutouts for Lights and Accessories



## 22-Inch Door (AKD5, AK25)

Figure 3 displays 22-inch door assemblies, with and without cutouts for lights. The next figure, Figure 4 displays cutouts for both lights and accessories.

Figure 3. AK25 (22-inch door assembly) with and without Cutouts for Lights

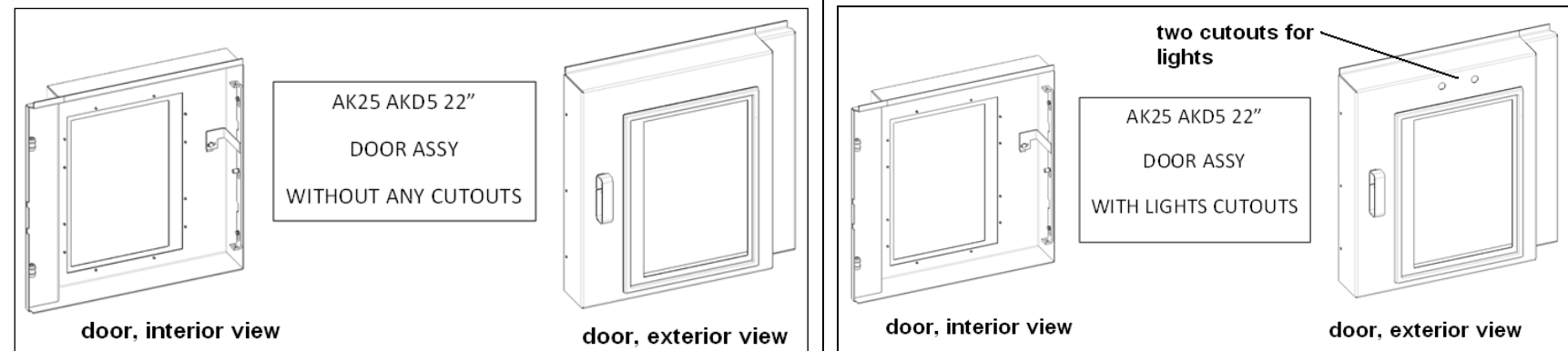
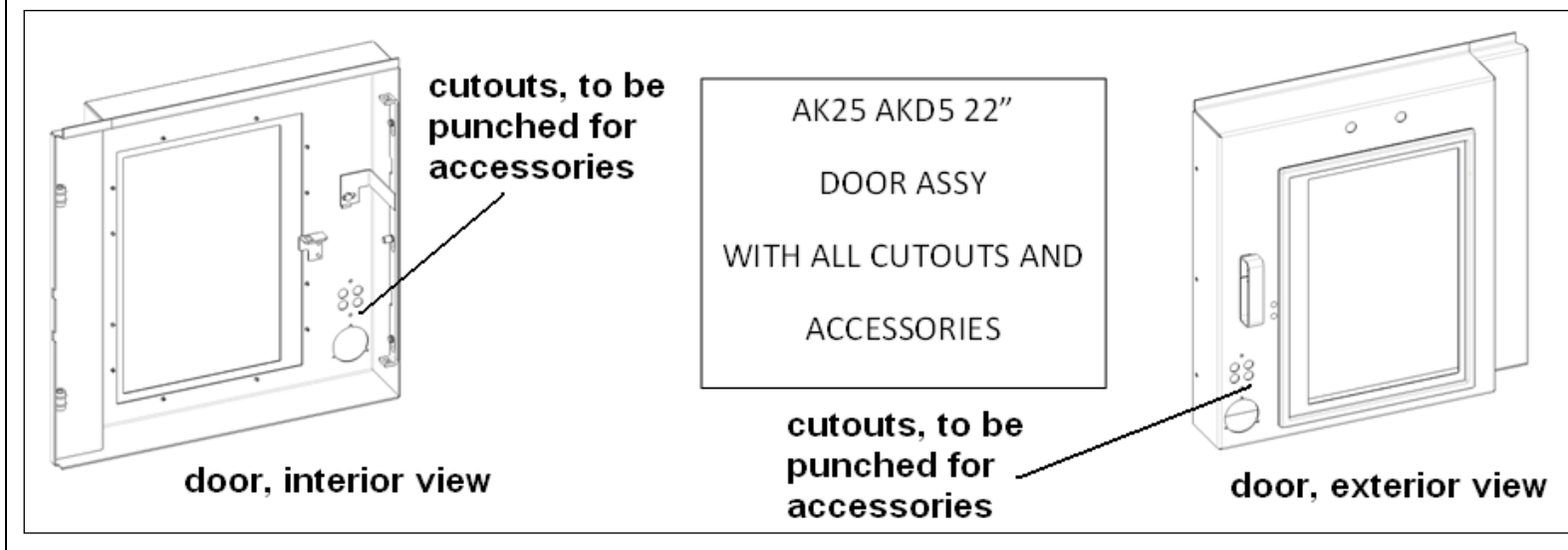


Figure 4. AK25 (22-inch door assembly) with Cutouts for Lights and Accessories



## 27-Inch Door (AKD5, AK25)

Figure 5 displays 27-inch door assemblies, with and without cutouts for lights. The next figure, Figure 6, displays cutouts for both lights and accessories.

Figure 5. AK25 (27-inch door assembly) with and without Cutouts for Lights

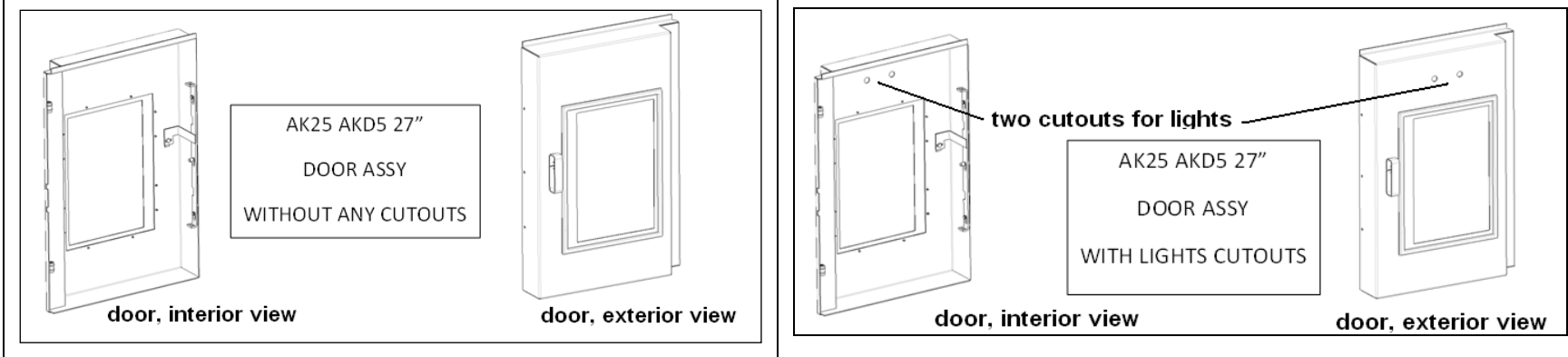


Figure 6. AK25 (27-inch door assembly) with Cutouts for Lights and Accessories

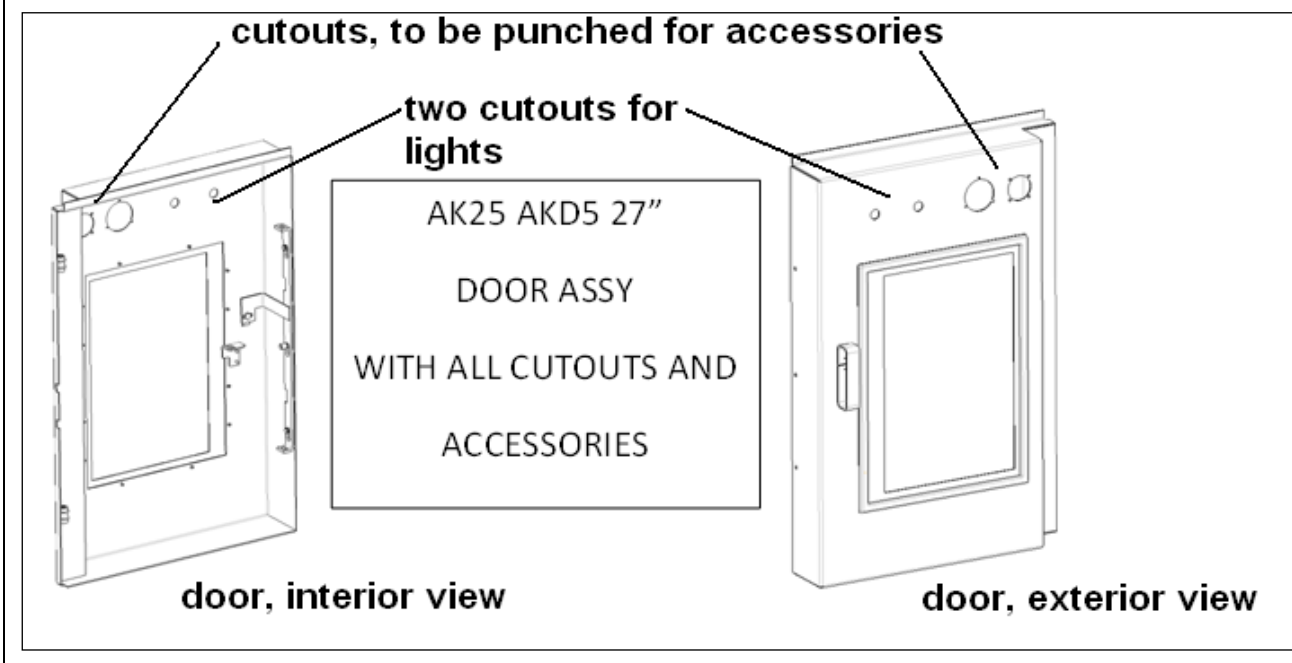


Table 1. Replacement Door Categories (TOP LEVEL)

Description	Breaker Type	LVS	Cutout Options			Available Stack Width (in inches)					Type	Door Width (in inches)	Door Bump-out (in inches)	CAT #
			Fascia Cutout Only	Plus Lamps	Plus Lamps & Ammeter	20	22	27	30	38				
AK25 DOOR ASSY	AK25	AKD5			YES			YES	YES	YES	RH	27	YES—3.7	10106255G1
AK25 DOOR ASSY	AK25	AKD5		YES		YES					RH	20	YES—3.7	10107429G1
AK25 DOOR ASSY	AK25	AKD5			YES		YES				RH	22	YES—3.7	10108047G1
AK25 DOOR ASSY	AK25	AKD5	YES			YES					RH	20	YES—3.7	10108345G1
AK25 DOOR ASSY	AK25	AKD5		YES			YES				RH	22	YES—3.7	10108347G1
AK25 DOOR ASSY	AK25	AKD5	YES				YES				RH	22	YES—3.7	10108376G1
AK25 DOOR ASSY	AK25	AKD5		YES				YES	YES	YES	RH	27	YES—3.7	10108380G1
AK25 DOOR ASSY	AK25	AKD5	YES					YES	YES	YES	RH	27	YES—3.7	10108383G1

## 27-Inch Door, 30-Inch Door, 38-Inch Door (AKD5, AK50 / AKT50 AK-75, AK-100)

Retrofit doors for the can be ordered as required, depending on door size and if you want door cutouts for accommodating lamps and ammeters (Figure 7 and Figure 8). In this section, the particular wireframe figures feature different door sizes. Table 2 lets you select a specific door type. It can be ordered by catalogue number by referring to the last column in the table. Two doors allow cutouts for lamps and/or ammeters; one does not allow any cutouts. All the doors in Table 2 are right-hand doors.

Figure 7. SHOWN (AK50 (27-inch door assembly) with and without Cutouts for Lights

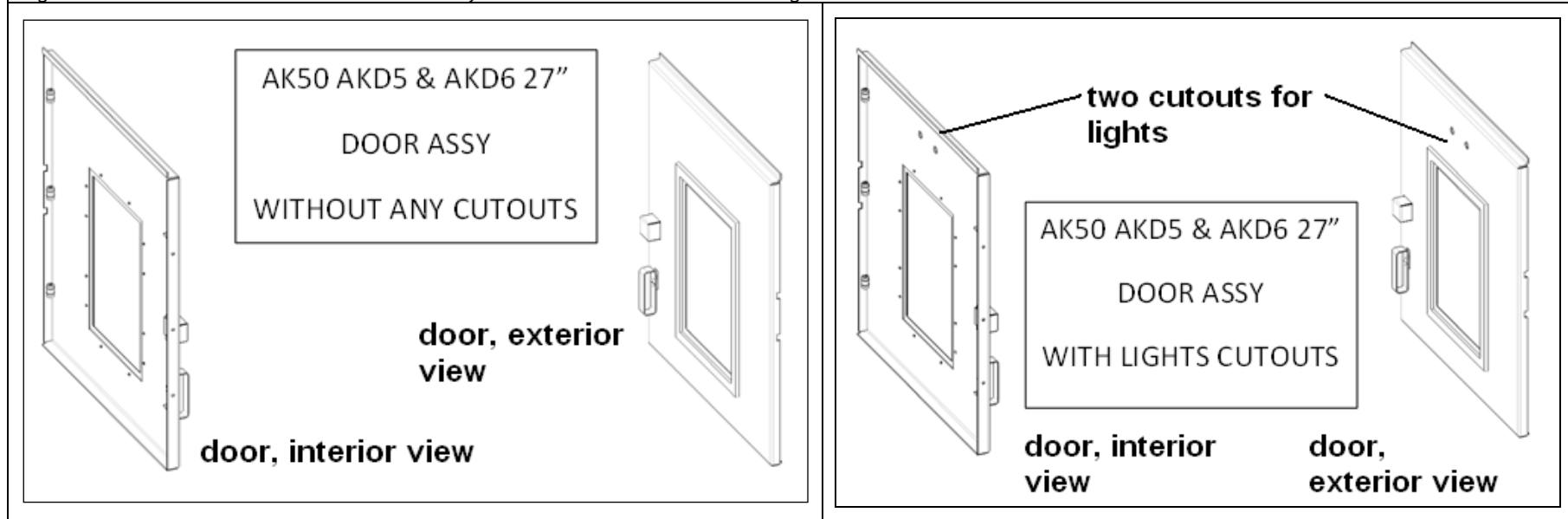
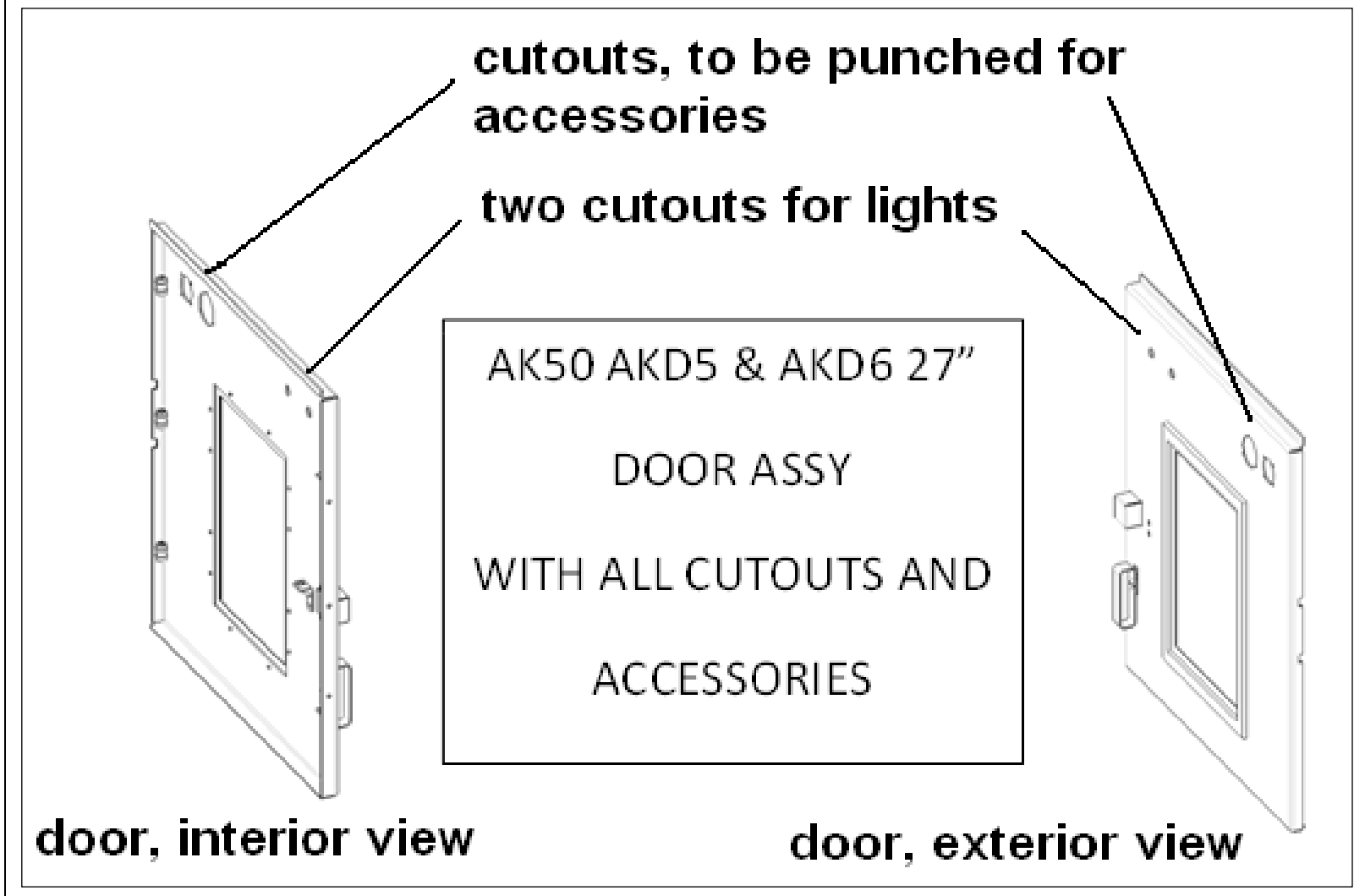


Figure 8. AK50 / AKT50 (27-inch door assembly) with Cutouts for Lights and Accessories



# Retrofill Door Assemblies/Accessories

DEH-41563

Table 2. Replacement Door Categories (TOP LEVEL)														
Description	Breaker Type	LVS	Cutout Options			Available Stack Width (in inches)					Type	Door Width (in inches)	Door Bump-out (in inches)	CAT #
			Fascia Cutout Only	Plus Lamps	Plus Lamps & Ammeter	20	22	27	30	38				
AK50 DOOR ASSY	AK50 AKT50	AKD 5			YES			YES	YES	YES	RH	27	No	10106248G1
AK50 DOOR ASSY	AK50 AKT50	AKD 5	YES					YES	YES	YES	RH	27	No	10108355G1
AK50 DOOR ASSY	AK50 AKT50	AKD 5		YES				YES	YES	YES	RH	27	No	10108363G1
AK75 DOOR ASSY	AK75	AKD 5	YES						YES		RH	30	No	10108355G2
AK75 DOOR ASSY	AK75	AKD 5		YES					YES		RH	30	No	10108355G4
AK75 DOOR ASSY	AK75	AKD 5			YES				YES		RH	30	No	10108355G6
AK100 DOOR ASSY	AK100	AKD 5	YES							YES	RH	38	No	10108355G3
AK100 DOOR ASSY	AK100	AKD 5		YES						YES	RH	38	No	10108355G4
AK100 DOOR ASSY	AK100	AKD 5			YES					YES	RH	38	No	10108355G7

## Replace AKD5 Door

Sequence of replacement of door assemblies will remain the same for all AKD5 type doors.

1. De-energize/switch off the LVS section that is to be retrofitted.
2. Open the compartment door that is to be retrofitted.
3. Rack out the existing legacy AK/AKR breaker from the LVS.
4. Keep the door open for accessing the door mounting hinges. These are placed on the right side wall of the moving frame in the LVS compartment.
5. The door hinge is mounted via 2/3-mounting pins that hold the door in place.
6. Lift the pin out of the hinge joint. This allows access for removing the old door from the LVS compartment.
7. Unpack the new door assembly and mount it on the door mounting hinges. These are located at the right side of the moving frame.
8. Replace the hinge pins and secure the joints.
9. Insert the new retrofitted EntelliGuard R Retrofill™ circuit breaker into the compartment and slide the breaker into the disconnected condition.
10. Close the new door and secure it to the compartment.
11. Rack-in the new retrofitted EntelliGuard R Retrofill™ in.

## Modify Existing Door

If customer doesn't want to buy a new door, the customer can modify the existing door:

1. Remove the legacy door assembly from the LVS section.
2. Modify the door cut out as per the new door cutout template.
3. Check the through-door racking with the new door assembly.

## AKD-6, AKR, AKR-75, AKR-100 Retrofit Door

Retrofit doors for the can be ordered as required, depending on door size and if you want door cutouts for accommodating lamps and ammeters. Table 3 lets you select a specific door type (Figure 9 and Figure 10). In this section, the particular wireframe figures different door

sizes. It can be ordered by catalogue number by referring to the last column in the table. Some doors allow cutouts for lamps and/or ammeters; some do not. All the doors in [Table 3](#) are right-hand doors.

## 22-Inch, 30-Inch Door (AKD6)

Figure 9. AKD6 SHOWN (22-inch door assembly) with and without Cutouts for Lights

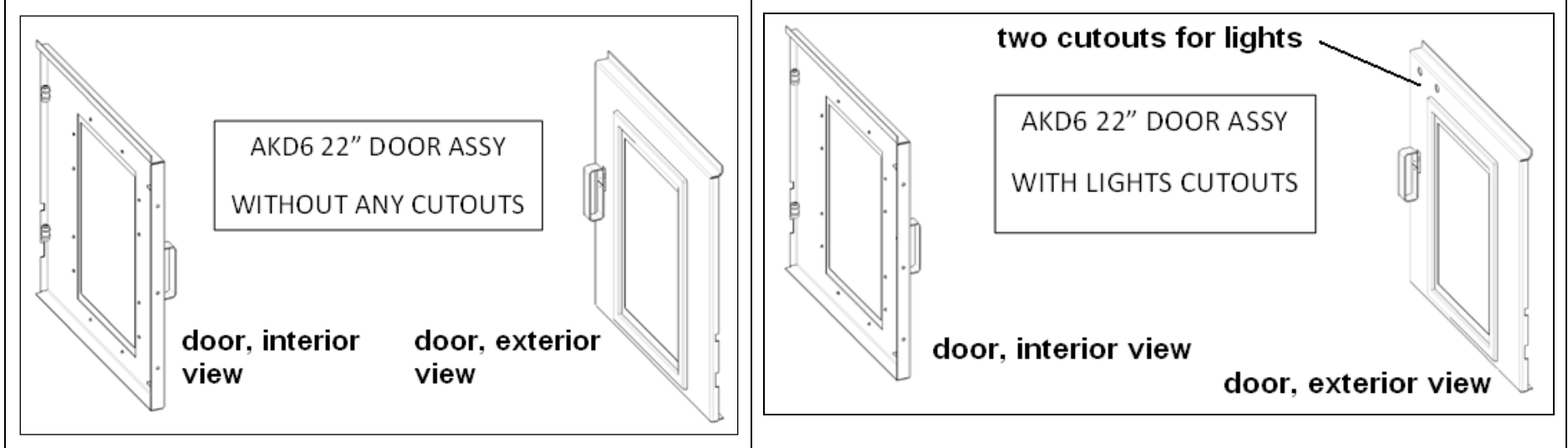
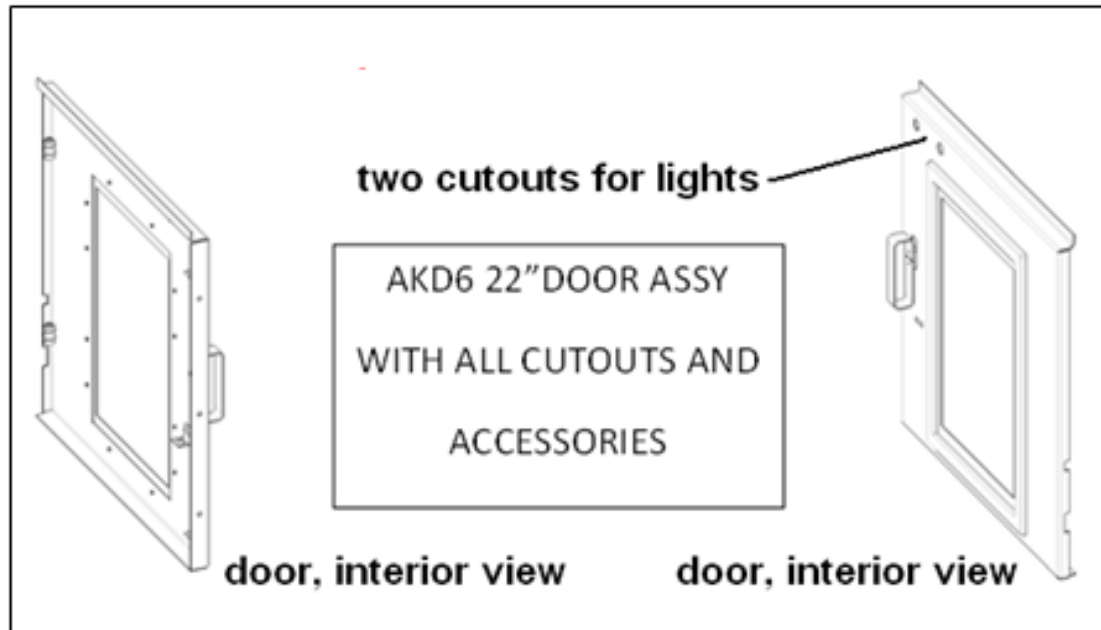


Figure 10. AKD6 SHOWN (22-inch door assembly) with Cutouts for Lights and Accessories



## 27-Inch, 30-Inch Door Sizes (AKD6)

For the AKD6, Figure 11 displays the 27-inch door assembly with and without cutouts for lights. Figure 12 shows cutouts or punch-outs for the same door assembly.

Figure 11. AKD6 SHOWN (27-inch door assembly) with and without Cutouts for Lights

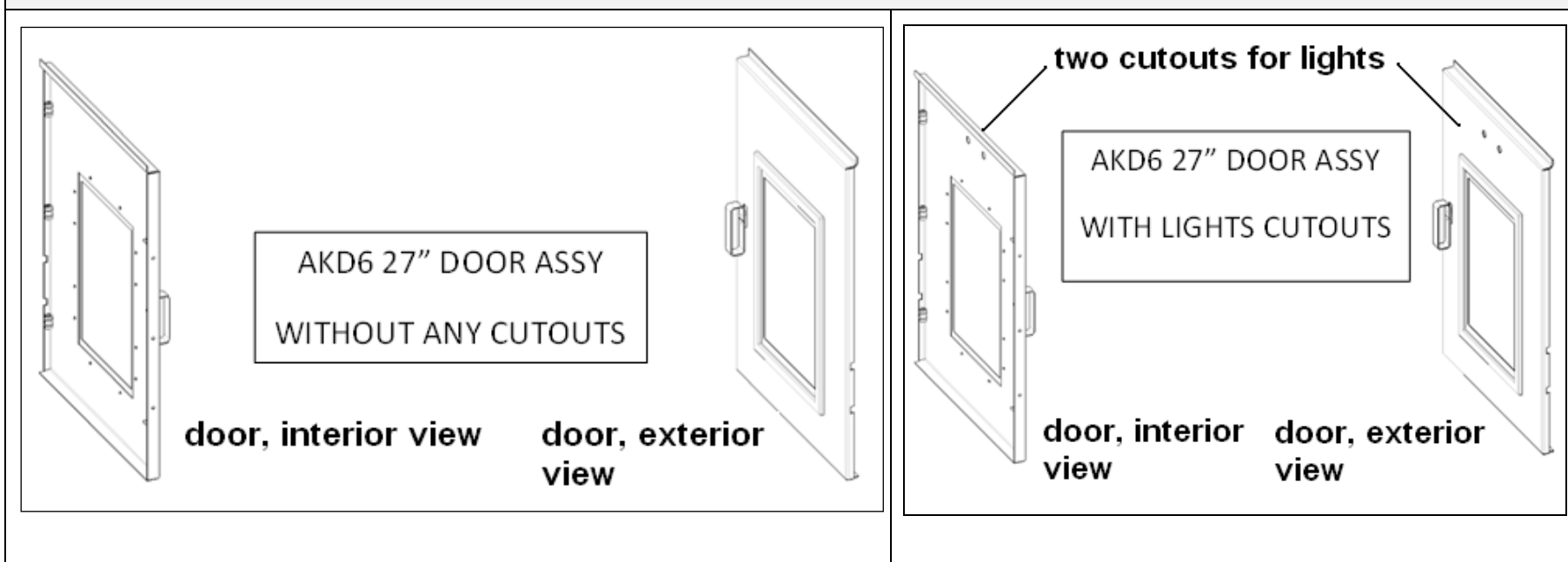


Figure 12. AKD6 SHOWN (27-inch door assembly with Cutouts for Lights and Accessories)

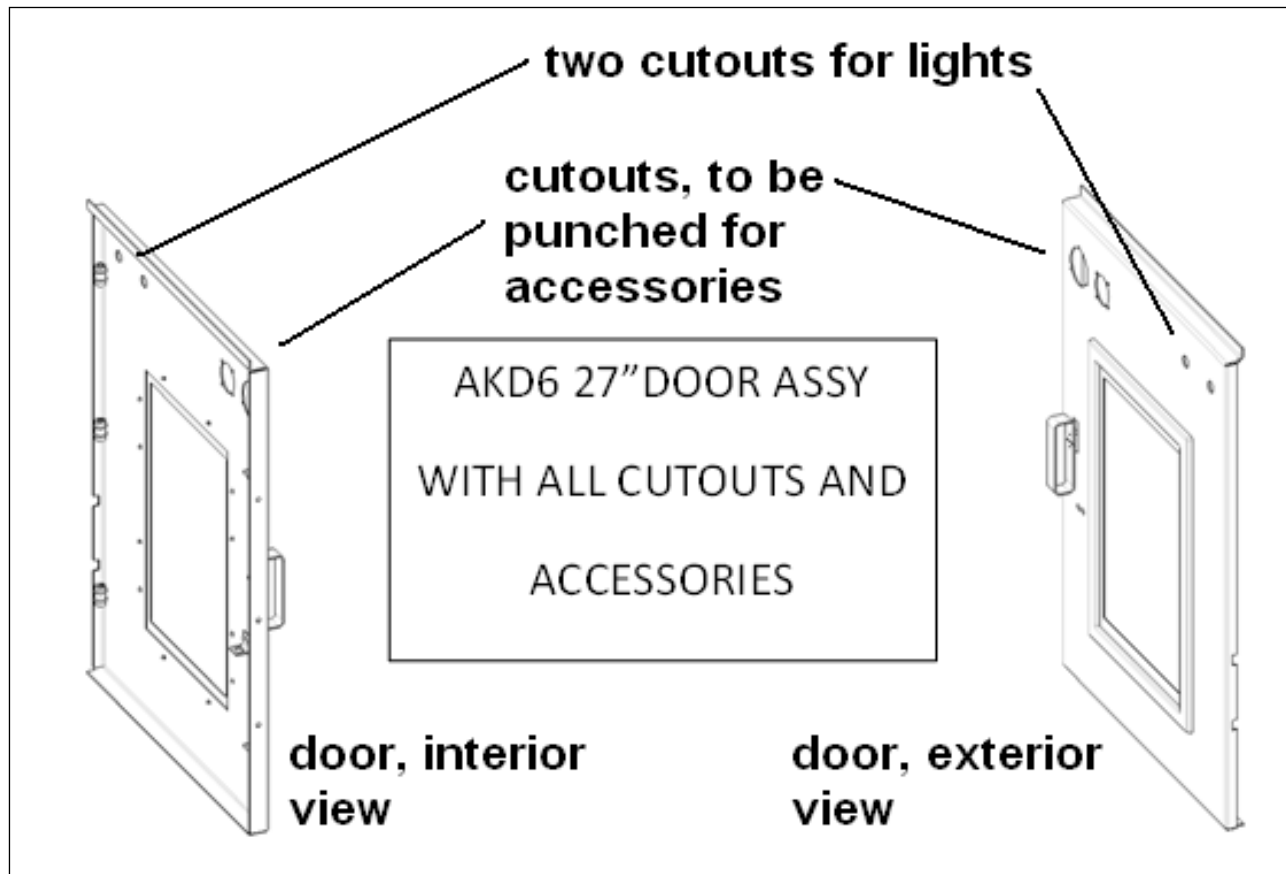


Table 3. Replacement Door Categories (TOP LEVEL)

Description	Legacy Breaker Type	LV Swgr	Cutout Options			Available Stack Width (in inches)					Type	Door Width (in inches)	Door Bump-out (in inches)	CAT #
			Fascia Cutout Only	Plus Lamps	Plus Lamps & Ammeter	20	22	27	30	38				
AKD6 DOOR ASSY	AKR-30/50/T50	AKD6		YES			YES				RH	22	No	10107469G1
AKD6 DOOR ASSY	AKR-30/50/T50	AKD6			YES		YES				RH	22	No	10108074G1
AKD6 DOOR ASSY	AKR-30/50/T50	AKD6	YES				YES				RH	22	No	10108439G1
AKD6 DOOR ASSY	AKR-30/50/T50	AKD6			YES			YES	YES	YES	RH	27	No	10108447G1
AKD6 DOOR ASSY	AKR-30/50/T50	AKD6	YES					YES	YES	YES	RH	27	No	10108462G1
AKD6 DOOR ASSY	AKR-30/50/T50	AKD6		YES				YES	YES	YES	RH	27	No	10108469G1
AKD6 DOOR ASSY	AKR75 AKR100	AKD6	YES						YES		RH	30	No	10108355G2
AKD6 DOOR ASSY	AKR75 AKR100	AKD6		YES					YES		RH	30	No	10108355G4
AKD6 DOOR ASSY	AKR75 AKR100	AKD6			YES				YES		RH	30	No	10108355G6

## Replacing AKD6 Door Assembly

Sequence of replacement of door assemblies will remain the same for all AKD6 type doors.

1. De-energize/switch off the LVS section that is to be retrofitted.
2. Open the compartment door that is to be retrofitted.
3. Rack out the existing legacy AK/AKR breaker from the LVS.
4. Keep the door open for accessing the door mounting hinges. These are placed on the right side wall of the moving frame in the LVS compartment.
5. The door hinge is mounted via 2/3-mounting pins that hold the door in place. [What does the "2/3" mean: size, inches, type, etc.?] [How many pins are there per door?]
6. Lift the pin out of the hinge joint. This will provide access for removing the old door from the LVS compartment.
7. Unpack the new door assembly and mount it on the door mounting hinges. These are placed [found?] [or are they already installed there?] at the right side of the moving frame.
8. Replace the hinge pins and secure the joints.
9. Insert the new retrofitted EntelliGuard R Retrofill™ circuit breaker into the compartment and slide the breaker into the disconnected condition.
10. Close the new door and secure it to the compartment.
11. Rack-in the new retrofitted EntelliGuard R Retrofill™ in. [OK, what do I do with the old door? Discard it—salvage it for something else?]

## Modifying Existing Door

If customer doesn't want to buy a new door, the customer can modify the existing door:

1. Remove the legacy door assembly from the LVS section.
2. Modify the door cut out as per the new door cutout template.
3. Check the through-door racking with the new door assembly.

AKD-8 / 10, AKR30S, AKR30H, AKR 30/50/, AKR-75, AKRH-75, AKRH-100, AKR-125 Retrofit Door Assemblies

Retrofit doors can be ordered as required, depending on door size and if you want door cutouts for accommodating lamps and ammeters (Figure 13, Figure 14, and Figure 15). Table 4 lets you select a specific door type. It can be ordered by catalogue number by referring to the last column in the table. Some doors allow cutouts for lamps and/or ammeters; some do not. All the doors in Table 4 are right-hand doors.

22-Inch, 30-Inch, 38-Inch RH AKD8/10

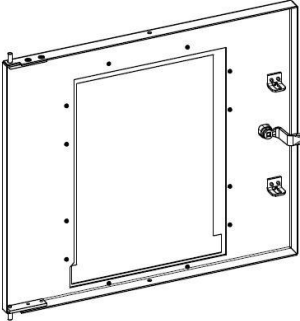
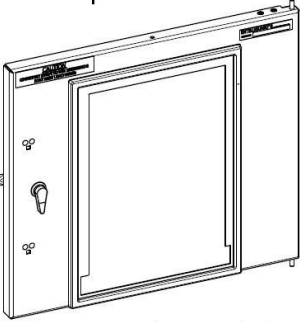
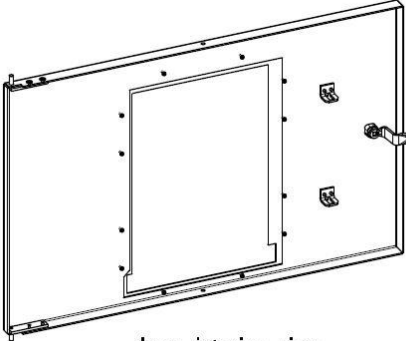
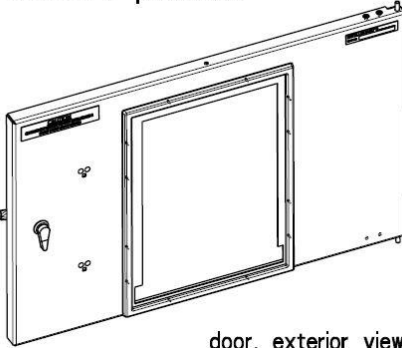
Figure 13. AKD8/10 SHOWN (22-inch door assembly) see 10106239G2 for BOM		Figure 14. AKD8/10 SHOWN (30-inch door assembly) See 10108088G1 for BOM	
	<p>AKD8/10 DOOR ASSY no cutouts or punch-outs</p> 		<p>AKD8/10 30" DOOR ASSY no cutouts or punch-outs</p> 
door, interior view	door, exterior view	door, interior view	door, exterior view

Figure 15. AKD8 AKR30S (30-inch door assembly)

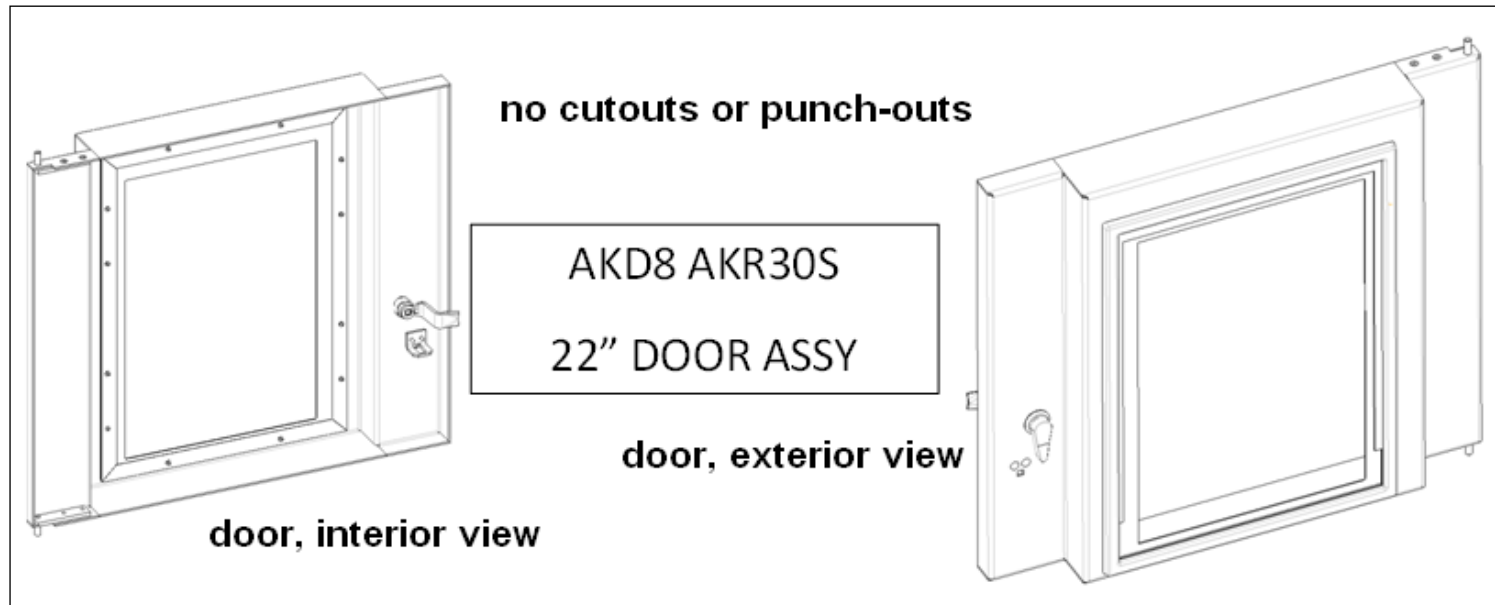


Table 4. Replacement Door Categories (TOP LEVEL)

Description	Legacy Breaker Type	LV Swgr.	Cutout Options	Available Stack Width (in inches)			Type	Door Width (inches)	Door Bump-out (inches)	CAT #
			Fascia Cutout Only (includes door interlock bracket)	22	30	38				
22" DOOR AKR30S	AKR-30S	AKD-8	YES	YES			RH	22	YES—2.95	10108089G1
30" DOOR AKR30S	AKR-30S	AKD-8	YES		YES		RH	30	YES—2.95	10108090G1
22" DOOR ASSY, AKD-8 & AKD-10	AKR-30/50/T50 WP-08/16/20	AKD-8 & AKD-10	YES	YES			RH	22	G1-YES 1" G2-NO	10106239G1/2*
30" DOOR ASSY, AKD-8 & AKD-10	AKR-30/50/T50 WP-08/16/20	AKD-8 & AKD-10	YES		YES		RH	30	NO	10108088G1
30" DOOR ASSY, AKD-8 ONLY	AKR-75/100	AKD-8	YES		YES		RH	30	NO	10108088G2
38" DOOR ASSY, AKD-8 ONLY	AKR-125	AKD-8	YES			YES	RH	38	NO	10108088G4
30" DOOR ASSY, AKD-10 ONLY	WP-32 & WP-40	AKD-10	YES		YES		RH	30	NO	10108088G3
38" DOOR ASSY, AKD-10 ONLY	WP-50	AKD-10	YES			YES	RH	38	NO	10108088G5

+Bump-out doors for AKR-30S Retrofills only

\*G1 -angled bump-out for early Model 1 Retrofills and G2 - later Model 1's & Model 2 Retrofills for AKR-30/50/T50, and all small frame WavePro.

## Replacing AKD-8/10 Door Assembly

Figure 16A & B are examples of new retrofill doors for the newly installed retrofill breakers. (Note that the figure16A shows that a motor can power the racking-in of the retrofill breaker.)

Figure 16A. Remote Racker Assembled to Retrofill in AKD-8



Figure 17B. New Door Assembled on AKD-10— 38"-Door, 5000A



Sequence of replacement of door assemblies will remain the same for all AKD8 /10 type doors.

1. De-energize/switch off the LVS section that is to be retrofitted.
2. Open the compartment door that is to be retrofitted.
3. Rack out the existing legacy AK/AKR breaker from the LVS
4. Keep the door open for accessing the door mounting pads placed on the right side wall in the LVS compartment.

5. Loosen the screws holding the mounting pads to the compartment frame.
6. Note that this will provide access for removing the old door from the LVS compartment.
7. Unpack the new door assembly and mount it on the compartment and secure via placing the pads and tightening the screws.
8. Insert the new retrofitted EntelliGuard R Retrofill™ circuit breaker into the compartment and slide the breaker into the disconnected condition.
9. Close the new door and secure it to the compartment.
10. Rack-in the new retrofitted EntelliGuard R Retrofill™ circuit breaker in.

## Modifying Existing Door

If customer doesn't want to buy a new door, the customer can modify the existing door:

1. Remove the legacy door assembly from the LVS section.
2. Modify the door cut out as per the new door cutout template.
3. Check the through-door racking with the new door assembly.

# Retrofill Door Assemblies/Accessories

DEH-41563

Figure 18 shows a legacy breaker in the cabinet with the old doors still attached. Figure 19 shows the retrofill breaker, racked in a compartment, waiting for a retrofill door to be installed. The other three compartment doors have the retrofill doors already, but no retrofill breakers yet.

Figure 18. Legacy AK with Old Door



Figure 19. AKR with New Door



## Retrofill Escutcheon Kit—Spare

Table 5 displays some kit options.

Description	Breaker Type	LV Swgr	Fascia Cutout Only			Available Stack Width (in inches)					CAT #
			No Cutouts	Plus Lamps	Plus Lamps & Ammeter	20	22	27	30	38	
Retrofill Escutcheon Kit—Spare	AK-25	AKD-5				YES	YES	YES	YES	YES	10109607G1
	AKR	AKD-6				N/A	YES	YES	YES	YES	
	AKR	AKD-8 / 10 AKR-30S				N/A	YES	YES	YES	YES	
	AKR	AKD-8 / 10 Regular				N/A	YES	YES	YES	YES	
Escutcheon Kit	AK-50	AKD-5				N/A	N/A	YES	YES	YES	10102167G1
Escutcheon Kit	AK & AKR-75/100 Only	AKD-5 & AKD-6				N/A	N/A	N/A	YES	YES	10102167G2

## Notes

These instructions do not cover all details or variations in equipment nor do they provide for every possible contingency that may be met in connection with installation, operation, or maintenance. Should further information be desired or should particular problems arise that are not covered sufficiently for the purchaser's purposes, the matter should be referred to the ABB Inc.

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