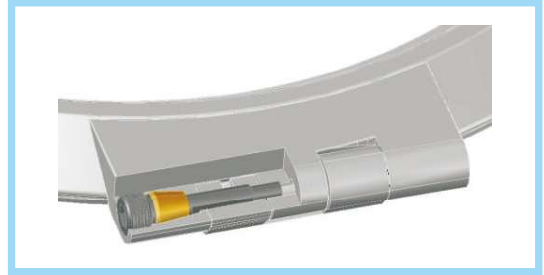


FRICATIVE HINGE DECK HATCH

FRICATIVE HINGE PATENT IN MANY COUNTRIES



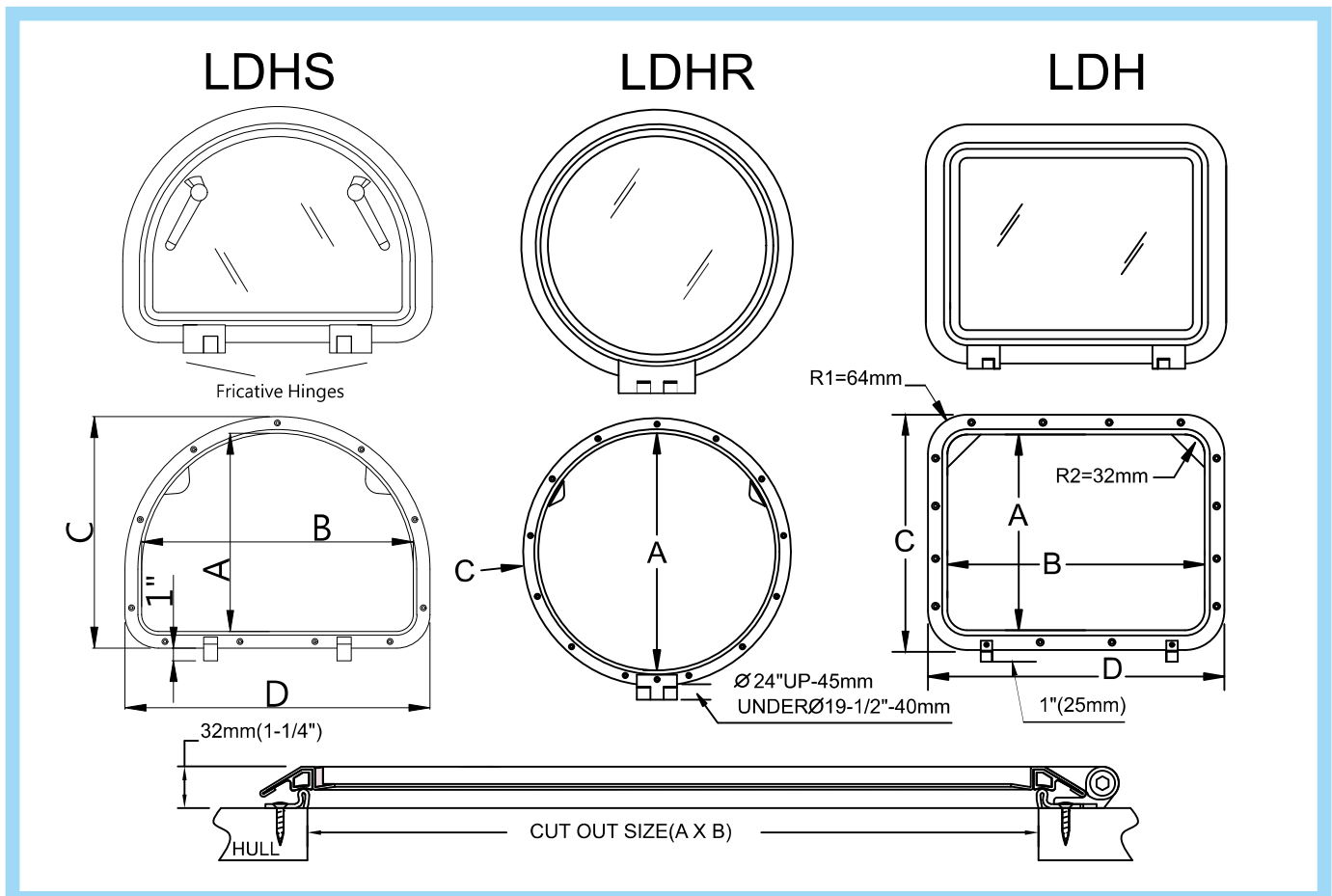
New patented design. Unique S/S 316 hinge.
Hatch can be opened at any degree without hatch arm support.
Easy open or close, water-tight, elegance & durability.



Replace or adjust hatch hinge shaft:
First, pls use 1/8" spanner loosen two set screw inside hinge three turn.
Then use 10mm spanner to adjust both end of hinge patented screw.
After retighten to avoid shake.

FEATURES

- **CE Approved. According to ISO/DIS 12216 Deck Hatches are approved for Area II, III, and IV, designs for craft type "any" .**
- No bolt holes showing, when hatch is closed.
- 316 stainless steel frames, hatch, and hinges. Hand polished and electro-polished to protect against corrosion. Frames and hatches are made from machine rolled stock to ensure strength and low weight.
- Tough, glare resistant grey acrylic tops.
- Gaskets are oil resistant Sanplane.
- Off-white powder coating are available.



● HATCHES SHOULD BE FITTED TO A FLAT SURFACE WITH A MAXIMUM TOLERANCE OF ± 2 MM.

LDHR



◎ ANY SIZE FOR "A" 16½ - 31"

INSIDE OPENING

PART No.	SIZE	CUTOUT SIZE		OVERALL SIZE		ACRYLIC THICKNESS	WEIGHT
		A	A	C	C		
LDHR-40-I	16½ 419	16½	419	19	483	½ 12	6.5KG
LDHR-50-I	19½ 495	19½	495	22	559	½ 12	7.8KG
LDHR-60-I	24 610	24	610	26½	674	½ 12	10.4KG
LDHR-70-I	31 788	31	788	33½	852	½ 12	15.8KG

IN/OUTSIDE OPENING

PART No.	SIZE	CUTOUT SIZE		OVERALL SIZE		ACRYLIC THICKNESS	WEIGHT
		A	A	C	C		
LDHR-40-O	16½ 419	16½	419	19	483	½ 12	6.6KG
LDHR-50-O	19½ 495	19½	495	22	559	½ 12	7.9KG
LDHR-60-O	24 610	24	610	26½	674	½ 12	10.6KG
LDHR-70-O	31 788	31	788	33½	852	½ 12	16.0KG

IN/MM

IN/MM

LDHS



◎ ANY SIZE FOR "B" 16½ - 31"

INSIDE OPENING

PART No.	SIZE	A x B		C x D		ACRYLIC THICKNESS	WEIGHT
		A	B	C	D		
LDHS-50-I	20½ 518mm	378mm	518mm	442mm	582mm	12mm	7KG
LDHS-60-I	21 530mm	430mm	530mm	494mm	594mm	12mm	8KG

IN/MM

IN/OUTSIDE OPENING

PART No.	SIZE	CUTOUT SIZE		OVERALL SIZE		ACRYLIC THICKNESS	WEIGHT
		A	B	C	D		
LDHS-50-O	20½ 518mm	378mm	518mm	442mm	582mm	12mm	7.5KG
LDHS-60-O	21 530mm	430mm	530mm	494mm	594mm	12mm	9.5KG

IN/MM

LDH-N



◎ ANY SIZE ARE AVAILABLE, IF R=1¼" (32MM) REMAIN UNCHANGED

INSIDE OPENING

PART No.	SIZE	CUTOUT SIZE				OVERALL SIZE				ACRYLIC THICKNESS	WEIGHT		
		A	B	A	B	C	D	C	D				
LDH-N08-I	8½ x 13¾	206	349	8½	206	13¾	349	10⅝	270	16¼	413	½ 12	4.5KG
LDH-N10-I	10 x 10	254	254	10	254	10	254	12½	318	12½	318	½ 12	4.2KG
LDH-N20-I	12½ x 17½	318	444	12½	318	17½	444	15	382	20	508	½ 12	7.0KG
LDH-N30-I	14½ x 19½	369	495	14½	369	19½	495	17	433	22	559	½ 12	8.0KG
LDH-N40-I	16½ x 16½	419	419	16½	419	16½	419	19	483	19	483	½ 12	7.9KG
LDH-N50-I	19½ x 19½	495	495	19½	495	19½	495	22	559	22	559	½ 12	10KG
LDH-N60-I	24 x 24	610	610	24	610	24	610	26½	674	26½	674	½ 12	12.8KG
LDH-N70-I	31 x 31	788	788	31	788	31	788	33½	852	33½	852	½ 12	19KG

IN/MM

IN/OUTSIDE OPENING

PART No.	SIZE	CUTOUT SIZE				OVERALL SIZE				ACRYLIC THICKNESS	WEIGHT		
		A	B	A	B	C	D	C	D				
LDH-N08-O	8½ x 13¾	206	349	8½	206	13¾	349	10⅝	270	16¼	413	½ 12	4.6KG
LDH-N10-O	10 x 10	254	254	10	254	10	254	12½	318	12½	318	½ 12	4.3KG
LDH-N20-O	12½ x 17½	318	444	12½	318	17½	444	15	382	20	508	½ 12	7.1KG
LDH-N30-O	14½ x 19½	369	495	14½	369	19½	495	17	433	22	559	½ 12	8.5KG
LDH-N40-O	16½ x 16½	419	419	16½	419	16½	419	19	483	19	483	½ 12	8.3KG
LDH-N50-O	19½ x 19½	495	495	19½	495	19½	495	22	559	22	559	½ 12	10.4KG
LDH-N60-O	24 x 24	610	610	24	610	24	610	26½	674	26½	674	½ 12	13.0KG
LDH-N70-O	31 x 31	788	788	31	788	31	788	33½	852	33½	852	½ 12	19.2KG

IN/MM

LOW PROFILE DECK HATCH

FEATURES Patent no. 111103

- **CE Approved. According to ISO/DIS 12216 Deck Hatches are approved for Area II, III, and IV, designs for craft type "any".**
- Low profile & elegant appearance.
- No bolt holes showing, when hatch is closed.
- 316 stainless steel frames, hatch, hatch arms and hinges. Hand polished and electro-polished to protect against corrosion. Frames and hatches are made from machine rolled stock to ensure strength and low weight.
- Positive easy to operate stainless arms allowing full 180 degree opening with pull-turn knobs to hold hatch open.
- Adjustable injection molded Nylon 66 handles.
- Set screw adjustment in each hinge to avoid hinge pins coming out.
- Tough, UV resistance of acrylics are available in grey (standard), clear and tint green
- Inside opening, inside/outside opening and double opening available.
- Inside/outside models with 100% Stainless Steel snag free handle.
- Double opening models with quick snap-release dogs and 100% stainless fast pins for easy and quick change of hinge location.
- Gaskets are oil resistant Sanplane.
- Off-white powder coating are available.
- Standard Arm can be changed to gas arm if needed.

INSIDE OPENING



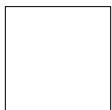
IN/OUTSIDE OPENING HATCH WITH LOCK



Acrylic colors available



Grey



Clear



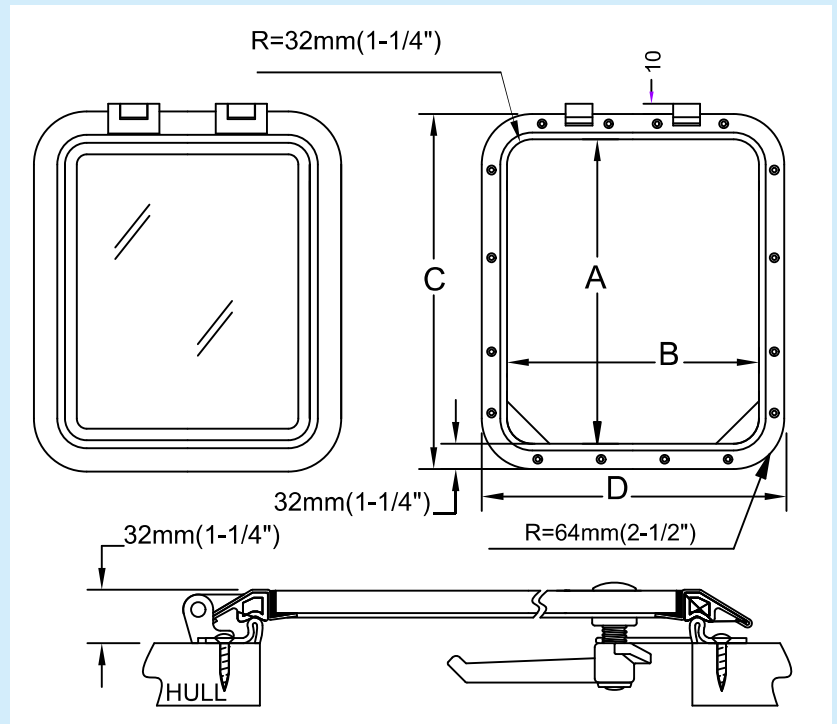
Tint Green

LOW PROFILE DECK HATCH

IN/OUTSIDE OPENING



DOUBLE OPENING



- ANY SIZE FOR "A" AND "B" AVAILABLE, IF R = 1 1/4" (32MM) REMAIN UNCHANGED.
- HATCHES SHOULD BE FITTED TO A FLAT SURFACE WITH A MAXIMUM TOLERANCE OF ±2MM.

INSIDE OPENING

PART No.	SIZE		CUTOUT SIZE		OVERALL		ACRYLIC THICKNESS	WEIGHT					
			A	B	C	D							
LDH-08-I	8 1/8 x 13 3/4	206X349	8 1/8	206	13 3/4	349	10 5/8	270	16 1/4	413	1/2	12	4.7KG
LDH-10-I	10 x 10	254X254	10	254	10	254	12 1/2	318	12 1/2	318	1/2	12	4.4KG
LDH-20-I	12 1/2 x 17 1/2	318X444	12 1/2	318	17 1/2	444	15	382	20	508	1/2	12	7.1KG
LDH-30-I	14 1/2 x 19 1/2	369X495	14 1/2	369	19 1/2	495	17	433	22	559	1/2	12	8.1KG
LDH-40-I	16 1/2 x 16 1/2	419X419	16 1/2	419	16 1/2	419	19	483	19	483	1/2	12	7.9KG
LDH-50-I	19 1/2 x 19 1/2	495X495	19 1/2	495	19 1/2	495	22	559	22	559	1/2	12	10.0KG
LDH-60-I	24 x 24	610X610	24	610	24	610	26 1/2	674	26 1/2	674	1/2	12	13.0KG
LDH-70-I	31 x 31	788X788	31	788	31	788	33 1/2	852	33 1/2	852	1/2	12	19.2KG

IN/MM

IN/OUTSIDE OPENING

PART No.	SIZE		CUTOUT SIZE		OVERALL		ACRYLIC THICKNESS	WEIGHT					
			A	B	C	D							
LDH-30-O	14 1/2 x 19 1/2	369X495	14 1/2	369	19 1/2	495	17	433	22	559	1/2	12	8.3KG
LDH-40-O	16 1/2 x 16 1/2	419X419	16 1/2	419	16 1/2	419	19	483	19	483	1/2	12	8.1KG
LDH-50-O	19 1/2 x 19 1/2	495X495	19 1/2	495	19 1/2	495	22	559	22	559	1/2	12	10.2KG
LDH-60-O	24 x 24	610X610	24	610	24	610	26 1/2	674	26 1/2	674	1/2	12	13.2KG
LDH-70-O	31 x 31	788X788	31	788	31	788	33 1/2	852	33 1/2	852	1/2	12	19.6KG

*Please indicate inside locking or outside locking or w/o outside locker while ordering.

IN/MM

DOUBLE OPENING

PART No.	SIZE		CUTOUT SIZE		OVERALL		ACRYLIC THICKNESS	WEIGHT					
			A	B	C	D							
LDH-50-D	19 1/2 x 19 1/2	495X495	19 1/2	495	19 1/2	495	22	559	22	559	1/2	12	10.8KG
LDH-60-D	24 x 24	610X610	24	610	24	610	26 1/2	674	26 1/2	674	1/2	12	14.3KG
LDH-70-D	31 x 31	788X788	31	788	31	788	33 1/2	852	33 1/2	852	1/2	12	20.4KG

IN/MM

DECK HATCH



FEATURES

- **CE Approved. According to ISO/DIS 12216 Deck Hatches are approved for Area II, III, and IV, designs for craft type "any".**

- 316 stainless steel frames, hatch, hatch arms and hinges. Hand polished and electro-polished to protect against corrosion. Frames and hatches are made from machine rolled stock to ensure strength and low weight.
- Positive easy to operate stainless arms allowing full 180 degree opening with pull-turn knobs to hold hatch open.
- Adjustable injection molded Nylon 66 handles.
- Set screw adjustment in each hinge to adjust the proper pressure against the gasket.
- Tough, UV resistance of acrylics are available in grey (standard), clear and tint green.
- Inside opening, inside/outside opening and double opening available.
- Inside/outside models with 100% Stainless Steel snag free handle.
- Double opening models with quick snap-release dogs and 100% stainless fast pins for easy and quick change of hinge location.
- Gaskets are oil resistant Sanplane.
- Custom Deck Hatches are available.
- Off-white powder coating are available.



Luxury deck hatch with gas arm just opened to 90 degree



Stainless arm fasten easily



Adjustable handle to ensure tightness



Set screw adjustable in hinge for tightness

INSIDE OPENING



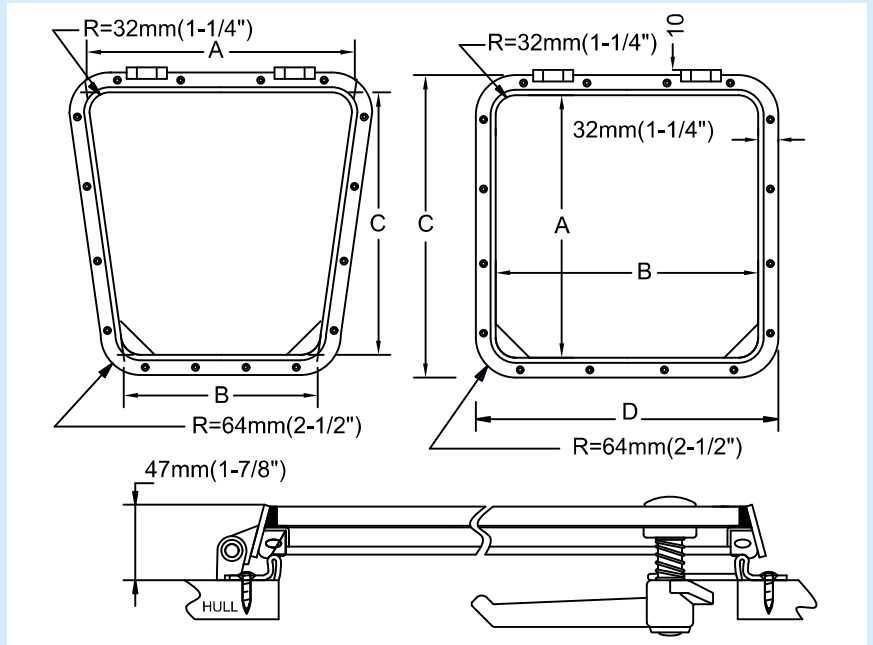
IN/OUTSIDE OPENING



DOUBLE OPENING



ROUND DECK HATCH INSIDE OPENING



- ANY SIZE ARE AVAILABLE, IF R = 1 1/4" (32MM) REMAIN UNCHANGED
- HATCHES SHOULD BE FITTED TO A FLAT SURFACE WITH A MAXIMUM TOLERANCE OF ± 2MM.

INSIDE OPENING

PART No.	SIZE	CUTOUT SIZE		OVERALL		ACRYLIC THICKNESS	WEIGHT
		A	B	C	D		
DH-08-I	8 1/8 X 13 3/4	206	349	270	413	5/16 8	4.4KG
DH-10-I	10 X 10	254	254	318	318	5/16 8	4.1KG
DH-20-I	12 1/2 X 17 1/2	318	444	382	508	1/2 12	7.6KG
DH-30-I	14 1/2 X 19 1/2	369	495	433	559	1/2 12	9.0KG
DH-40-I	16 1/2 X 16 1/2	419	419	483	483	1/2 12	8.6KG
DH-50-I	19 1/2 X 19 1/2	495	495	559	559	1/2 12	10.8KG
DH-60-I	24 X 24	610	610	674	674	1/2 12	13.8KG
DH-70-I	31 X 31	788	788	852	852	1/2 12	19.8KG

IN/MM

IN/OUTSIDE OPENING

PART No.	SIZE	CUTOUT SIZE		OVERALL		ACRYLIC THICKNESS	WEIGHT
		A	B	C	D		
DH-30-O	14 1/2 X 19 1/2	369	495	433	559	1/2 12	9.2KG
DH-40-O	16 1/2 X 16 1/2	419	419	483	483	1/2 12	8.8KG
DH-50-O	19 1/2 X 19 1/2	495	495	559	559	1/2 12	11KG
DH-60-O	24 X 24	610	610	674	674	1/2 12	14KG
DH-70-O	31 X 31	788	788	852	852	1/2 12	20KG

*Please indicate inside locking or outside locking or w/o outside locker while ordering.

IN/MM

DOUBLE OPENING

PART No.	SIZE	CUTOUT SIZE		OVERALL		ACRYLIC THICKNESS	WEIGHT
		A	B	C	D		
DH-50-D	19 1/2 X 19 1/2	495	495	559	559	1/2 12	12KG
DH-60-D	24 X 24	610	610	674	674	1/2 12	15KG
DH-70-D	31 X 31	788	788	852	852	1/2 12	21KG

IN/MM

ROUND DECK HATCH INSIDE OPENING

PART No.	SIZE	CUTOUT SIZE	OVERALL	ACRYLIC THICKNESS	WEIGHT
		A	C		
DHR-50-I	19 1/2 495	19 1/2 495	22 559	1/2 12	9KG
DHR-60-I	24 610	24 610	26 1/2 674	1/2 12	11.9KG

IN/MM



FRICATIVE HINGE FLUSH HATCH

Developed to withstand the effects of weather such as sun exposure, temperature fluctuations, rain, etc.

A modern hatch with an elegant stainless steel outer frame to strengthen and enclose the acrylic lens. Acrylic naturally warps under heat, but Man Ship's hatch will stand the test of time

NEW design & structure for Flush Hatch

- Outstanding resistance to long-term exposure to sunlight and weathering
- A sleek hatch option that is flush to your deck
- All stainless construction is grade Stainless Steel 316
- 12mm acrylic with UV resistivity, smoke grey, tanned, and clear colour options.
- Watertight hatch seal withstand a pressure of 5Mpa.
- Custom sizes available.(radius fixed)
- Max.size 24-11/16"x24-11/16"(627x627mm)

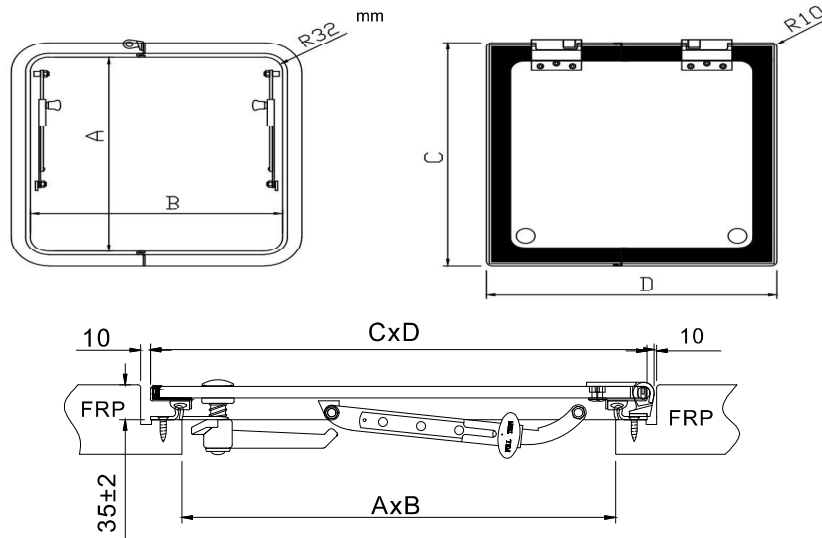


Star-shaped handle is available for inside/outside opening

INSIDE OPENING



IN/OUTSIDE OPENING



INSIDE OPENING

PART No.	CUTOUT SIZE		OVERALL		ACRYLIC THICKNESS	WEIGHT (Kg)
	A	B	C	D		
FDHA-15-I	15 ⁷ / ₁₆ 392mm	19 ⁵ / ₁₆ 507mm	18 ³ / ₁₆ 462mm	22 ¹¹ / ₁₆ 577mm	1/2 12	9
FDHA-17-I	17 ³ / ₈ 442mm	17 ³ / ₈ 442mm	20 ³ / ₁₆ 512mm	20 ³ / ₁₆ 512mm	1/2 12	9
FDHA-20-I	19 ¹⁵ / ₁₆ 507mm	19 ¹⁵ / ₁₆ 507mm	22 ¹¹ / ₁₆ 577mm	22 ¹¹ / ₁₆ 577mm	1/2 12	11
FDHA-24-I	24 ¹¹ / ₁₆ 627mm	24 ¹¹ / ₁₆ 627mm	27 1/2 697mm	27 1/2 697mm	1/2 12	13 IN/MM

IN/OUTSIDE OPENING

PART No.	CUTOUT SIZE		OVERALL		ACRYLIC THICKNESS	WEIGHT (Kg)
	A	B	C	D		
FDHA-15-O	15 ⁷ / ₁₆ 392mm	19 ⁵ / ₁₆ 507mm	18 ³ / ₁₆ 462mm	22 ¹¹ / ₁₆ 577mm	1/2 12	9
FDHA-17-O	17 ³ / ₈ 442mm	17 ³ / ₈ 442mm	20 ³ / ₁₆ 512mm	20 ³ / ₁₆ 512mm	1/2 12	9
FDHA-20-O	19 ¹⁵ / ₁₆ 507mm	19 ¹⁵ / ₁₆ 507mm	22 ¹¹ / ₁₆ 577mm	22 ¹¹ / ₁₆ 577mm	1/2 15	11
FDHA-24-O	24 ¹¹ / ₁₆ 627mm	24 ¹¹ / ₁₆ 627mm	27 1/2 697mm	27 1/2 697mm	1/2 15	13 IN/MM