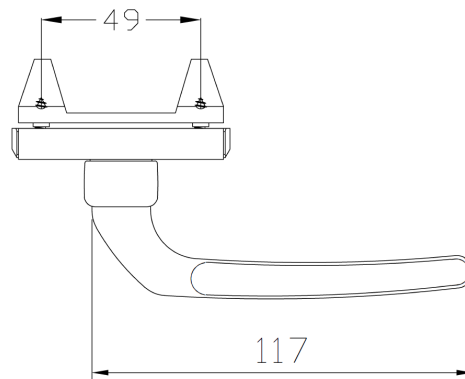


## Roto Push-out Casement Handles and Kempton 4-bar Hinges

Roto North America is excited to introduce our line of Push-out Casement handles. Suited for aluminum profiles, these handles pair well with our Kempton 4-bar hinges to provide a complete push-out casement hardware package. This line of handles accommodates both front and bottom fixing with several styles available in a white, black, silver finish, or anodized aluminum. Each Push-out Casement handle comes paired with a striker.

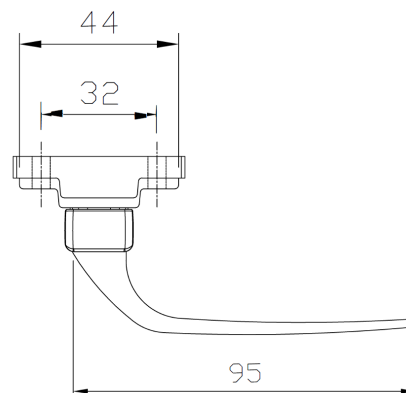
### FMA119P

- Ideal for use in larger applications
- Facemount application
- Integrated plastic handle grip for ease of use



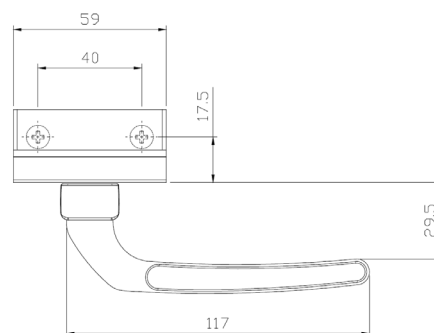
### FMA132P

- Ideal for use in smaller applications
- Facemount application
- Sleek and modern aesthetic handle



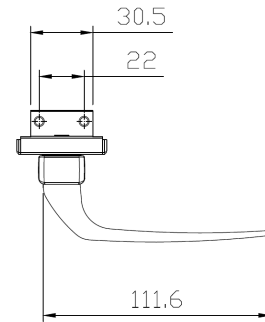
### FMA03P

- Surface mount application
- Handle designed with greater comfort in mind
- Easy to adjust screw covers provides a cleaner look



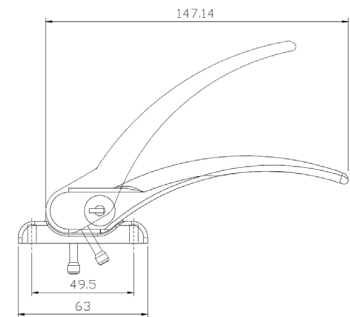
### FMA16P

- Can be used for both small and large applications
- Surface mount application
- Sleek and modern aesthetic handle



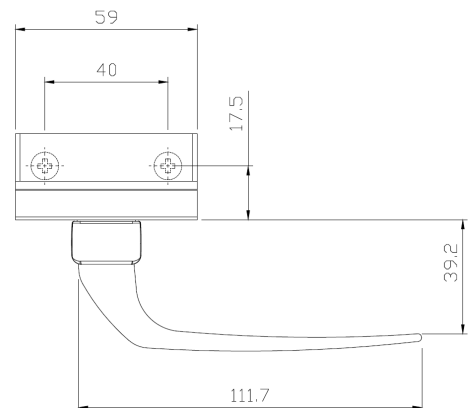
### FMA133P

- 24mm Locking pin
- Surface mount application
- Striker application within frame cavity for a seamless look
- Smooth handle lift operation vs. a traditional 90-degree rotation



### FMA62P

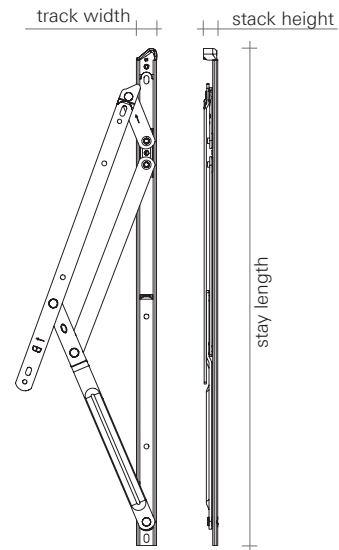
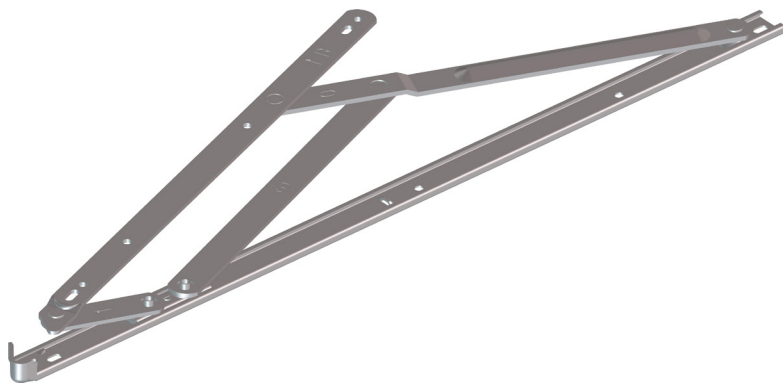
- Surface mount application
- Sleek, modern aesthetic handle
- Easy to adjust screw covers provides a cleaner look













Part Number	Old Part number	Material Description	Box Qty
829465	FMA132P121	HANDLE MINI R WHITE RAL9003	50
840106	FMA132P221	HANDLE MINI L WHITE RAL9003	50
839239	FMA132P122	HANDLE MINI R BLACK RAL9005	50
840107	FMA132P222	HANDLE MINI L BLACK RAL9005	50
839296	FMA132P163	HANDLE MINI R SILVER RAL9022	50
840134	FMA132P263	HANDLE MINI L SILVER RAL9022	50
839295	FMA132A106	HANDLE MINI R ANOD ALU	50
840109	FMA132A206	HANDLE MINI L ANOD ALU	50
829463	FMA119P121	HANDLE MAXI R WHITE RAL9003	50
840115	FMA119P221	HANDLE MAXI L WHITE RAL9003	50
839297	FMA119P122	HANDLE MAXI R BLACK RAL9005	50
840116	FMA119P222	HANDLE MAXI L BLACK RAL9005	50
839298	FMA119P163	HANDLE MAXI R SILVER RAL9022	50
840117	FMA119P263	HANDLE MAXI L SILVER RAL9022	50
839299	FMA119A106	HANDLE MAXI R ANOD ALU	50
840118	FMA119A206	HANDLE MAXI L ANOD ALU	50
829468	FMA16P121	HANDLE MAXI R WHITE RAL9003	50
840119	FMA16P221	HANDLE MAXI L WHITE RAL9003	50
839300	FMA16P122	HANDLE MAXI R BLACK RAL9005	50
840121	FMA16P222	HANDLE MAXI L BLACK RAL9005	50
839301	FMA16P163	HANDLE MAXI R SILVER RAL9022	50
840122	FMA16P263	HANDLE MAXI L SILVER RAL9022	50
839302	FMA16A106	HANDLE MAXI R ANOD ALU	50
840123	FMA16A206	HANDLE MAXI L ANOD ALU	50
829456	FMA03P121ARM01	HANDLE MAXI ARMONY R WHITE RAL9003	50
840124	FMA03P221ARM01	HANDLE MAXI ARMONY L WHITE RAL9003	50
839303	FMA03P122ARM01	HANDLE MAXI ARMONY R BLACK RAL9005	50
840125	FMA03P222ARM01	HANDLE MAXI ARMONY L BLACK RAL9005	50
839304	FMA03P163ARM01	HANDLE MAXI ARMONY R SILVER RAL9022	50
840126	FMA03P263ARM01	HANDLE MAXI ARMONY L SILVER RAL9022	50
829471	FMA62P121	HANDLE MAXI R WHITE RAL9062	50
840127	FMA62P221	HANDLE MAXI L WHITE RAL9062	50
839305	FMA62P122	HANDLE MAXI R BLACK RAL9005	50
840128	FMA62P222	HANDLE MAXI L BLACK RAL9005	50
839306	FMA62P163	HANDLE MAXI R SILVER RAL9022	50
840129	FMA62P263	HANDLE MAXI L SILVER RAL9022	50
839307	FMA62A106	HANDLE MAXI R ANOD ALU	50
840130	FMA62A206	HANDLE MAXI L ANOD ALU	50
829466	FMA133DP121PIN24	HANDLE R WHITE RAL9003	50
840131	FMA133EP221PIN24	HANDLE L WHITE RAL9003	50
839308	FMA133DP122PIN24	HANDLE R BLACK RAL9005	50
840132	FMA133EP222PIN24	HANDLE L BLACK RAL9005	50
839309	FMA133DP163PIN24	HANDLE R SILVER RAL9022	50
840133	FMA133EP263PIN24	HANDLE L SILVER RAL9022	50

# Kempton 4-bar Hinges



## Austenitic (304) heavy duty stainless steel friction stays

Description stay type   opening type   length-variant												
	inch	mm	mm	mm	kg/lb	min. (mm)	max. (mm)	min. (mm)	max. (mm)	±2.5°		
<b>Top hung</b>												
<b>HB TH 10</b>	10	262	16	23	37/ 82	267	635	-	-	50	25	<b>477254</b>
<b>HB TH 12</b>	12	313	16	23	45/ 99	635	787	-	-	50	25	<b>477274</b>
<b>HB TH 16</b>	16	415	16	23	55/ 121	787	1090	-	-	50	20	<b>477265</b>
<b>HB TH 22</b>	22	567	16	23	75/ 165	1090	1500	-	-	45	20	<b>477266</b>
<b>HB TH 26</b>	26	680	16	23	120/ 265	1270	2200	-	-	20	10	<b>477267</b>
<b>Side hung</b>												
<b>HB SH 10</b>	10	262	16	23	38/ 84	-	-	280	665	80	25	<b>485770</b>
<b>HB SH 16</b>	16	415	16	23	47/ 104	-	-	457	838	90	25	<b>485771</b>

### Top hung friction stay Roto Kempton 4-bar hinge

Limitation of sash formats depending on the glass thickness

#### Application range

Sash height SH.mm..... 267 – 2200 mm  
Sash width SW.mm ..... 400 – 2000 mm  
Sash weight S.kg ..... max. 120 kg

The information in the application diagram refer to the glass weight in kg/m<sup>2</sup> and to an already calculated profile weight of 2 kg/m.

1 mm / m<sup>2</sup> glass thickness = 2.5 kg

### Side hung friction stay Roto Kempton 4-bar hinge

Limitation of sash formats depending on the glass thickness

#### Application range

Sash height SH.mm..... 500 – 2800 mm  
Sash width SW.mm ..... 280 – 838 mm  
Sash weight S.kg ..... max. 47 kg

The information in the application diagram refer to the glass weight in kg/m<sup>2</sup> and to an already calculated profile weight of 2 kg/m.

1 mm / m<sup>2</sup> glass thickness = 2.5 kg

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### Product description

- Heavy duty friction stays for commercial applications
- Tested to operate 10,000 cycles
- Austenitic stainless steel for enhanced corrosion resistance
- Asymmetric stainless steel cap and end point for reliable, accurate closure
- Unrivalled weather sealing
- Composite slider for durability and smooth operation
- Self-balancing stay with adjustable friction mechanism
- Stay handing is indicated by colour coding of the end caps
- Optionally available:
  - vertical adjustment device
  - concealed locking point block

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### Trade references

Evaluated to the requirements of:

- AAMA 101-IS2-08
- AAMA 904-09
- AAMA 910-10