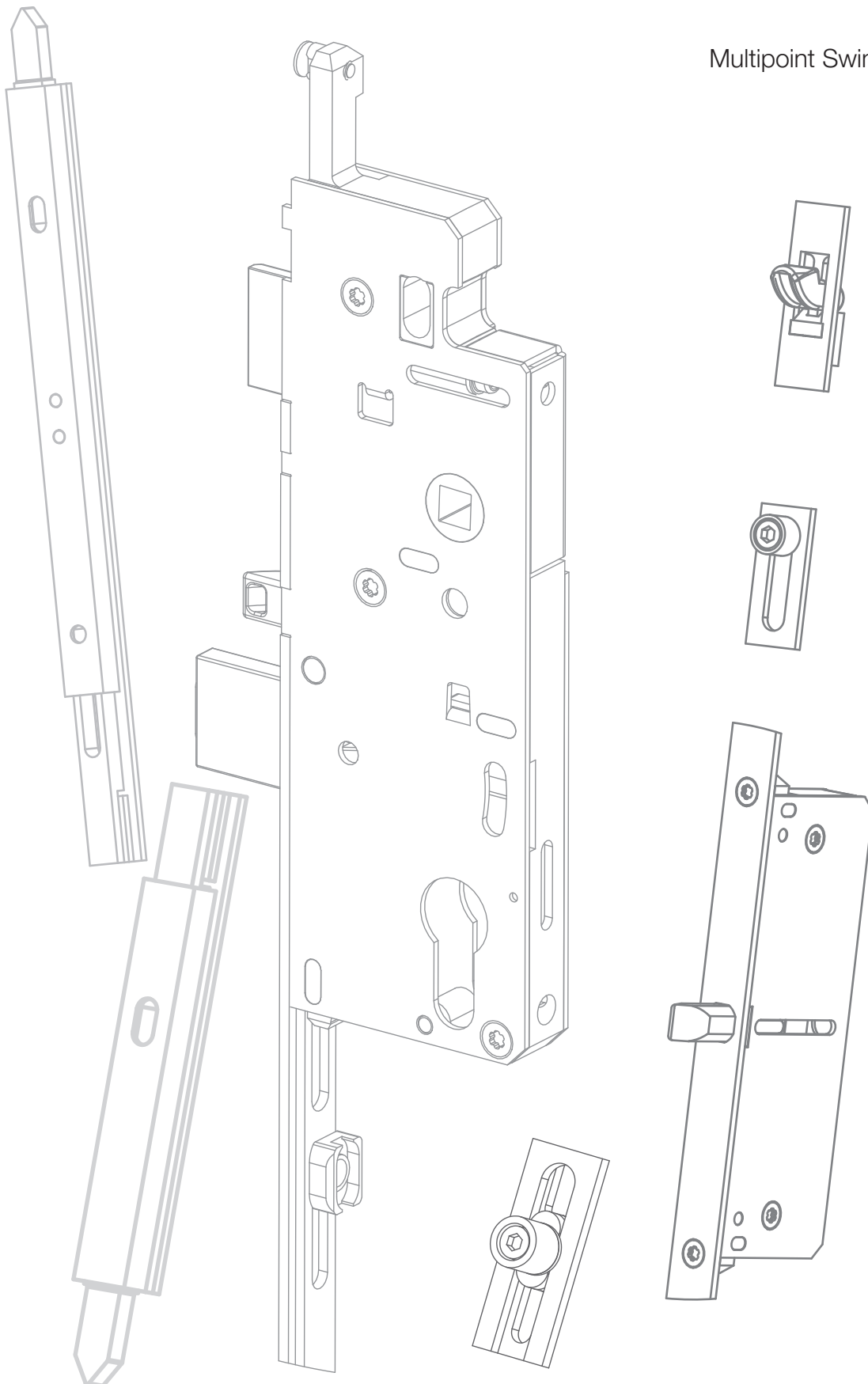


HLS®9000
Multipoint Swing Door Hardware
Edition 7



Why HOPPE Stainless Steel

Protect the quality of your product as well as your image. Insist on HOPPE Stainless Steel!

The HLS®9000 Stainless Steel Multipoint Locking System prevents the unwelcome intrusion of rust and corrosion, in addition to providing safety and security. The variety of locking point options allows for a wide range of applications on doors of virtually any height.

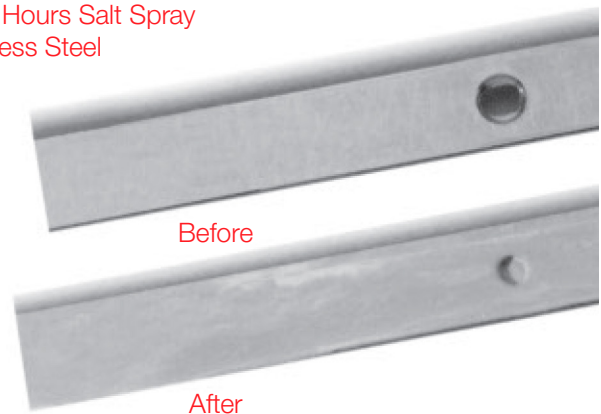


HLS®9000 Features & Benefits

- ❑ Multiple locking points for improved weather sealing
- ❑ All stainless steel construction for superior corrosion resistance
- ❑ Proven reliability in coastal environments
- ❑ Low maintenance
- ❑ Robust stainless steel latch and dead bolt
- ❑ Mishandling device prevents accidental use
- ❑ Made in the United States

HOPPE HLS®9000 Locking Systems have a proven track record. Our products have been used on the Florida coast, the Caribbean islands, Hawaii and nearly everywhere in between. Experience has shown that we have some of the most reliable, corrosion resistant multipoint locks in the market even in these coastal environments. If you are still not convinced, simply look to our HLS® lifetime finish warranty.

3000 Hours Salt Spray
Stainless Steel



16mm Faceplate

| | |
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| Four Roller | Page 18 |
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| Automatic Four Roller | Page 21 |

20mm Faceplate

| | |
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16mm Faceplate Inactive

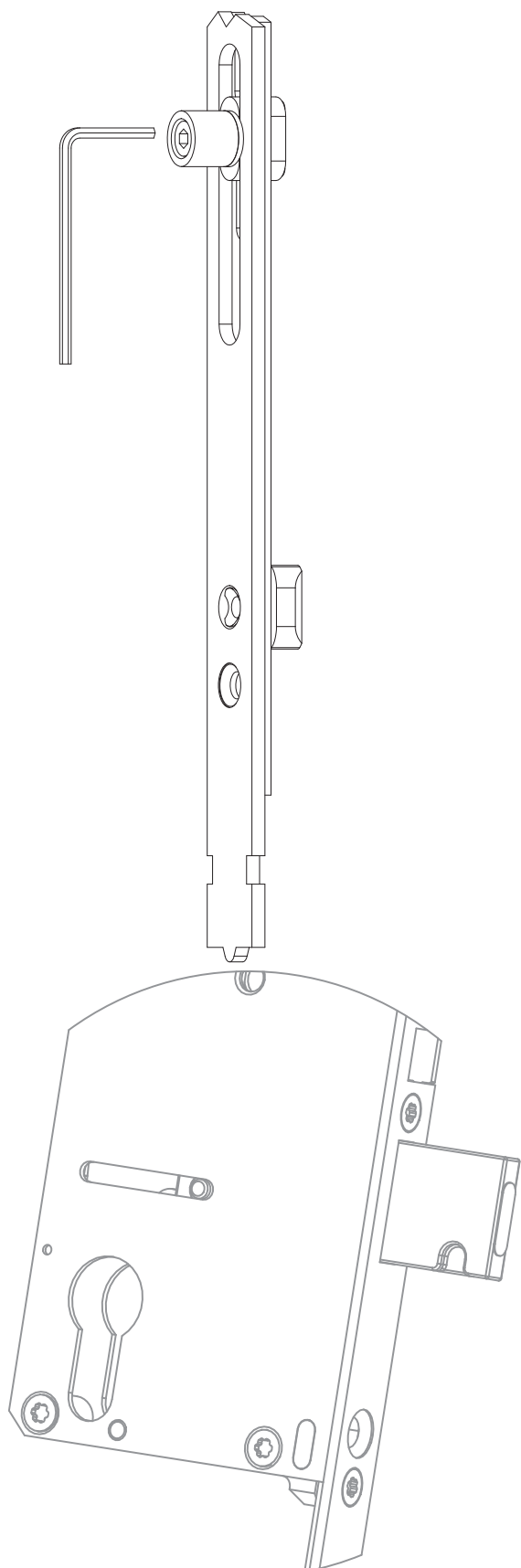
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20mm Faceplate Inactive

| | |
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Additional Hardware

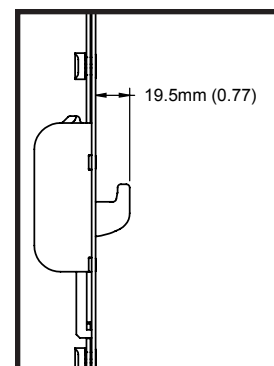
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Swing Hook - 16mm Faceplate

SWING HOOK

While offering security in the locked position, the HLS®9000 swing hook retracts when opened, giving a smooth clean appearance.

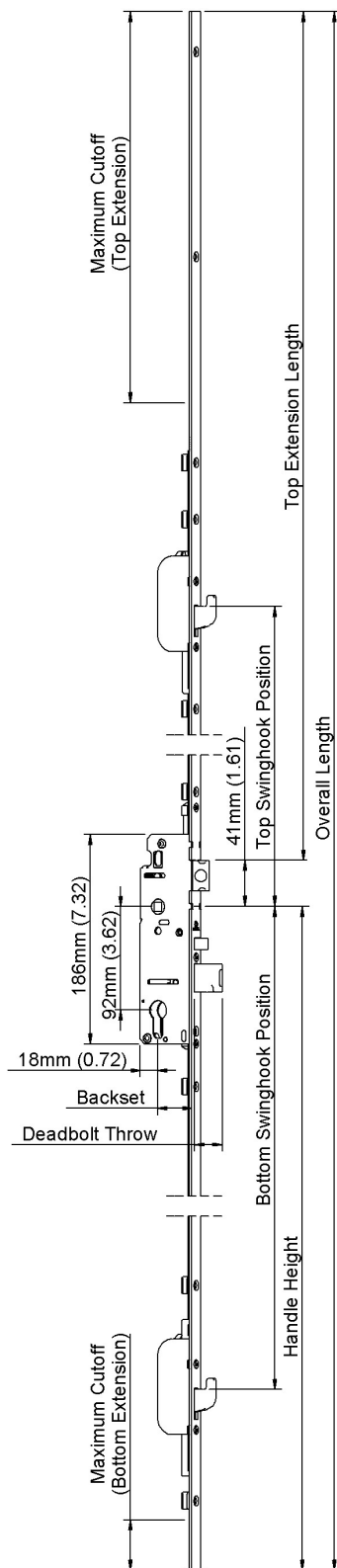


Top Extension

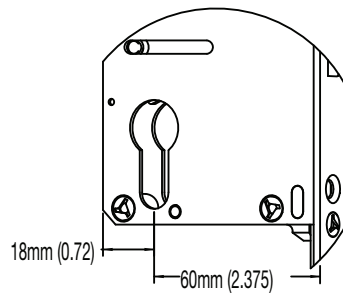
| Part Number | Description | Overall Length (with 914mm 36" Handle Height) | Extension Length | Handle to Top of Door | 1st Top Swinghook Position | 2nd Top Swinghook Position | Maximum Cutoff | Number of Screws |
|-------------|-------------------------------|---|---------------------|-----------------------------|----------------------------------|----------------------------------|-------------------|------------------------|
| 3868770 | M 1058 SW1 500 16-SC 418 | 1595mm-2013mm (62.80-79.25) | 1058mm (41.65) | 1099mm (43.27) | 500mm (19.69) | n/a | 418mm (16.46) | 6 |
| 3868796 | M 1058 SW1 900 16-SC 18 | 1995mm-2013mm (78.54-79.25) | 1058mm (41.65) | 1099mm (43.27) | 900mm (35.43) | n/a | 18mm (0.71) | 6 |
| 3868809 | M 1388 SW1 900 16-SC 348 | 1995mm-2343mm (78.54-92.24) | 1388mm (54.65) | 1429mm (56.26) | 900mm (35.43) | n/a | 348mm (13.70) | 8 |
| 3868817 | M 1388 SW2 500/900 16-SC 348 | 1995mm-2343mm (78.54-92.24) | 1388mm (54.65) | 1429mm (56.26) | 500mm (19.69) | 900mm (35.43) | 348mm (13.70) | 8 |
| 3868825 | M 1745 SW2 600/1193 16-SC 412 | 2288mm-2700mm (90.08-106.30) | 1745mm (68.70) | 1786mm (70.31) | 600mm (23.62) | 1193mm (46.97) | 412mm (16.22) | 10 |
| 3868833 | M 2270 SW2 600/1500 16-SC 630 | 2595mm-3225mm (102.17-126.97) | 2270mm (89.37) | 2311mm (90.98) | 600mm (23.62) | 1500mm (59.05) | 630mm (24.80) | 12 |

Gear / Bottom Extension

| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Swing Hook Position | Maximum Cutoff | Number of Screws |
|-------------|----------------------------|----------------|-------------------|------------------|----------------------------------|-------------------|------------------------|
| 3868868 | M/35/25 914 SW1 753 16S 30 | 35mm (1.38) | 25.4mm (1.00) | 914mm (36.00) | 753mm (29.65) | 30mm (1.18) | 5 |
| 3868876 | M/45/25 914 SW1 753 16S 30 | 45mm (1.77) | 25.4mm (1.00) | 914mm (36.00) | 753mm (29.65) | 30mm (1.18) | 5 |



60mm Backset Gear / Bottom Extension

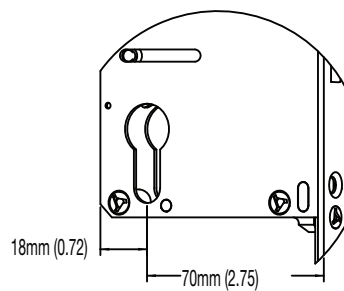


Gear - 60mm Backset

| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Swing Hook Position | Maximum Cutoff | Number of Screws |
|-------------|----------------------------|--------------|----------------|---------------|----------------------------|----------------|------------------|
| 3868884 | M/60/25 914 SW1 753 16S 30 | 60mm (2.375) | 25.4mm (1.00) | 914mm (36.00) | 753mm (29.65) | 30mm (1.18) | 5 |

For Top Extension, please reference the Top extension chart on the adjacent page.

70mm Backset Gear / Bottom Extension



Gear - 70mm Backset

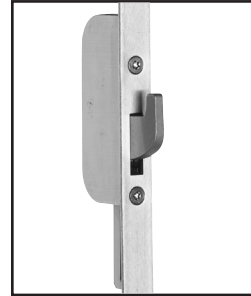
| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Swing Hook Position | Maximum Cutoff | Number of Screws |
|-------------|----------------------------|-------------|----------------|---------------|----------------------------|----------------|------------------|
| 3868892 | M/70/25 914 SW1 753 16S 30 | 70mm (2.75) | 25.4mm (1.00) | 914mm (36.00) | 753mm (29.65) | 30mm (1.18) | 5 |

For Top Extension, please reference the Top extension chart on the adjacent page.

Swing Hook / Shootbolt - 16mm Faceplate

SWING HOOK/SHOOTBOLT

The HLS®9000 Swing Hook/shootbolt offers the added security of both horizontal and vertical strength for increased wind-load protection.



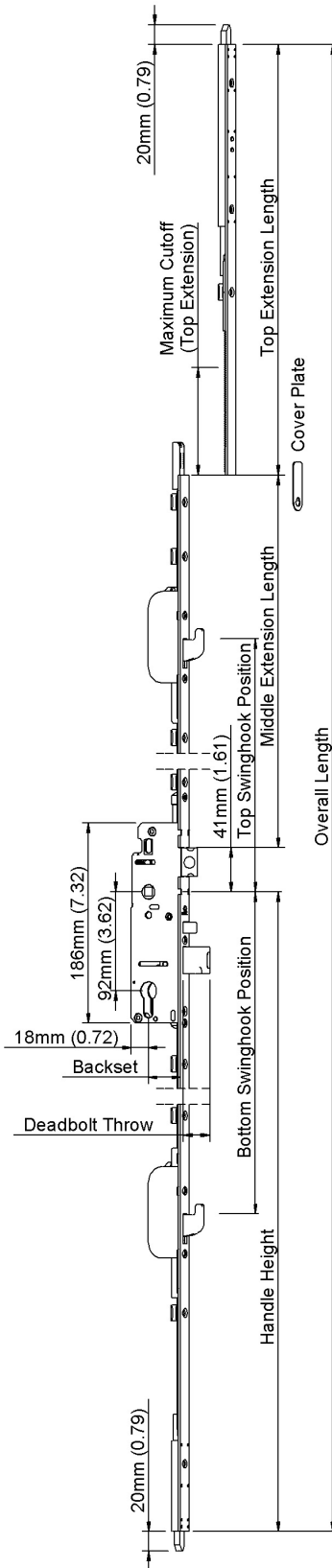
See corresponding colors in chart when referencing top extension length with middle extension chart

Top Extensions (used with middle extension containing 1 Swing Hook)

| Part Number | Description | Top Extension Length | Max. Cutoff | Number of Screws | Overall Length Combined with M 612 SW 500 (with 914mm/36" Handle Height) | Overall Length Combined with M 1012 SW 900 (with 914mm/36" Handle Height) |
|-------------|----------------------|----------------------|--------------|------------------|--|---|
| 8778611 | M 400 SB1 16S 20 100 | 400mm (15.75) | 100mm (3.94) | 3 | 1867mm - 1967mm (73.50 - 77.44) | 2267mm - 2367mm (89.25 - 93.19) |
| 8778615 | M 475 SB1 16S 20 100 | 475mm (18.70) | 100mm (3.94) | 3 | 1942mm - 2042mm (76.46 - 80.39) | 2342mm - 2442mm (92.20 - 96.14) |
| 8778619 | M 550 SB1 16S 20 100 | 550mm (21.65) | 100mm (3.94) | 4 | 2017mm - 2117mm (79.41 - 83.35) | 2417mm - 2517mm (95.16 - 99.09) |
| 8778623 | M 625 SB1 16S 20 100 | 625mm (24.61) | 100mm (3.94) | 4 | 2092mm - 2192mm (82.36 - 86.30) | 2492mm - 2592mm (98.11 - 102.05) |
| 8778627 | M 700 SB1 16S 20 100 | 700mm (27.56) | 100mm (3.94) | 4 | 2167mm - 2267mm (85.31 - 89.25) | 2567mm - 2667mm (101.06 - 105.00) |
| 8778631 | M 775 SB1 16S 20 100 | 775mm (30.51) | 100mm (3.94) | 4 | 2242mm - 2342mm (88.27 - 92.20) | 2642mm - 2742mm (104.02 - 107.95) |
| 3389488 | M 850 SB1 16S 20 100 | 850mm (33.46) | 100mm (3.94) | 5 | 2317mm - 2417mm (91.22 - 95.16) | 2717mm - 2817mm (106.97 - 110.91) |
| 3389517 | M 925 SB1 16S 20 100 | 925mm (36.42) | 100mm (3.94) | 5 | 2392mm - 2492mm (94.17 - 98.11) | 2792mm - 2892mm (109.92 - 113.86) |

Top Extensions (used with middle extension containing 2 Swing Hook)

| Part Number | Description | Top Extension Length | Max. Cutoff | Number of Screws | Overall Length Combined with M 1012 SW2 500/900 (with 914mm/36" Handle Height) | Overall Length Combined with M 1305 SW2 600/1193 (with 914mm/36" Handle Height) | Overall Length Combined with M 1612 SW2 600/1500 (with 914mm/36" Handle Height) |
|-------------|----------------------|----------------------|--------------|------------------|--|---|---|
| 8778611 | M 400 SB1 16S 20 100 | 400mm (15.75) | 100mm (3.94) | 3 | 2267mm - 2367mm (89.25 - 93.19) | 2560mm - 2660mm (100.79 - 104.72) | 2867mm - 2967mm (112.87 - 116.81) |
| 8778615 | M 475 SB1 16S 20 100 | 475mm (18.70) | 100mm (3.94) | 3 | 2342mm - 2442mm (92.20 - 96.14) | 2635mm - 2735mm (103.74 - 107.68) | 2942mm - 3042mm (115.83 - 119.76) |
| 8778619 | M 550 SB1 16S 20 100 | 550mm (21.65) | 100mm (3.94) | 4 | 2417mm - 2517mm (95.16 - 99.09) | 2710mm - 2810mm (106.69 - 110.63) | 3017mm - 3117mm (118.78 - 122.72) |
| 8778623 | M 625 SB1 16S 20 100 | 625mm (24.61) | 100mm (3.94) | 4 | 2492mm - 2592mm (98.11 - 102.05) | 2785mm - 2885mm (109.65 - 113.58) | 3092mm - 3192mm (121.73 - 125.67) |
| 8778627 | M 700 SB1 16S 20 100 | 700mm (27.56) | 100mm (3.94) | 4 | 2567mm - 2667mm (101.06 - 105.00) | 2860mm - 2960mm (112.60 - 116.54) | 3167mm - 3267mm (124.69 - 128.62) |
| 8778631 | M 775 SB1 16S 20 100 | 775mm (30.51) | 100mm (3.94) | 4 | 2642mm - 2742mm (104.02 - 107.95) | 2935mm - 3035mm (115.55 - 119.49) | 3242mm - 3342mm (127.64 - 131.67) |
| 3389488 | M 850 SB1 16S 20 100 | 850mm (33.46) | 100mm (3.94) | 5 | 2717mm - 2817mm (106.97 - 110.91) | 3010mm - 3110mm (118.50 - 122.44) | 3317mm - 3417mm (130.59 - 134.53) |
| 3389517 | M 925 SB1 16S 20 100 | 925mm (36.42) | 100mm (3.94) | 5 | 2792mm - 2892mm (109.92 - 113.86) | 3085mm - 3185mm (121.46 - 125.39) | 3392mm - 3492mm (133.54 - 137.48) |



Middle Extensions with 1 and 2 Swing Hooks

Middle Extension with 1 Swing Hook

| Part Number | Description | Middle Extension | Top Swing Hook Position | Second Swing Hook Position | Maximum Cutoff | Number of Screws |
|-------------|--------------------|------------------|-------------------------|----------------------------|----------------|------------------|
| 3622868 | M 612 SW1 500 16S | 612mm (24.09) | 500mm (19.69) | N/A | N/A | 4 |
| 3644160 | M 1012 SW1 900 16S | 1012mm (39.84) | 900mm (35.43) | N/A | N/A | 6 |

Middle Extension with 2 Swing Hooks

| Part Number | Description | Middle Extension | Top Swing Hook Position | Second Swing Hook Position | Maximum Cutoff | Number of Screws |
|-------------|-------------------------|------------------|-------------------------|----------------------------|----------------|------------------|
| 3644178 | M 1012 SW2 500/900 16S | 1012mm (39.84) | 500mm (19.69) | 900mm (35.43) | N/A | 6 |
| 3644186 | M 1305 SW2 600/1193 16S | 1305mm (51.38) | 600mm (23.62) | 1193mm (46.97) | N/A | 8 |
| 3644194 | M 1612 SW2 600/1500 16S | 1612mm (63.46) | 600mm (23.62) | 1500mm (59.06) | N/A | 9 |

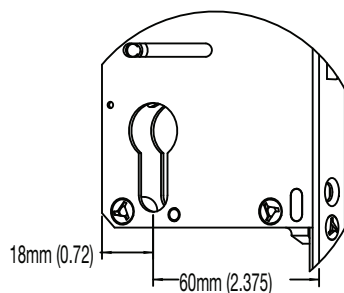
35/45mm Backset Gear / Bottom Extension

Gear

| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Swing Hook Position | Max. Cutoff | Number of Screws |
|-------------|-------------------------------|-------------|----------------|---------------|----------------------------|-------------|------------------|
| 3814747 | M/35/25 914 SW1SB1 620 16S 20 | 35mm (1.38) | 25mm (1.00) | 914mm (36.00) | 620mm (24.41) | N/A | 4 |
| 3622876 | M/45/25 914 SW1SB1 620 16S 20 | 45mm (1.77) | 25mm (1.00) | 914mm (36.00) | 620mm (24.41) | N/A | 4 |

| | |
|---------|-------------|
| 2875118 | Cover Plate |
|---------|-------------|

60mm Backset Gear / Bottom Extension

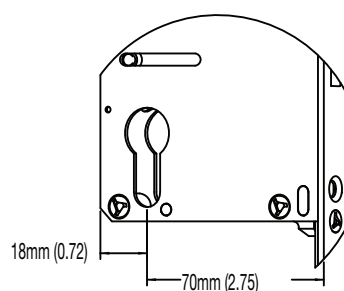


Gear - 60mm Backset

| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Swing Hook Position | Number of Screws |
|-------------|-------------------------------|--------------|----------------|---------------|----------------------------|------------------|
| 3660426 | M/60/25 914 SW1SB1 620 16S 20 | 60mm (2.375) | 25.4mm (1.00) | 914mm (36.00) | 620mm (24.41) | 4 |

For Top Extension, please reference the Top extension chart on the adjacent page.

70mm Backset Gear / Bottom Extension



Gear - 70mm Backset

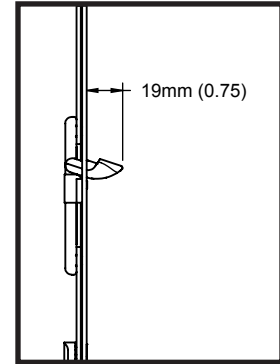
| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Swing Hook Position | Number of Screws |
|-------------|-------------------------------|-------------|----------------|---------------|----------------------------|------------------|
| 3868761 | M/70/25 914 SW1SB1 620 16S 20 | 70mm (2.75) | 25.4mm (1.00) | 914mm (36.00) | 620mm (24.41) | 4 |

For Top Extension, please reference the Top extension chart on the adjacent page.

Tongue - 16mm Faceplate

TONGUE

While offering security in the locked position, the HLS®9000 tongue retracts when opened, giving a smooth clean appearance.



Top Extension

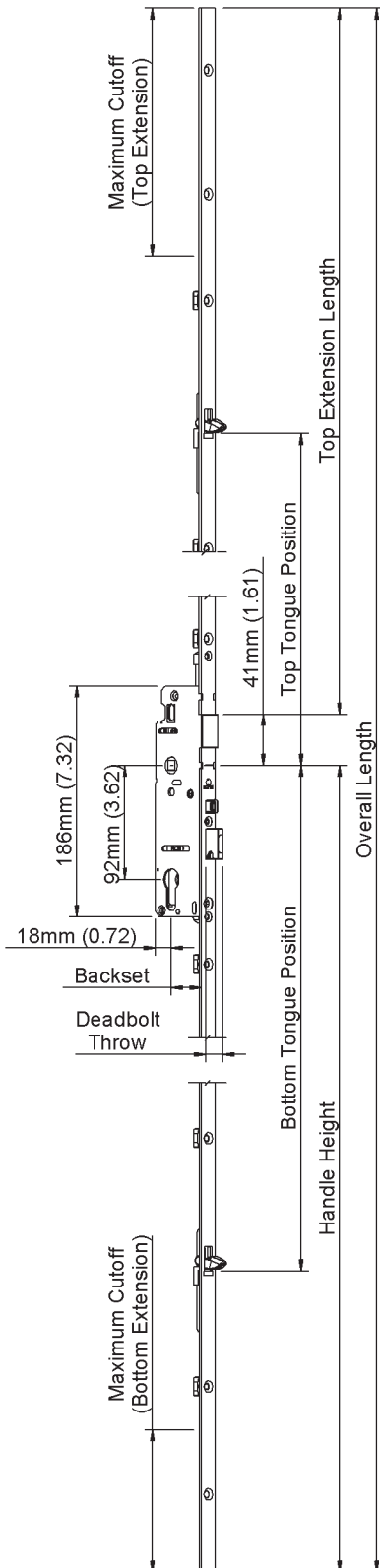
| Part Number | Description | Overall Length (with 914mm 36" Handle Height) | Extension Length | Handle to Top of Door | Top Tongue Position | Maximum Cutoff | Number of Screws |
|-------------|------------------------|---|------------------|-----------------------|---------------------|----------------|------------------|
| 3137707 | M 1058 TN 743 16S 195 | 1805mm-2013mm (71.06 - 79.25) | 1058mm (41.65) | 1086mm (42.76) | 743mm (29.25) | 208mm (8.19) | 7 |
| 8778551 | M 1220 TN 743 16S 370 | 1805mm - 2175mm (71.06 - 85.63) | 1220mm (48.03) | 1261mm (49.65) | 743mm (29.25) | 370mm (14.57) | 8 |
| 8778555 | M 1395 TN 945 16S 340 | 2010mm - 2350mm (79.13 - 92.52) | 1395mm (54.92) | 1436mm (56.54) | 945mm (37.20) | 340mm (13.39) | 9 |
| 8778559 | M 1570 TN 945 16S 515 | 2010mm - 2525mm (79.13 - 99.41) | 1570mm (61.81) | 1611mm (63.43) | 945mm (37.20) | 515mm (20.28) | 10 |
| 8778563 | M 1745 TN 1193 16S 445 | 2255mm - 2700mm (88.78 - 106.30) | 1745mm (68.70) | 1786mm (70.31) | 1193mm (46.97) | 445mm (17.52) | 10 |
| 8778567 | M 1920 TN 1594 16S 220 | 2655mm - 2875mm (104.53 - 113.19) | 1920mm (75.59) | 1961mm (77.20) | 1594mm (62.76) | 220mm (8.66) | 11 |
| 8778571 | M 2095 TN 1594 16S 395 | 2655mm - 3050mm (104.53 - 120.08) | 2095mm (82.48) | 2136mm (84.09) | 1594mm (62.76) | 395mm (15.55) | 12 |
| 8778575 | M 2270 TN 1594 16S 570 | 2655mm - 3225mm (104.53 - 126.97) | 2270mm (89.37) | 2311mm (90.98) | 1594mm (62.76) | 570mm (22.44) | 13 |

Top Extension with two tongues

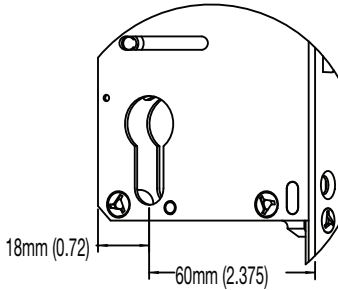
| Part Number | Description | Overall Length (with 914mm 36" Handle Height) | Extension Length | Handle to Top of Door | 1st Tongue Position | 2nd Tongue Position | Maximum Cutoff | Number of Screws |
|-------------|--------------------------|---|------------------|-----------------------|---------------------|---------------------|----------------|------------------|
| 2240631 | M 1424 TN2 661/246.5 16S | 2309mm - 2379mm (90.91 - 93.66) | 1424mm (56.06) | 1465mm (57.68) | 661mm (26.02) | 1246.5mm (49.07) | 70mm (2.76) | 8 |
| 3387298 | M 1998 TN2 945/1500 16S | 2563mm - 2953mm (100.91 - 116.26) | 1988mm (78.66) | 2039mm (80.28) | 945mm (37.20) | 1500mm (59.06) | 390mm (15.35) | 11 |
| 2949640 | M 2093 TN2 945/1500 16S | 2563mm - 3048mm (100.91 - 120.00) | 2093mm (82.40) | 2134mm (84.02) | 945mm (37.20) | 1500mm (59.06) | 485mm (19.09) | 11 |
| 3021229 | M 2093 TN2 1050/1850 16S | 2913mm - 3048mm (114.69 - 120.00) | 2093mm (82.40) | 2134mm (84.02) | 1050mm (41.34) | 1850mm (72.83) | 135mm (5.31) | 12 |

Gear / Bottom Extension

| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Tongue Position | Maximum Cutoff | Number of Screws |
|-------------|----------------------------|-------------|----------------|---------------|------------------------|----------------|------------------|
| 2423904 | M/35/25 914 TN 620 16S 160 | 35mm (1.38) | 25.4mm (1.00) | 914mm (36.00) | 620mm (24.41) | 160mm (6.30) | 6 |
| 8779123 | M/45/25 914 TN 620 16S 160 | 45mm (1.77) | 25.4mm (1.00) | 914mm (36.00) | 620mm (24.41) | 160mm (6.30) | 6 |
| 8778171 | M/35/14 914 TN 671 16S 115 | 35mm (1.38) | 14mm (.55) | 914mm (36.00) | 671mm (26.42) | 115mm (4.53) | 6 |
| 8778167 | M/45/14 914 TN 671 16S 115 | 45mm (1.77) | 14mm (.55) | 914mm (36.00) | 671mm (26.42) | 115mm (4.53) | 6 |
| 8778147 | M/35/25 914 TN 671 16S 115 | 35mm (1.38) | 25.4mm (1.00) | 914mm (36.00) | 671mm (26.42) | 115mm (4.53) | 6 |
| 8778075 | M/45/25 914 TN 671 16S 115 | 45mm (1.77) | 25.4mm (1.00) | 914mm (36.00) | 671mm (26.42) | 115mm (4.53) | 6 |
| 8778159 | M/35/14 914 TN 753 16S 30 | 35mm (1.38) | 14mm (.55) | 914mm (36.00) | 753mm (29.65) | 30mm (1.18) | 5 |
| 8778183 | M/45/14 914 TN 753 16S 30 | 45mm (1.77) | 14mm (.55) | 914mm (36.00) | 753mm (29.65) | 30mm (1.18) | 5 |
| 8778143 | M/35/25 914 TN 753 16S 30 | 35mm (1.38) | 25.4mm (1.00) | 914mm (36.00) | 753mm (29.65) | 30mm (1.18) | 5 |
| 8778163 | M/45/25 914 TN 753 16S 30 | 45mm (1.77) | 25.4mm (1.00) | 914mm (36.00) | 753mm (29.65) | 30mm (1.18) | 5 |



60mm Backset Gear / Bottom Extension

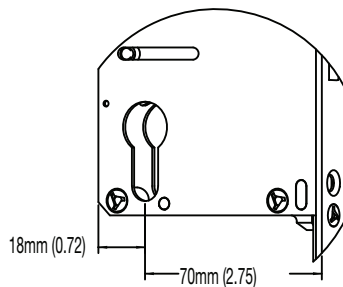


Gear - 60mm Backset

| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Tongue Position | Maximum Cutoff | Number of Screws |
|-------------|----------------------------|--------------|----------------|---------------|------------------------|----------------|------------------|
| 2406346 | M/60/25 914 TN 620 16S 160 | 60mm (2.375) | 25.4mm (1.00) | 914mm (36.00) | 620mm (24.41) | 160mm (6.30) | 6 |
| 2406354 | M/60/25 914 TN 671 16S 115 | 60mm (2.375) | 25.4mm (1.00) | 914mm (36.00) | 671mm (26.42) | 115mm (4.53) | 6 |
| 2406362 | M/60/25 914 TN 753 16S 30 | 60mm (2.375) | 25.4mm (1.00) | 914mm (36.00) | 753mm (29.65) | 30mm (1.18) | 5 |

For Top Extension, please reference the Top extension chart on the adjacent page.

70mm Backset Gear / Bottom Extension



Gear - 70mm Backset

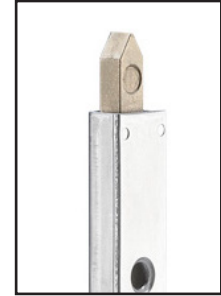
| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Tongue Position | Maximum Cutoff | Number of Screws |
|-------------|----------------------------|-------------|----------------|---------------|------------------------|----------------|------------------|
| 2406371 | M/70/25 914 TN 620 16S 160 | 70mm (2.75) | 25.4mm (1.00) | 914mm (36.00) | 620mm (24.41) | 160mm (6.30) | 6 |
| 2406389 | M/70/25 914 TN 671 16S 115 | 70mm (2.75) | 25.4mm (1.00) | 914mm (36.00) | 671mm (26.42) | 115mm (4.53) | 6 |
| 2406397 | M/70/25 914 TN 753 16S 30 | 70mm (2.75) | 25.4mm (1.00) | 914mm (36.00) | 753mm (29.65) | 30mm (1.18) | 5 |

For Top Extension, please reference the Top extension chart on the adjacent page.

Tongue / Shootbolt - 16mm Faceplate

TONGUE/SHOOTBOLT

The HLS®9000 tongue/shootbolt offers the added security of both horizontal and vertical strength for increased wind-load protection.



See corresponding colors in chart when referencing top extension length with middle extension chart

Top Extension

| Part Number | Description | Top Extension Length | Max. Cutoff | Number of Screws | Overall Length Combined with M 691 TN 600 (with 914mm/36" Handle Height) | Overall Length Combined with M 1141 TN 1050 (with 914mm/36" Handle Height) | Overall Length Combined with M 1591 TN 1500 (with 914mm/36" Handle Height) |
|-------------|---------------------|----------------------|--------------|------------------|--|--|--|
| 8778611 | M 400 SB 16S 20 100 | 400mm (15.75) | 100mm (3.94) | 3 | 1946mm - 2046mm (76.61 - 80.55) | 2396mm - 2496mm (94.33 - 98.27) | 2846mm - 2946mm (112.05 - 115.98) |
| 8778615 | M 475 SB 16S 20 100 | 475mm (18.70) | 100mm (3.94) | 3 | 2021mm - 2121mm (79.57 - 83.50) | 2471mm - 2571mm (97.28 - 101.22) | 2921mm - 3021mm (115.00 - 118.94) |
| 8778619 | M 550 SB 16S 20 100 | 550mm (21.65) | 100mm (3.94) | 4 | 2096mm - 2196mm (82.52 - 86.46) | 2546mm - 2646mm (100.24 - 104.17) | 2996mm - 3096mm (117.95 - 121.89) |
| 8778623 | M 625 SB 16S 20 100 | 625mm (24.61) | 100mm (3.94) | 4 | 2171mm - 2271mm (85.47 - 89.41) | 2621mm - 2721mm (103.19 - 107.13) | 3071mm - 3171mm (120.91 - 124.84) |
| 8778627 | M 700 SB 16S 20 100 | 700mm (27.56) | 100mm (3.94) | 4 | 2246mm - 2346mm (88.43 - 92.36) | 2696mm - 2796mm (106.14 - 110.08) | 3146mm - 3246mm (123.86 - 127.80) |
| 8778631 | M 775 SB 16S 20 100 | 775mm (30.51) | 100mm (3.94) | 5 | 2321mm - 2421mm (91.38 - 95.31) | 2771mm - 2871mm (109.09 - 113.03) | 3221mm - 3321mm (126.81 - 130.75) |

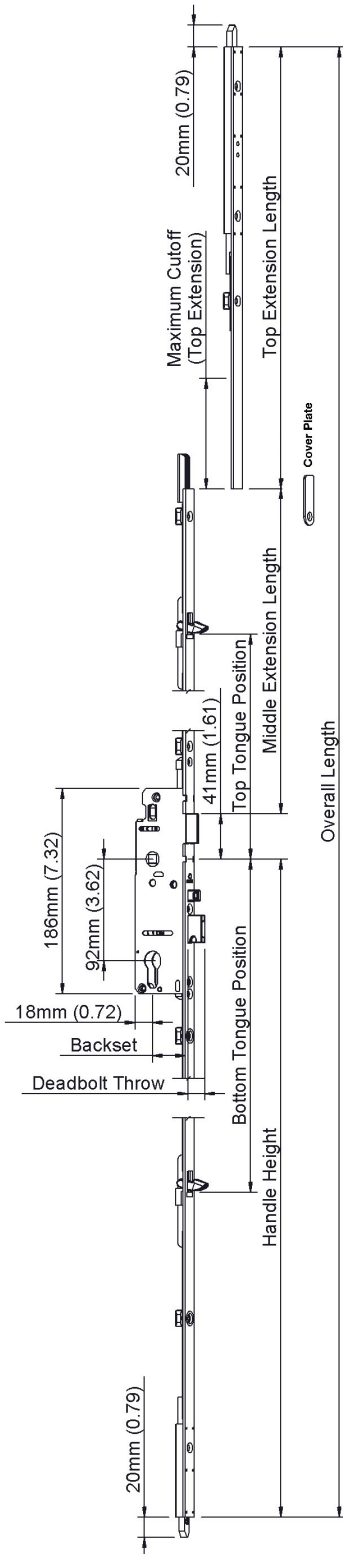
Middle Extension

| Part Number | Description | Middle Extension | Top Tongue Position | Second Tongue Position | Maximum Cutoff | Number of Screws |
|-------------|--------------------------|------------------|---------------------|------------------------|----------------|------------------|
| 2344923 | M 341 TN 250 16S | 341mm (13.43) | 250mm (9.84) | N/A | N/A | 3 |
| 8778703 | M 691 TN 600 16S | 691mm (27.20) | 600mm (23.62) | N/A | N/A | 4 |
| 8779139 | M 750 TN 600 16S | 750mm (29.53) | 600mm (23.62) | N/A | N/A | 4 |
| 2002350 | M 834 TN 743 16S | 834mm (32.83) | 743mm (29.25) | N/A | N/A | 5 |
| 8778707 | M 1141 TN 1050 16S | 1141mm (44.92) | 1050mm (41.34) | N/A | N/A | 7 |
| 8779143 | M 1156 TN 1050 16S | 1156mm (45.51) | 1050mm (41.34) | N/A | N/A | 7 |
| 2002384 | M 1284 TN 1193 16S | 1284mm (50.55) | 1193mm (46.97) | N/A | N/A | 7 |
| 8778711 | M 1591 TN 1500 16S | 1591mm (62.64) | 1500mm (59.06) | N/A | N/A | 9 |
| 2339358 | M 2041 TNT 1050/1950 16S | 2041mm (80.35) | 1950mm (76.77) | 1050mm (41.34) | N/A | 12 |

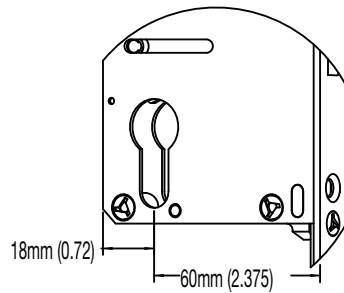
Gear

| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Tongue Position | Max. Cutoff | Number of Screws |
|-------------|----------------------------|-------------|----------------|---------------|------------------------|-------------|------------------|
| 8778283 | M/35/14 914 TNS 620 16S 20 | 35mm (1.38) | 14mm (0.55) | 914mm (36.00) | 620mm (24.41) | N/A | 6 |
| 8778311 | M/45/14 914 TNS 620 16S 20 | 45mm (1.77) | 14mm (0.55) | 914mm (36.00) | 620mm (24.41) | N/A | 6 |
| 8778263 | M/35/25 914 TNS 620 16S 20 | 35mm (1.38) | 25mm (1.00) | 914mm (36.00) | 620mm (24.41) | N/A | 6 |
| 8778107 | M/45/25 914 TNS 620 16S 20 | 45mm (1.77) | 25mm (1.00) | 914mm (36.00) | 620mm (24.41) | N/A | 6 |

2875118 Cover Plate



60mm Backset Gear / Bottom Extension

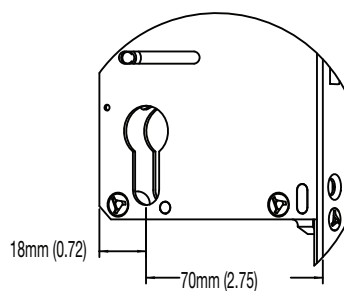


Gear - 60mm Backset

| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Tongue Position | Number of Screws |
|-------------|----------------------------|--------------|----------------|---------------|------------------------|------------------|
| 2406477 | M/60/25 914 TNS 620 16S 20 | 60mm (2.375) | 25.4mm (1.00) | 914mm (36.00) | 620mm (24.41) | 6 |

For Top Extension, please reference the Top extension chart on the adjacent page.

70mm Backset Gear / Bottom Extension



Gear - 70mm Backset

| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Tongue Position | Number of Screws |
|-------------|----------------------------|-------------|----------------|---------------|------------------------|------------------|
| 2406485 | M/70/25 914 TNS 620 16S 20 | 70mm (2.75) | 25.4mm (1.00) | 914mm (36.00) | 620mm (24.41) | 6 |

For Top Extension, please reference the Top extension chart on the adjacent page.

Shootbolt - 16mm Faceplate

SHOOTBOLT

Added vertical strength is a proven benefit of the shootbolt version providing extra security through the locking points in the head and sill of the door.



See corresponding colors in chart when referencing top extension length with middle extension chart

Top Extension

| Part Number | Description | Top Extension Length | Max. Cutoff | Number of Screws | Overall Length Combined with M 691 (with 914mm/36" Handle Height) | Overall Length Combined with M 1141 (with 914mm/36" Handle Height) | Overall Length Combined with M 1591 (with 914mm/36" Handle Height) |
|-------------|---------------------|----------------------|--------------|------------------|---|--|--|
| 8778611 | M 400 SB 16S 20 100 | 400mm (15.75) | 100mm (3.94) | 3 | 1946mm - 2046mm (76.61 - 80.55) | 2396mm - 2496mm (94.33 - 98.27) | 2846mm - 2946mm (112.05 - 115.98) |
| 8778615 | M 475 SB 16S 20 100 | 475mm (18.70) | 100mm (3.94) | 3 | 2021mm - 2121mm (79.57 - 83.50) | 2471mm - 2571mm (97.28 - 101.22) | 2921mm - 3021mm (115.00 - 118.94) |
| 8778619 | M 550 SB 16S 20 100 | 550mm (21.65) | 100mm (3.94) | 4 | 2096mm - 2196mm (82.52 - 86.46) | 2546mm - 2646mm (100.24 - 104.17) | 2996mm - 3096mm (117.95 - 121.89) |
| 8778623 | M 625 SB 16S 20 100 | 625mm (24.61) | 100mm (3.94) | 4 | 2171mm - 2271mm (85.47 - 89.41) | 2621mm - 2721mm (103.19 - 107.13) | 3071mm - 3171mm (120.91 - 124.84) |
| 8778627 | M 700 SB 16S 20 100 | 700mm (27.56) | 100mm (3.94) | 4 | 2246mm - 2346mm (88.43 - 92.36) | 2696mm - 2796mm (106.14 - 110.08) | 3146mm - 3246mm (123.86 - 127.80) |
| 8778631 | M 775 SB 16S 20 100 | 775mm (30.51) | 100mm (3.94) | 5 | 2321mm - 2421mm (91.38 - 95.31) | 2771mm - 2871mm (109.09 - 113.03) | 3221mm - 3321mm (126.81 - 130.75) |

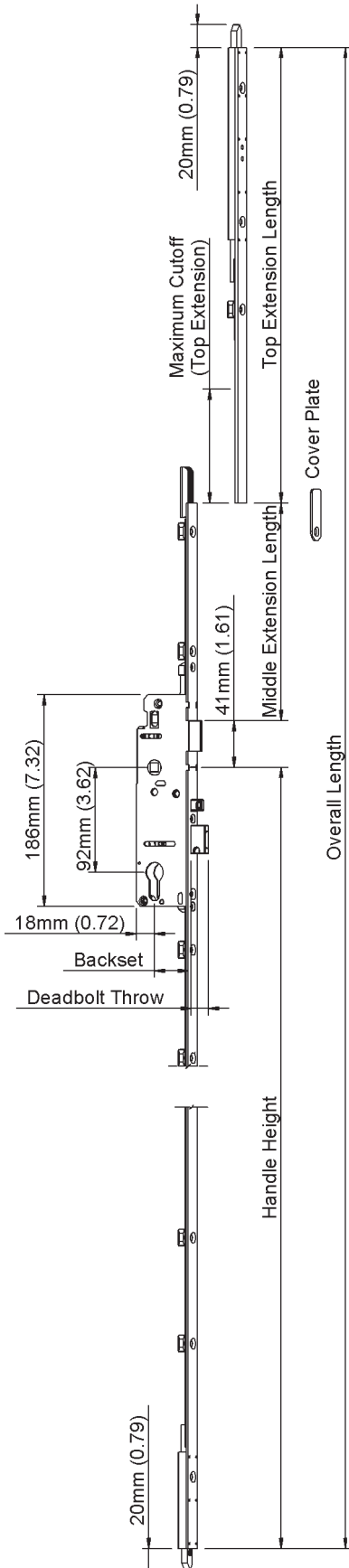
Middle Extension

| Part Number | Description | Middle Extension | Maximum Cutoff | Number of Screws |
|-------------|-------------|------------------|----------------|------------------|
| 8779199 | M 191 16S | 191mm (7.52) | N/A | 2 |
| 2424114 | M 441 16S | 441mm (17.36) | N/A | 3 |
| 8778691 | M 691 16S | 691mm (27.20) | N/A | 4 |
| 8778695 | M 1141 16S | 1141mm (44.92) | N/A | 6 |
| 8778699 | M 1591 16S | 1591mm (62.64) | N/A | 8 |
| 3174559 | M 2041 16S | 2041mm (80.35) | N/A | 11 |

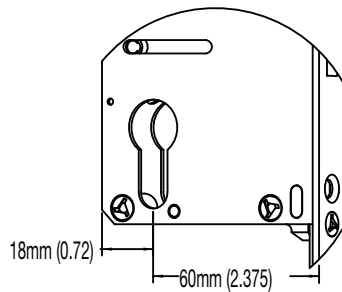
Gear / Bottom Extension

| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Max. Cutoff | Number of Screws |
|-------------|-----------------------|-------------|----------------|---------------|-------------|------------------|
| 8778339 | M/35/14 914 SB 16S 20 | 35mm (1.38) | 14mm (0.55) | 914mm (36.00) | N/A | 6 |
| 8778343 | M/45/14 914 SB 16S 20 | 45mm (1.77) | 14mm (0.55) | 914mm (36.00) | N/A | 6 |
| 8778335 | M/35/25 914 SB 16S 20 | 35mm (1.38) | 25mm (1.00) | 914mm (36.00) | N/A | 6 |
| 8778331 | M/45/25 914 SB 16S 20 | 45mm (1.77) | 25mm (1.00) | 914mm (36.00) | N/A | 6 |

| | |
|---------|-------------|
| 2875118 | Cover Plate |
|---------|-------------|



60mm Backset Gear / Bottom Extension

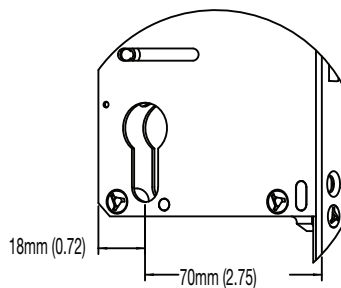


Gear - 60mm Backset

| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Number of Screws |
|-------------|--------------------|--------------|----------------|---------------|------------------|
| 2406514 | M/60/25 914 SB 16S | 60mm (2.375) | 25.4mm (1.00) | 914mm (36.00) | 6 |

For Top Extension, please reference the Top extension chart on the adjacent page.

70mm Backset Gear / Bottom Extension



Gear - 70mm Backset

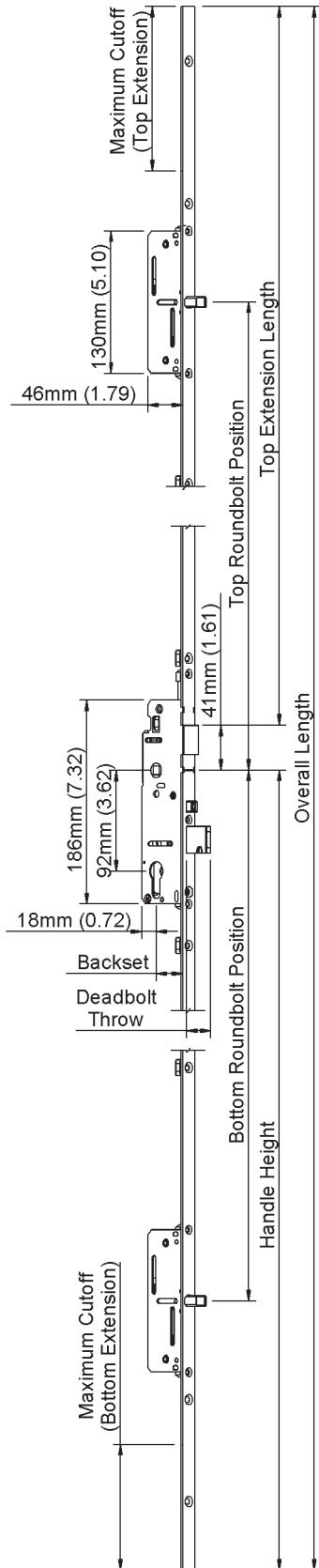
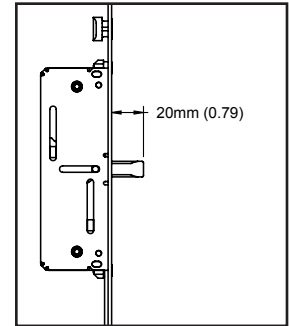
| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Number of Screws |
|-------------|--------------------|-------------|----------------|---------------|------------------|
| 2406522 | M/70/25 914 SB 16S | 70mm (2.75) | 25.4mm (1.00) | 914mm (36.00) | 6 |

For Top Extension, please reference the Top extension chart on the adjacent page.

Roundbolt - 16mm Faceplate

ROUNDBOLT

The roundbolt version offers one of the highest levels of security with the added benefit of an even, finished look when in the open position.

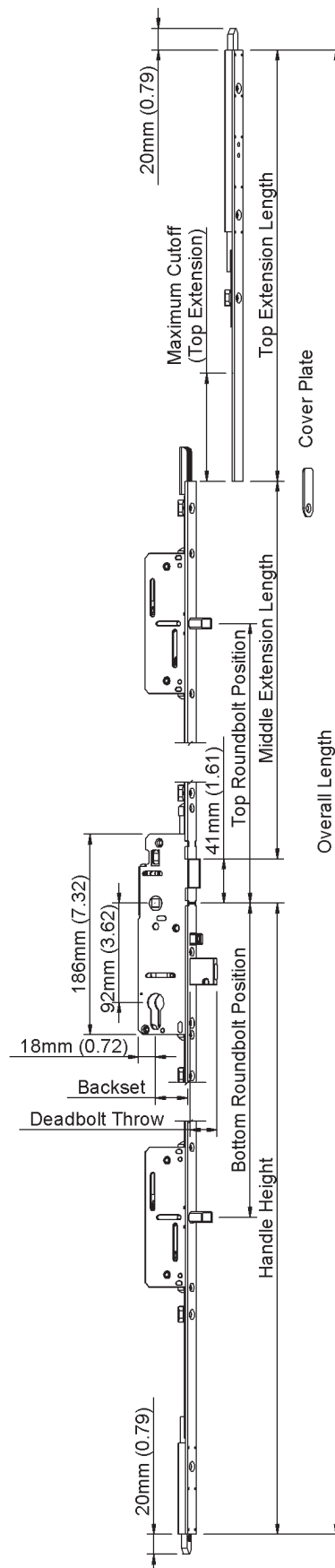


Top Extension

| Part Number | Description | Overall Length Combined (with 914mm 36" Handle Height) | Extension Length | Handle to Top of Door | Top Roundbolt | Maximum Cutoff | Number of Screws |
|-------------|-------------------------|--|------------------|-----------------------|-----------------|----------------|------------------|
| 3726739 | M 379 RB 294.5 16S 25 | 1309mm - 1334mm (51.53 - 52.62) | 379mm (14.92) | 420mm (16.54) | 294.5mm (11.59) | 25mm (1.00) | 2 |
| 3444213 | M 1003 RB 465 16S 475 | 1483mm - 1958mm (58.39 - 77.09) | 1003mm (39.49) | 1044mm (41.10) | 465mm (18.31) | 475mm (18.70) | 5 |
| 8778659 | M 1045 RB 816 16S 165 | 1835mm - 2000mm (72.24 - 78.74) | 1045mm (41.14) | 1086mm (42.76) | 816mm (32.13) | 165mm (6.50) | 6 |
| 3444221 | M 1162 RB 625 16S 475 | 1642mm - 2117mm (64.65 - 83.35) | 1162mm (45.75) | 1203mm (47.36) | 625mm (24.61) | 475mm (18.70) | 6 |
| 8778663 | M 1220 RB 816 16S 340 | 1835mm - 2175mm (72.24 - 85.63) | 1220mm (48.03) | 1261mm (49.65) | 816mm (32.13) | 340mm (13.39) | 8 |
| 8778667 | M 1395 RB 1016 16S 315 | 2035mm - 2350mm (80.15 - 92.52) | 1395mm (54.92) | 1436mm (56.54) | 1016mm (40.00) | 315mm (12.40) | 9 |
| 8778671 | M 1570 RB 1216 16 S 290 | 2235mm - 2525mm (87.99 - 99.41) | 1570mm (61.81) | 1611mm (63.43) | 1216mm (47.87) | 290mm (11.42) | 10 |
| 8778675 | M 1745 RB 1216 16S 465 | 2235mm - 2700mm (87.99 - 106.30) | 1745mm (68.70) | 1786mm (70.31) | 1216mm (47.87) | 465mm (18.31) | 10 |
| 8778679 | M 1920 RB 1600 16S 255 | 2620mm - 2875mm (103.15 - 113.19) | 1920mm (75.59) | 1961mm (77.20) | 1600mm (62.99) | 255mm (10.04) | 11 |
| 8778683 | M 2095 RB 1600 16S 430 | 2620mm - 3050mm (103.15 - 120.08) | 2095mm (82.48) | 2136mm (84.09) | 1600mm (62.99) | 430mm (16.93) | 12 |
| 8778687 | M 2270 RB 1600 16S 605 | 2620mm - 3225mm (103.15 - 126.97) | 2270mm (89.37) | 2311mm (90.98) | 1600mm (62.99) | 605mm (23.82) | 13 |

Gear

| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Roundbolt Position | Max. Cutoff | Number of Screws |
|-------------|---------------------------|-------------|----------------|---------------|---------------------------|--------------|------------------|
| 8778259 | M/35/25 914 RB 668 16S 20 | 35mm (1.38) | 25mm (1.00) | 914mm (36.00) | 668mm (26.30) | 140mm (5.51) | 5 |
| 8778139 | M/45/25 914 RB 668 16S 20 | 45mm (1.77) | 25mm (1.00) | 914mm (36.00) | 668mm (26.30) | 140mm (5.51) | 5 |
| 2942245 | M/60/25 914 RB 668 16S 20 | 60mm (2.36) | 25mm (1.00) | 914mm (36.00) | 668mm (26.30) | 140mm (5.51) | 5 |
| 2942253 | M/70/25 914 RB 668 16S 20 | 70mm (2.76) | 25mm (1.00) | 914mm (36.00) | 668mm (26.30) | 140mm (5.51) | 5 |



ROUNDBOLT/SHOOTBOLT

The strongest multipoint we offer. The 24.41"/shootbolt features five locking points with horizontal and vertical strength for the highest level of security including improved weather-sealing and warpage control.



Top Extension

| Part Number | Description | Top Extension Length | Max. Cutoff | Number of Screws | Overall Length Combined with M 691 RB 600 (with 914mm/36" Handle Height) | Overall Length Combined with M 1141 RB 1050 (with 914mm/36" Handle Height) | Overall Length Combined with M 1591 RB 1500 (with 914mm/36" Handle Height) |
|-------------|---------------------|----------------------|--------------|------------------|--|--|--|
| 8778611 | M 400 SB 16S 20 100 | 400mm (15.75) | 100mm (3.94) | 3 | 1946mm - 2046mm (76.61 - 80.55) | 2396mm - 2496mm (94.33 - 98.27) | 2846mm - 2946mm (112.05 - 115.98) |
| 8778615 | M 475 SB 16S 20 100 | 475mm (18.70) | 100mm (3.94) | 3 | 2021mm - 2121mm (79.57 - 83.50) | 2471mm - 2571mm (97.28 - 101.22) | 2921mm - 3021mm (115.00 - 118.94) |
| 8778619 | M 550 SB 16S 20 100 | 550mm (21.65) | 100mm (3.94) | 4 | 2096mm - 2196mm (82.52 - 86.46) | 2546mm - 2646mm (100.24 - 104.17) | 2996mm - 3096mm (117.95 - 121.89) |
| 8778623 | M 625 SB 16S 20 100 | 625mm (24.61) | 100mm (3.94) | 4 | 2171mm - 2271mm (85.47 - 89.40) | 2621mm - 2721mm (103.19 - 107.13) | 3071mm - 3171mm (120.91 - 124.84) |
| 8778627 | M 700 SB 16S 20 100 | 700mm (27.56) | 100mm (3.94) | 4 | 2246mm - 2346mm (88.43 - 92.36) | 2696mm - 2796mm (106.14 - 110.08) | 3146mm - 3246mm (123.86 - 127.80) |
| 8778631 | M 775 SB 16S 20 100 | 775mm (30.51) | 100mm (3.94) | 5 | 2321mm - 2421mm (91.38 - 95.31) | 2771mm - 2871mm (109.09 - 113.03) | 3221mm - 3321mm (126.81 - 130.75) |

Middle Extension

| Part Number | Description | Middle Extension | Top Roundbolt Position | Maximum Cutoff | Number of Screws |
|-------------|--------------------|-------------------|------------------------|----------------|------------------|
| 3537057 | M 466 RB 375 16S | 466mm (18.35) | 375mm (14.76) | N/A | 3 |
| 8778739 | M 691 RB 600 16S | 691mm (27.20) | 600mm (23.62) | N/A | 4 |
| 8778743 | M 1141 RB 1050 16S | 1141mm (44.92) | 1050mm (41.34) | N/A | 6 |
| 8778747 | M 1591 RB 1500 16S | 1591mm (62.64) | 1500mm (59.06) | N/A | 8 |

Gear

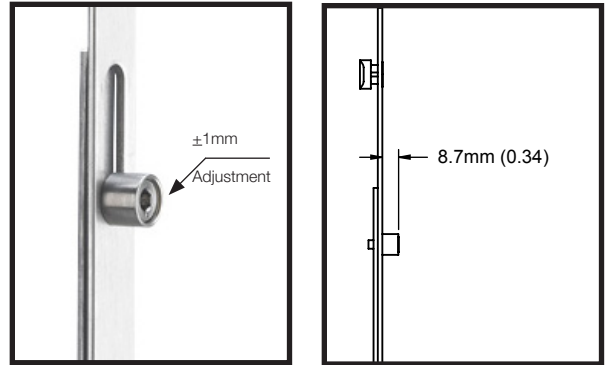
| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Roundbolt Position | Max. Cutoff | Number of Screws |
|-------------|----------------------------|----------------|----------------|------------------|---------------------------|-------------|------------------|
| 8778751 | M/35/25 914 RBS 620 16S 20 | 35mm (1.38) | 25mm (1.00) | 914mm (36.00) | 620mm (24.41) | N/A | 6 |
| 8778755 | M/45/25 914 RBS 620 16S 20 | 45mm (1.77) | 25mm (1.00) | 914mm (36.00) | 620mm (24.41) | N/A | 6 |
| 2485283 | M/60/25 914 RBS 620 16S 20 | 60mm (2.36) | 25mm (1.00) | 914mm (36.00) | 620mm (24.41) | N/A | 6 |

| | |
|---------|-------------|
| 2875118 | Cover Plate |
|---------|-------------|

Two Roller - 16mm Faceplate

TWO ROLLER

The HLS®9000 two roller version is easily adjusted with the simple turn of an hex wrench for improved weather sealing.



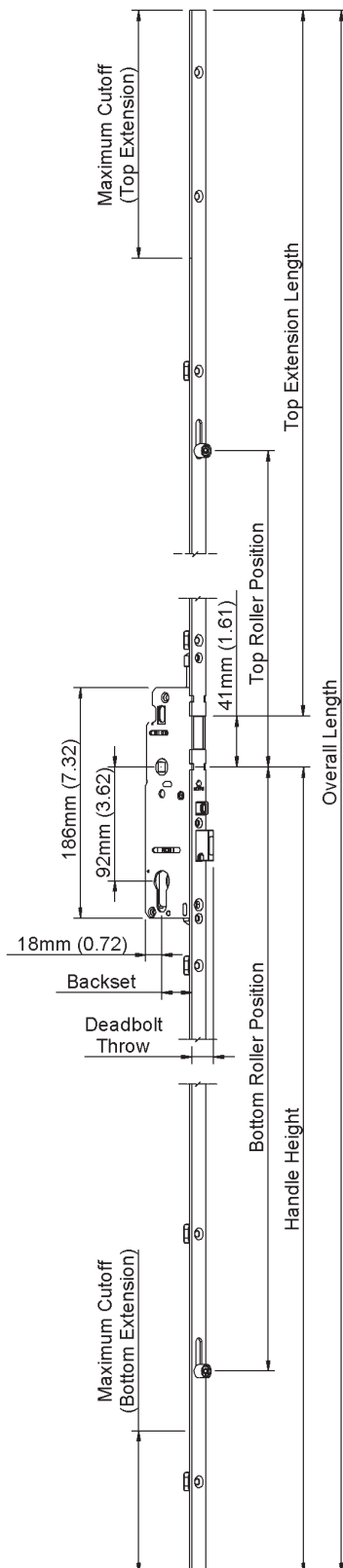
Top Extension

| Part Number | Description | Overall Length (with 914mm 36" Handle Height) | Extension Length | Handle to Top of Door | Top Roller Position | Maximum Cutoff | Number of Screws |
|-------------|------------------------|--|---------------------|--------------------------|---------------------------|-------------------|------------------------|
| 8778479 | M 1045 RL 730 16S 275 | 1725mm-2000mm (67.91 - 78.74) | 1045mm (41.14) | 1086mm (42.76) | 730mm (28.74) | 275mm (10.83) | 7 |
| 8778483 | M 1220 RL 930 16S 250 | 1925mm - 2175mm (75.79 - 85.63) | 1220mm (48.03) | 1261mm (49.65) | 930mm (36.61) | 250mm (9.84) | 8 |
| 8778487 | M 1395 RL 1135 16S 220 | 2130mm - 2350mm (83.86 - 92.52) | 1395mm (54.92) | 1436mm (56.54) | 1135mm (44.69) | 220mm (8.66) | 9 |
| 8778491 | M 1570 RL 1285 16S 245 | 2280mm - 2525mm (89.76 - 99.41) | 1570mm (61.81) | 1611mm (63.43) | 1285mm (50.59) | 245mm (9.65) | 10 |
| 8778495 | M 1745 RL 1285 16S 420 | 2280mm - 2700mm (89.76 - 106.30) | 1745mm (68.70) | 1786mm (70.31) | 1285mm (50.59) | 420mm (16.54) | 11 |
| 8778499 | M 1920 RL 1600 16S 280 | 2595mm - 2875mm (102.17 - 113.19) | 1920mm (75.59) | 1961mm (77.20) | 1600mm (62.99) | 280mm (11.02) | 11 |
| 8778503 | M 2095 RL 1600 16S 455 | 2595mm - 3050mm (102.17 - 120.08) | 2095mm (82.48) | 2136mm (84.09) | 1600mm (62.99) | 455mm (17.91) | 12 |
| 8778507 | M 2270 RL 1600 16S 630 | 2595mm - 3225mm (102.17 - 126.97) | 2270mm (89.37) | 2311mm (90.98) | 1600mm (62.99) | 630mm (24.80) | 13 |

Gear

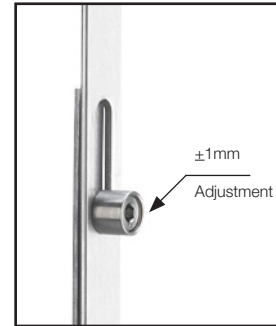
| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Roller Position | Maximum Cutoff | Number of Screws |
|-------------|---------------------------|----------------|-------------------|------------------|---------------------------|-------------------|------------------------|
| 8778279 | M/35/14 914 RL 750 16S 60 | 35mm (1.38) | 14mm (.55) | 914mm (36.00) | 750mm (29.53) | 60mm (2.36) | 5 |
| 8778511 | M/45/14 914 RL 750 16S 60 | 45mm (1.77) | 14mm (.55) | 914mm (36.00) | 750mm (29.53) | 60mm (2.36) | 5 |
| 8778255 | M/35/25 914 RL 750 16S 60 | 35mm (1.38) | 25.4mm (1.00) | 914mm (36.00) | 750mm (29.53) | 60mm (2.36) | 5 |
| 8778223 | M/45/25 914 RL 750 16S 60 | 45mm (1.77) | 25.4mm (1.00) | 914mm (36.00) | 750mm (29.53) | 60mm (2.36) | 5 |

Note: Rollers are listed in the locked or down position.



ROLLER/SHOOTBOLT

The roller/shootbolt combines all the qualities of the shootbolt and the roller systems. The simple adjustability of a typical roller system for additional weather sealing and the strength of the shootbolt.


Top Extension

| Part Number | Description | Top Extension Length | Max. Cutoff | Number of Screws | Overall Length Combined with M 691 RL 600 (with 914mm/36" Handle Height) | Overall Length Combined with M 1141 RL 1050 (with 914mm/36" Handle Height) | Overall Length Combined with M 1591 RL 1500 (with 914mm/36" Handle Height) |
|-------------|---------------------|----------------------|--------------|------------------|--|--|--|
| 8778611 | M 400 SB 16S 20 100 | 400mm (15.75) | 100mm (3.94) | 3 | 1946mm - 2046mm (76.61 - 80.55) | 2396mm - 2496mm (94.33 - 98.27) | 2846mm - 2946mm (112.05 - 115.98) |
| 8778615 | M 475 SB 16S 20 100 | 475mm (18.70) | 100mm (3.94) | 3 | 2021mm - 2121mm (79.57 - 83.50) | 2471mm - 2571mm (97.28 - 101.22) | 2921mm - 3021mm (115.00 - 118.94) |
| 8778619 | M 550 SB 16S 20 100 | 550mm (21.65) | 100mm (3.94) | 4 | 2096mm - 2196mm (82.52 - 86.46) | 2546mm - 2646mm (100.24 - 104.17) | 2996mm - 3096mm (117.95 - 121.89) |
| 8778623 | M 625 SB 16S 20 100 | 625mm (24.61) | 100mm (3.94) | 4 | 2171mm - 2271mm (85.47 - 89.41) | 2621mm - 2721mm (103.19 - 107.13) | 3071mm - 3171mm (120.91 - 124.84) |
| 8778627 | M 700 SB 16S 20 100 | 700mm (27.56) | 100mm (3.94) | 4 | 2246mm - 2346mm (88.43 - 92.36) | 2696mm - 2796mm (106.14 - 110.08) | 3146mm - 3246mm (123.86 - 127.80) |
| 8778631 | M 775 SB 16S 20 100 | 775mm (30.51) | 100mm (3.94) | 5 | 2321mm - 2421mm (91.38 - 95.31) | 2771mm - 2871mm (109.09 - 113.03) | 3221mm - 3321mm (126.81 - 130.75) |

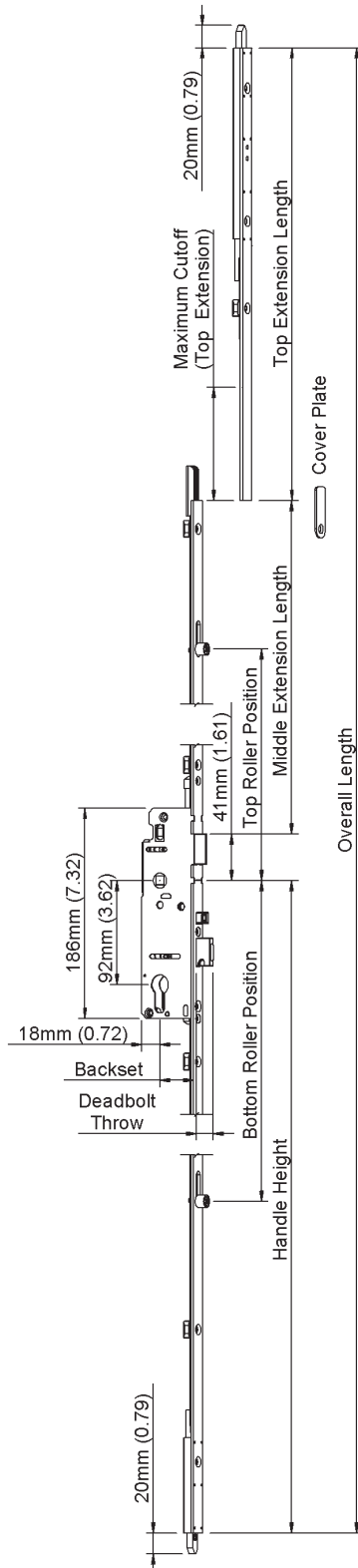
Middle Extension

| Part Number | Description | Middle Extension | Top Roller Position | Maximum Cutoff | Number of Screws |
|-------------|--------------------|------------------|---------------------|----------------|------------------|
| 8779295 | M 691 RL 330 16S | 691mm (27.20) | 330mm (12.99) | N/A | 4 |
| 8778823 | M 691 RL 600 16S | 691mm (27.20) | 600mm (23.62) | N/A | 4 |
| 2164818 | M 742 RL 651 16S | 742mm (29.21) | 651mm (25.63) | N/A | 4 |
| 2162396 | M 920 RL 829 16S | 920mm (36.22) | 829mm (32.64) | N/A | 5 |
| 8778827 | M 1141 RL 1050 16S | 1141mm (44.92) | 1050mm (41.34) | N/A | 7 |
| 8778831 | M 1591 RL 1500 16S | 1591mm (62.64) | 1500mm (59.06) | N/A | 9 |

Gear

| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Roller Position | Max. Cutoff | Number of Screws |
|-------------|----------------------------|-------------|----------------|---------------|------------------------|-------------|------------------|
| 8778835 | M/35/14 914 RLS 620 16S 20 | 35mm (1.38) | 14mm (0.55) | 914mm (36.00) | 620mm (24.41) | N/A | 6 |
| 8778839 | M/45/14 914 RLS 620 16S 20 | 45mm (1.77) | 14mm (0.55) | 914mm (36.00) | 620mm (24.41) | N/A | 6 |
| 8778843 | M/35/25 914 RLS 620 16S 20 | 35mm (1.38) | 25mm (1.00) | 914mm (36.00) | 620mm (24.41) | N/A | 6 |
| 8778847 | M/45/25 914 RLS 620 16S 20 | 45mm (1.77) | 25mm (1.00) | 914mm (36.00) | 620mm (24.41) | N/A | 6 |
| 2858511 | M/60/25 914 RLS 620 16S 20 | 60mm (2.36) | 25mm (1.00) | 914mm (36.00) | 620mm (24.41) | N/A | 6 |
| 3924524 | M/70/25 914 RLS 620 16S 20 | 70mm (2.75) | 25mm (1.00) | 914mm (36.00) | 620mm (24.41) | N/A | 6 |

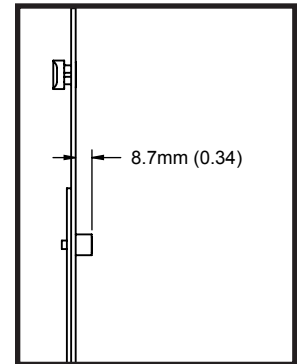
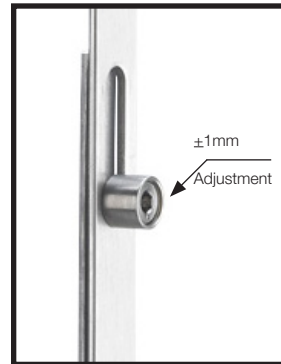
| | |
|---------|-------------|
| 2875118 | Cover Plate |
|---------|-------------|



Four Roller - 16mm Faceplate

FOUR ROLLER

The four roller version offers the same benefits as the two roller version with two additional locking points for added security and additional weather sealing.



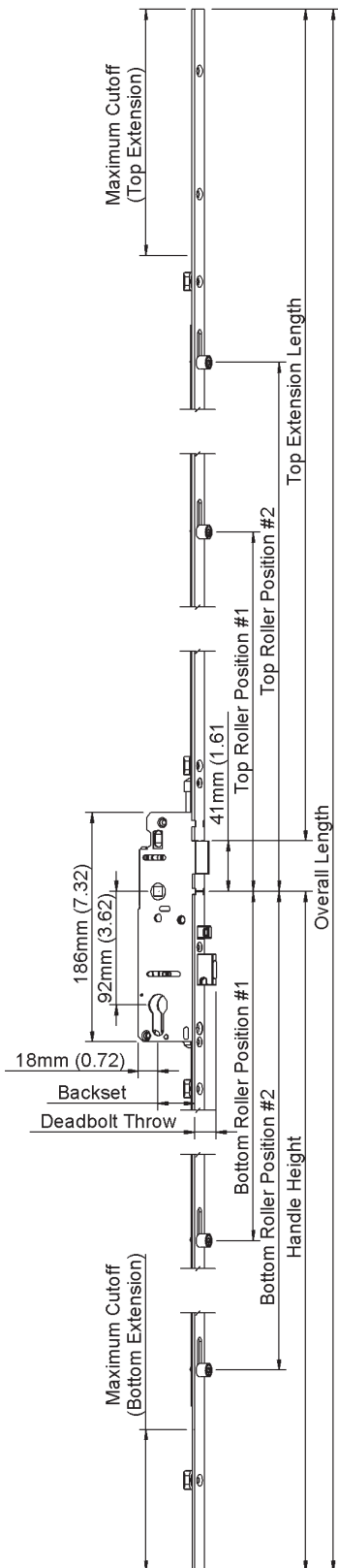
Top Extension

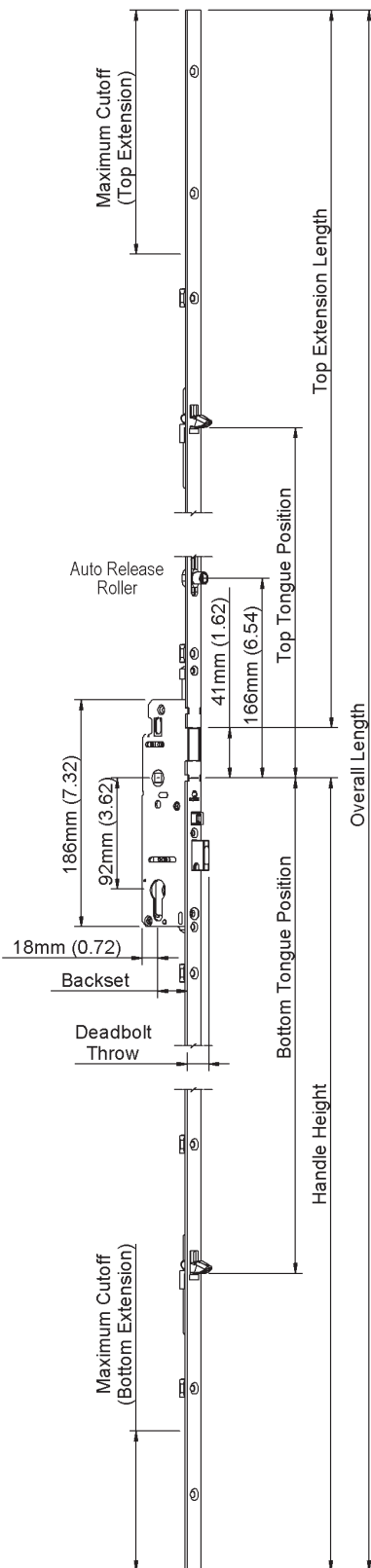
| Part Number | Description | Overall Length (with 914mm 36" Handle Height) | Ext. Length | Handle to Top of Door | Top Roller Pos. #1 | Top Roller Pos. #2 | Max. Cutoff | Number of Screws |
|-------------|------------------------------|--|-------------------|-----------------------------|--------------------------|--------------------------|------------------|------------------------|
| 8778851 | M 1045 RLR 400/800 16S 205 | 1795mm-2000mm (70.67 - 78.74) | 1045mm (41.14) | 1086mm (42.76) | 400mm (15.75) | 800mm (31.50) | 205mm (8.07) | 7 |
| 8778855 | M 1220 RLR 400/800 16S 380 | 1795mm - 2175mm (70.67 - 85.63) | 1220mm (48.03) | 1261mm (49.65) | 400mm (15.75) | 800mm (31.50) | 380mm (14.96) | 8 |
| 8778859 | M 1395 RLR 600/1150 16S 205 | 2145mm - 2350mm (84.45 - 92.52) | 1395mm (54.92) | 1436mm (56.54) | 600mm (23.62) | 1150mm (45.28) | 205mm (8.07) | 9 |
| 8778863 | M 1570 RLR 600/1150 16S 380 | 2145mm - 2525mm (84.45 - 99.41) | 1570mm (61.81) | 1611mm (63.43) | 600mm (23.62) | 1150mm (45.28) | 380mm (14.96) | 10 |
| 8778867 | M 1745 RLR 800/1500 16S 205 | 2495mm - 2700mm (98.23 - 106.30) | 1745mm (68.70) | 1786mm (70.31) | 800mm (31.50) | 1500mm (59.06) | 205mm (8.07) | 11 |
| 8778871 | M 1920 RLR 800/1500 16S 380 | 2495mm - 2875mm (98.23 - 113.19) | 1920mm (75.59) | 1961mm (77.20) | 800mm (31.50) | 1500mm (59.06) | 380mm (14.96) | 12 |
| 8778875 | M 2095 RLR 1000/1850 16S 205 | 2845mm - 3050mm (112.01 - 120.08) | 2095mm (82.48) | 2136mm (84.09) | 1000mm (39.97) | 1850mm (72.83) | 205mm (8.07) | 12 |
| 8778879 | M 2270 RLR 1000/1850 16S 380 | 2845mm - 3225mm (112.01 - 126.97) | 2270mm (89.37) | 2311mm (90.98) | 1000mm (39.97) | 1850mm (72.83) | 380mm (14.96) | 13 |

Gear

| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Roller Pos. #1 | Bottom Roller Pos. #2 | Max. Cutoff | Number of Screws |
|-------------|--------------------------------|----------------|-------------------|------------------|-----------------------------|-----------------------------|----------------|------------------------|
| 8778883 | M/35/14 914 RLR 400/750 16S 60 | 35mm (1.38) | 14mm (.55) | 914mm (36.00) | 400mm (15.75) | 750mm (29.53) | 60mm (2.36) | 5 |
| 8778887 | M/45/14 914 RLR 400/750 16S 60 | 45mm (1.77) | 14mm (.55) | 914mm (36.00) | 400mm (15.75) | 750mm (29.53) | 60mm (2.36) | 5 |
| 8778891 | M/35/25 914 RLR 400/750 16S 60 | 35mm (1.38) | 25.4mm (1.00) | 914mm (36.00) | 400mm (15.75) | 750mm (29.53) | 60mm (2.36) | 5 |
| 8778895 | M/45/25 914 RLR 400/750 16S 60 | 45mm (1.77) | 25.4mm (1.00) | 914mm (36.00) | 400mm (15.75) | 750mm (29.53) | 60mm (2.36) | 5 |

Note: Rollers are listed in the locked or down position.





AUTOMATIC TONGUE

While offering security in the locked position, the HLS®9000 tongue version retracts when opened, giving a smooth clean appearance. Automatic version engages multipoint when door is closed.



Top Extension

| Part Number | Description | Overall Length (with 914mm 36" Handle Height) | Extension Length | Handle to Top of Door | Top Tongue Position | Maximum Cutoff | Number of Screws |
|-------------|------------------------|---|------------------|-----------------------|---------------------|----------------|------------------|
| 8778579 | A 1045 TN 743 16S 195 | 1805mm - 2000mm (71.06 - 78.74) | 1045mm (41.14) | 1086mm (42.76) | 743mm (29.25) | 195mm (7.67) | 7 |
| 8778583 | A 1220 TN 743 16S 370 | 1805mm - 2175mm (71.06 - 85.63) | 1220mm (48.03) | 1261mm (49.65) | 743mm (29.25) | 370mm (14.57) | 8 |
| 8778587 | A 1395 TN 945 16S 340 | 2010mm - 2350mm (79.13 - 92.52) | 1395mm (54.92) | 1436mm (56.54) | 945mm (37.20) | 340mm (13.39) | 9 |
| 8778591 | A 1570 TN 945 16S 515 | 2010mm - 2525mm (79.13 - 99.41) | 1570mm (61.81) | 1611mm (63.43) | 945mm (37.20) | 515mm (20.28) | 10 |
| 8778595 | A 1745 TN 1193 16S 445 | 2255mm - 2700mm (88.78 - 106.30) | 1745mm (68.70) | 1786mm (70.31) | 1193mm (46.97) | 445mm (17.52) | 10 |
| 8778607 | A 2270 TN 1594 16S 570 | 2655mm - 3225mm (104.53 - 126.97) | 2270mm (89.37) | 2311mm (90.98) | 1594mm (62.76) | 570mm (22.44) | 13 |

Gear

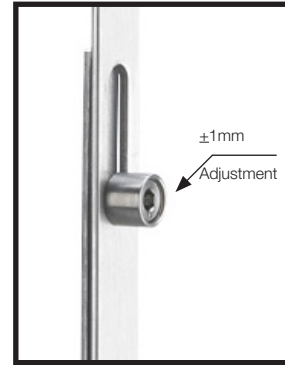
| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Tongue Position | Maximum Cutoff | Number of Screws |
|-------------|----------------------------|-------------|----------------|---------------|------------------------|----------------|------------------|
| 8778271 | A/35/14 914 TN 671 16S 115 | 35mm (1.38) | 14mm (.55) | 914mm (36.00) | 671mm (26.42) | 115mm (4.53) | 6 |
| 8778303 | A/45/14 914 TN 671 16S 115 | 45mm (1.77) | 14mm (.55) | 914mm (36.00) | 671mm (26.42) | 115mm (4.53) | 6 |
| 8778247 | A/35/25 914 TN 671 16S 115 | 35mm (1.38) | 25.4mm (1.00) | 914mm (36.00) | 671mm (26.42) | 115mm (4.53) | 6 |
| 8778291 | A/45/25 914 TN 671 16S 115 | 45mm (1.77) | 25.4mm (1.00) | 914mm (36.00) | 671mm (26.42) | 115mm (4.53) | 6 |
| 8778267 | A/35/14 914 TN 753 16S 30 | 35mm (1.38) | 14mm (.55) | 914mm (36.00) | 753mm (29.65) | 30mm (1.18) | 5 |
| 8778299 | A/45/14 914 TN 753 16S 30 | 45mm (1.77) | 14mm (.55) | 914mm (36.00) | 753mm (29.65) | 30mm (1.18) | 5 |
| 8778243 | A/35/25 914 TN 753 16S 30 | 35mm (1.38) | 25.4mm (1.00) | 914mm (36.00) | 753mm (29.65) | 30mm (1.18) | 5 |
| 8778287 | A/45/25 914 TN 753 16S 30 | 45mm (1.77) | 25.4mm (1.00) | 914mm (36.00) | 753mm (29.65) | 30mm (1.18) | 5 |

See page 43 for Special Automatic Strike.

Automatic Two Roller - 16mm Faceplate

AUTOMATIC TWO ROLLER

The HLS®9000 two roller version is easily adjusted with the simple turn of an hex wrench for improved weather sealing. Automatic version engages multi-point when door is closed.



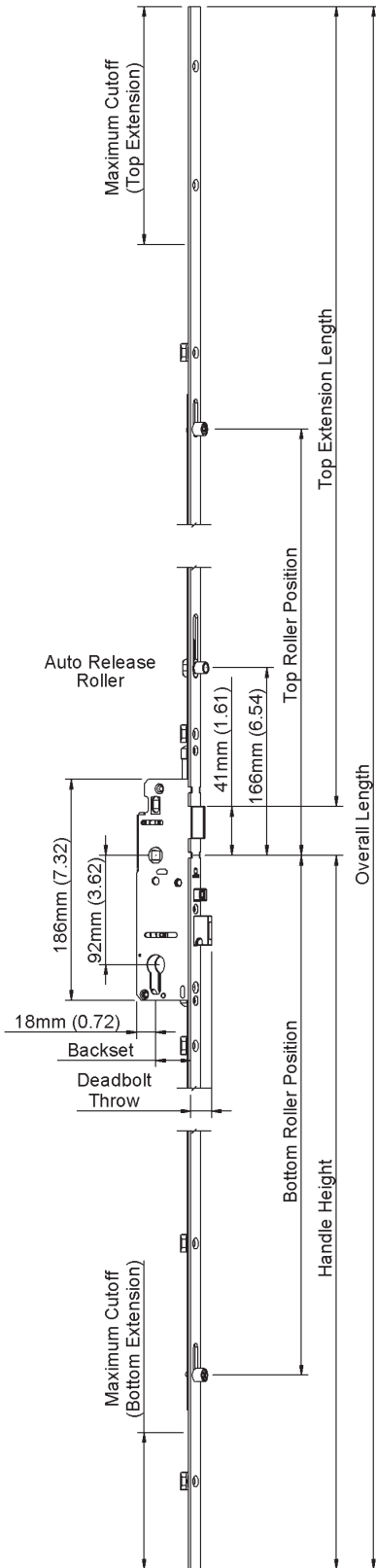
Top Extension

| Part Number | Description | Overall Length (with 914mm 36" Handle Height) | Extension Length | Handle to Top of Door | Top Roller Position | Maximum Cutoff | Number of Screws |
|-------------|------------------------|--|---------------------|-----------------------------|---------------------------|-------------------|------------------------|
| 8778515 | A 1045 RL 730 16S 195 | 1805mm-2000mm (71.06 - 78.74) | 1045mm (41.14) | 1086mm (42.76) | 730mm (28.74) | 275mm (10.83) | 7 |
| 8778519 | A 1220 RL 930 16S 370 | 1805mm - 2175mm (71.06 - 85.63) | 1220mm (48.03) | 1261mm (49.65) | 930mm (36.61) | 250mm (9.84) | 8 |
| 8778523 | A 1395 RL 1135 16S 340 | 2010mm - 2350mm (79.13 - 92.52) | 1395mm (54.92) | 1436mm (56.54) | 1135mm (44.69) | 220mm (8.66) | 9 |
| 8778527 | A 1570 RL 1285 16S 515 | 2010mm - 2525mm (79.13 - 99.41) | 1570mm (61.81) | 1611mm (63.43) | 1285mm (50.59) | 245mm (9.65) | 10 |
| 8778531 | A 1745 RL 1285 16S 445 | 2255mm - 2700mm (88.78 - 106.30) | 1745mm (68.70) | 1786mm (70.31) | 1285mm (50.59) | 420mm (16.54) | 11 |
| 8778535 | A 1920 RL 1600 16S 220 | 2655mm - 2875mm (104.53 - 113.19) | 1920mm (75.59) | 1961mm (77.20) | 1600mm (62.99) | 280mm (11.02) | 11 |
| 8778539 | A 2095 RL 1600 16S 395 | 2655mm - 3050mm (104.53 - 120.08) | 2095mm (82.48) | 2136mm (84.09) | 1600mm (62.99) | 455mm (17.91) | 12 |
| 8778543 | A 2270 RL 1600 16S 570 | 2655mm - 3225mm (104.53 - 126.97) | 2270mm (89.37) | 2311mm (90.98) | 1600mm (62.99) | 630mm (24.80) | 13 |

Gear

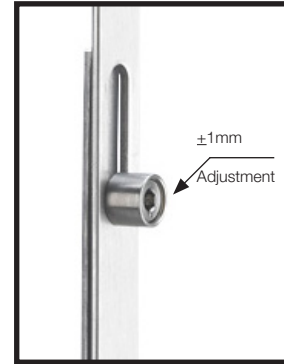
| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Roller Position | Maximum Cutoff | Number of Screws |
|-------------|---------------------------|----------------|-------------------|------------------|------------------------------|-------------------|------------------------|
| 8778275 | A/35/14 914 RL 750 16S 60 | 35mm (1.38) | 14mm (.55) | 914mm (36.00) | 750mm (29.53) | 60mm (2.36) | 5 |
| 8778307 | A/45/14 914 RL 750 16S 60 | 45mm (1.77) | 14mm (.55) | 914mm (36.00) | 750mm (29.53) | 60mm (2.36) | 5 |
| 8778251 | A/35/25 914 RL 750 16S 60 | 35mm (1.38) | 25.4mm (1.00) | 914mm (36.00) | 750mm (29.53) | 60mm (2.36) | 5 |
| 8778295 | A/45/25 914 RL 750 16S 60 | 45mm (1.77) | 25.4mm (1.00) | 914mm (36.00) | 750mm (29.53) | 60mm (2.36) | 5 |

See page 43 for Special Automatic Strike.



AUTOMATIC FOUR ROLLER

The HLS9000® two roller version is easily adjusted with the simple turn of an hex wrench for improved weather sealing. Automatic version engages multipoint when door is closed.



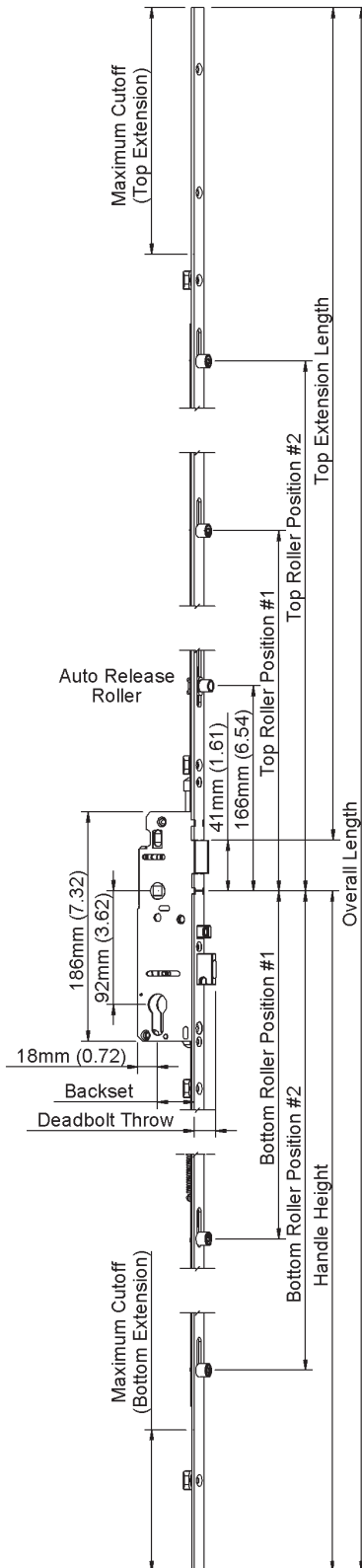
Top Extension

| Part Number | Description | Overall Length (with 914mm 36" Handle Height) | Extension Length | Handle to Top of Door | Top Roller Pos. #1 | Top Roller Pos. #2 | Max. Cutoff | Number of Screws |
|-------------|------------------------------|--|---------------------|-----------------------------|--------------------------|--------------------------|------------------|------------------------|
| 8778899 | A 1045 RLR 400/800 16S 205 | 1795mm-2000mm (70.67 - 78.74) | 1045mm (41.14) | 1086mm (42.76) | 400mm (15.75) | 800mm (31.50) | 205mm (8.07) | 7 |
| 8778903 | A 1220 RLR 400/800 16S 380 | 1795mm - 2175mm (70.67 - 85.63) | 1220mm (48.03) | 1261mm (49.65) | 400mm (15.75) | 800mm (31.50) | 380mm (14.96) | 8 |
| 8778907 | A 1395 RLR 600/1150 16S 205 | 2145mm - 2350mm (84.45 - 92.52) | 1395mm (54.92) | 1436mm (56.54) | 600mm (23.62) | 1150mm (45.28) | 205mm (8.07) | 9 |
| 8778911 | A 1570 RLR 600/1150 16S 380 | 2145mm - 2525mm (84.45 - 99.41) | 1570mm (61.81) | 1611mm (63.43) | 600mm (23.62) | 1150mm (45.28) | 380mm (14.96) | 10 |
| 8778915 | A 1745 RLR 800/1500 16S 205 | 2495mm - 2700mm (98.23 - 106.30) | 1745mm (68.70) | 1786mm (70.31) | 800mm (31.50) | 1500mm (59.06) | 205mm (8.07) | 11 |
| 8778919 | A 1920 RLR 800/1500 16S 380 | 2495mm - 2875mm (98.23 - 113.19) | 1920mm (75.59) | 1961mm (77.20) | 800mm (31.50) | 1500mm (59.06) | 380mm (14.96) | 12 |
| 8778923 | A 2095 RLR 1000/1850 16S 205 | 2845mm - 3050mm (112.01 - 120.08) | 2095mm (82.48) | 2136mm (84.09) | 1000mm (39.37) | 1850mm (72.83) | 205mm (8.07) | 12 |
| 8778927 | A 2270 RLR 1000/1850 16S 380 | 2845mm - 3225mm (112.01 - 126.97) | 2270mm (89.37) | 2311mm (90.98) | 1000mm (39.37) | 1850mm (72.83) | 380mm (14.96) | 13 |

Gear

| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Roller Pos. #1 | Bottom Roller Pos. #2 | Max. Cutoff | Number of Screws |
|-------------|--------------------------------|----------------|-------------------|------------------|-----------------------------|-----------------------------|----------------|------------------------|
| 8778931 | A/35/14 914 RLR 400/750 16S 60 | 35mm (1.38) | 14mm (.55) | 914mm (36.00) | 400mm (15.75) | 750mm (29.53) | 60mm (2.36) | 5 |
| 8778935 | A/45/14 914 RLR 400/750 16S 60 | 45mm (1.77) | 14mm (.55) | 914mm (36.00) | 400mm (15.75) | 750mm (29.53) | 60mm (2.36) | 5 |
| 8778939 | A/35/25 914 RLR 400/750 16S 60 | 35mm (1.38) | 25.4mm (1.00) | 914mm (36.00) | 400mm (15.75) | 750mm (29.53) | 60mm (2.36) | 5 |
| 8778943 | A/45/25 914 RLR 400/750 16S 60 | 45mm (1.77) | 25.4mm (1.00) | 914mm (36.00) | 400mm (15.75) | 750mm (29.53) | 60mm (2.36) | 5 |

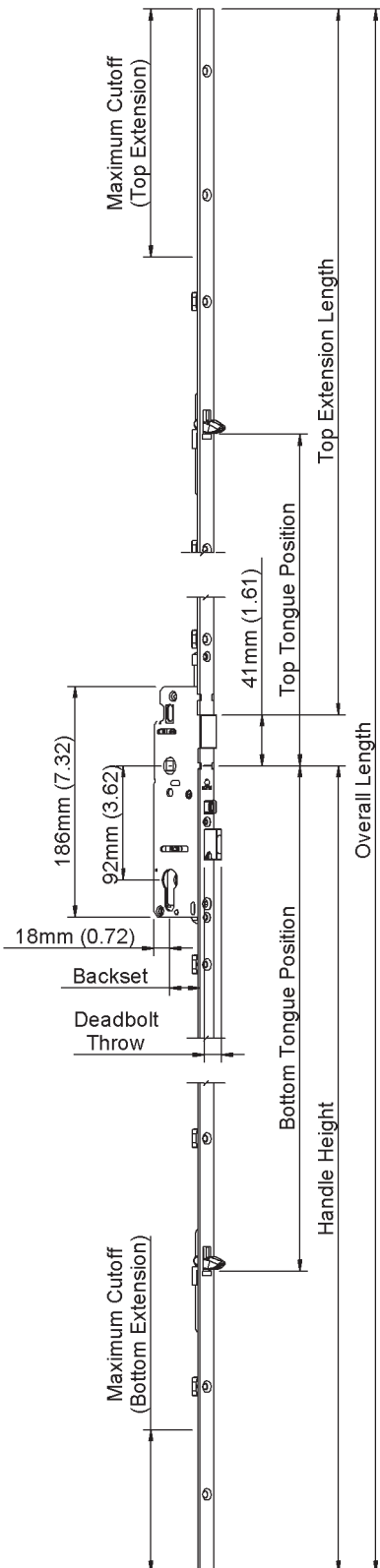
See page 43 for Special Automatic Strike.



Tongue Version - 20mm Faceplate

TONGUE VERSION

While offering security in the locked position, the HLS®9000 tongue version retracts when opened, giving a smooth clean appearance.



Top Extension

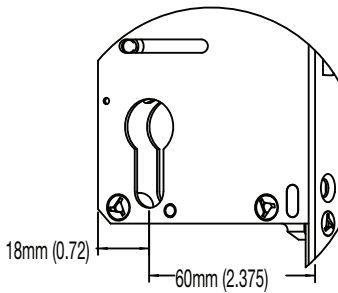
| Part Number | Description | Overall Length (with 914mm 36" Handle Height) | Extension Length | Handle to Top of Door | Top Tongue Position | Maximum Cutoff | Number of Screws |
|-------------|------------------------|--|---------------------|-----------------------------|---------------------------|-------------------|------------------------|
| 2320956 | M 1045 TN 743 20S 195 | 1805mm - 2000mm (71.06 - 78.74) | 1045mm (41.14) | 1086mm (42.76) | 743mm (29.25) | 195mm (7.67) | 7 |
| 2332973 | M 1220 TN 743 20S 370 | 1805mm - 2175mm (71.06 - 85.63) | 1220mm (48.03) | 1261mm (49.65) | 743mm (29.25) | 370mm (14.57) | 8 |
| 2332990 | M 1395 TN 945 20S 340 | 2010mm - 2350mm (79.13 - 92.52) | 1395mm (54.92) | 1436mm (56.54) | 945mm (37.20) | 340mm (13.39) | 9 |
| 2333010 | M 1570 TN 945 20S 515 | 2010mm - 2525mm (79.13 - 99.41) | 1570mm (61.81) | 1611mm (63.43) | 945mm (37.20) | 515mm (20.28) | 10 |
| 2333036 | M 1745 TN 1193 20S 445 | 2255mm - 2700mm (88.78 - 106.30) | 1745mm (68.70) | 1786mm (70.31) | 1193mm (46.97) | 445mm (17.52) | 10 |
| 2333052 | M 1920 TN 1594 20S 220 | 2655mm - 2875mm (104.53 - 113.19) | 1920mm (75.59) | 1961mm (77.20) | 1594mm (62.76) | 220mm (8.66) | 11 |
| 2333765 | M 2095 TN 1594 20S 395 | 2655mm - 3050mm (104.53 - 120.08) | 2095mm (82.48) | 2136mm (84.09) | 1594mm (62.76) | 395mm (15.55) | 12 |
| 2333781 | M 2270 TN 1594 20S 570 | 2655mm - 3225mm (104.53 - 126.97) | 2270mm (89.37) | 2311mm (90.98) | 1594mm (62.76) | 570mm (22.44) | 13 |

Gear

| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Tongue Position | Maximum Cutoff | Number of Screws |
|-------------|----------------------------|----------------|-------------------|------------------|------------------------------|-------------------|------------------------|
| 2332324 | M/35/25 914 TN 620 20S 160 | 35mm (1.38) | 25.4mm (1.00) | 914mm (36.00) | 620mm (24.41) | 160mm (6.30) | 6 |
| 2332316 | M/45/25 914 TN 620 20S 160 | 45mm (1.77) | 25.4mm (1.00) | 914mm (36.00) | 620mm (24.41) | 160mm (6.30) | 6 |
| 2320964 | M/35/14 914 TN 671 20S 115 | 35mm (1.38) | 14mm (.55) | 914mm (36.00) | 671mm (26.42) | 115mm (4.53) | 6 |
| 2320972 | M/45/14 914 TN 671 20S 115 | 45mm (1.77) | 14mm (.55) | 914mm (36.00) | 671mm (26.42) | 115mm (4.53) | 6 |
| 2320981 | M/35/25 914 TN 671 20S 115 | 35mm (1.38) | 25.4mm (1.00) | 914mm (36.00) | 671mm (26.42) | 115mm (4.53) | 6 |
| 2320948 | M/45/25 914 TN 671 20S 115 | 45mm (1.77) | 25.4mm (1.00) | 914mm (36.00) | 671mm (26.42) | 115mm (4.53) | 6 |
| 2332332 | M/35/14 914 TN 753 20S 30 | 35mm (1.38) | 14mm (.55) | 914mm (36.00) | 753mm (29.65) | 30mm (1.18) | 5 |
| 2332341 | M/45/14 914 TN 753 20S 30 | 45mm (1.77) | 14mm (.55) | 914mm (36.00) | 753mm (29.65) | 30mm (1.18) | 5 |
| 2332359 | M/35/25 914 TN 753 20S 30 | 35mm (1.38) | 25.4mm (1.00) | 914mm (36.00) | 753mm (29.65) | 30mm (1.18) | 5 |
| 2332367 | M/45/25 914 TN 753 20S 30 | 45mm (1.77) | 25.4mm (1.00) | 914mm (36.00) | 753mm (29.65) | 30mm (1.18) | 5 |

60mm Backset Gear / Bottom Extension

Gear - 60mm Backset

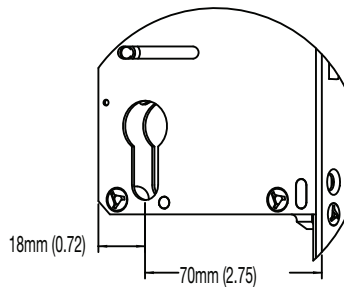


| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Tongue Position | Maximum Cutoff | Number of Screws |
|-------------|----------------------------|--------------|----------------|---------------|------------------------|----------------|------------------|
| 2406400 | M/60/25 914 TN 620 20S 160 | 60mm (2.375) | 25.4mm (1.00) | 914mm (36.00) | 620mm (24.41) | 160mm (6.30) | 6 |
| 2406418 | M/60/25 914 TN 671 20S 115 | 60mm (2.375) | 25.4mm (1.00) | 914mm (36.00) | 671mm (26.42) | 115mm (4.53) | 6 |
| 2406434 | M/60/25 914 TN 753 20S 30 | 60mm (2.375) | 25.4mm (1.00) | 914mm (36.00) | 753mm (29.65) | 30mm (1.18) | 5 |

For Top Extension, please reference the Top extension chart on the adjacent page.

70mm Backset Gear / Bottom Extension

Gear - 70mm Backset



| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Tongue Position | Maximum Cutoff | Number of Screws |
|-------------|----------------------------|-------------|----------------|---------------|------------------------|----------------|------------------|
| 2406442 | M/70/25 914 TN 620 20S 160 | 70mm (2.75) | 25.4mm (1.00) | 914mm (36.00) | 620mm (24.41) | 160mm (6.30) | 6 |
| 2406451 | M/70/25 914 TN 671 20S 115 | 70mm (2.75) | 25.4mm (1.00) | 914mm (36.00) | 671mm (26.42) | 115mm (4.53) | 6 |
| 2406469 | M/70/25 914 TN 753 20S 30 | 70mm (2.75) | 25.4mm (1.00) | 914mm (36.00) | 753mm (29.65) | 30mm (1.18) | 5 |

For Top Extension, please reference the Top extension chart on the adjacent page.

Tongue / Shootbolt - 20mm Faceplate

TONGUE/SHOOTBOLT

The HLS®9000 tongue/shootbolt offers the added security of both horizontal and vertical strength for increased wind-load protection.



Top Extension

| Part Number | Description | Top Extension Length | Max. Cutoff | Number of Screws | Overall Length Combined with M 691 TN 600 (with 914mm/36" Handle Height) | Overall Length Combined with M 1141 TN 1050 (with 914mm/36" Handle Height) | Overall Length Combined with M 1591 TN 1500 (with 914mm/36" Handle Height) |
|-------------|---------------------|----------------------|--------------|------------------|--|--|--|
| 2186566 | M 400 SB 20S 20 100 | 400mm (15.75) | 100mm (3.94) | 3 | 1946mm - 2046mm (76.61 - 80.55) | 2396mm - 2496mm (94.33 - 98.27) | 2846mm - 2946mm (112.05 - 115.98) |
| 2186507 | M 475 SB 20S 20 100 | 475mm (18.70) | 100mm (3.94) | 3 | 2021mm - 2121mm (79.57 - 83.50) | 2471mm - 2571mm (97.28 - 101.22) | 2921mm - 3021mm (115.00 - 118.94) |
| 2186486 | M 550 SB 20S 20 100 | 550mm (21.65) | 100mm (3.94) | 4 | 2096mm - 2196mm (82.52 - 86.46) | 2546mm - 2646mm (100.24 - 104.17) | 2996mm - 3096mm (117.95 - 121.89) |
| 2186030 | M 625 SB 20S 20 100 | 625mm (24.61) | 100mm (3.94) | 4 | 2171mm - 2271mm (85.47 - 89.41) | 2621mm - 2721mm (103.19 - 107.13) | 3071mm - 3171mm (120.91 - 124.84) |
| 2186013 | M 700 SB 20S 20 100 | 700mm (27.56) | 100mm (3.94) | 4 | 2246mm - 2346mm (88.43 - 92.36) | 2696mm - 2796mm (106.14 - 110.08) | 3146mm - 3246mm (123.86 - 127.80) |
| 2185993 | M 775 SB 20S 20 100 | 775mm (30.51) | 100mm (3.94) | 5 | 2321mm - 2421mm (91.38 - 95.31) | 2771mm - 2871mm (109.09 - 113.03) | 3221mm - 3321mm (126.81 - 130.75) |

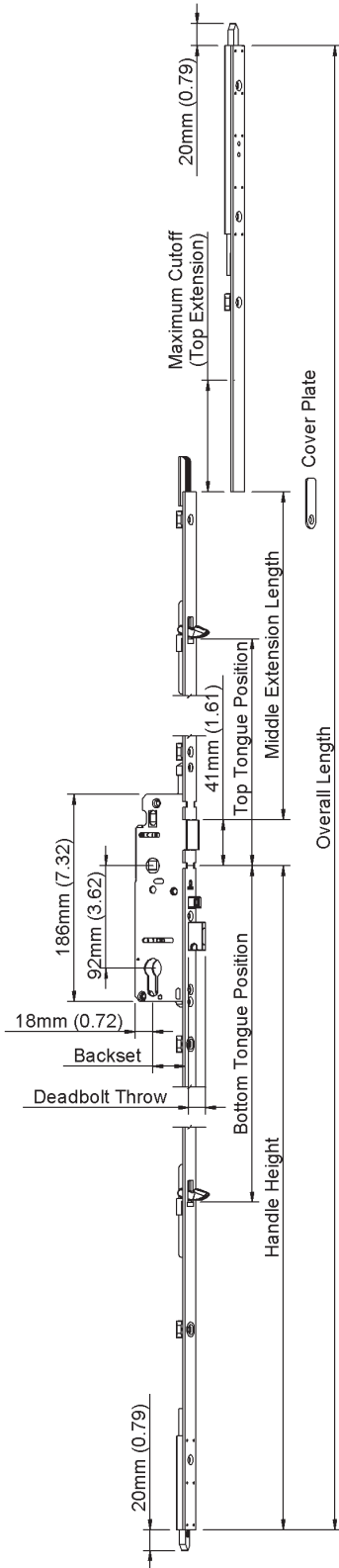
Middle Extension

| Part Number | Description | Middle Extension | Top Tongue Position | Second Tongue Position | Maximum Cutoff | Number of Screws |
|-------------|--------------------------|------------------|---------------------|------------------------|----------------|------------------|
| 2400569 | M 341 TN 250 20S | 341mm (13.43) | 250mm (9.84) | N/A | N/A | 4 |
| 2400577 | M 691 TN 600 20S | 691mm (27.20) | 600mm (23.62) | N/A | N/A | 4 |
| 2400593 | M 1141 TN 1050 20S | 1141mm (44.92) | 1050mm (41.34) | N/A | N/A | 7 |
| 2400606 | M 1591 TN 1500 20S | 1591mm (62.64) | 1500mm (59.06) | N/A | N/A | 9 |
| 2400614 | M 2041 TNT 1050/1950 20S | 2041mm (80.35) | 1950mm (76.77) | 1050mm (41.34) | N/A | 12 |

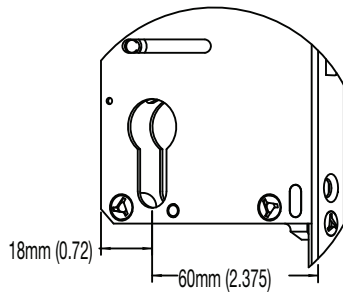
Gear

| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Tongue Position | Max. Cutoff | Number of Screws |
|-------------|---------------------------|-------------|----------------|---------------|------------------------|-------------|------------------|
| 2400622 | M/35/14 914 TN 620 20S 20 | 35mm (1.38) | 14mm (0.55) | 914mm (36.00) | 620mm (24.41) | N/A | 6 |
| 2400631 | M/45/14 914 TN 620 20S 20 | 45mm (1.77) | 14mm (0.55) | 914mm (36.00) | 620mm (24.41) | N/A | 6 |
| 2400649 | M/35/25 914 TN 620 20S 20 | 35mm (1.38) | 25mm (1.00) | 914mm (36.00) | 620mm (24.41) | N/A | 6 |
| 2400657 | M/45/25 914 TN 620 20S 20 | 45mm (1.77) | 25mm (1.00) | 914mm (36.00) | 620mm (24.41) | N/A | 6 |

| | |
|---------|-------------|
| 2875118 | Cover Plate |
|---------|-------------|



60mm Backset Gear / Bottom Extension

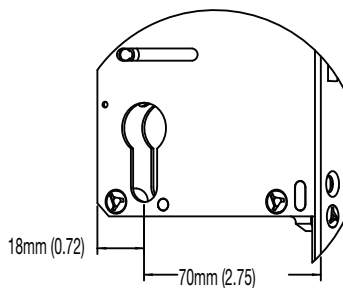


Gear - 60mm Backset

| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Tongue Position | Number of Screws |
|-------------|----------------------------|--------------|----------------|---------------|------------------------|------------------|
| 2406493 | M/60/25 914 TNS 620 20S 20 | 60mm (2.375) | 25.4mm (1.00) | 914mm (36.00) | 620mm (24.41) | 6 |

For Top Extension, please reference the Top extension chart on the adjacent page.

70mm Backset Gear / Bottom Extension



Gear - 70mm Backset

| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Bottom Tongue Position | Number of Screws |
|-------------|------------------------|-------------|----------------|---------------|------------------------|------------------|
| 2406506 | M/70/25 914 TNS 20S 20 | 70mm (2.75) | 25.4mm (1.00) | 914mm (36.00) | 620mm (24.41) | 6 |

For Top Extension, please reference the Top extension chart on the adjacent page.

Shootbolt - 20mm Faceplate

SHOOTBOLT VERSION

Added vertical strength is a proven benefit of the shootbolt version providing extra security through the locking points in the head and sill of the door.



See corresponding colors in chart when referencing top extension length with middle extension chart

Top Extension

| Part Number | Description | Top Extension Length | Max. Cutoff | Number of Screws | Overall Length Combined with M 691 (with 914mm/36" Handle Height) | Overall Length Combined with M 1141 (with 914mm/36" Handle Height) | Overall Length Combined with M 1591 (with 914mm/36" Handle Height) |
|-------------|---------------------|----------------------|--------------|------------------|---|--|--|
| 2186566 | M 400 SB 20S 20 100 | 400mm (15.75) | 100mm (3.94) | 3 | 1946mm - 2046mm (76.61 - 80.55) | 2396mm - 2496mm (94.33 - 98.27) | 2846mm - 2946mm (112.05 - 115.98) |
| 2186507 | M 475 SB 20S 20 100 | 475mm (18.70) | 100mm (3.94) | 3 | 2021mm - 2121mm (79.57 - 83.50) | 2471mm - 2571mm (97.28 - 101.22) | 2921mm - 3021mm (115.00 - 118.94) |
| 2186486 | M 550 SB 20S 20 100 | 550mm (21.65) | 100mm (3.94) | 4 | 2096mm - 2196mm (82.52 - 86.46) | 2546mm - 2646mm (100.24 - 104.17) | 2996mm - 3096mm (117.95 - 121.89) |
| 2186030 | M 625 SB 20S 20 100 | 625mm (24.61) | 100mm (3.94) | 4 | 2171mm - 2271mm (85.47 - 89.41) | 2621mm - 2721mm (103.19 - 107.13) | 3071mm - 3171mm (120.91 - 124.84) |
| 2186013 | M 700 SB 20S 20 100 | 700mm (27.56) | 100mm (3.94) | 4 | 2246mm - 2346mm (88.43 - 92.36) | 2696mm - 2796mm (106.14 - 110.08) | 3146mm - 3246mm (123.86 - 127.80) |
| 2185993 | M 775 SB 20S 20 100 | 775mm (30.51) | 100mm (3.94) | 5 | 2321mm - 2421mm (91.38 - 95.31) | 2771mm - 2871mm (109.09 - 113.03) | 3221mm - 3321mm (126.81 - 130.75) |

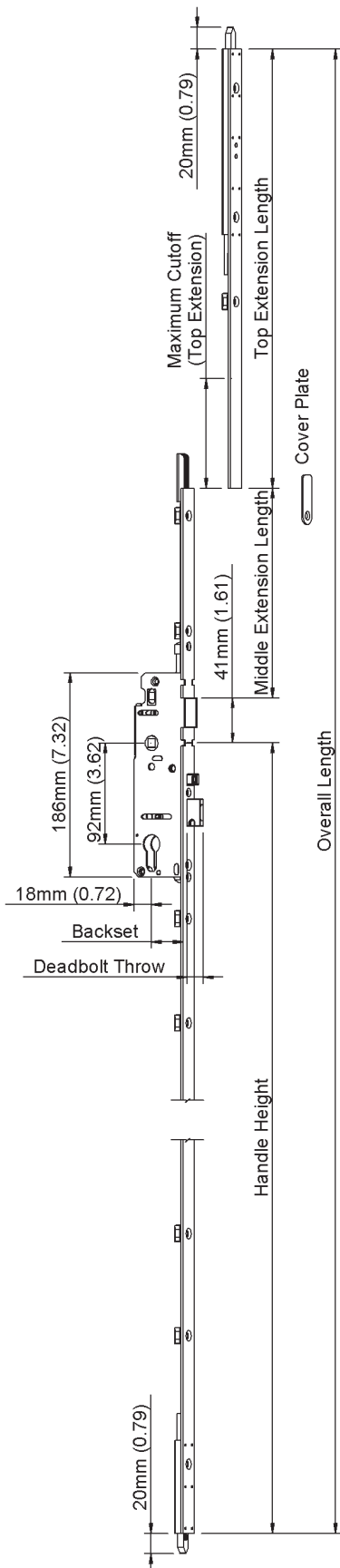
Middle Extension

| Part Number | Description | Middle Extension | Maximum Cutoff | Number of Screws |
|-------------|-------------|------------------|----------------|------------------|
| 2185977 | M 191 20S | 191mm (7.52) | N/A | 2 |
| 2424131 | M 441 20S | 441mm (17.36) | N/A | 3 |
| 2186523 | M 691 20S | 691mm (27.20) | N/A | 4 |
| 2185951 | M 1141 20S | 1141mm (44.92) | N/A | 6 |
| 2185934 | M 1591 20S | 1591mm (62.64) | N/A | 8 |

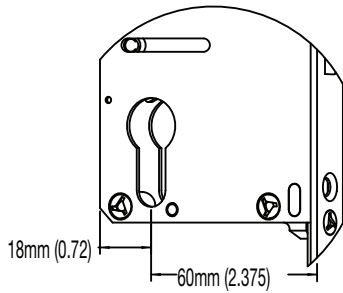
Gear / Bottom Extension

| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Max. Cutoff | Number of Screws |
|-------------|-----------------------|-------------|----------------|---------------|-------------|------------------|
| 2185133 | M/35/14 914 SB 20S 20 | 35mm (1.38) | 14mm (0.55) | 914mm (36.00) | N/A | 6 |
| 2185150 | M/45/14 914 SB 20S 20 | 45mm (1.77) | 14mm (0.55) | 914mm (36.00) | N/A | 6 |
| 2185125 | M/35/25 914 SB 20S 20 | 35mm (1.38) | 25mm (1.00) | 914mm (36.00) | N/A | 6 |
| 2185141 | M/45/25 914 SB 20S 20 | 45mm (1.77) | 25mm (1.00) | 914mm (36.00) | N/A | 6 |

| | |
|---------|-------------|
| 2875118 | Cover Plate |
|---------|-------------|



60mm Backset Gear / Bottom Extension

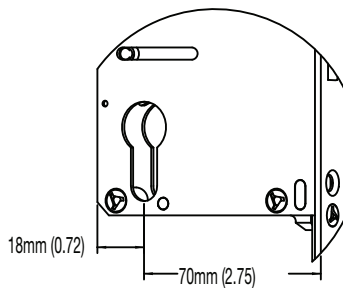


Gear - 60mm Backset

| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Number of Screws |
|-------------|--------------------|--------------|----------------|---------------|------------------|
| 2406531 | M/60/25 914 SB 20S | 60mm (2.375) | 25.4mm (1.00) | 914mm (36.00) | 6 |

For Top Extension, please reference the Top extension chart on the adjacent page.

70mm Backset Gear / Bottom Extension



Gear - 70mm Backset

| Part Number | Description | Backset | Deadbolt Throw | Handle Height | Number of Screws |
|-------------|--------------------|-------------|----------------|---------------|------------------|
| 2406549 | M/70/25 914 SB 20S | 70mm (2.75) | 25.4mm (1.00) | 914mm (36.00) | 6 |

For Top Extension, please reference the Top extension chart on the adjacent page.

Inactive - 16mm Faceplate
20mm Shootbolt Throw

INACTIVE

Our inactive shootbolt with a 16mm faceplate and **20mm shootbolt throw** is handle operated for security on the secondary panel. With this **2 piece version**, not only do you have the security of our shootbolts, but the added beauty of operable handles on French doors.



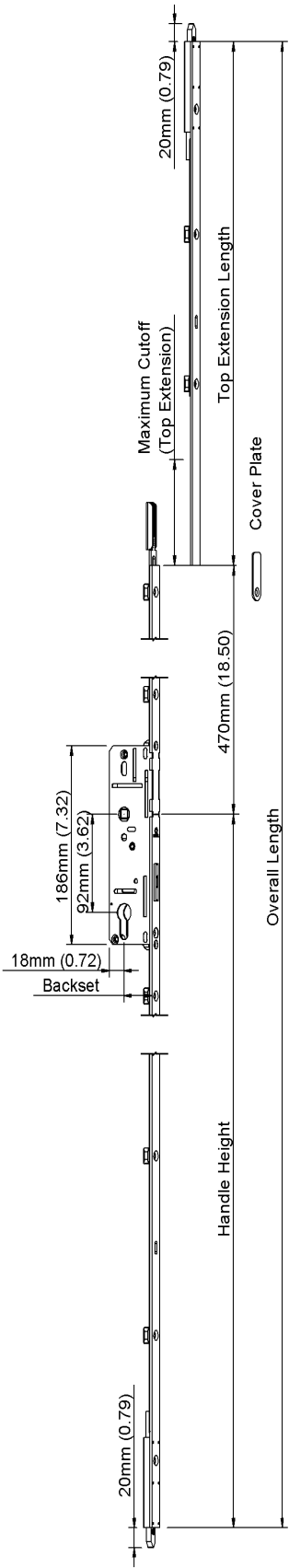
Top Extension

| Part Number | Description | Overall Length (with 914mm 36" Handle Height) | Extension Length | Handle to top of Door | Maximum Cutoff | Number of Screws |
|-------------|-----------------------|--|--------------------|-----------------------|------------------|------------------|
| 3416909 | IA 415 SB 16S 20 100 | 66.89" - 70.83" (1699mm - 1799mm) | 16.33" (415mm) | 34.84" (885mm) | 3.94" (100mm) | 2 |
| 8778759 | IA 490 SB 16S 20 100 | 69.84" - 73.78" (1774mm - 1874mm) | 19.29" (490mm) | 37.80" (960mm) | 3.94" (100mm) | 3 |
| 8778763 | IA 565 SB 16S 20 100 | 72.80" - 76.73" (1849mm - 1949mm) | 22.24" (565mm) | 40.75" (1035mm) | 3.94" (100mm) | 3 |
| 8778767 | IA 640 SB 16S 20 100 | 75.75" - 79.69" (1924mm - 2024mm) | 25.20" (640mm) | 43.70" (1110mm) | 3.94" (100mm) | 4 |
| 8778771 | IA 715 SB 16S 20 100 | 78.70" - 82.64" (1999mm - 2099mm) | 28.15" (715mm) | 46.65" (1185mm) | 3.94" (100mm) | 4 |
| 8778775 | IA 790 SB 16S 20 100 | 81.65" - 85.59" (2074mm - 2174mm) | 31.10" (790mm) | 49.61" (1260mm) | 3.94" (100mm) | 4 |
| 8778779 | IA 865 SB 16S 20 100 | 84.61" - 88.54" (2149mm - 2249mm) | 34.06" (865mm) | 52.56" (1335mm) | 3.94" (100mm) | 6 |
| 8778783 | IA 940 SB 16S 20 100 | 87.56" - 91.50" (2224mm - 2324mm) | 37.01" (940mm) | 55.51" (1410mm) | 3.94" (100mm) | 6 |
| 8778787 | IA 1140 SB 16S 20 230 | 90.31" - 99.37" (2294mm - 2524mm) | 44.88" (1140mm) | 63.39" (1610mm) | 9.06" (230mm) | 7 |
| 8778791 | IA 1340 SB 16S 20 230 | 98.19" - 107.24" (2494mm - 2724mm) | 52.76" (1340mm) | 71.26" (1810mm) | 9.06" (230mm) | 8 |
| 8778795 | IA 1540 SB 16S 20 230 | 106.06" - 115.12" (2694mm - 2924mm) | 60.63" (1540mm) | 79.13" (2010mm) | 9.06" (230mm) | 10 |
| 8778799 | IA 1740 SB 16S 20 230 | 113.94" - 122.99" (2894mm - 3124mm) | 68.50" (1740mm) | 87.01" (2210mm) | 9.06" (230mm) | 11 |
| 8778803 | IA 1940 SB 16S 20 230 | 121.81" - 130.87" (3094mm - 3324mm) | 76.38" (1940mm) | 94.88" (2410mm) | 9.06" (230mm) | 12 |

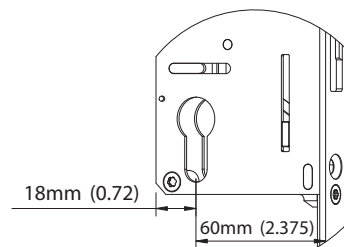
Gear / Bottom Extension - ONE- PIECE INCLUDES BOTH

| Part Number | Description | Backset | Handle Height | Number of Screws |
|-------------|------------------|-----------------|----------------|------------------|
| 2074564 | IA 35 914 16S 20 | 1.38" (35mm) | 36" (914mm) | 8 |
| 1997447 | IA 45 914 16S 20 | 1.77" (45mm) | 36" (914mm) | 8 |

| | |
|---------|-------------|
| 2875118 | Cover Plate |
|---------|-------------|



60mm Backset Gear / Bottom Extension

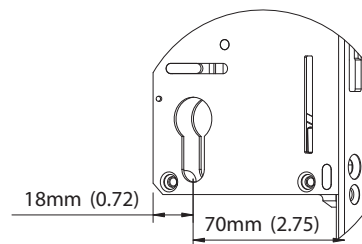


Gear - 60mm Backset

| Part Number | Description | Backset | Handle Height | Number of Screws |
|-------------|------------------|------------------|----------------|------------------|
| 2406557 | IA/60 914 16S 20 | 2.375" (60mm) | 36" (914mm) | 8 |

For Top Extension, Please reference the Top Extension chart on the adjacent page.

70mm Backset Gear / Bottom Extension



Gear - 70mm Backset

| Part Number | Description | Backset | Handle Height | Number of Screws |
|-------------|------------------|-----------------|----------------|------------------|
| 2406565 | IA/70 914 16S 20 | 2.75" (70mm) | 36" (914mm) | 8 |

For Top Extension, Please reference the Top Extension chart on the adjacent page.

Inactive Version - 16mm Faceplate
25mm Shootbolt Throw

INACTIVE

Our inactive shootbolt version with a 16mm faceplate and **25mm shootbolt throw** is handle operated for security on the secondary panel. With this **2 piece version**, not only do you have the security of our shootbolts, but the added beauty of operable handles on French doors.



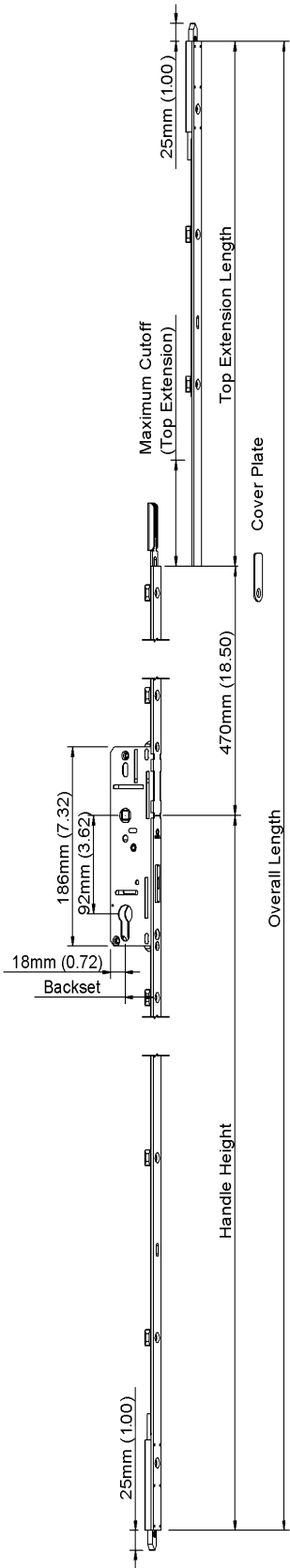
Top Extension

| Part Number | Description | Overall Length (with 914mm 36" Handle Height) | Extension Length | Handle to top of Door | Maximum Cutoff | Number of Screws |
|-------------|-----------------------|--|--------------------|-----------------------|------------------|------------------|
| 3416896 | IA 415 SB 16S 25 100 | 66.89" - 70.83" (1699mm - 1799mm) | 16.33" (415mm) | 34.84" (885mm) | 3.94" (100mm) | 2 |
| 8786975 | IA 490 SB 16S 25 100 | 69.84" - 73.78" (1774mm - 1874mm) | 19.29" (490mm) | 37.80" (960mm) | 3.94" (100mm) | 3 |
| 8786979 | IA 565 SB 16S 25 100 | 72.80" - 76.73" (1849mm - 1949mm) | 22.24" (565mm) | 40.75" (1035mm) | 3.94" (100mm) | 3 |
| 8786983 | IA 640 SB 16S 25 100 | 75.75" - 79.69" (1924mm - 2024mm) | 25.20" (640mm) | 43.70" (1110mm) | 3.94" (100mm) | 4 |
| 8786987 | IA 715 SB 16S 25 100 | 78.70" - 82.64" (1999mm - 2099mm) | 28.15" (715mm) | 46.65" (1185mm) | 3.94" (100mm) | 4 |
| 8786991 | IA 790 SB 16S 25 100 | 81.65" - 85.59" (2074mm - 2174mm) | 31.10" (790mm) | 49.61" (1260mm) | 3.94" (100mm) | 4 |
| 8786995 | IA 865 SB 16S 25 100 | 84.61" - 88.54" (2149mm - 2249mm) | 34.06" (865mm) | 52.56" (1335mm) | 3.94" (100mm) | 6 |
| 8786999 | IA 940 SB 16S 25 100 | 87.56" - 91.50" (2224mm - 2324mm) | 37.01" (940mm) | 55.51" (1410mm) | 3.94" (100mm) | 6 |
| 8787003 | IA 1140 SB 16S 25 230 | 90.31" - 99.37" (2294mm - 2524mm) | 44.88" (1140mm) | 63.39" (1610mm) | 9.06" (230mm) | 7 |
| 8787007 | IA 1340 SB 16S 25 230 | 98.19" - 107.24" (2494mm - 2724mm) | 52.76" (1340mm) | 71.26" (1810mm) | 9.06" (230mm) | 8 |
| 8787011 | IA 1540 SB 16S 25 230 | 106.06" - 115.12" (2694mm - 2924mm) | 60.63" (1540mm) | 79.13" (2010mm) | 9.06" (230mm) | 10 |
| 8787015 | IA 1740 SB 16S 25 230 | 113.94" - 122.99" (2894mm - 3124mm) | 68.50" (1740mm) | 87.01" (2210mm) | 9.06" (230mm) | 11 |
| 8787019 | IA 1940 SB 16S 25 230 | 121.81" - 130.87" (3094mm - 3324mm) | 76.38" (1940mm) | 94.88" (2410mm) | 9.06" (230mm) | 12 |

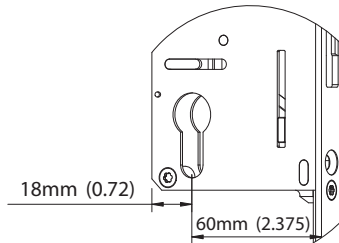
Gear / Bottom Extension - ONE- PIECE INCLUDES BOTH

| Part Number | Description | Backset | Handle Height | Number of Screws |
|-------------|------------------|-----------------|----------------|------------------|
| 2139436 | IA 35 914 16S 25 | 1.38" (35mm) | 36" (914mm) | 8 |
| 2099201 | IA 45 914 16S 25 | 1.77" (45mm) | 36" (914mm) | 8 |

| | |
|---------|-------------|
| 2875118 | Cover Plate |
|---------|-------------|



60mm Backset Gear / Bottom Extension

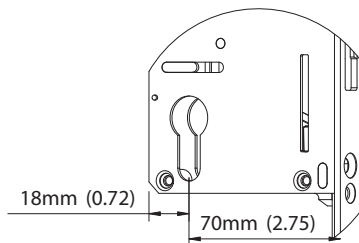


Gear - 60mm Backset

| Part Number | Description | Backset | Handle Height | Number of Screws |
|-------------|------------------|------------------|----------------|------------------|
| 2406573 | IA/60 914 16S 25 | 2.375" (60mm) | 36" (914mm) | 8 |

For Top Extension, Please reference the Top Extension chart on the adjacent page.

70mm Backset Gear / Bottom Extension



Gear - 70mm Backset

| Part Number | Description | Backset | Handle Height | Number of Screws |
|-------------|------------------|-----------------|----------------|------------------|
| 2406581 | IA/70 914 16S 25 | 2.75" (70mm) | 36" (914mm) | 8 |

For Top Extension, Please reference the Top Extension chart on the adjacent page.

Inactive - 16mm Faceplate 20mm Shootbolt Throw

INACTIVE

Our inactive shootbolt with a 16mm faceplate and **20mm shootbolt throw** is handle operated for security on the secondary panel. With this **3 piece version**, not only do you have the security of our shootbolts, but the added beauty of operable handles on French doors.



Top Extension - CAN USE TOP EXTENSIONS FOR BOTTOM EXTENSIONS

| Part Number | Description | Overall Length (with 914mm 36" Handle Height) | Extension Length | Handle to top of Door | Maximum Cutoff | Number of Screws |
|-------------|-----------------------|--|--------------------|-----------------------|------------------|------------------|
| 3416909 | IA 415 SB 16S 20 100 | 66.89" - 70.83" (1699mm - 1799mm) | 16.33" (415mm) | 34.84" (885mm) | 3.94" (100mm) | 2 |
| 8778759 | IA 490 SB 16S 20 100 | 69.84" - 73.78" (1774mm - 1874mm) | 19.29" (490mm) | 37.80" (960mm) | 3.94" (100mm) | 3 |
| 8778763 | IA 565 SB 16S 20 100 | 72.80" - 76.73" (1849mm - 1949mm) | 22.24" (565mm) | 40.75" (1035mm) | 3.94" (100mm) | 3 |
| 8778767 | IA 640 SB 16S 20 100 | 75.75" - 79.69" (1924mm - 2024mm) | 25.20" (640mm) | 43.70" (1110mm) | 3.94" (100mm) | 4 |
| 8778771 | IA 715 SB 16S 20 100 | 78.70" - 82.64" (1999mm - 2099mm) | 28.15" (715mm) | 46.65" (1185mm) | 3.94" (100mm) | 4 |
| 8778775 | IA 790 SB 16S 20 100 | 81.65" - 85.59" (2074mm - 2174mm) | 31.10" (790mm) | 49.61" (1260mm) | 3.94" (100mm) | 4 |
| 8778779 | IA 865 SB 16S 20 100 | 84.61" - 88.54" (2149mm - 2249mm) | 34.06" (865mm) | 52.56" (1335mm) | 3.94" (100mm) | 6 |
| 8778783 | IA 940 SB 16S 20 100 | 87.56" - 91.50" (2224mm - 2324mm) | 37.01" (940mm) | 55.51" (1410mm) | 3.94" (100mm) | 6 |
| 8778787 | IA 1140 SB 16S 20 230 | 90.31" - 99.37" (2294mm - 2524mm) | 44.88" (1140mm) | 63.39" (1610mm) | 9.06" (230mm) | 7 |
| 8778791 | IA 1340 SB 16S 20 230 | 98.19" - 107.24" (2494mm - 2724mm) | 52.76" (1340mm) | 71.26" (1810mm) | 9.06" (230mm) | 8 |
| 8778795 | IA 1540 SB 16S 20 230 | 106.06" - 115.12" (2694mm - 2924mm) | 60.63" (1540mm) | 79.13" (2010mm) | 9.06" (230mm) | 10 |
| 8778799 | IA 1740 SB 16S 20 230 | 113.94" - 122.99" (2894mm - 3124mm) | 68.50" (1740mm) | 87.01" (2210mm) | 9.06" (230mm) | 11 |
| 8778803 | IA 1940 SB 16S 20 230 | 121.81" - 130.87" (3094mm - 3324mm) | 76.38" (1940mm) | 94.88" (2410mm) | 9.06" (230mm) | 12 |

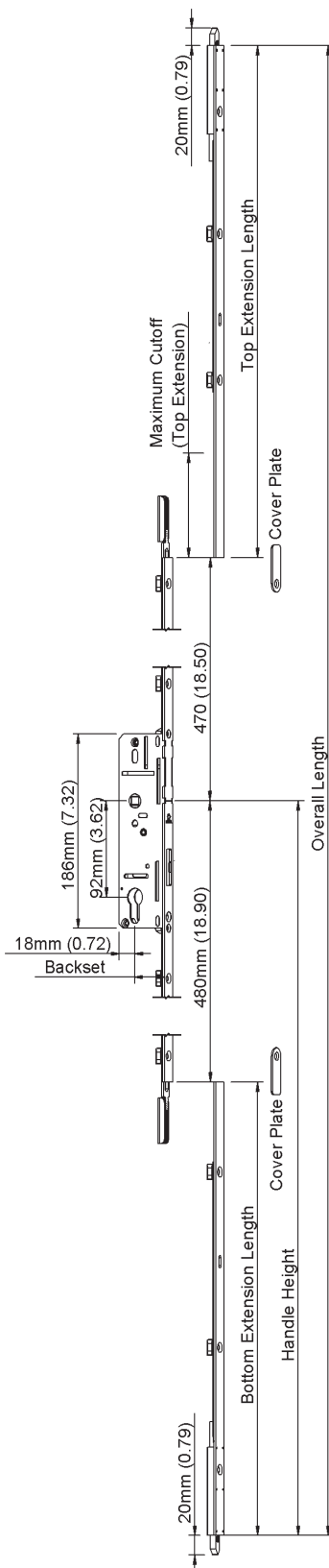
Gear Only

| Part Number | Description | Backset | Handle Height Combined with IA 434 16S 20 15 | Number of Screws |
|-------------|-------------|------------------|---|------------------|
| 8778155 | IA 35 16S | 1.38" (35mm) | 36" (914mm) | 6 |
| 8778443 | IA 45 16S | 1.77" (45mm) | 36" (914mm) | 6 |
| 3403999 | IA 60 16S | 2.375" (60mm) | 36" (914mm) | 6 |
| 3761139 | IA 70 16S | 2.755" (70mm) | 36" (914mm) | 6 |

Bottom Extension - Allows for variable handle heights
If needing 36" handle heights use 2 piece version on page 30

| Part Number | Description | Extension Length | Maximum Cutoff | Number of Screws |
|-------------|------------------|-------------------|----------------|------------------|
| 8787583 | IA 434 16S 20 15 | 17.09" (434mm) | .59" (15mm) | 3 |

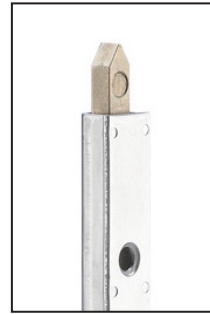
| | |
|---------|-------------|
| 2875118 | Cover Plate |
|---------|-------------|



Inactive - 16mm Faceplate 25mm Shootbolt Throw

INACTIVE

Our inactive shootbolt with a 16mm faceplate and **25mm shootbolt throw** is handle operated for security on the secondary panel. With this **3 piece version**, not only do you have the security of our shootbolts, but the added beauty of operable handles on French doors.



Top Extension - CAN USE TOP EXTENSIONS FOR BOTTOM EXTENSIONS

| Part Number | Description | Overall Length (with 914mm 36" Handle Height) | Extension Length | Handle to top of Door | Maximum Cutoff | Number of Screws |
|-------------|-----------------------|--|--------------------|-----------------------|------------------|------------------|
| 3416896 | IA 415 SB 16S 25 100 | 66.89" - 70.83" (1699mm - 1799mm) | 16.33" (415mm) | 34.84" (885mm) | 3.94" (100mm) | 2 |
| 8786975 | IA 490 SB 16S 25 100 | 69.84" - 73.78" (1774mm - 1874mm) | 19.29" (490mm) | 37.80" (960mm) | 3.94" (100mm) | 3 |
| 8786979 | IA 565 SB 16S 25 100 | 72.80" - 76.73" (1849mm - 1949mm) | 22.24" (565mm) | 40.75" (1035mm) | 3.94" (100mm) | 3 |
| 8786983 | IA 640 SB 16S 25 100 | 75.75" - 79.69" (1924mm - 2024mm) | 25.20" (640mm) | 43.70" (1110mm) | 3.94" (100mm) | 4 |
| 8786987 | IA 715 SB 16S 25 100 | 78.70" - 82.64" (1999mm - 2099mm) | 28.15" (715mm) | 46.65" (1185mm) | 3.94" (100mm) | 4 |
| 8786991 | IA 790 SB 16S 25 100 | 81.65" - 85.59" (2074mm - 2174mm) | 31.10" (790mm) | 49.61" (1260mm) | 3.94" (100mm) | 4 |
| 8786995 | IA 865 SB 16S 25 100 | 84.61" - 88.54" (2149mm - 2249mm) | 34.06" (865mm) | 52.56" (1335mm) | 3.94" (100mm) | 6 |
| 8786999 | IA 940 SB 16S 25 100 | 87.56" - 91.50" (2224mm - 2324mm) | 37.01" (940mm) | 55.51" (1410mm) | 3.94" (100mm) | 6 |
| 8787003 | IA 1140 SB 16S 25 230 | 90.31" - 99.37" (2294mm - 2524mm) | 44.88" (1140mm) | 63.39" (1610mm) | 9.06" (230mm) | 7 |
| 8787007 | IA 1340 SB 16S 25 230 | 98.19" - 107.24" (2494mm - 2724mm) | 52.76" (1340mm) | 71.26" (1810mm) | 9.06" (230mm) | 8 |
| 8787011 | IA 1540 SB 16S 25 230 | 106.06" - 115.12" (2694mm - 2924mm) | 60.63" (1540mm) | 79.13" (2010mm) | 9.06" (230mm) | 10 |
| 8787015 | IA 1740 SB 16S 25 230 | 113.94" - 122.99" (2894mm - 3124mm) | 68.50" (1740mm) | 87.01" (2210mm) | 9.06" (230mm) | 11 |
| 8787019 | IA 1940 SB 16S 25 230 | 121.81" - 130.87" (3094mm - 3324mm) | 76.38" (1940mm) | 94.88" (2410mm) | 9.06" (230mm) | 12 |

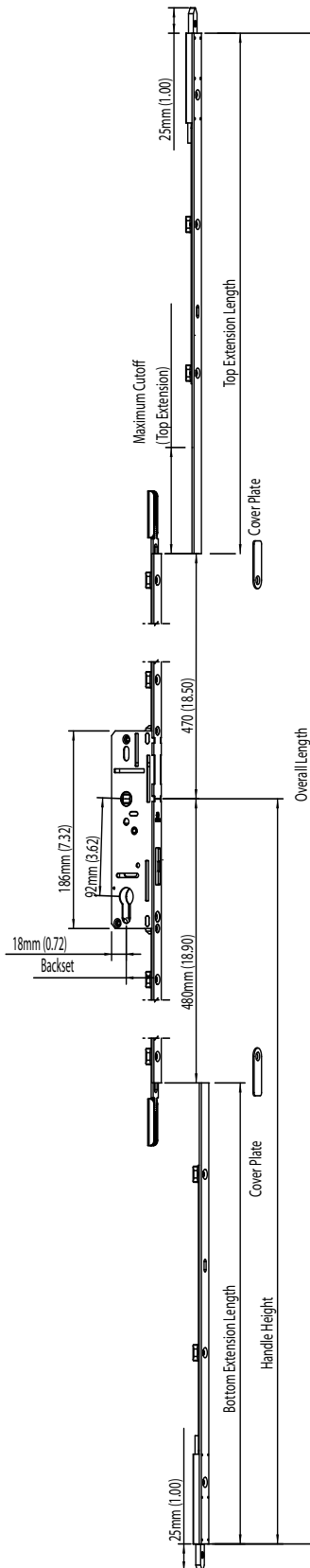
Gear Only

| Part Number | Description | Backset | Handle Height Combined with IA 434 16S 20 15 | Number of Screws |
|-------------|-------------|------------------|--|------------------|
| 8778155 | IA 35 16S | 1.38" (35mm) | 36" (914mm) | 6 |
| 8778443 | IA 45 16S | 1.77" (45mm) | 36" (914mm) | 6 |
| 3403999 | IA 60 16S | 2.375" (60mm) | 36" (914mm) | 6 |
| 3761139 | IA 70 16S | 2.755" (70mm) | 36" (914mm) | 6 |

Bottom Extension - Allows for variable handle heights
If needing 36" handle heights use 2 piece version on page 3

| Part Number | Description | Extension Length | Maximum Cutoff | Number of Screws |
|-------------|------------------|-------------------|----------------|------------------|
| 8779355 | IA 434 16S 25 15 | 17.09" (434mm) | .59" (15mm) | 3 |

| | |
|---------|-------------|
| 2875118 | Cover Plate |
|---------|-------------|



Inactive - 20mm Faceplate
20mm Shootbolt Throw

INACTIVE

Our inactive shootbolt with a 20mm faceplate and **20mm shootbolt throw** is handle operated for security on the secondary panel. With this **2 piece version**, not only do you have the security of our shootbolts, but the added beauty of operable handles on French doors.



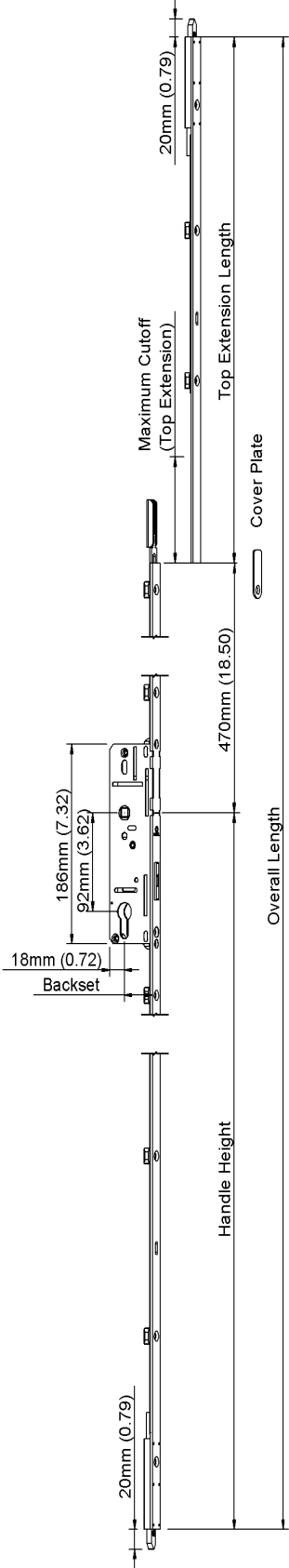
Top Extension

| Part Number | Description | Overall Length (with 914mm 36" Handle Height) | Extension Length | Handle to top of Door | Maximum Cutoff | Number of Screws |
|-------------|-----------------------|--|------------------|-----------------------|----------------|------------------|
| 2185918 | IA 490 SB 20S 20 100 | 69.84" - 73.78" (1774mm - 1874mm) | 19.29" (490mm) | 37.80" (960mm) | 3.94" (100mm) | 3 |
| 2185897 | IA 565 SB 20S 20 100 | 72.80" - 76.73" (1849mm - 1949mm) | 22.24" (565mm) | 40.75" (1035mm) | 3.94" (100mm) | 3 |
| 2186582 | IA 640 SB 20S 20 100 | 75.75" - 79.69" (1924mm - 2024mm) | 25.20" (640mm) | 43.70" (1110mm) | 3.94" (100mm) | 4 |
| 2185871 | IA 715 SB 20S 20 100 | 78.70" - 82.64" (1999mm - 2099mm) | 28.15" (715mm) | 46.65" (1185mm) | 3.94" (100mm) | 4 |
| 2185854 | IA 790 SB 20S 20 100 | 81.65" - 85.59" (2074mm - 2174mm) | 31.10" (790mm) | 49.61" (1260mm) | 3.94" (100mm) | 4 |
| 2185838 | IA 865 SB 20S 20 100 | 84.61" - 88.54" (2149mm - 2249mm) | 34.06" (865mm) | 52.56" (1335mm) | 3.94" (100mm) | 6 |
| 2185711 | IA 940 SB 20S 20 100 | 87.56" - 91.50" (2224mm - 2324mm) | 37.01" (940mm) | 55.51" (1410mm) | 3.94" (100mm) | 6 |
| 2185791 | IA 1140 SB 20S 20 230 | 90.31" - 99.37" (2294mm - 2524mm) | 44.88" (1140mm) | 63.39" (1610mm) | 9.06" (230mm) | 7 |
| 2185774 | IA 1340 SB 20S 20 230 | 98.19" - 107.24" (2494mm - 2724mm) | 52.76" (1340mm) | 71.26" (1810mm) | 9.06" (230mm) | 8 |
| 2185758 | IA 1540 SB 20S 20 230 | 106.06" - 115.12" (2694mm - 2924mm) | 60.63" (1540mm) | 79.13" (2010mm) | 9.06" (230mm) | 10 |
| 2185731 | IA 1740 SB 20S 20 230 | 113.94" - 122.99" (2894mm - 3124mm) | 68.50" (1740mm) | 87.01" (2210mm) | 9.06" (230mm) | 11 |
| 2185715 | IA 1940 SB 20S 20 230 | 121.81" - 130.87" (3094mm - 3324mm) | 76.38" (1940mm) | 94.88" (2410mm) | 9.06" (230mm) | 12 |

Gear / Bottom Extension - ONE- PIECE INCLUDES BOTH

| Part Number | Description | Backset | Handle Height | Number of Screws |
|-------------|------------------|--------------|---------------|------------------|
| 2185176 | IA 35 914 20S 20 | 1.38" (35mm) | 36" (914mm) | 8 |
| 2185651 | IA 45 914 20S 20 | 1.77" (45mm) | 36" (914mm) | 8 |

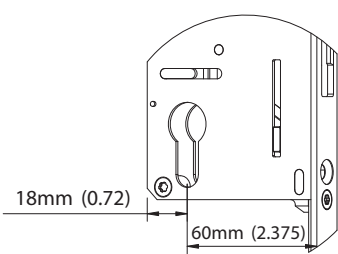
| | |
|---------|-------------|
| 2875118 | Cover Plate |
|---------|-------------|



Inactive - 20mm Faceplate
20mm Shootbolt Throw

60mm Backset Gear / Bottom Extension

Gear - 60mm Backset

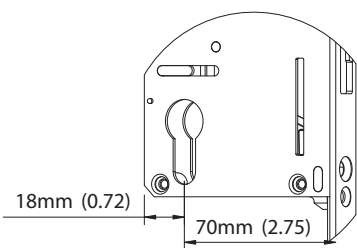


| Part Number | Description | Backset | Handle Height | Number of Screws |
|-------------|------------------|---------------|---------------|------------------|
| 2406590 | IA/60 914 20S 20 | 2.375" (60mm) | 36" (914mm) | 8 |

For Top Extension, Please reference the Top Extension chart on the adjacent page.

70mm Backset Gear / Bottom Extension

Gear - 70mm Backset



| Part Number | Description | Backset | Handle Height | Number of Screws |
|-------------|------------------|--------------|---------------|------------------|
| 2406602 | IA/70 914 20S 20 | 2.75" (70mm) | 36" (914mm) | 8 |

For Top Extension, Please reference the Top Extension chart on the adjacent page.

Inactive - 20mm Faceplate
25mm Shootbolt Throw

INACTIVE

Our inactive shootbolt with a 20mm faceplate and **25mm shootbolt throw** is handle operated for security on the secondary panel. With this **2 piece version**, not only do you have the security of our shootbolts, but the added beauty of operable handles on French doors.



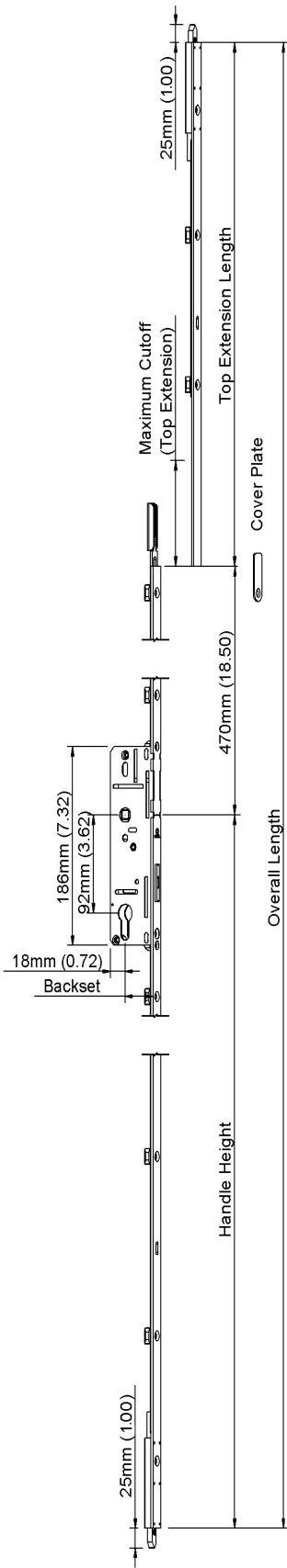
Top Extension

| Part Number | Description | Overall Length (with 914mm 36" Handle Height) | Extension Length | Handle to top of Door | Maximum Cutoff | Number of Screws |
|-------------|-----------------------|--|--------------------|-----------------------|------------------|------------------|
| 2399861 | IA 640 SB 20S 25 100 | 75.75" - 79.69" (1924mm - 2024mm) | 25.20" (640mm) | 43.70" (1110mm) | 3.94" (100mm) | 4 |
| 2399879 | IA 715 SB 20S 25 100 | 78.70 - 82.64" (1999mm - 2099mm) | 28.15" (715mm) | 46.65" (1185mm) | 3.94" (100mm) | 4 |
| 2399887 | IA 790 SB 20S 25 100 | 81.65" - 85.59" (2074mm - 2174mm) | 31.10" (790mm) | 49.61" (1260mm) | 3.94" (100mm) | 4 |
| 2399908 | IA 865 SB 20S 25 100 | 84.61" - 88.54" (2149mm - 2249mm) | 34.06" (865mm) | 52.56" (1335mm) | 3.94" (100mm) | 6 |
| 2399924 | IA 1140 SB 20S 25 230 | 90.31" - 99.37" (2294mm - 2524mm) | 44.88" (1140mm) | 63.39" (1610mm) | 9.06" (230mm) | 7 |
| 2399932 | IA 1340 SB 20S 25 230 | 98.19" - 107.24" (2494mm - 2724mm) | 52.76" (1340mm) | 71.26" (1810mm) | 9.06" (230mm) | 8 |
| 2399941 | IA 1540 SB 20S 25 230 | 106.06" - 115.12" (2694mm - 2924mm) | 60.63" (1540mm) | 79.13" (2010mm) | 9.06" (230mm) | 10 |
| 2399959 | IA 1740 SB 20S 25 230 | 113.94" - 122.99" (2894mm - 3124mm) | 68.50" (1740mm) | 87.01" (2210mm) | 9.06" (230mm) | 11 |

Gear / Bottom Extension - ONE- PIECE INCLUDES BOTH

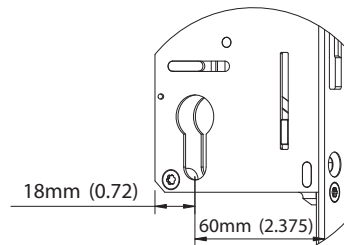
| Part Number | Description | Backset | Handle Height | Number of Screws |
|-------------|------------------|-----------------|----------------|------------------|
| 2399983 | IA 35 914 20S 25 | 1.38" (35mm) | 36" (914mm) | 8 |
| 2399991 | IA 45 914 20S 25 | 1.77" (45mm) | 36" (914mm) | 8 |

| | |
|---------|-------------|
| 2875118 | Cover Plate |
|---------|-------------|



Inactive - 20mm Faceplate
25mm Shootbolt Throw

60mm Backset Gear / Bottom Extension

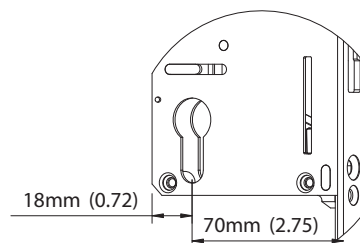


Gear - 60mm Backset

| Part Number | Description | Backset | Handle Height | Number of Screws |
|-------------|------------------|------------------|----------------|------------------|
| 2406611 | IA/60 914 20S 25 | 2.375" (60mm) | 36" (914mm) | 8 |

For Top Extension, Please reference the Top Extension chart on the adjacent page.

70mm Backset Gear / Bottom Extension



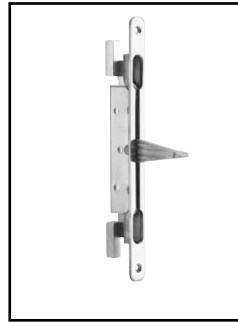
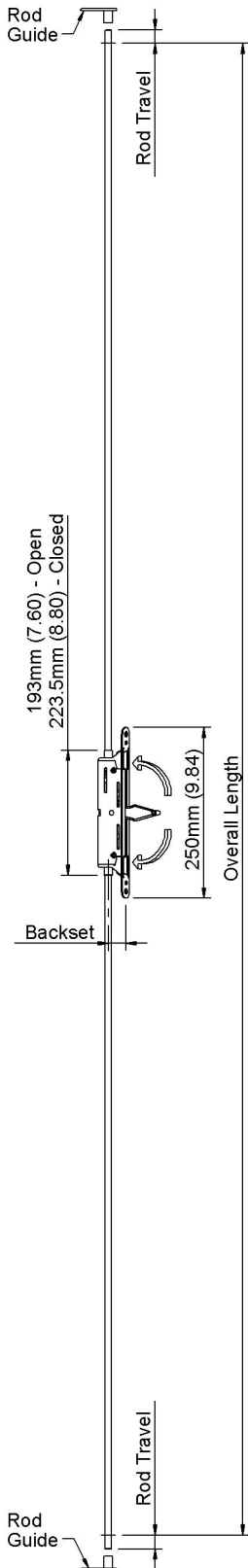
Gear - 70mm Backset

| Part Number | Description | Backset | Handle Height | Number of Screws |
|-------------|------------------|-----------------|----------------|------------------|
| 2406629 | IA/70 914 20S 25 | 2.75" (70mm) | 36" (914mm) | 8 |

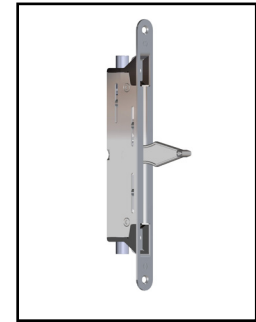
For Top Extension, Please reference the Top Extension chart on the adjacent page.

INACTIVE FLUSHBOLT

The inactive flushbolt version provides a simple solution for securing inactive panels of French doors. Edge-mounted, the lockset activates the rod extensions which secure the door at both head and sill.



15mm Rod Travel



25mm Rod Travel

8mm Rods with 8mm threads

| Part Number | Description | Rod Length |
|-------------|----------------------|------------------------------|
| 8786895 | BK/SS/08/08/0599.6/B | 8mm x 599.6mm (.31 X 23.61) |
| 8786899 | BK/SS/08/08/0659.6/B | 8mm x 659.6mm (.31 X 25.97) |
| 8779363 | BK/SS/08/08/0972/B | 8mm x 972mm (.31 X 38.27) |
| 8786903 | BK/SS/08/08/1014.5/B | 8mm x 1014.5mm (.31 X 39.94) |
| 8779367 | BK/SS/08/08/1035.5/B | 8mm x 1035.5mm (.31 X 40.77) |
| 8786907 | BK/SS/08/08/1188.6/B | 8mm x 1188.6mm (.31 X 46.79) |
| 8779375 | BK/SS/08/08/1391.1/B | 8mm x 1391.1mm (.31 X 54.77) |
| 8779379 | BK/SS/08/08/1695.9/B | 8mm x 1695.9mm (.31 X 66.77) |
| 8779383 | BK/SS/08/08/2000.7/B | 8mm x 2000.7mm (.31 X 78.77) |

B = Beveled 1.0 X 45°

9.5mm Rods with 8mm threads

| Part Number | Description | Rod Length |
|-------------|-----------------------|--------------------------------|
| 8789539 | BK/SS/9.5/08/0676/B | 9.5mm x 676mm (.37 X 24.33) |
| 8789547 | BK/SS/9.5/08/1005/B | 9.5mm x 1005mm (.37 X 39.57) |
| 8786855 | BK/SS/9.5/08/1038.7/B | 9.5mm x 1038.7mm (.37 X 40.89) |
| 8789551 | BK/SS/9.5/08/1183/B | 9.5mm x 1183mm (.37 X 46.57) |
| 8786863 | BK/SS/9.5/08/1394.3/B | 9.5mm x 1394.3mm (.37 X 54.89) |
| 8786867 | BK/SS/9.5/08/1699.1/B | 9.5mm x 1699.1mm (.37 X 66.71) |
| 8786871 | BK/SS/9.5/08/2003.9/B | 9.5mm x 2003.9mm (.37 X 78.89) |

B = Beveled 1.0 X 45°

Rod Guides

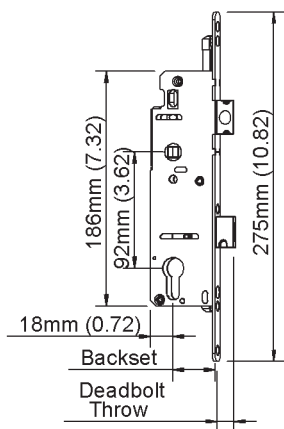
| Part Number | Description | Finish |
|-------------|---------------|--------|
| 1900916 | Standard 8mm | Black |
| 1900908 | Standard 10mm | Black |

Mortise Flushbolt in Stainless Steel

| Part Number | Description | Backset | Rod Travel |
|-------------|-------------------------------|-------------|-------------|
| 40006463 | BK Rod Lock - 8mm Version 33N | 30mm (1.18) | 15mm (.59) |
| 40006426 | BK Rod Lock - 8mm Version 17N | 26mm (1.02) | 15mm (.59) |
| 40006445 | BK Rod Lock - 8mm Version 19N | 24mm (0.94) | 15mm (.59) |
| 2792267 | Rod Lock - 8mm | 30mm (1.18) | 25mm (1.00) |

SINGLE POINT

A cost effective alternative to using multipoint in any application where you want to use HOPPE handle sets.

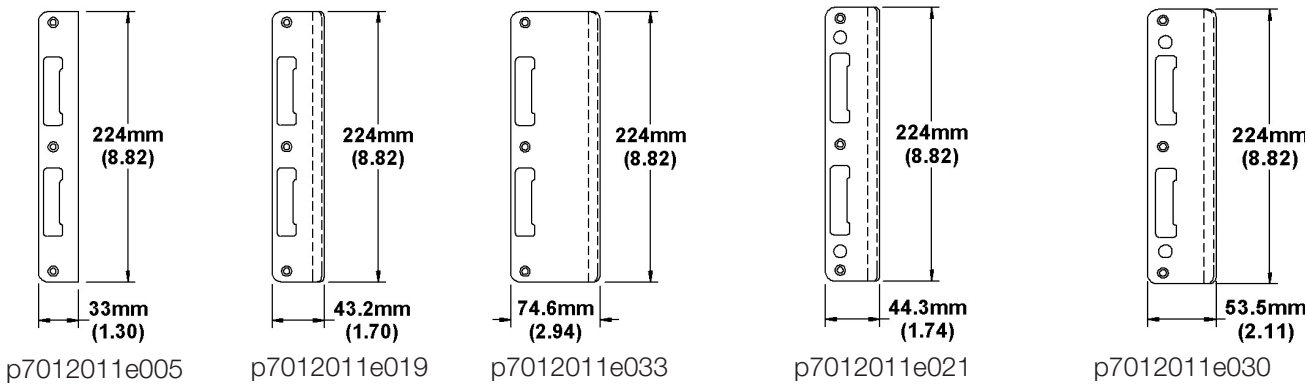


Single Point

| Part Number | Description | Backset | Deadbolt Throw | Number of Screws |
|-------------|-------------|----------------|----------------|------------------|
| 11517463 | M/35/14 16R | 35mm (1.38) | 14mm (.55) | 2 |
| 11517487 | M/45/14 16R | 45mm (1.75) | 14mm (.55) | 2 |
| 11517475 | M/35/25 16R | 35mm (1.38) | 25mm (1.00) | 2 |
| 11517499 | M/45/25 16R | 45mm (1.77) | 25mm (1.00) | 2 |
| 11517505 | M/60/25 16R | 60mm (2.36) | 25mm (1.00) | 2 |
| 11517517 | M/70/25 16R | 70mm (2.75) | 25mm (1.00) | 2 |

Strikes

Latch and Deadbolt Strikes



Latch & Deadbolt Strikes Flat for 1-3/4" panel, non handed

| | Brass | Stainless Steel | Rustic Umber (F8709) |
|--------------|---------|-----------------|----------------------|
| p7012011e005 | 2342194 | 2342311 | 2621821 |

Latch & Deadbolt Strikes, curved lip, non handed for 1-3/4" to 2-1/8" panel
Will work for some 2 1/4" doors, but may have to notch edge of panel.

| | Brass | Stainless Steel | Rustic Umber (F8709) |
|--------------|---------|-----------------|----------------------|
| p7012011e019 | 1963546 | 1963554 | 2162880 |

Latch & Deadbolt Strikes, extended curved lip, non handed for larger offset panels

| | Brass | Stainless Steel | Rustic Umber (F8709) |
|--------------|---------|-----------------|----------------------|
| p7012011e033 | 3879701 | 8787743 | 2829867 |

Latch and Deadbolt Strike - Curved Lip with Inactive Cylinder Hole & Non Handed
Contains access hole for reaching the cylinder screw on Inactive panel

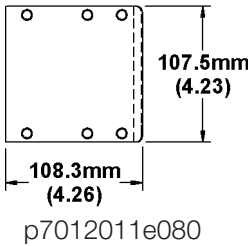
| | Brass | Stainless Steel | Matte Black (F9714) | Satin Nickel (F42) | Rustic Umber (F8709) |
|--------------|---------|-----------------|---------------------|--------------------|----------------------|
| p7012011e021 | 8787715 | 8787747 | 8787735 | 2127443 | 2616554 |

Latch and Deadbolt Strike - extended curved lip, non handed
For centered 2-1/4" panels

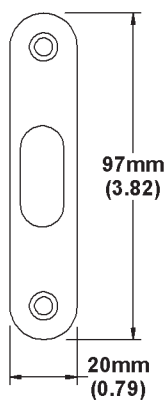
| | Brass | Stainless Steel | Rustic Umber (F8709) |
|--------------|---------|-----------------|----------------------|
| p7012011e030 | 2014019 | 2014027 | 3772612 |

Extender for use with Latch & Deadbolt - Curved Lip & Non Handed

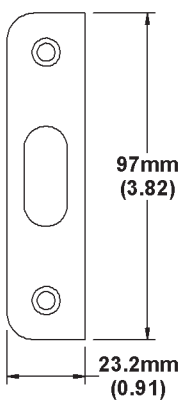
| | Stainless Steel |
|--------------|-----------------|
| p7012011e080 | 1972477 |



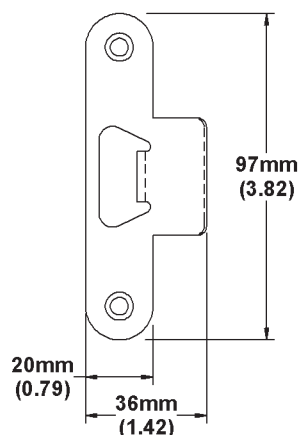
Roundbolt Strikes



p7012009e001



p7012009e002



p7012009e003

Roundbolt Strike - with Offset Roundbolt Hole

| | Stainless Steel |
|--------------|------------------------|
| p7012009e001 | 1958739 |

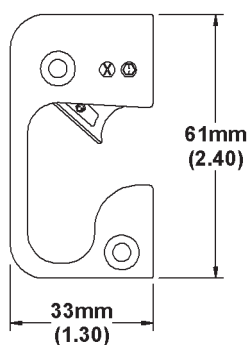
Roundbolt Strikes - Flat

| | Brass |
|--------------|--------------|
| p7012009e002 | 8784651 |

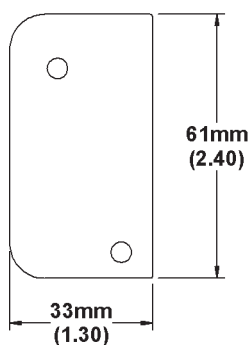
Roundbolt Strike - Radius Lip

| | Brass |
|--------------|--------------|
| p7012009e003 | 2013260 |

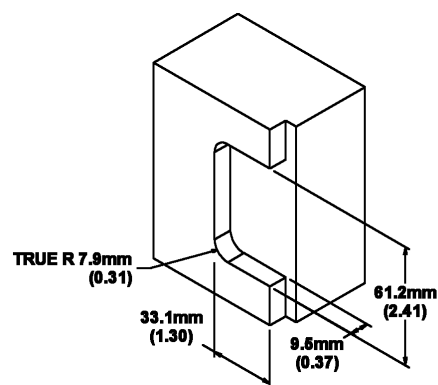
Auto Release Strikes



p7012019g001



p7012019e004



Automatic Strike Route

Auto-Release Strike Plate

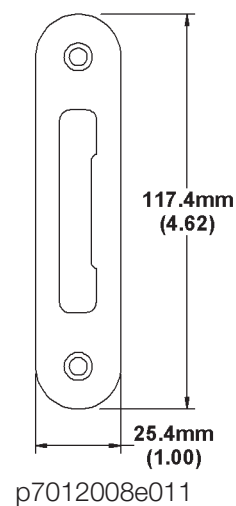
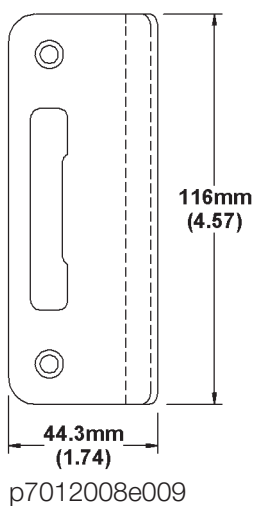
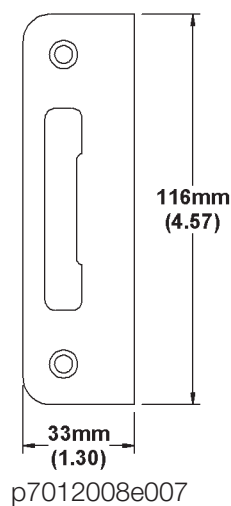
| | Brass Finished | Nickel |
|--------------|-----------------------|---------------|
| p7012019g001 | 8783867 | 8783871 |

Underplate for Auto-Release Strike Plate Required if using Auto-Release Strike.

| | Brass Finished | Nickel |
|--------------|-----------------------|---------------|
| p7012019e004 | 8784775 | 8784783 |

Strikes

Tongue Strikes



Tongue Strike - Flat

| | Brass | Stainless Steel | Brushed Chrome (F41) | Matte Black (F9714) | Satin Nickel (F42) | Rustic Umber (F8709) |
|--------------|---------|-----------------|----------------------|---------------------|--------------------|----------------------|
| p7012008e007 | 8784699 | 8784707 | 8786559 | 8786575 | 2127486 | 2245597 |

Tongue Strike - Curved Lip

| | Brass | Stainless Steel | Rustic Umber (F8709) |
|--------------|---------|-----------------|----------------------|
| p7012008e009 | 8784675 | 1964522 | 2163006 |

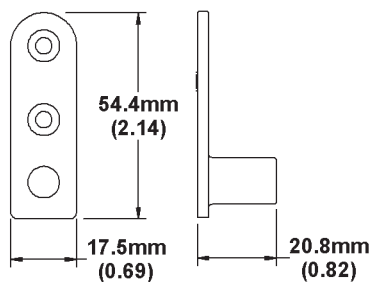
Tongue Strike - Radius Lip

| | Brass | Stainless Steel | Rustic Umber (F8709) |
|--------------|---------|-----------------|----------------------|
| p7012008e011 | 2025181 | 2025199 | 2671238 |

Rod Guides

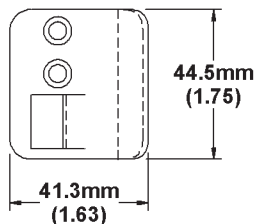
Rod Guide

| | Standard 8mm | Standard 9.9mm |
|-------|--------------|----------------|
| Black | 1900916 | 1900908 |

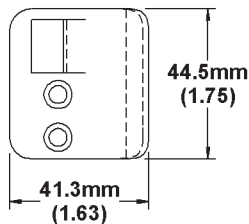


Standard

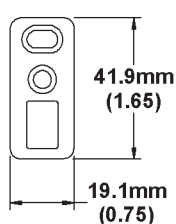
Shootbolt Strikes



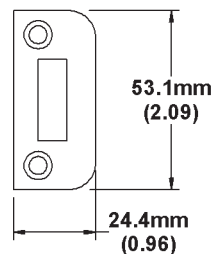
p7012010e037



p7012010e038



p7012010e032



p7012010e057

Shootbolt Strike - Left Handed for Single Door / Curved Lip

| | Brass | Stainless Steel |
|--------------|---------|-----------------|
| p7012010e037 | 8784095 | 8784091 |

Shootbolt Strike - Right Handed for Single Door / Curved Lip

| | Brass | Stainless Steel |
|--------------|---------|-----------------|
| p7012010e038 | 8784067 | 8783923 |

Shootbolt Strike - For Single Door

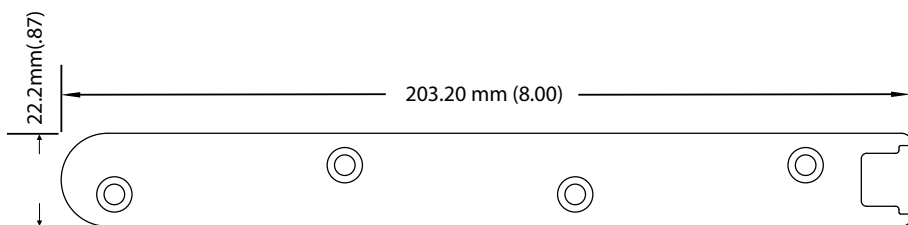
| | Brass | Stainless Steel |
|--------------|---------|-----------------|
| p7012010e032 | 2135259 | 2098911 |

Single Shootbolt Strike

| | Brass | Stainless Steel |
|--------------|---------|-----------------|
| p7012010e057 | 2016559 | 2058724 |

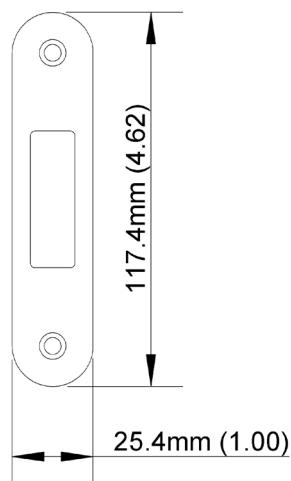
High Performance Cover Plate

| | Stainless Steel |
|--------------|-----------------|
| p7012016e001 | 2512296 |



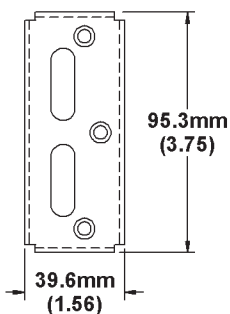
Swing Hook Strike

| | Stainless Steel |
|--------------|-----------------|
| p7012014e001 | 2736661 |

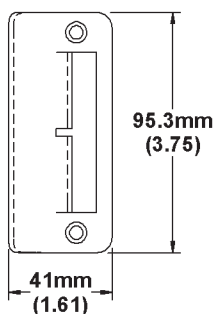


Strikes

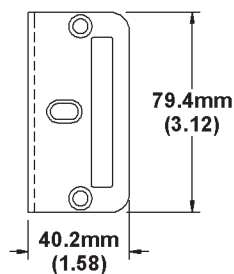
Double Door Strikes



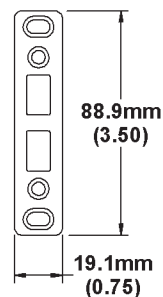
p7012010e005



p7012010e020



p7012010e012



p7012010e007

Double Shootbolt Strike

| | Brass | Stainless Steel |
|--------------|---------|-----------------|
| p7012010e005 | N/A | 8752847 |
| p7012010e020 | 8789023 | 8789027 |

Rod Strike - Adjustable

| | Brass | Stainless Steel | Rustic Umber (F8709) |
|--------------|---------|-----------------|----------------------|
| p7012010e012 | 8783899 | 8783907 | 2621804 |

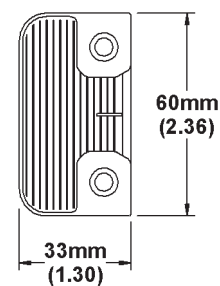
Shootbolt Strike - For Double Door

| | Stainless Steel |
|--------------|-----------------|
| p7012010e007 | 2098945 |

Roller Strike Plates

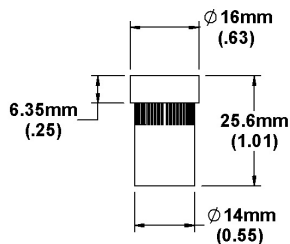
Roller Strike Plate

| | Brass | Nickel | Oil-Rubbed Brass (F79) |
|--------------|---------|---------|------------------------|
| p7012017e001 | 8785003 | 8784999 | 8784991 |

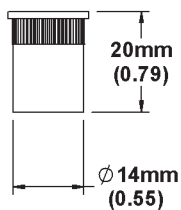


p7012017e001

Socket Strikes



p7012018e001



p7012018e002

Socket Strike - 1" Throw

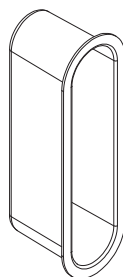
| | Brass |
|--------------|---------|
| p7012018e001 | 2024962 |

Socket Strike - 3/4" Throw

| | Brass |
|--------------|---------|
| p7012018e002 | 8784663 |

Dust Cap

| | Part Number | Finish |
|--|-------------|--------|
| for Latch & Deadbolt Strike or Tongue Strike | 8786547 | Black |

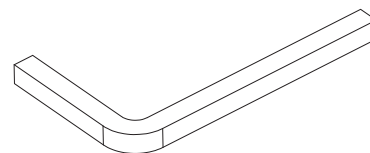
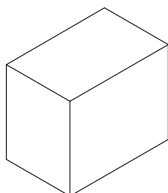


**For Auto
Release Roller
3mm
Hex Wrench**

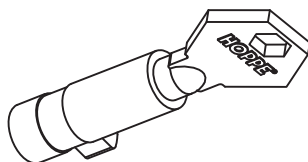
| | Part Number | Finish |
|----------------|-------------|--------|
| 3mm Hex Wrench | 8773799 | N/A |

Foam Eurogroove Plug

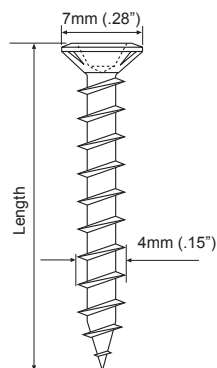
| | Part Number | Finish |
|--|-------------|--------|
| | 1963538 | Black |

**Construction Key**

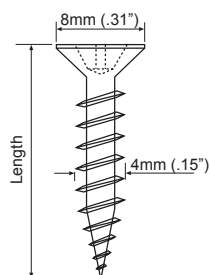
| | Black | Finish |
|--|---------|--------|
| | 2667482 | Black |

**Construction Handle (For 8mm Hub)**

| | Part Number | Finish |
|--|-------------|--------|
| | 2426890 | N/A |

**Screws for Vinyl Profiles**

| Part Number | Description | Length | Quantity Per Box |
|-------------|---------------------------------------|-------------|------------------|
| 8785667 | Stainless Steel Screw - 7mm Head Size | 19mm (0.75) | 1000 |
| 11756415 | Stainless Steel Screw - 7mm Head Size | 25mm (1.00) | 1000 |
| 11756421 | Stainless Steel Screw - 7mm Head Size | 35mm (1.37) | 1000 |

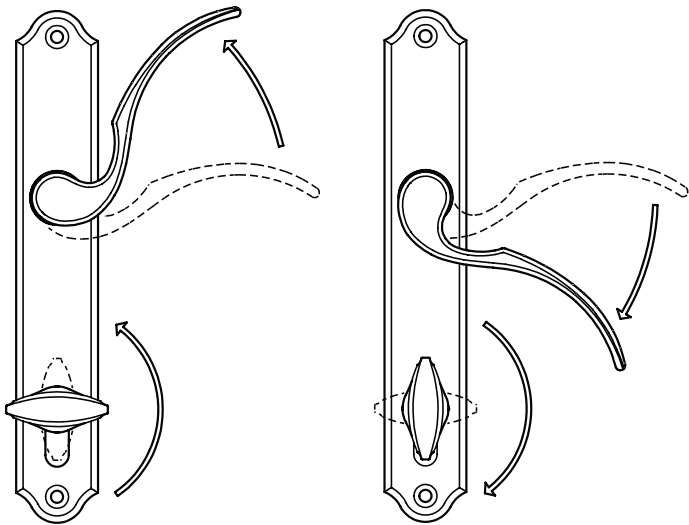
Screws for Wood Profiles

| Part Number | Description | Length | Quantity Per Box |
|-------------|--|-------------|------------------|
| 8785687 | Stainless Steel Screws - 8mm Head Size | 20mm (0.79) | 1000 |
| 8785691 | Stainless Steel Screws - 8mm Head Size | 30mm (1.18) | 1000 |
| 8785695 | Stainless Steel Screws - 8mm Head Size | 35mm (1.38) | 1000 |
| 8785699 | Stainless Steel Screws - 8mm Head Size | 45mm (1.77) | 500 |
| 8785703 | Stainless Steel Screws - 8mm Head Size | 60mm (2.36) | 500 |

**Gear Operations
Handle Instructions**

Handles and backplates may vary

Operational Stickers



LOCKING THE DOOR

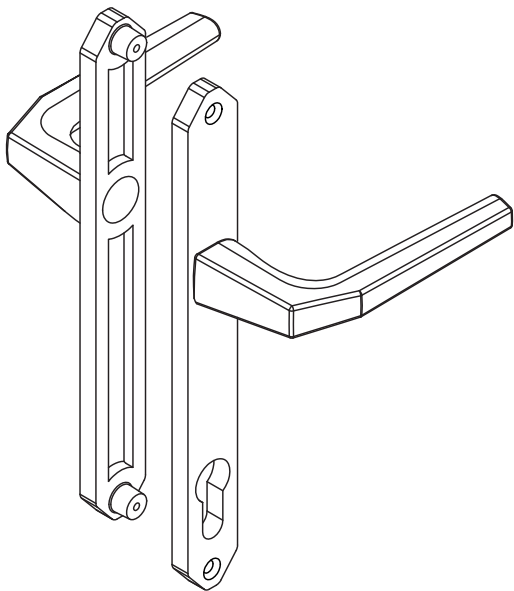
- 1. Lift Lever to engage multipoint
- 2. Turn Thumbturn to extend deadbolt

UNLOCKING THE DOOR

- 1. Turn Thumbturn to retract deadbolt
- 2. Push Down on Lever to disengage multipoints

| | Part Number | Finish |
|------------|-------------|--------|
| Left Hand | 2384255 | Clear |
| Right Hand | 2384247 | Clear |

Construction Handle Set



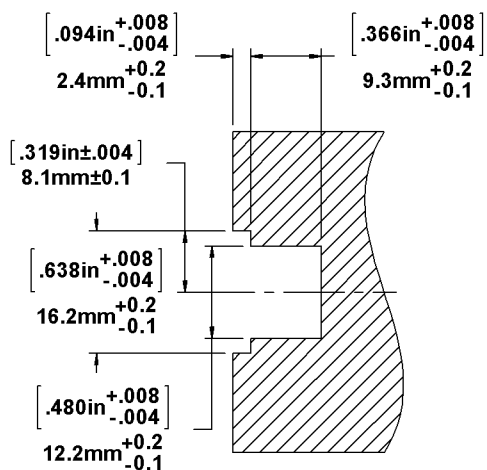
Complete Interior and Exterior Trim for security and weather resistance during the construction phase

Construction Handle Set

| Part Number | Description |
|-------------|---|
| 2604801 | Construction Handle Set |
| 2605353 | Construction Handle Set with Construction Key |

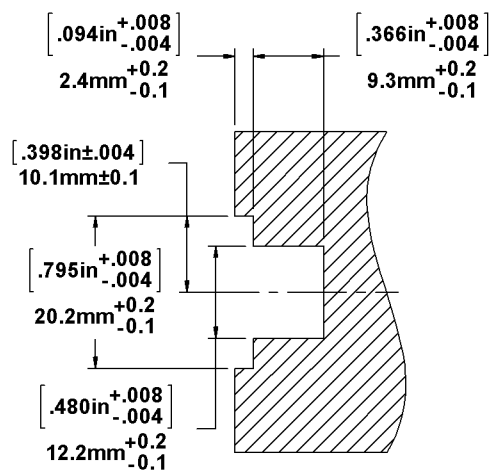
Wood

16mm Eurogrooves



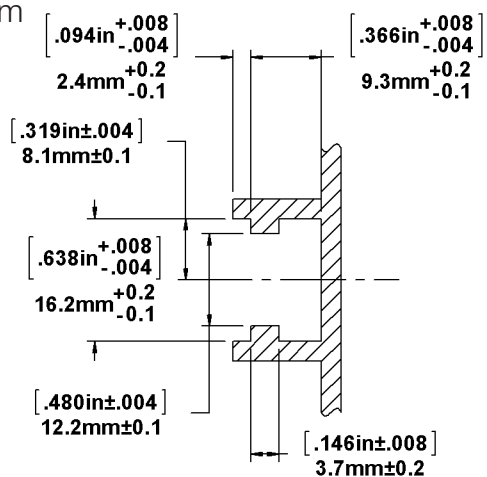
Generic Profile Shown

20mm Eurogrooves

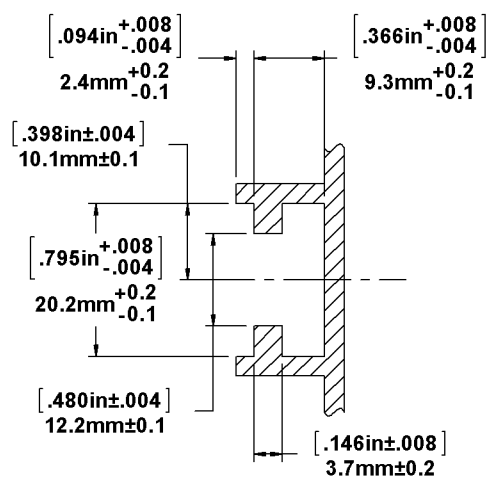


Generic Profile Shown

Aluminum

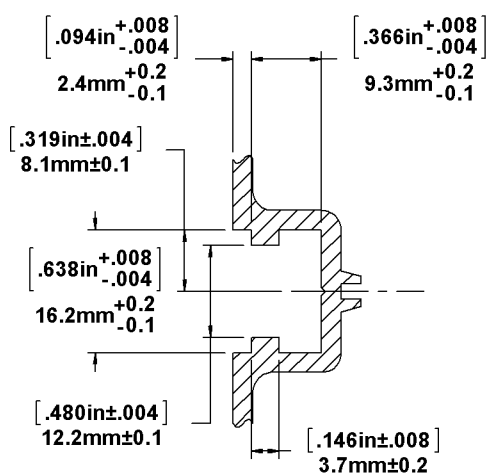


Generic Profile Shown

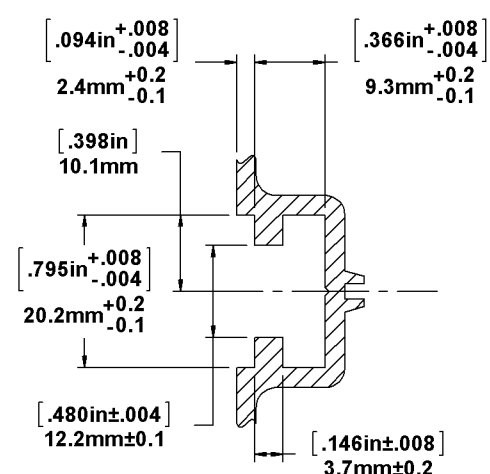


Generic Profile Shown

UPVC



Generic Profile Shown



Generic Profile Shown

How to Order

To help you determine which multipoint locking system would be right for your application, we will need you to answer the following questions:

1. Is your door aluminum, wood, fiberglass or UPVC?
2. If wood, is it prime or clad?
3. If UPVC, whose profile system?
4. If wood, is the door flush or rebated?
5. Is the door inswing or outswing?
6. Is the door French (double) or single swing?
7. Do you want a multipoint or single point system?
8. What is the door thickness?
9. What is the panel height from bottom of door panel?
10. What is the lock stile width or what backset do you need? 35mm (1.38), 45mm (1.77), 60mm (2.38) or 70mm (2.75)?
11. What deadbolt throw size do you want? 14mm (0.55) or 25.4mm (1.00)?
12. What type of locking system are you interested in?
 - See version descriptions starting on page 12.
 - Swing Hook
 - Swing Hook + Shootbolt
 - Tongue
 - Tongue + Shootbolt
 - Two Roller
 - Four Roller
 - Single Point
 - Tongue + Shootbolt
 - Roller + Shootbolt
 - Roundbolt
 - Inactive Rod
 - Shootbolt
 - Inactive
13. If tongue version, which tongue location is needed for the gear?
 - 620mm (24.41)** used when customer uses both Tongue/Shootbolt or Tongue system, so both doors have the same route prep.
 - 671mm (26.42)** allows strike to be located over an Inactive Shootbolt system on a double door.
 - 753mm (29.65)** best for getting Tongue closest to the bottom corner of the door.
14. What is the faceplate width? 16mm (.63) or 20mm (.79)
15. What type of strike plates are needed? See chart on opposite page for handing.
 - Curved Lip or Flat Strike
 - Handed or non handed, as viewed from outside
 - Finish or color
16. Do you require our stainless steel mounting screws?
 - See page 47 for screw sizes
 - NOTE: stainless steel screws must be used for mounting the HLS®9000 gear systems.
 - When replacing an existing gear system, please contact your representative directly.

Technical Drawings available upon request

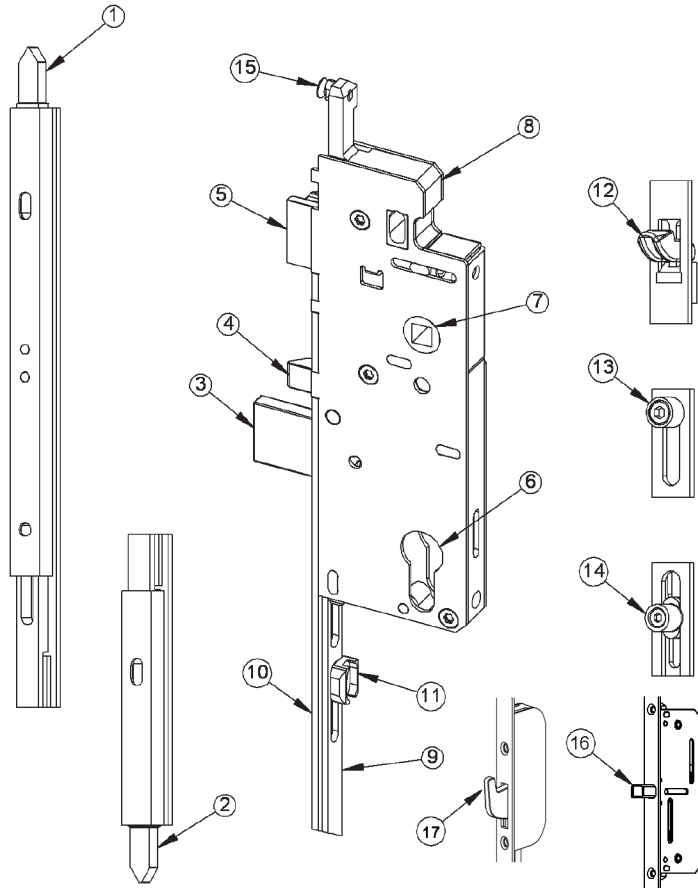
HLS® One

Want a faster, easier way to order? HLS® One features the most popular HLS®9000 locking systems in this catalog pre-configured and packaged in one box. One SKU includes locks, strikes, fasteners and installation instructions. Three-point and five-point locking systems are available, even for French doors. Visit www.us.hoppe.com to learn more.

HLS®9000 Multipoint Hardware System Terminology

TERMINOLOGY:

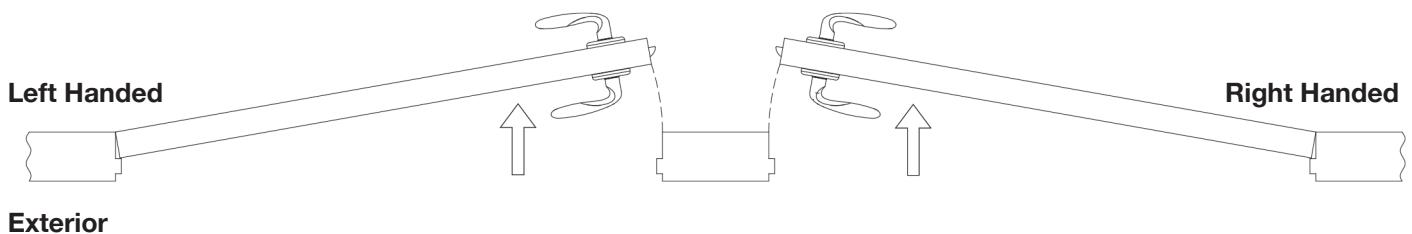
1. Top Shootbolt
2. Bottom Shootbolt
3. Deadbolt
4. Mishandling Device
5. Latch Bolt
6. Cylinder Hole
7. Handle Hole
8. Lockcase
9. Drive Rail
10. Faceplate
11. Screw Support
12. Tongue
13. Roller
14. Auto-Release Roller
15. Top Extension Phillips Machine Screw
16. Roundbolt
17. Swing Hook



Note:

All options are shown for the sake of terminology. The gear system you have will NOT contain all of the components as shown in the diagram below.

Handing



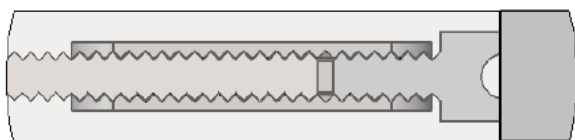
Door handing is always determined from the exterior.
When hinges are on the left, the door is LH; when the hinges are on the right, door is RH.
Inswing or outswing does not determine handing.

HLS9000 ACTIVE Top Shootbolt Extension ***Installation Procedure***

After installing the Active Gear/Bottom Extension, the Middle Extension, and cutting the Top Shootbolt Extension to length:

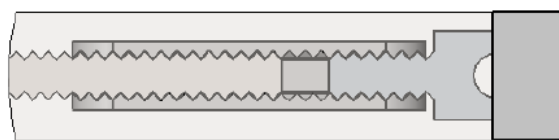
1. Insert the Drive Rail Serrations into the Coupler as shown and slide the Top Extension Faceplate flush against the Middle Extension Faceplate. The Top Shootbolt should now be fully retracted into the Shootbolt Housing.

CORRECT



Drive Rail Serrations are fully engaged in Coupler

WRONG



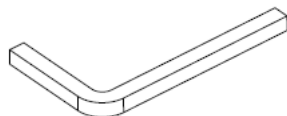
Drive Rail Serrations are not fully engaged in Coupler (Gap between serrated ends must be less than 3 teeth)

2. Install the Cover Plate to reinforce the connection between the Middle Extension and Top Shootbolt Extension.



Cover Plate
HOPPE p/n 2875118

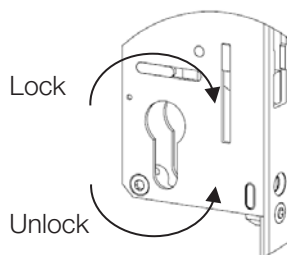
3. Install remaining screws to fix the extension to the door
 - a. To inspect for proper installation, use a Construction Handle to activate the Gear/Bottom Extension. The Multipoints should now be extended. Insert a Construction Key into the Gear/Bottom Extension and turn to lock as shown. Proper installation is indicated by:
 - i. The Construction Key will turn freely
 - ii. The Construction Handle will be locked (cannot rotate to retract Shootbolts)



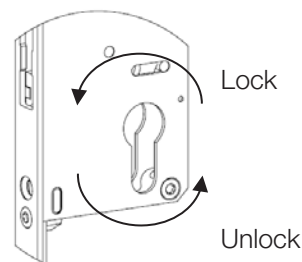
Construction Handle
HOPPE p/n 2426890



Construction Key
HOPPE p/n 2667482

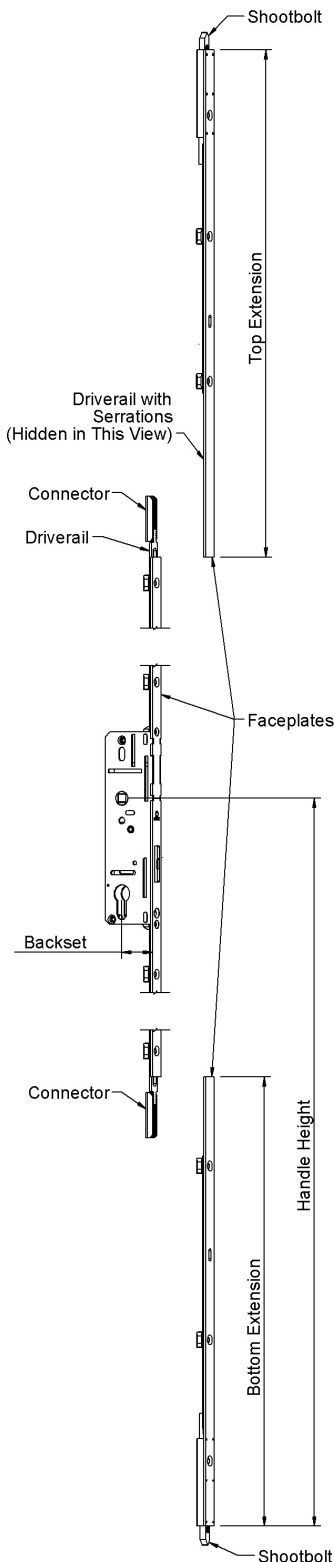


OR



- b. Unlock the Gear/Bottom Extension by turning the Construction Key as shown above.

Inactive Assembly Instructions

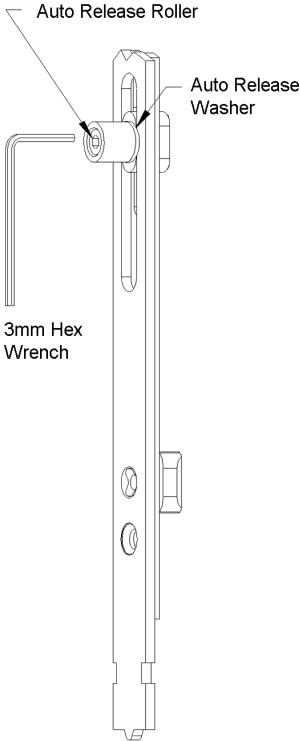
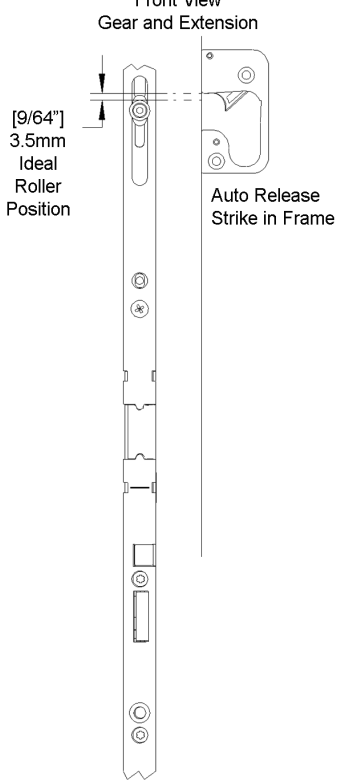
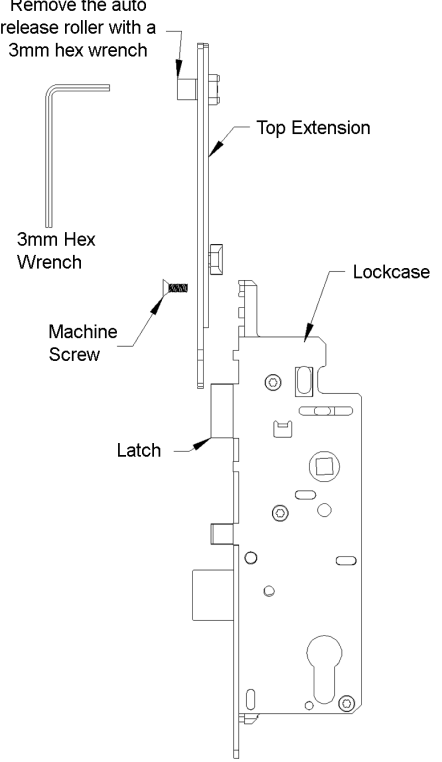


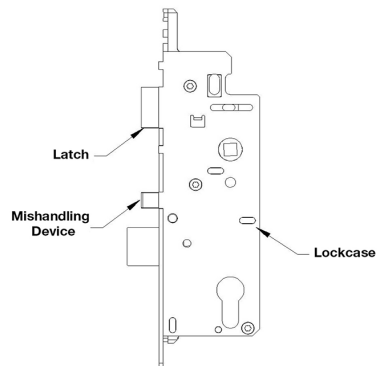
We recommend assembly of the inactive gear in the activated (locked) position. To be consistent in the operation and assembly, you should assemble the gear operator as follows:

Install main gear body assembly into stile using either method:

- a. If using a jig to center the gear on the handle hole, slide into place and screw down.
 - b. If aligning off the bottom, extend the bottom shootbolt mechanism all the way out. Butt the gear against the bottom extension, and then screw the gear in place.
1. Operate and extend the shootbolt mechanism with the handle. Then lock the thumb-turn mechanism (cylinder). The thumb-turn mechanism will spin freely after it hits the locking point. If the thumbturn mechanism feels as though it has hit the locking point but does not spin freely, the mechanism is not working properly.
 2. Connect the drive rail of the bottom extension to the connector of the main gear. Make sure the teeth are fully engaged (seated into the connector). The shootbolts should extend $\frac{3}{4}$ " or 1" (model options). Screw the bottom extension to the stile. Repeat this to the top extension.
- Note: Tolerance – There is an allowance of up to $\frac{1}{8}$ " (3mm) between the gear and extensions.
3. Finish screwing the inactive system onto the stile. Be sure you install screws only to the holes that will not be filled when the astragal is applied.
 4. Unlock the thumb-turn mechanism. Operate the handle set to retract and extend the shootbolts. The shootbolt mechanisms should operate freely.
 5. Now try to operate the shootbolts while the lock is engaged. The shootbolts should not retract.

Hardware Adjustment Sheet HLS®9000

| | | |
|---|---|---|
| <p>Adjustment of Automatic Roller</p>  <p>Auto Release roller is adjusted for vertical movement in the slot. There is not a horizontal adjustment.</p> | <p>Positioning of Automatic Roller</p> <p>Front View Gear and Extension</p>  <p>Loosen screw to adjust position of auto release roller, then tighten to fix position.</p> | <p>Converting to Semi-Automatic System</p>  <p>Converting to Manual System</p> <ol style="list-style-type: none"> 1. Remove the auto release roller with 3mm hex wrench 2. Remove the pressure spring from the back side of the lower driverail with a screwdriver. |
|---|---|---|



Reversing Latch and Mishandling Device

1. Pull and rotate latch and mishandling device 180° with hand and release back into lockcase

| Part Number | Description | Locking Type | Backset | Handle Height/Length |
|-------------|--------------------------------|--------------------------|---------|----------------------|
| 2794799 | M/45/25/420/R200/RB315/T165/SB | Multi-Function | 45mm | 420mm / 840mm |
| 2794781 | M/45/25/420/T250/T250 | Tongue | 45mm | 420mm / 840mm |
| 2794764 | M/45/25/420/T250/SB | Tongue / Shootbolt | 45mm | 420mm / 840mm |
| 2794772 | M/45/25/420/T250/T165/SB | 2 Tongue / Shootbolt | 45mm | 420mm / 840mm |
| 2794801 | M/70/25/420/T250/T165/SB | 2 Tongue / Shootbolt | 70mm | 420mm / 840mm |
| 2794756 | M/45/25/420/SB | Shootbolt Only Both Ends | 45mm | 420mm / 840mm |
| 2794748 | M/45/25/420/RB315/RB294.5 | Roundbolt | 45mm | 420mm / 840mm |
| 2794730 | M/45/25/420/R247/261 | 2 Roller | 45mm | 420mm / 840mm |
| 3731327 | M/45/25/420/SW315/SW294.5 | 2 Swing Hook | 45mm | 420mm/840mm |
| 2793366 | IA/45/420/840/SB | Inactive | 45mm | 420mm / 840mm |

Part Number includes the sales gear mounted in wood stile and travel case.

Handle set is specified by customer.

Multi-function version shown includes shootbolt, roundbolt and tongue functions.

For more details on obtaining sales tools above, contract your local representative



Glossary

Active Door Set

Handle set used on the active panel. This set will always include a cylinder.

Active Panel

When a door is referred to as “active” it means it is the primary functioning door usually in a pair of French doors. This will be the door that opens first.

Astragal

Decorative center section of wood or other material that is attached to the inactive panel and serves as a jamb.

Auto Release Roller

Activated the multipoint to engage the locking point into the frame of the door.

Auto Release Striker

The strike in the frame of the door which catches the auto release pin after the multipoint is activated.

Backplate

Decorative plate which mounts to the face of the door with holes to accept the handle and cylinder, or thumb turn.

Backplate Screw

Screws that attach one backplate to the other. The screws enter through screw holes on the interior plate, travel through the door and attach directly to the exterior plate. Available in a variety of lengths to accommodate different door thicknesses.

Backset

Distance from the surface of the lock faceplate to the center of the handle hole. This distance establishes where the handle will be mounted to the face of the door.

Cylinder

The device used to lock a multipoint system and is activated with a key or thumbturn.

Deadbolt

The center locking point on the door which is engaged with the other locking points when the handle is lifted.

Driverail

The vertical moving mechanism of multipoint hardware behind the faceplate. The driverail carries the motion from the gear to the multipoints to activate them. This can be achieved through a single part or through multiple parts hooked together such as extensions and corner drives. The driverail is hidden by the faceplate.

Engage

A term used to describe the activating of the multipoint hardware. When the multipoints have been activated into position, the system is said to be engaged.

Eurogroove

Routed groove in the edge of the door, usually centered, but may be offset to one side in which the drive rail and faceplate of the multipoint hardware are mounted.

Extension

Sections of operating drive rail that can be attached to the gear to reach the needed height of a door.

Faceplate

Flat piece of metal that covers the drive rail and multipoints along the entire length of the door sitting flush with the edge.

Flushbolt

A bolt mortised into a door that holds the door closed when the bolt is projected into the head or sill of the doorframe.

Fixed Dummy

Handle set is usually “fixed” in place. Handles serve only as pull handles and do not operate. Usually used on inactive panels where a mortise flush bolt has been used. These sets have no cylinder holes in either backplate.

Frame

The outer casing of a door which mounts directly into the rough opening of a wall.

Gear

Main functioning body of multipoint or single point hardware containing hub for handle operation and deadbolt (on active gear).

Handle Height

The distance from the bottom of the door panel to the center of the handle hole.

Handle Set

Kit which includes handles, backplates and screws and may also include a cylinder.

Inactive Door Set

Handle set used on the inactive panel. This set will have a thumbturn on the inside and will not have a cylinder or cylinder hole on the outside.

Inactive Hardware

Hardware used on the inactive panel, no latch or deadbolt.

Inactive Panel

When a door is referred to as “inactive” it means it is the secondary functioning door in a pair of French doors. This door can only be opened after the “active” panel has been opened.

Jamb

See frame.

Latch

The catch for the door.

Lockcase

The main body of the multipoint gear.

Machine Screw

Screw that is used with a tapped hole.

Mishandling Device

Prevents locking points from accidentally firing and potentially damaging door trim.

Mortise

Edge pocket for lockcase or additional locking points.

Mortise Lock

Any hardware containing a gearbox that requires pocket routing in the edge of a door in order to be mounted or installed.

Multipoint Hardware

Any hardware that has multiple locking points which simultaneously lock into place through the action of a continuous travel drive rail activated by a handle.

Profile

A UPVC or aluminum extrusion used in door manufacturing. The shape/style of each extrusion differs between each extruder and therefore requires different hardware—particularly hinges and strike plates.

Rebate

A deep notch formed in or near one edge of board, so that a door can be closed against it.

Roller

Small cylindrical cam locking point that is connected to the drive rail and secures inside a strike plate by an upward and downward movement along the surface of the faceplate.

Roundbolt

Bullet shaped locking point that retracts flush inside the backplate until engaged, at which point it deadbolts the door inside a strike plate. No upward or downward movement. This version requires additional mortising for the roundbolt lockcases.

Screw Support

A support on the backside of the gear for the screws which helps prevent flexing or bending of the gear once installed in the edge of the door.

Shootbolt

Arrow shaped locking point that retracts into the eurogroove until engaged, at which point it extends out and locks into strike plates in the head and sill of the frame.

Sill

Bottom portion of an opening that rests on the foundation and supports the frame structure.

Single Point

A mortise lock consisting of a latch and deadbolt only.

Spindle

Metal shafts used to mount the handles to the door. Available in different lengths to accommodate a variety of door thicknesses.

Stile

Upright or vertical piece of the framework of a wood flush door.

Strike Plates

Plates that the locking points (roller, tongue, swinghook, deadbolt or latch) lock into. Different strike plates are required for different versions of locking points and profile designs.

Swinghook

Hook shaped locking point that retracts into the faceplate until engaged when it extends the reach into the jamb.

Threshold

The horizontal bottom portion of the door frame, also called the sill.

Throw

Distance a locking point travels from surface of faceplate to point of full extension.

Tongue

Triangular shaped locking point that retracts flush inside the faceplate until engaged, at which point it extends out to lock into a strike plate.

Wood Screw

Screw with a tapered shaft that drills its own hole into the wood.



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