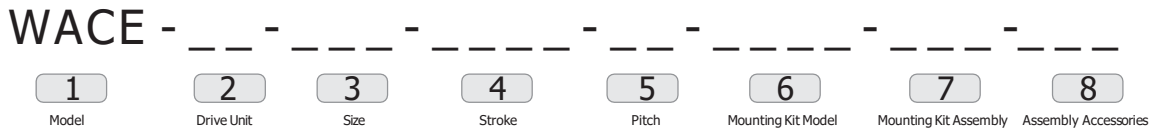


**Ordering Code**



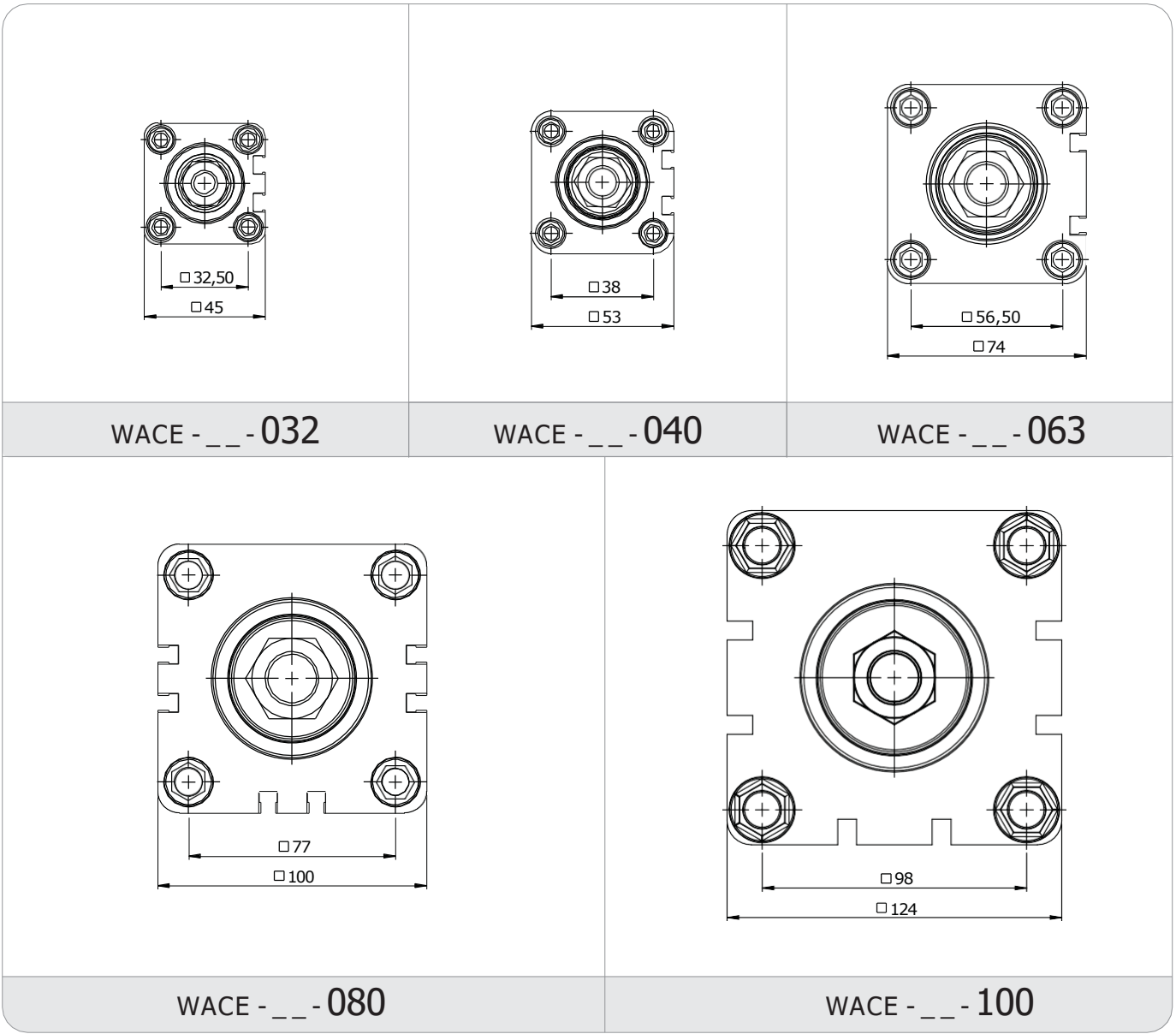
**1 - Model**

**WACE** : Series Linear Actuators

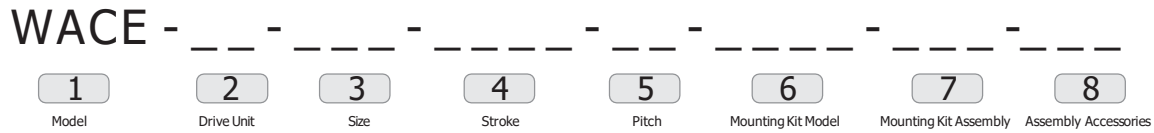
**2 - Drive Unit**

BS : Ball Screw  
 LS : Lead Screw

**3 - Size**



**Ordering Code**



**4 - Stroke**

0000 : Maximum 600 mm

**Movement Stroke**

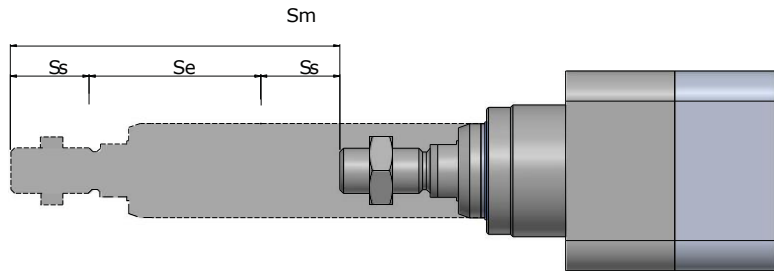
In addition to the desired movement stroke, it is recommended to leave a space on both sides until 2xPitch.

$S_m = S_e + 2.S_s$   
 $S_s = 2.p$

$S_m$  : Movement Stroke

$S_e$  : Safety Stroke

$p$  : Ball Screw Pitch



**5 - Pitch**

| Drive Unit       | Ball Screw |    |    | Lead Screw |    |    |
|------------------|------------|----|----|------------|----|----|
| Actuator Model   | 5          | 10 | 20 | 5          | 10 | 12 |
| WACE - _ - - 032 |            | +  |    |            | +  |    |
| WACE - _ - - 040 | +          | +  |    | +          |    |    |
| WACE - _ - - 063 |            | +  | +  |            |    | +  |
| WACE - _ - - 080 |            | +  |    |            |    |    |
| WACE - _ - - 100 |            | +  |    |            |    |    |

**6 - Mounting Kit Model**

|                       |                  |                     |
|-----------------------|------------------|---------------------|
|                       |                  |                     |
| 00 : Without Mounting | WDAK : Axial Kit | WDPK : Parallel Kit |

Note 1 : Please contact for different motor types and mounting sizes.

Note 2 : Please contact for to use reducer.

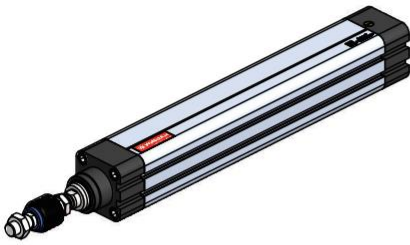
**7 - Mounting Kit Assembly**

|                    |                          |                          |
|--------------------|--------------------------|--------------------------|
|                    |                          |                          |
| 00 : Without Motor | 070 : Ø70 motor mounting | 090 : Ø90 motor mounting |

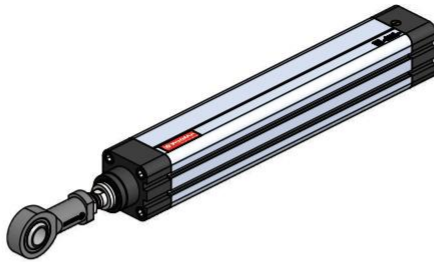
**8 - Assembly Accessories**

**Front Mounting**

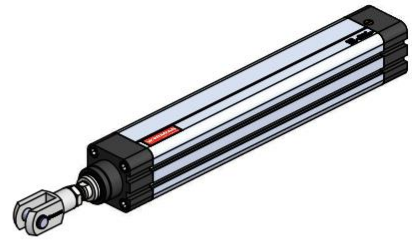
... - WKA



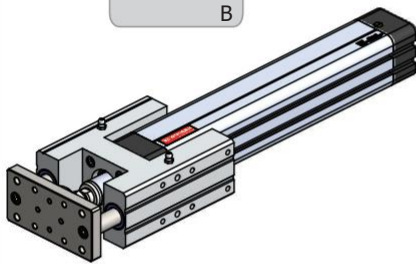
... - WGM



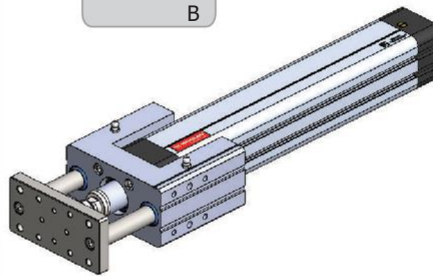
... - WCB



... - WHCR  
B

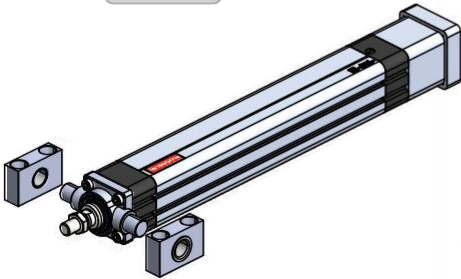


... - WUCR  
B



**Mounting for Axial Kit**

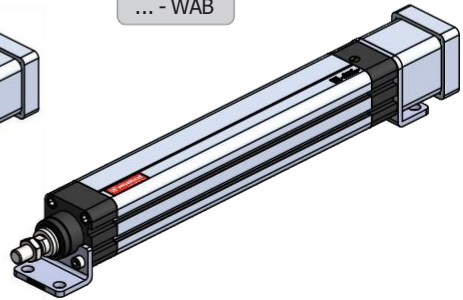
... - FTC



... - WFB

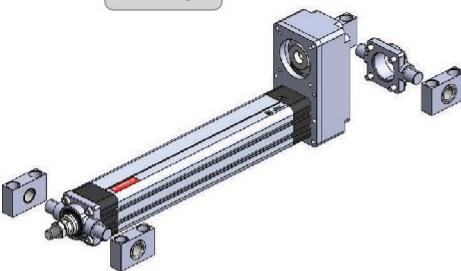


... - WAB

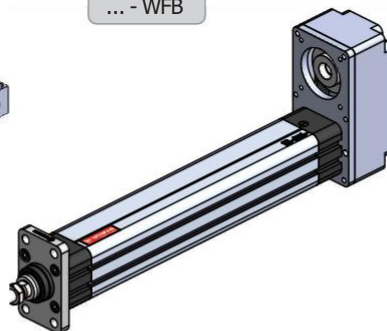


**Mounting for Parallel Kit**

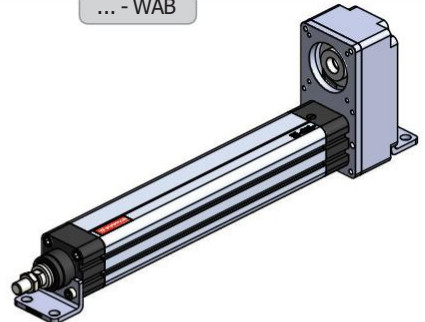
... - FTC



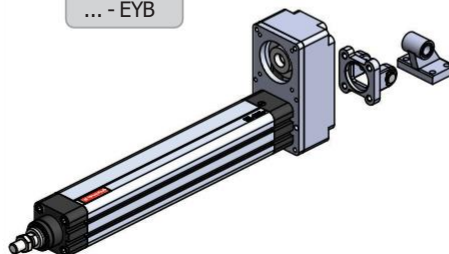
... - WFB

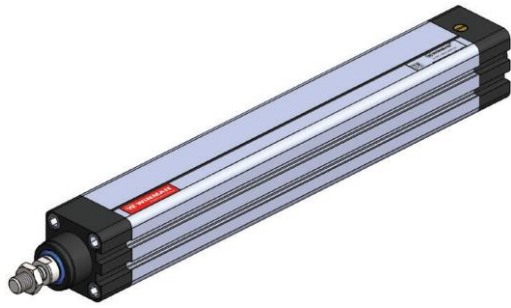


... - WAB



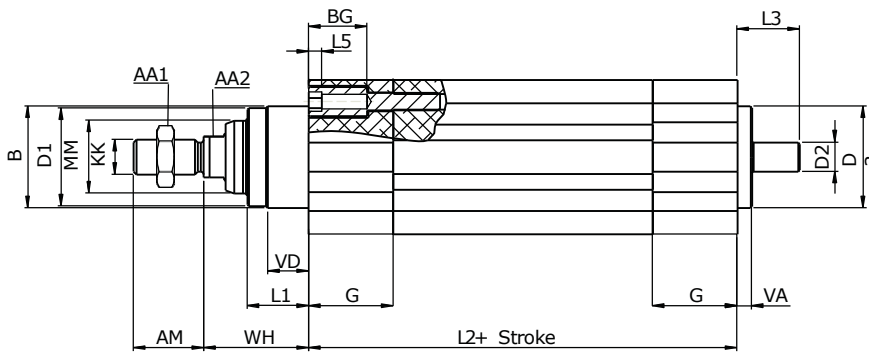
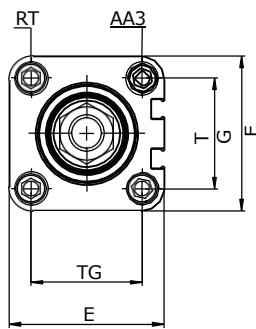
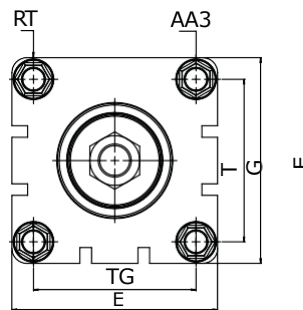
... - EYB



**WINMAN WACE Series Linear Actuators**

**Specification**

| Size                |                  | 032    | 040  | 063  | 080  | 100  |
|---------------------|------------------|--------|------|------|------|------|
| Maximum Axial Force | N                | 800    | 1250 | 3100 | 5000 | 8000 |
| Maximum Speed       | mm/s             | 500    | 500  | 1000 | 500  | 500  |
| Maximum Stroke      | mm               | 400    | 600  | 600  | 600  | 600  |
| Position Accuracy   | µm/mm            | 53/300 |      |      |      |      |
| Repeating Accuracy  | mm               | < 0,05 |      |      |      |      |
| Acceleration        | m/s <sup>2</sup> | 10     |      |      |      |      |

Note : Calculated value are theoretical values. We recommend you to calculate safety factor as five(5).

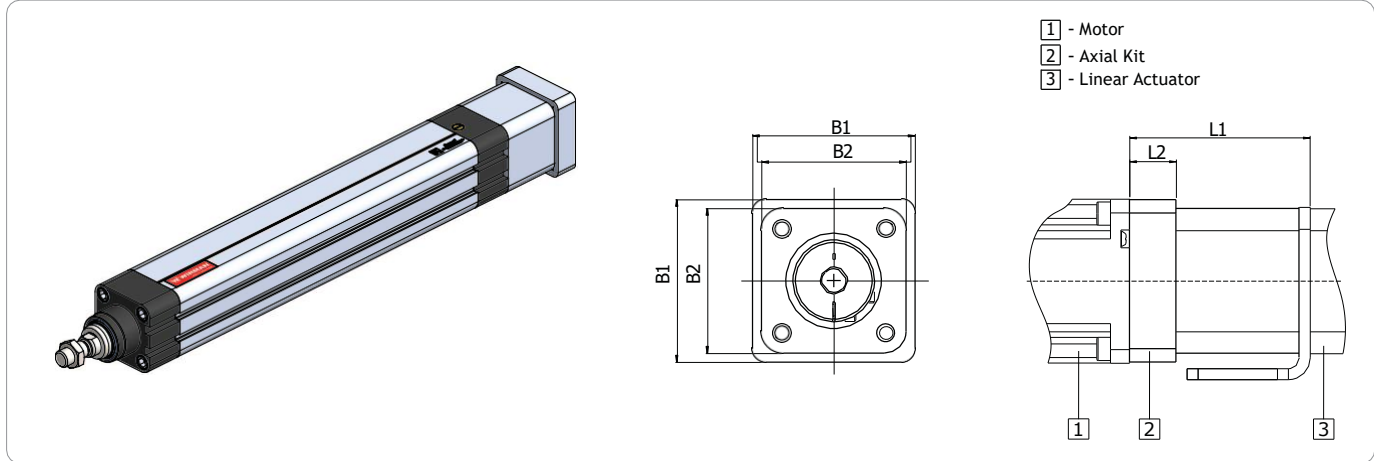
**Technical Drawing**

**WACE...-32/063**

**WACE...-080/100**


| Size | AA1 | AA2 | AA3 | AM | B  | BG   | D1   | D2 | D3 | E   | G    |
|------|-----|-----|-----|----|----|------|------|----|----|-----|------|
| 032  | 16  | 14  | 6   | 22 | 30 | 20   | 28,8 | 6  | 31 | 45  | 24,5 |
| 040  | 18  | 14  | 6   | 24 | 35 | 20,5 | 33,7 | 10 | 35 | 53  | 29   |
| 063  | 24  | 17  | 8   | 32 | 45 | 24   | 42,5 | 13 | 45 | 74  | 35   |
| 080  | 30  | 22  | 12  | 40 | 60 | 30   | 59   | 19 | 55 | 100 | 40   |
| 100  | 30  | 22  | 17  | 40 | 70 | 36   | 69   | 24 | 75 | 124 | 45   |

| Size | KK | L1   | L2  | L3   | L5 | MM | RT  | TG   | VA | VD   | WH   |
|------|----|------|-----|------|----|----|-----|------|----|------|------|
| 032  | 10 | 18   | 131 | 16,5 | 5  | 16 | M6  | 32,5 | 5  | 14,5 | 26,5 |
| 040  | 12 | 21   | 147 | 21,5 | 5  | 25 | M6  | 38   | 5  | 14   | 36   |
| 063  | 16 | 28,5 | 183 | 26   | 5  | 35 | M8  | 56,5 | 4  | 15,5 | 41,5 |
| 080  | 20 | 28,5 | 230 | 37   | 6  | 45 | M12 | 77   | 5  | 16   | 45   |
| 100  | 20 | 40   | 273 | 47   | 9  | 55 | M16 | 98   | 7  | 27,5 | 57,5 |

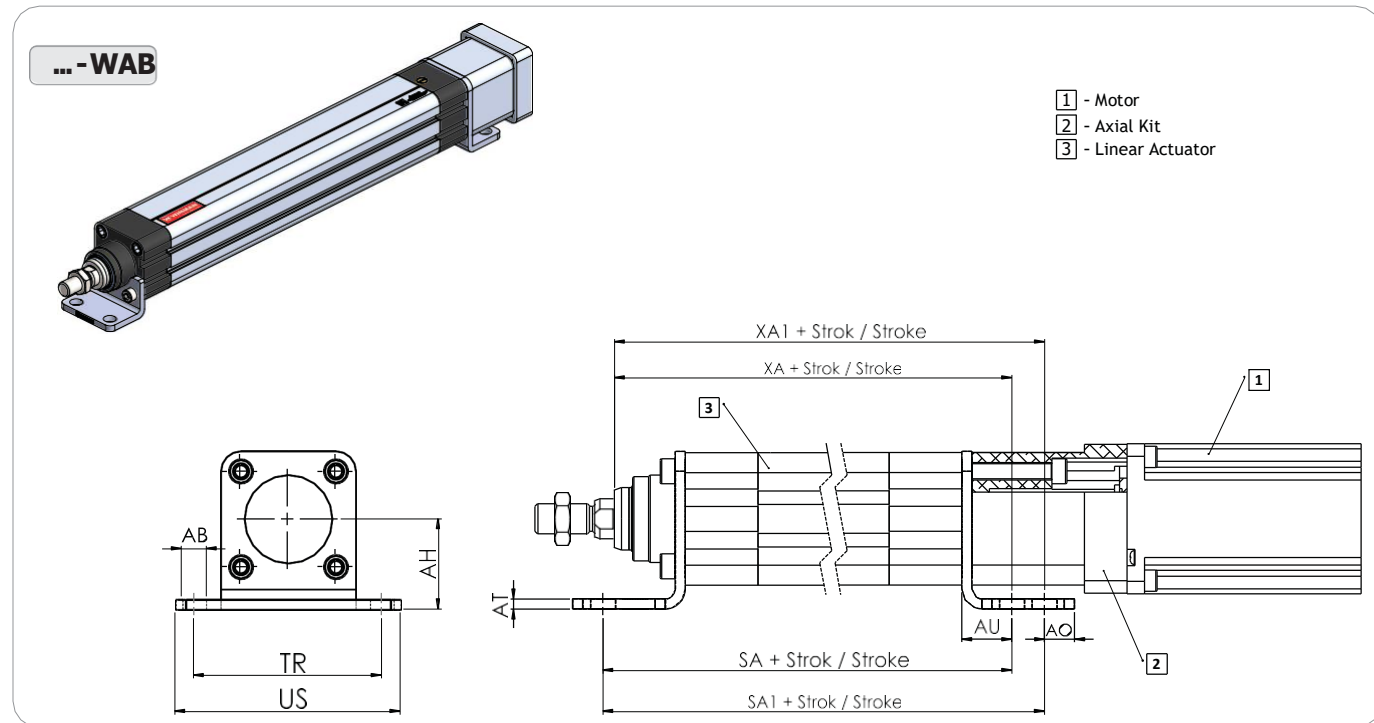
**WDAK Axial Mounting Kit**

**Technical Drawing**



| Size | B1   | B2 | L1  | L2 |
|------|------|----|-----|----|
| 032  | 59,5 | 45 | 61  | 10 |
| 040  | 59,5 | 53 | 62  | 17 |
| 063  | 80   | 74 | 81  | 16 |
| 080  | 100  | 80 | 92  | 12 |
| 100  | 124  | 80 | 102 | 18 |

**Foot Mounting**

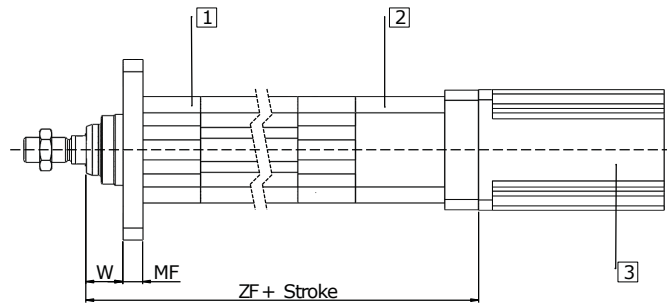
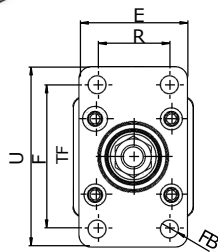
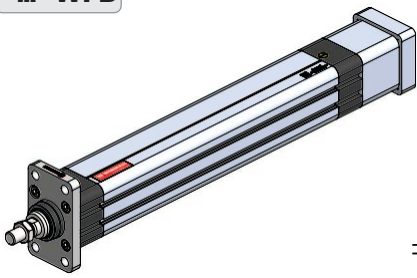


| Size | ØAB | AH   | AO   | AT | AU   | SA    | SA1 | TR  | US  | XA    | XA1 |
|------|-----|------|------|----|------|-------|-----|-----|-----|-------|-----|
| 032  | 7   | 32   | 12   | 5  | 20   | 175   | -   | 65  | 79  | 177,5 | -   |
| 040  | 10  | 36   | 18,5 | 5  | 26,5 | 201,5 | -   | 75  | 90  | 202   | -   |
| 063  | 10  | 50   | 10   | 6  | 20   | 235   | 255 | 100 | 120 | 237   | 257 |
| 080  | 12  | 63   | 15   | 6  | 32   | 319   | 344 | 120 | 150 | 297   | 322 |
| 100  | 12  | 75,5 | 15   | 6  | 32   | 346   | 371 | 120 | 150 | 350   | 375 |

**WDAK Axial Mounting Kit**

**Flansh Mounting**

**... -WFB**



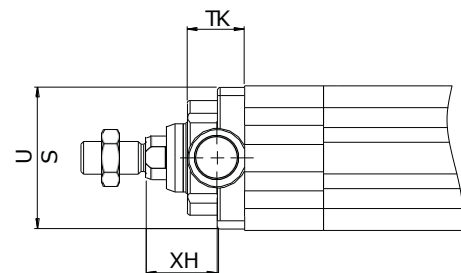
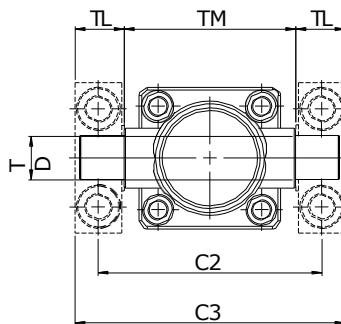
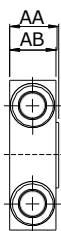
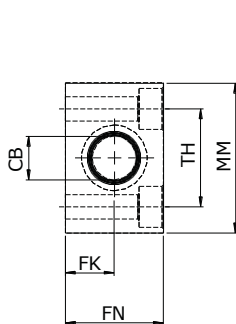
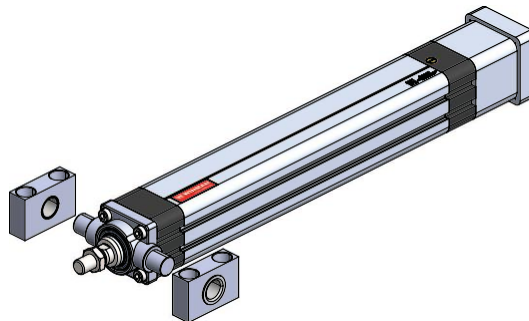
- 1 - Linear Actuator
- 2 - Axial Kit
- 3 - Motor

Note : Contact us WACE.080 and WACE.100

| Size | E  | FB | MF | R  | TF  | UF  | W    | ZF    |
|------|----|----|----|----|-----|-----|------|-------|
| 032  | 45 | 7  | 10 | 32 | 64  | 80  | 16,5 | 218,5 |
| 040  | 54 | 9  | 10 | 36 | 72  | 90  | 26   | 245   |
| 063  | 75 | 9  | 12 | 50 | 100 | 120 | 29,5 | 305,5 |

**WDAK Swivel Mounting**

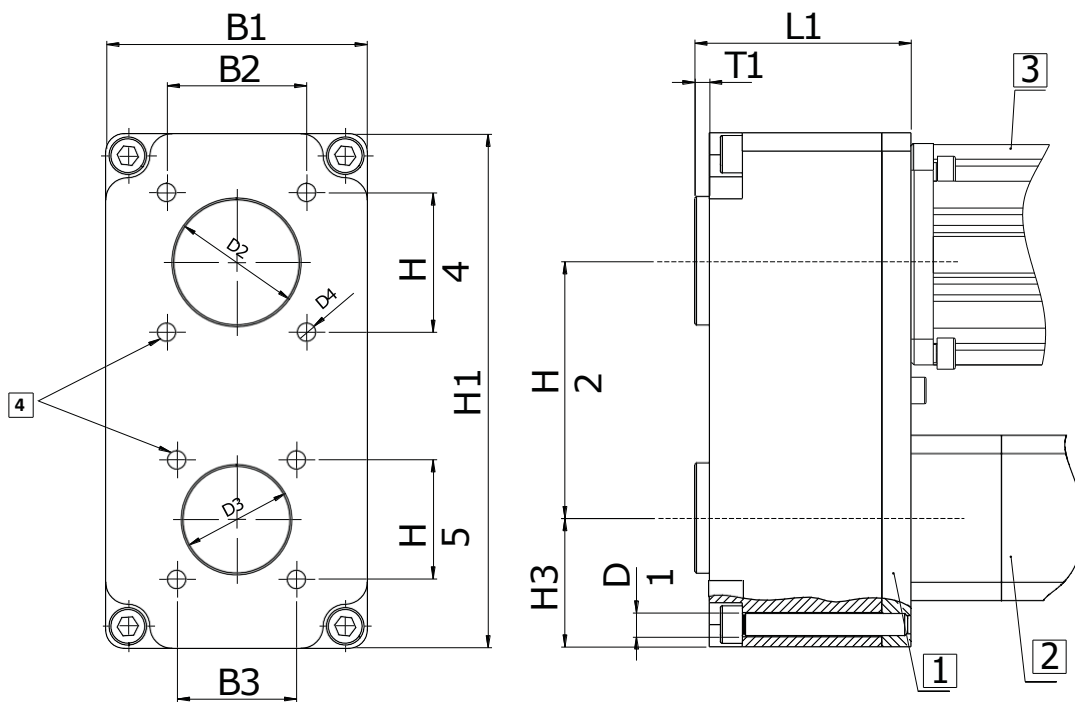
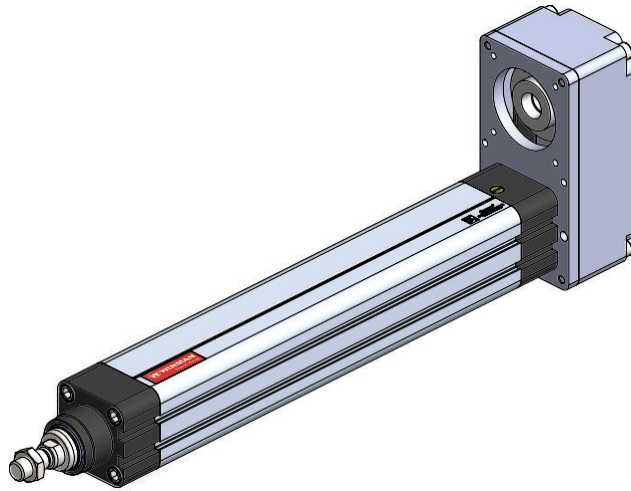
**... -FTC**



Note : Contact us WACE.080 and WACE.100

| Size | AA   | AB   | C2    | C3  | CB | FK | FN | MM | TD | TH | TK | TL | TM | US | XH   |
|------|------|------|-------|-----|----|----|----|----|----|----|----|----|----|----|------|
| 032  | 15   | 14   | 66    | 80  | 12 | 15 | 30 | 46 | 12 | 32 | 19 | 12 | 50 | 46 | 16,5 |
| 040  | 16   | 17   | 82    | 99  | 16 | 18 | 36 | 55 | 16 | 36 | 21 | 16 | 63 | 52 | 26   |
| 063  | 21,5 | 20,5 | 113,5 | 134 | 20 | 20 | 40 | 65 | 20 | 42 | 28 | 20 | 90 | 74 | 29,5 |

WDPK Parallel Mounting Kit



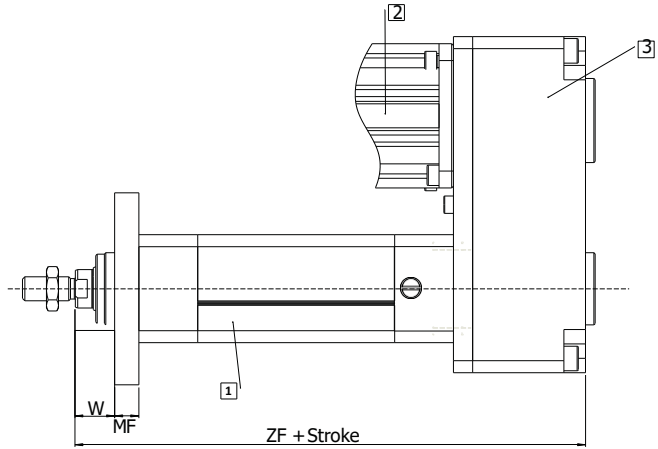
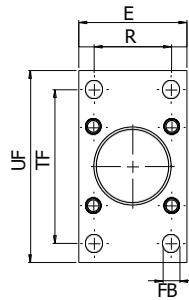
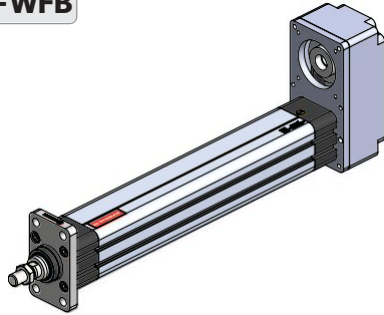
- 1 - Parallel Kit
- 2 - Linear Actuator
- 3 - Motor
- 4 - Mounting Thread

| Size | L1  | T1 | B1  | B2 | B3   | D1  | D2 | D3 | D4  | H1  | H2  | H3   | H4 | H5   |
|------|-----|----|-----|----|------|-----|----|----|-----|-----|-----|------|----|------|
| 032  | 59  | 4  | 71  | 38 | 32,5 | M6  | 35 | 30 | M6  | 140 | 70  | 35   | 38 | 32,5 |
| 040  | 59  | 4  | 71  | 38 | 32,5 | M6  | 35 | 30 | M6  | 140 | 70  | 35   | 38 | 32,5 |
| 063  | 64  | 4  | 86  | -  | 56,5 | M6  | -  | 45 | M8  | 168 | 85  | 40,5 | -  | 56,5 |
| 080  | 86  | 4  | 110 | -  | 72   | M8  | -  | 45 | M8  | 230 | 116 | 57   | -  | 72   |
| 100  | 100 | 4  | 150 | -  | 98   | M16 | -  | 45 | M10 | 315 | 168 | 73,5 | -  | 98   |

**WDPK / WDAK Axial Mounting Kit**

**WDPK Flansh Mounting**

**... - WFB**

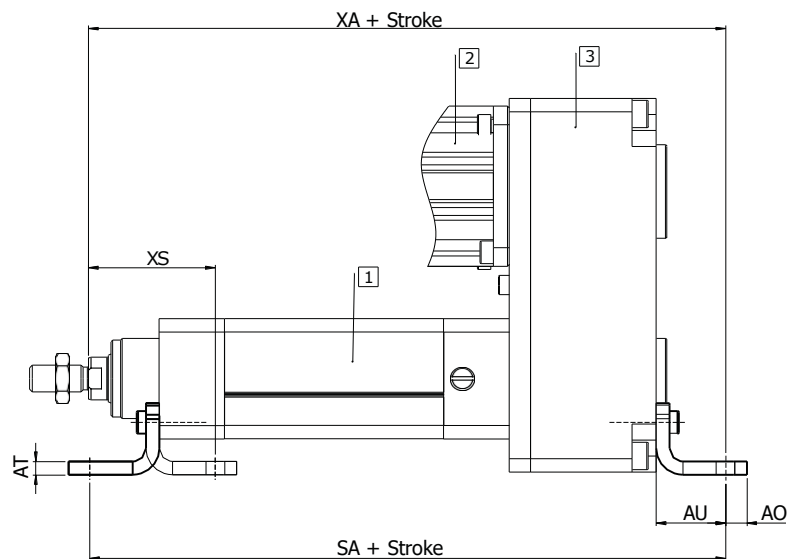
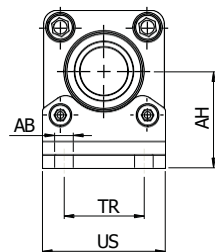
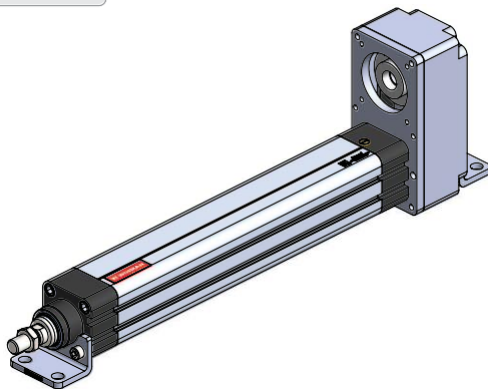


- 1 - Linear Actuator
- 2 - Motor
- 3 - Parallel Kit

| Size | E  | ØFB | MF | R  | TF  | UF  | W    | ZF    |
|------|----|-----|----|----|-----|-----|------|-------|
| 032  | 45 | 7   | 10 | 32 | 64  | 80  | 16,5 | 216,5 |
| 040  | 54 | 9   | 10 | 36 | 72  | 90  | 26   | 242   |
| 063  | 75 | 9   | 12 | 50 | 100 | 120 | 29,5 | 288,5 |

**WDPK Foot Mounting**

**... - WAB**



- 1 - Linear Actuator
- 2 - Motor
- 3 - Parallel Kit

Note : Contact us WACE.080 and WACE.100

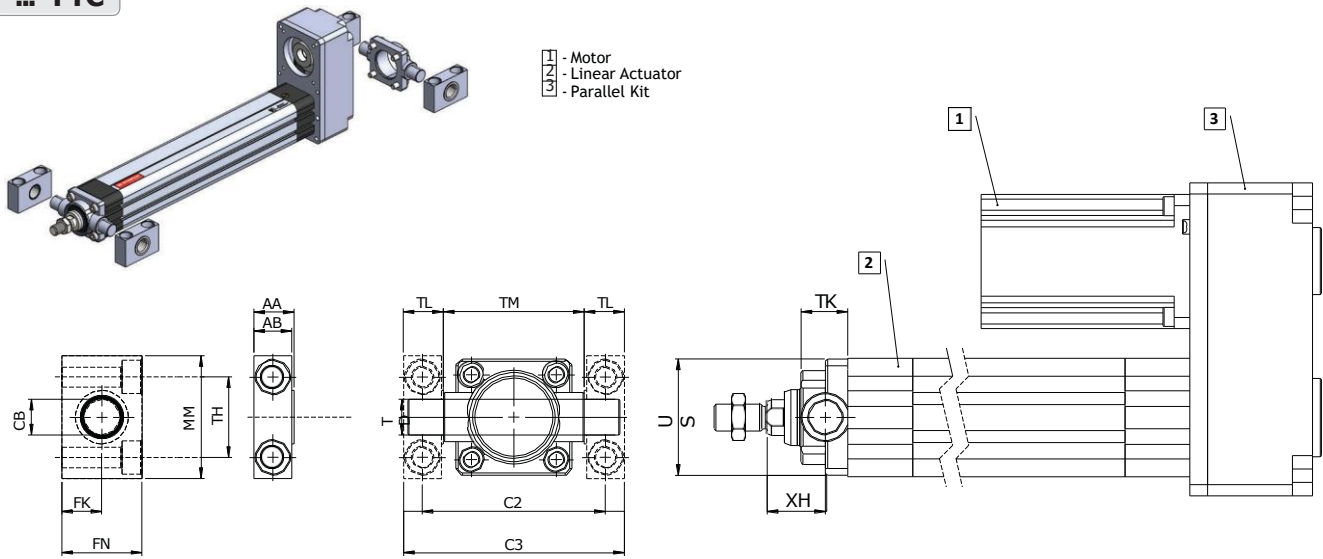
| Size | AB | AH | AO   | AT | AU | SA  | TR | US | XA    | XS   |
|------|----|----|------|----|----|-----|----|----|-------|------|
| 032  | 7  | 36 | 8    | 5  | 26 | 238 | 30 | 46 | 238,5 | 47,5 |
| 040  | 10 | 36 | 9    | 5  | 29 | 258 | 36 | 54 | 266   | 60   |
| 063  | 10 | 50 | 12,5 | 6  | 32 | 307 | 50 | 75 | 316,5 | 68,5 |



**WDPK / WDAK Axial Mounting Kit**

**WDPK Swivel Mounting**

**... -FTC**

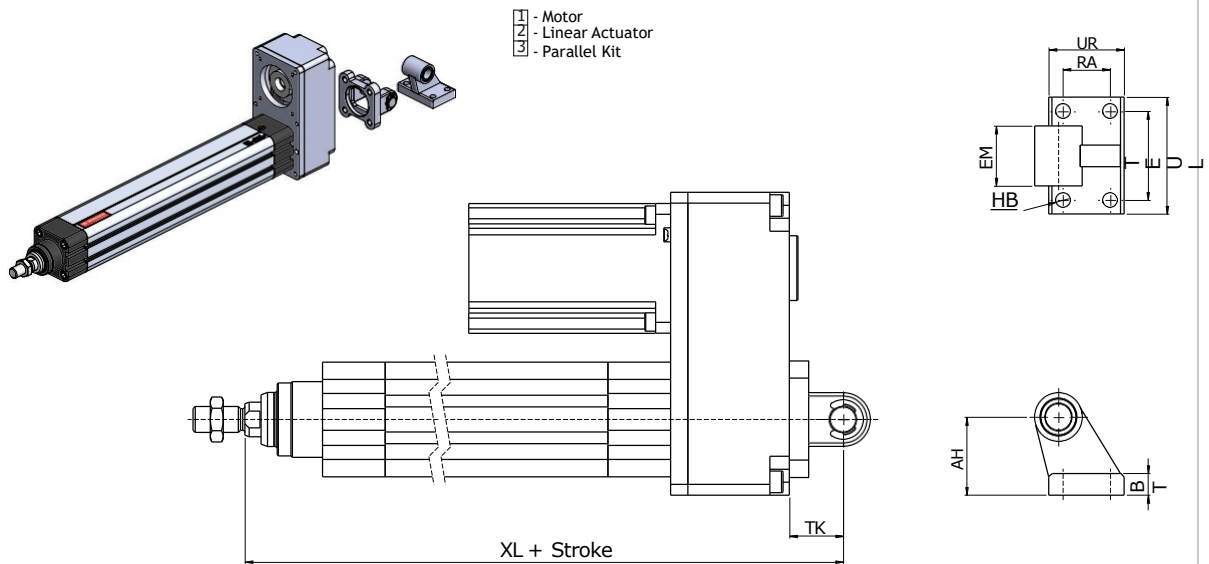


Note : Contact us WACE.080 and WACE.100

| Size | AA   | AB   | C2    | C3  | CB | FK | FN | MM | TD | TH | TK | TL | TM | US | XH   | XL    |
|------|------|------|-------|-----|----|----|----|----|----|----|----|----|----|----|------|-------|
| 032  | 15   | 14   | 66    | 80  | 12 | 15 | 30 | 46 | 12 | 32 | 19 | 12 | 50 | 46 | 16,5 | 226   |
| 040  | 16   | 17   | 82    | 99  | 16 | 18 | 36 | 55 | 16 | 36 | 21 | 16 | 63 | 52 | 26   | 252,5 |
| 063  | 21,5 | 20,5 | 113,5 | 134 | 20 | 20 | 40 | 65 | 20 | 42 | 28 | 20 | 90 | 74 | 29,5 | 302,5 |

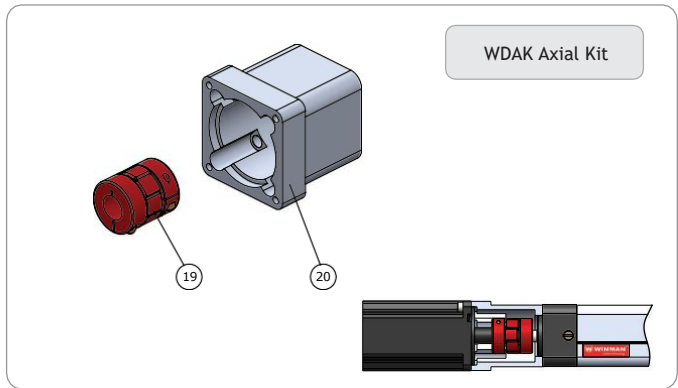
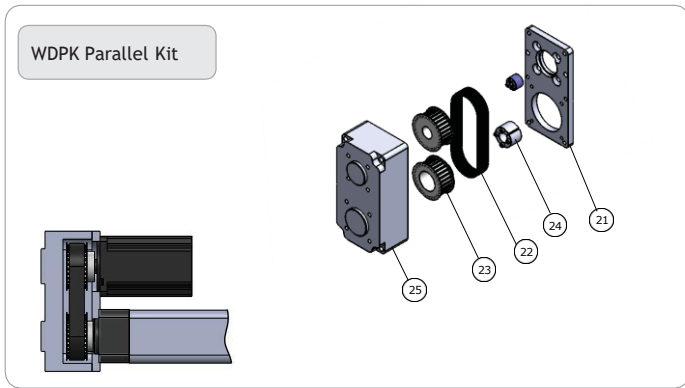
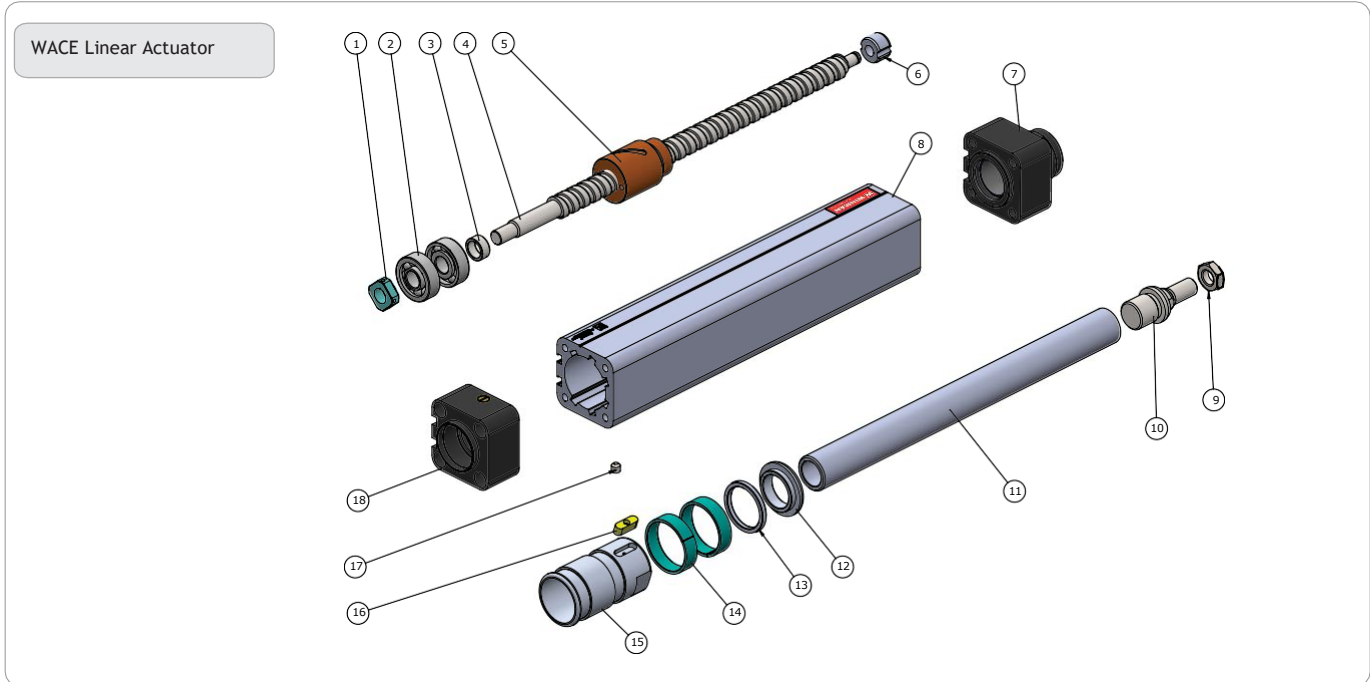
**WDPK Swivel Flange and Clevis Foot**

**... -EYB**

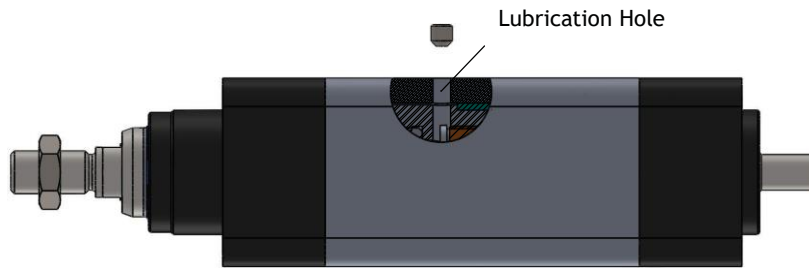


| Size | AH | BT | EM | HB  | RA | TE | UL | UR | XL    |
|------|----|----|----|-----|----|----|----|----|-------|
| 032  | 32 | 8  | 26 | 6,5 | 18 | 38 | 51 | 31 | 234,5 |
| 040  | 36 | 10 | 28 | 6,5 | 22 | 41 | 54 | 35 | 263   |
| 063  | 50 | 12 | 40 | 9   | 30 | 50 | 65 | 50 | 316,5 |
| 080  | 63 | 14 | 50 | 11  | 40 | 66 | 86 | 60 | 393   |
| 100  | 71 | 15 | 60 | 11  | 50 | 76 | 96 | 70 | 467,5 |

**Assembly**



| Piece | Qty | Part Name            | Assembly                 |
|-------|-----|----------------------|--------------------------|
| 1     | 1   | Bearing Pressure Nut | <b>Actuator</b>          |
| 2     | 2   | Bearing              |                          |
| 3     | 1   | Bearing Nut          |                          |
| 4     | 1   | Ball Screw           |                          |
| 5     | 1   | Ball Nut             |                          |
| 6     | 1   | Ball Screw Bearing   |                          |
| 7     | 1   | Front Block          |                          |
| 8     | 1   | Profile              |                          |
| 9     | 1   | Connection Nut       |                          |
| 10    | 1   | Connection Nipple    |                          |
| 11    | 1   | Piston Rod           |                          |
| 12    | 1   | Piston Part - 2      |                          |
| 13    | 1   | Magnetic             |                          |
| 14    | 2   | Guide Ring           |                          |
| 15    | 1   | Piston Part - 1      |                          |
| 16    | 1   | Key                  |                          |
| 17    | 1   | Nipple               |                          |
| 18    | 1   | Back Block           |                          |
| 19    | 2   | Coupling             |                          |
| 20    | 1   | Bellhousing          | <b>Parallel Mounting</b> |
| 21    | 1   | Parallel Kit Cover   |                          |
| 22    | 1   | Toothed Belt         |                          |
| 23    | 1   | Timing Belt Pulleys  |                          |
| 24    | 1   | Taper Bushing        |                          |
| 25    | 1   | Parallel Kit Box     |                          |

**Maintenance**


Basic lubrication is done in-factory before shipment.

Bearings of the ball screw have been lubricated for life and will not require in-service lubrication under normal operating conditions.

The profile of the linear actuator has port on the top side for access to the lube on the ball nut.

Re-lubrication should be carried out if the defined travel distance is completed or 400 operating hours are reached first. At the end of 2 years, it must be re-lubricated even if the travel distance and working hours are not reached.

For lubrication; set linear actuator to zero stroke position.

Remove the grubs in the lubrication port lubricate the amount indicated in the table and replace the glue after lubrication, move the linear actuator at least three times along the stroke distance. the travel speed must not exceed 10 mm / s.

Linear actuators must be lubricated with suitable grease.

Lithium soap grease should be used.

Caution: Do not use grease containing graphite or MoS!

Lubrication quantity is provided in table by normal operating conditions.

| Normal Working Conditions |         |         |
|---------------------------|---------|---------|
| Ambient Temperature       | °C      | 10 ~ 40 |
| Speed                     | m/s     | ≤ 0,4   |
| Screw Rotation Speed      | rev/min | 2500    |
| Load                      | N       | ≤ 0,2 P |
| Stroke                    | mm      | > 60    |

**Lubrication**

| Actuator Model     |                 | WACE - 032 | WACE - 040 | WACE - 063 | WACE - 080 | WACE - 100 |
|--------------------|-----------------|------------|------------|------------|------------|------------|
| Lubrication Period | km              | 250        | 400        | 600        | 600        | 600        |
|                    | h               | 400        | 400        | 400        | 400        | 400        |
| Lubricate Dose     | cm <sup>3</sup> | 0,6        | 1,3        | 2,5        | 3,0        | 3,7        |