

Technical Data Sheet  
Gearbox  
INLINE GEARBOX



|                    |            |
|--------------------|------------|
| MODEL              | 412A       |
| Ø OUTPUT SHAFT     | 25 mm      |
| APPROXIMATE RATIO  | 19         |
| EXACT RATIO        | 18.78      |
| OUTPUT SPEED       | 77 RPM     |
| EXACT OUTPUT SPEED | 78 RPM     |
| INPUT POWER        | 0.37 KW    |
| INPUT ROTATION     | 1400 RPM   |
| INPUT PAM          | 71B14      |
| OUTPUT TORQUE      | 45.50 N.m  |
| NOMINAL TORQUE     | 138.00 N.m |
| NOMINAL POWER      | 1.1 KW     |
| SERVICE FACTOR     | 2.97       |
| DYNAMIC EFFICIENCY | 0.96       |

Oil Quantity (L)

| B3/H1 | B6/H4 | B7/H3 | B8/H2 | V5/H5 | V6/H6 |
|-------|-------|-------|-------|-------|-------|
| 0.25  | 0.35  | 0.4   | 0.45  | 0.4   | 0.5   |

Radial and Axial Loads



| $n_2$ [min-1] | $F_A$ [N] | $F_R$ [N] |
|---------------|-----------|-----------|
| 300           | 310       | 1550      |
| 200           | 360       | 1800      |
| 120           | 448       | 2240      |
| 70            | 540       | 2700      |

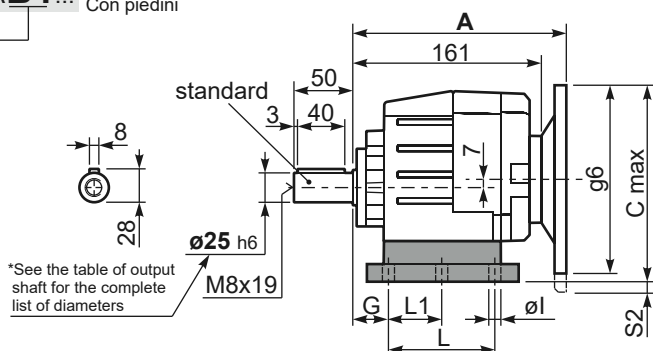
Universal Motors S.A.  
Rua Comendador Brandão, 484  
4495-375 Póvoa de Varzim  
[geral@universalmotors.pt](mailto:geral@universalmotors.pt)  
TEL.: 252 299 080

Universal Motors UK, Ltd  
Unit E2, Meltham Mills Road  
West Yorkshire HD9 4AR  
[enquiries@universalmotors-group.co.uk](mailto:enquiries@universalmotors-group.co.uk)  
TEL.: +44(0) 1484660222

Universal Motors SL  
C/La Habana n.6 nave 4 PI Camporoso  
28806 Alcala de Henares  
[info@universalmotors-group.es](mailto:info@universalmotors-group.es)  
TEL.: 918 864 213

P412A **B1** ... With feet  
Con piedini

|                                         |             |               |
|-----------------------------------------|-------------|---------------|
| <b>Gearbox weight</b><br>peso riduttore | With flange | <b>5.7 kg</b> |
|                                         | With feet   | <b>5.9 Kg</b> |



Feet / piedi

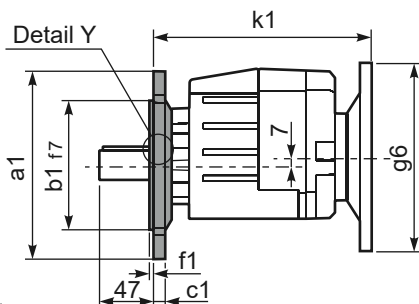
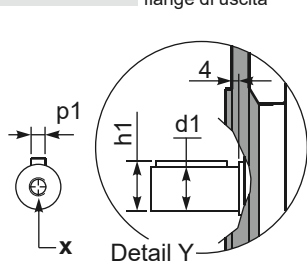
| Feet Code | Market reference | G  | H   | R       | L      | L1 | S   | H1    | O  | øI | S2 only with motor flange | B5 max. Flange       | kit code |            |
|-----------|------------------|----|-----|---------|--------|----|-----|-------|----|----|---------------------------|----------------------|----------|------------|
| B1        | 112              | 18 | 85  | 110     | 87     | 50 | 130 | 167.5 | 15 | -  | 8<br>33                   | 80/90B5<br>100/112B5 | -        | KC35.9.021 |
| B2        | 212/3            | 18 | 100 | 130     | 107.5  | 60 | 155 | 182.5 | 17 | 11 | 18                        | 100/112B5            | -        | KC40.9.025 |
| S1        | 17               | 18 | 75  | 110     | 90÷110 | 50 | 145 | 155.5 | 15 | 9  | 18<br>43                  | 80/90B5<br>100/112B5 | -        | KC40.9.022 |
| S2        | 27               | 25 | 90  | 110     | 130    | -  | 145 | 172.5 | 20 | 9  | 3<br>28                   | 80/90B5<br>100/112B5 | -        | KC40.9.024 |
| H2        | 022-223          | 25 | 100 | 110     | 115    | -  | 145 | 182.5 | 20 | 9  | 18                        | 100/112B5            | -        | KC40.9.026 |
| M1        | 42/3             | 25 | 80  | 110÷120 | 85     | -  | 145 | 162.5 | 15 | 9  | 13<br>38                  | 80/90B5<br>100/112B5 | -        | KC40.9.023 |

Other feet are available,  
see our web site  
Sono disponibili altri piedini,  
consulta il nostro sito web

**A see on page bottom**

 Most popular types  
Tipi più diffusi

P412A-**F** ... Output flanges  
flange di uscita



**\*Available output shaft** / Albero di uscita

|                           | Shaft - d1 | p1 | h1   | x     |
|---------------------------|------------|----|------|-------|
| Standard                  | ø 25x50    | 8  | 28   | M8x19 |
| On request<br>A richiesta | ø 16x40    | 5  | 18   | M6x16 |
|                           | ø 19x40    | 6  | 21.5 | M6x16 |
|                           | ø 20x40    | 6  | 22.5 | M8x19 |
|                           | ø 24x50    | 8  | 27   | M8x19 |

### Available output flanges / flange di uscita

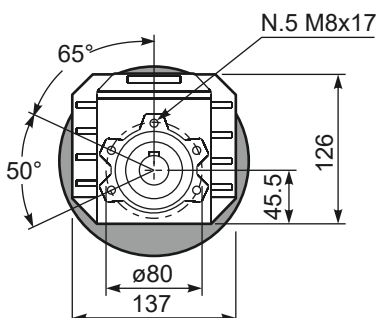
| a1 ø | b1  | c1   | e1  | f1  | s1 | kit code   |
|------|-----|------|-----|-----|----|------------|
| 120  | 80  | 10   | 100 | 3   | 7  | KC40.9.010 |
| 140  | 95  | 10   | 115 | 3   | 9  | KC40.9.011 |
| 160  | 110 | 10   | 130 | 3.5 | 9  | KC40.9.012 |
| 200  | 130 | 10   | 165 | 3.5 | 11 | KC40.9.013 |
| 250  | 180 | 11.5 | 215 | 3.5 | 14 | KC40.9.014 |

With flange an feet only on request. Ask for compatibility

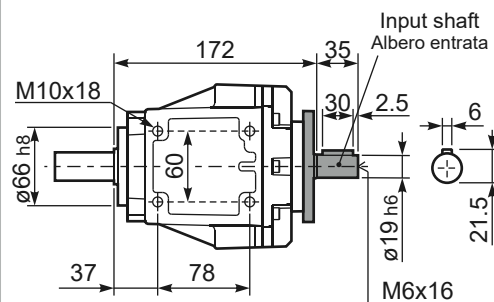
With flange and feet only on request. Ask for compatibility

|            |                                 |
|------------|---------------------------------|
| P412A-N... | Basic gearbox<br>Riduttore base |
|------------|---------------------------------|

Suggested B14  
motor flanges



**R412A-N...** Input Shaft  
Albero in entrata



| <b>B5 Motor Flanges</b> | <b>A</b> | <b>C<sub>max</sub></b> | <b>g6</b> | <b>k1</b> | <b>kit code</b> |
|-------------------------|----------|------------------------|-----------|-----------|-----------------|
| 63 B5                   | 181.5    | 177                    | 140       | 185.5     | K063.4.041      |
| 71 B5                   | 179.5    | 187                    | 160       | 183.5     | K063.4.042      |
| 80/90 B5                | 181.5    | 207                    | 200       | 185.5     | K063.4.043      |
| 100/112 B5              | 196.5    | 232                    | 250       | 200.5     | KC40.4.043      |

| <b>B14 Motor<br/>Flanges</b> | <b>A</b> | <b>C<sub>max</sub></b> | <b>g6</b> | <b>k1</b> | <b>kit code</b> |
|------------------------------|----------|------------------------|-----------|-----------|-----------------|
| 71 B14                       | 179.5    | 159.5                  | 105       | 183.5     | K063.4.047      |
| 80 B14                       | 181.5    | 167                    | 120       | 185.5     | K063.4.046      |
| 90 B14                       | 181.5    | 177                    | 140       | 185.5     | K063.4.041      |
| 100/112 B14                  | 196.5    | 187                    | 160       | 200.5     | KC40.4.041      |