

Technical Data Sheet  
Gearbox  
INLINE GEARBOX



|                    |           |
|--------------------|-----------|
| MODEL              | 412A      |
| Ø OUTPUT SHAFT     | 25 mm     |
| APPROXIMATE RATIO  | 3.5       |
| EXACT RATIO        | 3.52      |
| OUTPUT SPEED       | 417 RPM   |
| EXACT OUTPUT SPEED | 415 RPM   |
| INPUT POWER        | 1.50 KW   |
| INPUT ROTATION     | 1400 RPM  |
| INPUT PAM          | 90B5      |
| OUTPUT TORQUE      | 34.57 N.m |
| NOMINAL TORQUE     | 80.00 N.m |
| NOMINAL POWER      | 3.5 KW    |
| SERVICE FACTOR     | 2.33      |
| 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 piediniGearbox weight  
peso riduttore With flange **5.7 kg**  
With feet **5.9 Kg**

Feet / piedini

| Feet Code | Market reference | G  | H   | R       | L      | L1 | S   | H1    | O  | øl | S2 only with motor flange | B5 max. Flange | kit code   |
|-----------|------------------|----|-----|---------|--------|----|-----|-------|----|----|---------------------------|----------------|------------|
| B1        | 112              | 18 | 85  | 110     | 87     | 50 | 130 | 167.5 | 15 | -  | 8/33 80/90B5 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  | 18/43 80/90B5 100/112B5   | -              | KC40.9.022 |
| S2        | 27               | 25 | 90  | 110     | 130    | -  | 145 | 172.5 | 20 | 9  | 3/28 80/90B5 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  | 13/38 80/90B5 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 and feet only on request. Ask for compatibility

P412A-N... Basic gearbox  
Riduttore base

Suggested B14 motor flanges

R412A-N... Input Shaft  
Albero in entrata

| B5 Motor Flanges | A     | C <sub>max</sub> | g6  | k1    | kit code   |
|------------------|-------|------------------|-----|-------|------------|
| 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 |

| B14 Motor Flanges | A     | C <sub>max</sub> | g6  | k1    | kit code   |
|-------------------|-------|------------------|-----|-------|------------|
| 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 |