

# THREE-PHASE INDUCTION ELECTRIC MOTORS

**Series T** - three-phase induction electric motors sizes 56, 63, 71, 80, 90, 100, 112, 132 and 160 with a squirrel cage rotor and external ventilation by own fan are designed for universal application.

## DESIGN

**The longitudinally ribbed frames** of the motors are made of : aluminium alloy for electric motors sizes 56, 63, 71 and 80; aluminium alloy or cast iron for electric motors sizes 80, 90, 100 and 112; or cast iron for electric motors sizes 132 and 160.

**The bearing shields** are made of: aluminium alloy for electric motors sizes 56, 63 and 71; aluminium alloy or cast iron for electric motors sizes 80, 90, 100 and 112; or cast iron for electric motors sizes 132 and 160.

**The rotor axial clearance** is compensated by a spacing ring fixed in the back bearing seat.

**The electric motor winding** is made of enamelled copper wire and the fan is made of plastics.

**The terminal box** is located on top and is rotateable at every 90°. The terminal box of the electric motors sizes 80, 90, 100, 112, 132 and 160 can be located both on the right and left side if the frame made of coast iron.

## SUPPLY VOLTAGE AND FREQUENCY

**The supply voltage** of the electric motors is 230/400V - connection  $\Delta/Y$  and frequency 50Hz.

The electric motors can also be designed for voltages from 220V up to 440V connections  $\Delta$  and up to 690V connections Y, for two voltages in ratio 2:1, as well as for frequency 60Hz.

Supply voltages deviation should not exceed its rated value more than  $\pm 5\%$ . Frequency deviation should not exceed its rated value more than  $\pm 2\%$  (zone A) as per EN 60034-1.

## PROTECTION

The degree of protection of the motors is IP 54 or IP 55 as per EN 60034-5.

## INSULATION CLASS

Insulation class - F as per EN 60034-1.

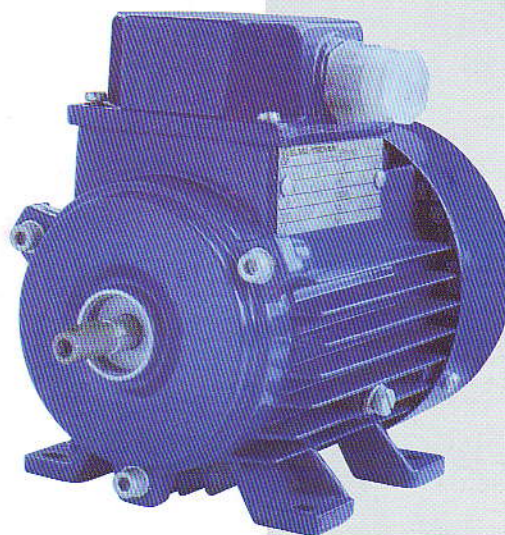
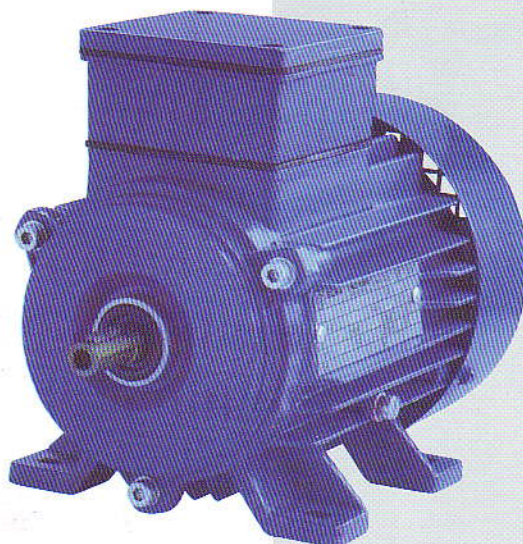
## OPERATING CONDITIONS

The electric motors are designed for continuous operation at duty cycles (S1) in the conditions of *Moderate climatic area* as per DIN IEC 721-2-1, at temperatures from -25 °C up to +40 °C. Altitude up to 1000 m, and humidity up to 85%.

The electric motor output is reduced when operating under conditions different than the specified above.

The electric motors can operate at duties (different from S1) on request.

The electric motors can be executed for operation in a *Worldwide climatic area*.



**SERIES T**
**TECHNICAL DATA 400V, 50Hz**

| Rated Output   |    | Type       | Rotation speed | Current | Efficiency | Power Factor | Starting characteristics       |                                |                                  | Torque of Inertia | Weight    |          |
|----------------|----|------------|----------------|---------|------------|--------------|--------------------------------|--------------------------------|----------------------------------|-------------------|-----------|----------|
|                |    |            |                |         |            |              | Current                        | Torque                         |                                  |                   | Cast Iron | Al alloy |
| P <sub>2</sub> |    | Indication | n              | I       | η          | cosφ         | I <sub>s</sub> /I <sub>R</sub> | M <sub>s</sub> /M <sub>R</sub> | M <sub>MAX</sub> /M <sub>R</sub> | J                 | m         |          |
| kW             | HP | -          | rpm            | A       | %          | -            | -                              | -                              | -                                | kg.m <sup>2</sup> | kg        |          |

3000 rpm

|       |       |           |      |       |    |      |     |      |     |          |       |      |
|-------|-------|-----------|------|-------|----|------|-----|------|-----|----------|-------|------|
| 0,09  | 0,12  | T56A-2    | 2850 | 0,26  | 63 | 0,79 | 4,4 | 2,00 | 2,7 | 0,000095 | -     | 2,8  |
| 0,12  | 0,16  | T56B-2    | 2830 | 0,37  | 64 | 0,74 | 4,0 | 2,30 | 2,5 | 0,000095 | -     | 2,8  |
| 0,18  | 0,25  | T63A-2    | 2770 | 0,49  | 64 | 0,81 | 3,9 | 2,10 | 2,4 | 0,000141 | -     | 3,8  |
| 0,25  | 0,34  | T63B-2    | 2770 | 0,67  | 69 | 0,78 | 4,1 | 2,25 | 2,5 | 0,000188 | -     | 4,2  |
| 0,37  | 0,50  | T71A-2    | 2800 | 0,91  | 71 | 0,83 | 4,3 | 2,20 | 2,4 | 0,000333 | -     | 5,4  |
| 0,55  | 0,75  | T71B-2    | 2790 | 1,33  | 71 | 0,81 | 4,1 | 2,30 | 2,4 | 0,000352 | -     | 5,7  |
| 0,75  | 1,00  | T71C-2*   | 2740 | 1,90  | 70 | 0,84 | 3,7 | 2,20 | 2,4 | 0,000410 | -     | 6,5  |
| 0,75  | 1,00  | T80A-2    | 2820 | 1,90  | 72 | 0,82 | 5,0 | 2,40 | 2,6 | 0,000900 | -     | 8,2  |
| 1,10  | 1,50  | T80B-2    | 2820 | 2,55  | 77 | 0,81 | 5,3 | 2,60 | 2,6 | 0,001000 | -     | 9,3  |
| 1,50  | 2,00  | T80C-2*   | 2780 | 3,40  | 76 | 0,85 | 4,9 | 2,50 | 2,6 | 0,001100 | -     | 11,3 |
| 1,50  | 2,00  | T90S-2    | 2875 | 3,30  | 77 | 0,82 | 6,6 | 2,70 | 3,0 | 0,001630 | 18,5  | 12,8 |
| 2,20  | 3,00  | T90L-2    | 2860 | 4,80  | 80 | 0,85 | 6,8 | 3,10 | 3,2 | 0,001820 | 22,0  | 16,3 |
| 3,00  | 4,00  | T90LB-2*  | 2810 | 6,10  | 81 | 0,88 | 6,0 | 2,60 | 2,8 | 0,002220 | 23,0  | 17,8 |
| 3,00  | 4,00  | T100L-2   | 2880 | 6,20  | 82 | 0,87 | 7,2 | 2,50 | 2,7 | 0,003720 | 27,5  | 20,0 |
| 4,00  | 5,50  | T100LB-2* | 2860 | 7,90  | 84 | 0,87 | 7,8 | 2,90 | 3,1 | 0,004560 | 29,5  | 22,0 |
| 4,00  | 5,50  | T112M-2   | 2870 | 8,20  | 83 | 0,88 | 7,2 | 2,70 | 3,0 | 0,005830 | 36,0  | 26,2 |
| 5,50  | 7,50  | T112MB-2* | 2870 | 11,40 | 83 | 0,86 | 7,2 | 2,80 | 3,0 | 0,007380 | 40,0  | 27,9 |
| 5,50  | 7,50  | T132SA-2  | 2900 | 11,20 | 85 | 0,87 | 6,0 | 2,30 | 3,1 | 0,011500 | 50,0  | -    |
| 7,50  | 10,20 | T132SB-2  | 2905 | 14,30 | 85 | 0,89 | 7,0 | 2,10 | 2,8 | 0,014200 | 56,0  | -    |
| 9,20  | 12,50 | T132MA-2* | 2890 | 18,00 | 84 | 0,88 | 7,5 | 2,50 | 3,2 | 0,015800 | 66,0  | -    |
| 11,00 | 15,00 | T132M-2*  | 2890 | 21,00 | 88 | 0,90 | 7,8 | 3,30 | 3,3 | 0,018180 | 68,0  | -    |
| 11,00 | 15,00 | T160MA-2  | 2910 | 20,30 | 88 | 0,90 | 6,0 | 2,00 | 2,5 | 0,026790 | 98,0  | -    |
| 15,00 | 20,40 | T160MB-2  | 2915 | 27,00 | 89 | 0,90 | 7,2 | 2,40 | 2,9 | 0,037000 | 111,0 | -    |
| 18,50 | 25,20 | T160L-2   | 2910 | 32,60 | 90 | 0,92 | 7,2 | 2,40 | 3,0 | 0,045930 | 130,0 | -    |

I<sub>s</sub> - Starting current  
 I<sub>R</sub> - Current at rated load  
 M<sub>R</sub> - Torque at rated load  
 M<sub>s</sub> - Starting torque  
 M<sub>MAX</sub> - Maximum running torque

\* The joining dimensions are not in compliance with the power as per DIN 42673-1

**SERIES T**
**TECHNICAL DATA 400V, 50Hz**

| Rated Output   | Type       | Rotation speed | Current | Efficiency | Power Factor | Starting characteristics       |                                |                                  | Torque of Inertia | Weight    |          |
|----------------|------------|----------------|---------|------------|--------------|--------------------------------|--------------------------------|----------------------------------|-------------------|-----------|----------|
|                |            |                |         |            |              | Current                        | Torque                         |                                  |                   | Cast Iron | Al alloy |
| P <sub>2</sub> | Indication | n              | I       | η          | cosφ         | I <sub>s</sub> /I <sub>R</sub> | M <sub>s</sub> /M <sub>R</sub> | M <sub>MAX</sub> /M <sub>R</sub> | J                 | m         |          |
| kW    HP       | -       -  | rpm            | A       | %          | -            | -                              | -                              | -                                | kg.m <sup>2</sup> | kg        |          |

1500 rpm

|       |       |           |      |       |    |      |     |     |     |          |       |      |
|-------|-------|-----------|------|-------|----|------|-----|-----|-----|----------|-------|------|
| 0,06  | 0,08  | T56A-4    | 1400 | 0,25  | 54 | 0,64 | 3,0 | 2,1 | 2,4 | 0,000155 | -     | 2,5  |
| 0,09  | 0,12  | T56B-4    | 1380 | 0,37  | 56 | 0,63 | 2,9 | 2,4 | 2,5 | 0,000199 | -     | 2,9  |
| 0,12  | 0,16  | T63A-4    | 1340 | 0,42  | 59 | 0,70 | 3,0 | 2,0 | 2,1 | 0,000177 | -     | 3,7  |
| 0,18  | 0,25  | T63B-4    | 1320 | 0,58  | 62 | 0,72 | 3,0 | 2,0 | 2,0 | 0,000231 | -     | 4,1  |
| 0,25  | 0,34  | T71A-4    | 1350 | 0,79  | 65 | 0,70 | 3,1 | 2,0 | 2,1 | 0,000590 | -     | 5,2  |
| 0,37  | 0,50  | T71B-4    | 1360 | 1,12  | 66 | 0,72 | 3,2 | 2,1 | 2,2 | 0,000720 | -     | 6,1  |
| 0,55  | 0,75  | T71C-4*   | 1360 | 1,75  | 69 | 0,66 | 3,5 | 2,2 | 2,3 | 0,000900 | -     | 7,3  |
| 0,55  | 0,75  | T80A-4    | 1400 | 1,62  | 69 | 0,74 | 3,7 | 1,8 | 2,2 | 0,001280 | -     | 8,4  |
| 0,75  | 1,00  | T80B-4    | 1400 | 2,20  | 71 | 0,70 | 4,4 | 2,2 | 2,5 | 0,001540 | -     | 9,2  |
| 1,10  | 1,50  | T90S-4    | 1410 | 2,80  | 75 | 0,78 | 4,6 | 2,2 | 2,4 | 0,002550 | 18,0  | 12,7 |
| 1,50  | 2,00  | T90L-4    | 1400 | 3,65  | 76 | 0,80 | 4,8 | 2,2 | 2,6 | 0,002780 | 21,0  | 15,3 |
| 2,20  | 3,00  | T100LA-4  | 1410 | 5,10  | 79 | 0,82 | 5,6 | 2,2 | 2,6 | 0,005030 | 27,0  | 19,5 |
| 3,00  | 4,00  | T100LB-4  | 1410 | 6,80  | 81 | 0,82 | 5,8 | 2,7 | 2,8 | 0,006190 | 31,0  | 23,5 |
| 4,00  | 5,50  | T100LC-4* | 1400 | 8,90  | 80 | 0,81 | 5,8 | 2,8 | 2,9 | 0,007820 | 34,5  | 27,5 |
| 4,00  | 5,50  | T112M-4   | 1420 | 8,70  | 82 | 0,83 | 6,0 | 2,7 | 2,9 | 0,010900 | 38,5  | 28,7 |
| 5,50  | 7,50  | T112MB-4* | 1400 | 11,50 | 83 | 0,83 | 6,3 | 2,8 | 3,1 | 0,014000 | 43,0  | 31,0 |
| 5,50  | 7,50  | T132S-4   | 1440 | 11,50 | 85 | 0,83 | 6,2 | 2,6 | 2,8 | 0,022000 | 55,0  | 45,5 |
| 7,50  | 10,20 | T132M-4   | 1445 | 15,50 | 86 | 0,83 | 6,7 | 2,7 | 3,0 | 0,029600 | 67,0  | -    |
| 9,50  | 13,00 | T132MA-4* | 1430 | 18,90 | 88 | 0,83 | 6,0 | 2,9 | 3,0 | 0,033200 | 78,0  | -    |
| 11,00 | 15,00 | T132MB-4* | 1440 | 21,70 | 90 | 0,82 | 6,0 | 2,5 | 2,7 | 0,038500 | 85,0  | -    |
| 11,00 | 15,00 | T160M-4   | 1460 | 20,40 | 89 | 0,87 | 6,8 | 2,3 | 3,0 | 0,065500 | 100,0 | -    |
| 15,00 | 20,40 | T160L-4   | 1460 | 27,50 | 90 | 0,87 | 7,5 | 2,5 | 3,1 | 0,089500 | 130,0 | -    |

I<sub>s</sub> - Starting current  
 I<sub>R</sub> - Current at rated load  
 M<sub>R</sub> - Torque at rated load  
 M<sub>s</sub> - Starting torque  
 M<sub>MAX</sub> - Maximum running torque

\* The joining dimensions are not in compliance with the power as per DIN 42673-1

**SERIES T**
**TECHNICAL DATA 400V, 50Hz**

| Rated Output   | Type       | Rotation speed | Current | Efficiency | Power Factor | Starting characteristics       |                                |                                  | Torque of Inertia | Weight    |          |
|----------------|------------|----------------|---------|------------|--------------|--------------------------------|--------------------------------|----------------------------------|-------------------|-----------|----------|
|                |            |                |         |            |              | Current                        | Torque                         |                                  |                   | Cast Iron | Al alloy |
| P <sub>2</sub> | Indication | n              | I       | η          | cosφ         | I <sub>s</sub> /I <sub>R</sub> | M <sub>s</sub> /M <sub>R</sub> | M <sub>MAX</sub> /M <sub>R</sub> | J                 | m         |          |
| kW    HP       | -          | rpm            | A       | %          | -            | -                              | -                              | -                                | kg.m <sup>2</sup> | kg        |          |

1000 rpm

|       |       |          |     |       |    |      |     |     |     |         |       |      |
|-------|-------|----------|-----|-------|----|------|-----|-----|-----|---------|-------|------|
| 0,18  | 0,25  | T71A-6   | 900 | 0,66  | 57 | 0,68 | 2,5 | 1,8 | 2,0 | 0,00093 | -     | 5,4  |
| 0,25  | 0,34  | T71B-6   | 880 | 0,91  | 60 | 0,66 | 2,8 | 1,9 | 2,0 | 0,00108 | -     | 6,0  |
| 0,37  | 0,50  | T80A-6   | 930 | 1,30  | 62 | 0,67 | 3,5 | 2,0 | 2,1 | 0,00194 | -     | 8,0  |
| 0,55  | 0,75  | T80B-6   | 925 | 1,91  | 66 | 0,66 | 3,3 | 2,0 | 2,3 | 0,00221 | -     | 9,2  |
| 0,75  | 1,00  | T90S-6   | 935 | 2,10  | 72 | 0,73 | 4,0 | 2,1 | 2,4 | 0,00374 | 18,0  | 13,3 |
| 1,10  | 1,50  | T90L-6   | 930 | 2,90  | 75 | 0,75 | 4,6 | 2,3 | 2,4 | 0,00492 | 22,0  | 16,8 |
| 1,50  | 2,00  | T100L-6  | 920 | 3,80  | 75 | 0,77 | 5,0 | 1,8 | 2,1 | 0,00908 | 28,0  | 20,5 |
| 2,20  | 3,00  | T112M-6  | 940 | 5,60  | 78 | 0,78 | 4,9 | 2,0 | 2,5 | 0,01470 | 37,0  | 27,5 |
| 3,00  | 4,00  | T132S-6  | 960 | 7,30  | 81 | 0,76 | 5,0 | 1,7 | 2,4 | 0,02240 | 48,0  | -    |
| 4,00  | 5,50  | T132MA-6 | 960 | 9,70  | 83 | 0,73 | 6,0 | 2,3 | 2,8 | 0,02960 | 58,5  | -    |
| 5,50  | 7,50  | T132MB-6 | 960 | 13,90 | 83 | 0,71 | 6,2 | 2,4 | 2,8 | 0,03600 | 67,0  | -    |
| 7,50  | 10,20 | T160M-6  | 966 | 15,60 | 86 | 0,80 | 6,5 | 2,2 | 3,3 | 0,07315 | 105,0 | -    |
| 11,00 | 15,00 | T160L-6  | 965 | 20,80 | 87 | 0,84 | 7,4 | 2,4 | 3,3 | 0,10450 | 130,0 | -    |

750 rpm

|      |       |          |     |       |      |      |     |     |     |         |       |      |
|------|-------|----------|-----|-------|------|------|-----|-----|-----|---------|-------|------|
| 0,09 | 0,12  | T71A-8   | 690 | 0,68  | 38,0 | 0,50 | 1,9 | 2,0 | 2,5 | 0,00093 | -     | 5,3  |
| 0,12 | 0,16  | T71B-8   | 660 | 0,78  | 39,5 | 0,57 | 1,9 | 1,6 | 1,9 | 0,00108 | -     | 6,0  |
| 0,18 | 0,25  | T80A-8   | 700 | 0,95  | 48,0 | 0,58 | 2,3 | 1,7 | 2,1 | 0,00194 | -     | 8,0  |
| 0,25 | 0,34  | T80B-8   | 700 | 1,25  | 53,0 | 0,56 | 2,4 | 2,0 | 2,3 | 0,00221 | -     | 9,2  |
| 0,37 | 0,50  | T90S-8   | 680 | 1,25  | 63,0 | 0,67 | 3,2 | 1,6 | 1,9 | 0,00374 | 17,5  | 14,3 |
| 0,55 | 0,75  | T90L-8   | 680 | 1,90  | 65,0 | 0,66 | 3,2 | 1,7 | 1,9 | 0,00492 | 22,0  | 16,8 |
| 0,75 | 1,00  | T100LA-8 | 700 | 2,60  | 68,0 | 0,65 | 3,6 | 1,6 | 2,1 | 0,00672 | 25,5  | 18,0 |
| 1,10 | 1,50  | T100LB-8 | 690 | 3,60  | 68,0 | 0,68 | 3,3 | 1,8 | 2,0 | 0,00786 | 28,0  | 20,5 |
| 1,50 | 2,00  | T112M-8  | 705 | 4,60  | 73,0 | 0,65 | 4,3 | 2,2 | 2,5 | 0,01470 | 36,0  | 26,5 |
| 2,20 | 3,00  | T132S-8  | 705 | 6,40  | 77,0 | 0,68 | 4,1 | 2,1 | 2,3 | 0,02630 | 49,0  | -    |
| 3,00 | 4,00  | T132M-8  | 705 | 8,30  | 78,0 | 0,70 | 4,1 | 2,1 | 2,4 | 0,03520 | 59,0  | -    |
| 4,00 | 5,40  | T160MA-8 | 720 | 10,20 | 81,0 | 0,70 | 5,0 | 1,7 | 2,5 | 0,06692 | 96,0  | -    |
| 5,50 | 7,50  | T160MB-8 | 715 | 13,20 | 83,0 | 0,72 | 5,0 | 2,1 | 2,6 | 0,08404 | 105,0 | -    |
| 7,50 | 10,20 | T160L-8  | 715 | 16,70 | 85,0 | 0,76 | 5,5 | 1,9 | 2,8 | 0,11472 | 125,0 | -    |

 I<sub>s</sub> - Starting current

 I<sub>R</sub> - Current at rated load

 M<sub>R</sub> - Torque at rated load

 M<sub>s</sub> - Starting torque

 M<sub>MAX</sub> - Maximum running torque

**SERIES T**
**TECHNICAL DATA 400V, 50Hz**

| Rated Output   | Type       | Rotation speed | Current | Efficiency | Power Factor | Starting characteristics       |                                |                                  | Torque of Inertia | Weight    |          |
|----------------|------------|----------------|---------|------------|--------------|--------------------------------|--------------------------------|----------------------------------|-------------------|-----------|----------|
|                |            |                |         |            |              | Current                        | Torque                         |                                  |                   | Cast Iron | Al alloy |
| P <sub>2</sub> | Indication | n              | I       | η          | cosφ         | I <sub>s</sub> /I <sub>R</sub> | M <sub>s</sub> /M <sub>R</sub> | M <sub>MAX</sub> /M <sub>R</sub> | J                 | m         |          |
| kW    HP       | -          | rpm            | A       | %          | -            | -                              | -                              | -                                | kg.m <sup>2</sup> | kg        |          |

**1500/3000 rpm**

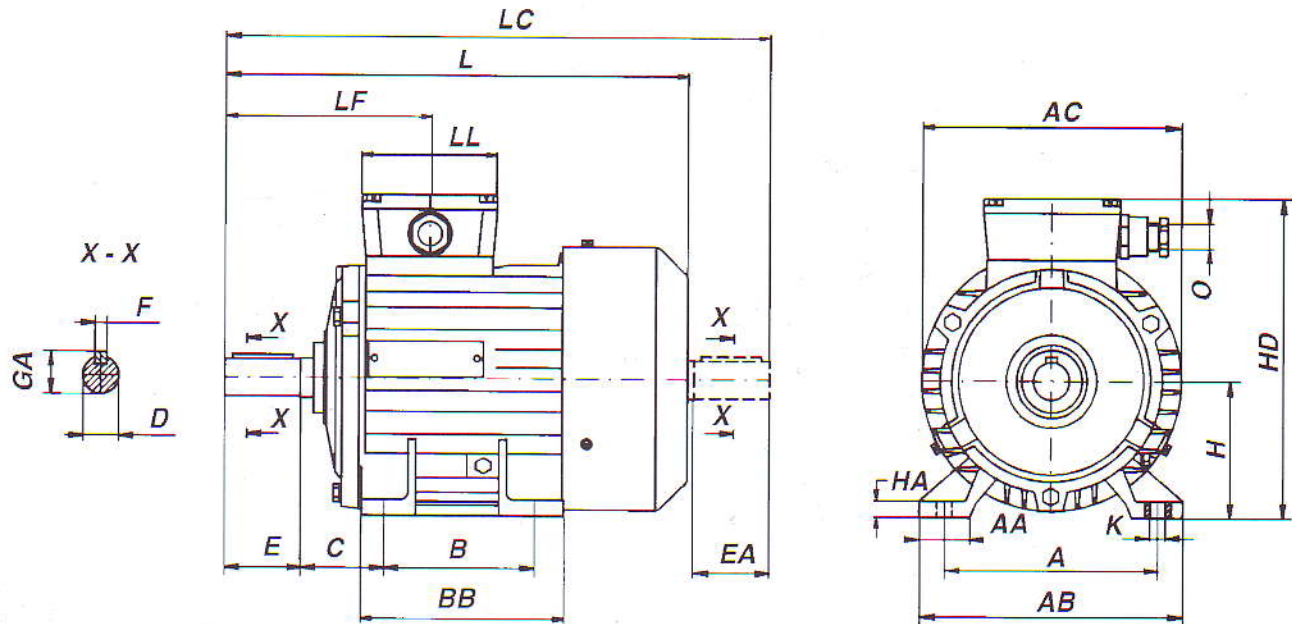
|                   |            |           |            |       |           |         |         |         |         |      |      |
|-------------------|------------|-----------|------------|-------|-----------|---------|---------|---------|---------|------|------|
| 0,45/0,6 0,6/0,8  | T80A-4/2   | 1410/2830 | 1,50/1,50  | 61/71 | 0,74/0,89 | 3,5/4,4 | 1,6/1,6 | 2,1/2,2 | 0,00128 | -    | 8,2  |
| 0,60/0,8 0,8/1,0  | T80B-4/2   | 1410/2830 | 1,90/1,80  | 66/73 | 0,71/0,88 | 3,5/5,0 | 1,7/1,6 | 2,2/2,3 | 0,00194 | -    | 9,2  |
| 0,80/1,1 1,1/1,5  | T90S-4/2   | 1440/2860 | 2,20/2,55  | 71/70 | 0,73/0,88 | 4,7/5,1 | 1,7/1,7 | 2,4/2,2 | 0,00255 | 17,3 | 13,3 |
| 1,10/1,5 1,5/2,0  | T90L-4/2   | 1430/2840 | 2,75/3,30  | 73/72 | 0,79/0,92 | 4,5/5,0 | 1,8/1,7 | 2,3/2,2 | 0,00278 | 22,0 | 15,8 |
| 1,50/2,2 2,0/3,0  | T100LA-4/2 | 1440/2845 | 3,70/4,80  | 78/75 | 0,79/0,90 | 5,9/5,4 | 1,9/1,5 | 2,5/2,1 | 0,00503 | 27,0 | 19,5 |
| 2,40/3,0 3,3/4,1  | T100LB-4/2 | 1420/2855 | 5,50/6,40  | 78/78 | 0,83/0,90 | 5,6/6,7 | 2,0/2,0 | 2,4/2,4 | 0,00619 | 31,0 | 23,5 |
| 3,20/4,0 4,3/5,5  | T112M-4/2  | 1425/2845 | 7,30/8,20  | 79/79 | 0,83/0,93 | 5,4/6,3 | 1,9/1,9 | 2,5/2,5 | 0,01090 | 38,0 | 28,2 |
| 4,50/5,5 6,1/7,4  | T132S-4/2  | 1455/2905 | 9,90/11,2  | 83/79 | 0,81/0,91 | 5,1/6,2 | 1,9/2,2 | 2,4/2,5 | 0,02200 | 55,0 | -    |
| 6,10/7,5 8,2/10,1 | T132M-4/2  | 1450/2900 | 12,70/14,4 | 86/85 | 0,83/0,90 | 6,3/7,0 | 2,2/2,4 | 2,4/2,7 | 0,02960 | 67,0 | -    |

**750/1500 rpm**

|                  |            |          |         |       |           |         |         |         |         |      |      |
|------------------|------------|----------|---------|-------|-----------|---------|---------|---------|---------|------|------|
| 0,7/1,1 0,95/1,5 | T100LA-8/4 | 700/1415 | 2,6/2,8 | 64/68 | 0,65/0,84 | 3,5/4,3 | 1,5/1,5 | 2,0/2,0 | 0,00672 | 25,5 | 18,0 |
| 0,9/1,5 1,40/2,2 | T100LB-8/4 | 700/1415 | 3,4/3,5 | 64/74 | 0,64/0,87 | 3,3/4,8 | 1,6/1,4 | 2,2/2,0 | 0,00786 | 28,0 | 20,5 |
| 1,4/2,2 1,90/3,0 | T112M-8/4  | 710/1430 | 4,5/4,6 | 69/78 | 0,66/0,89 | 3,8/5,8 | 1,9/1,7 | 2,3/2,4 | 0,01470 | 36,0 | 26,2 |
| 1,9/2,7 2,50/3,6 | T132S-8/4  | 705/1420 | 5,0/5,9 | 77/76 | 0,75/0,90 | 4,0/4,7 | 1,6/1,5 | 2,0/2,1 | 0,02630 | 49,0 | -    |
| 2,5/3,7 3,40/5,0 | T132M-8/4  | 700/1420 | 6,4/8,0 | 76/78 | 0,76/0,87 | 3,9/4,9 | 1,8/1,7 | 2,0/2,0 | 0,03850 | 61,0 | -    |

I<sub>s</sub> - Starting current  
 I<sub>R</sub> - Current at rated load  
 M<sub>s</sub> - Starting torque  
 M<sub>R</sub> - Torque at rated load  
 M<sub>MAX</sub> - Maximum running torque

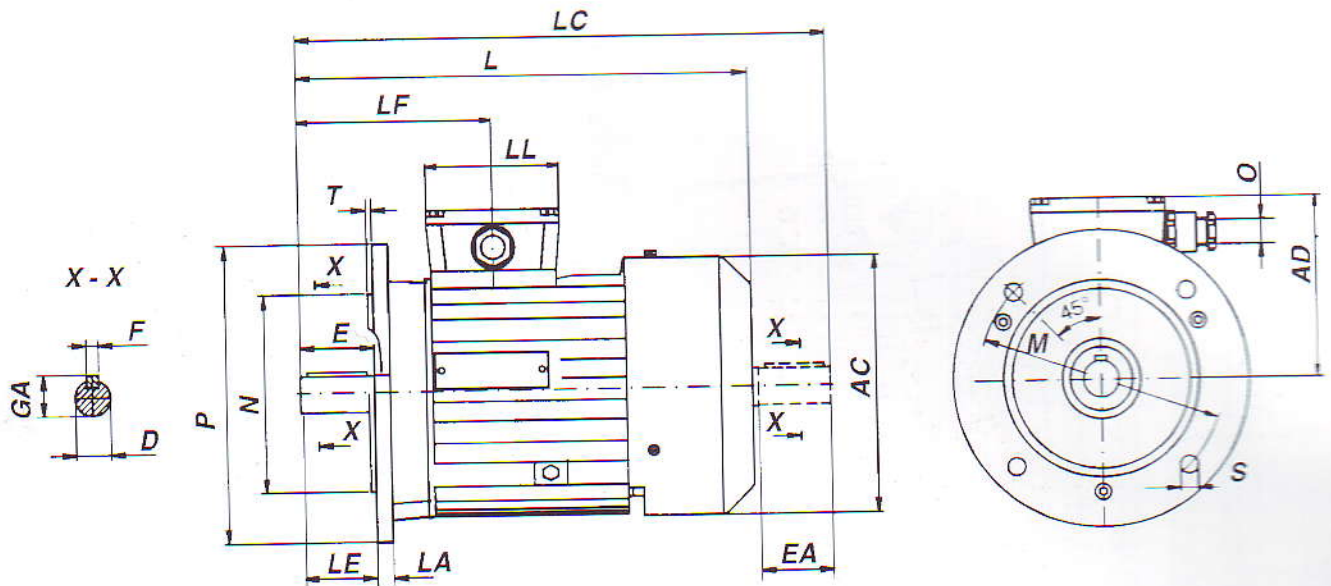
# OVERALL AND ASSEMBLY DIMENSIONS



## TYPE OF EXECUTION IM B3

| Type              |     | Dimension, mm |     |    |     |     |     |     |     |                |    |     |     |     |                |     |                | Shaft |                   |      |    |
|-------------------|-----|---------------|-----|----|-----|-----|-----|-----|-----|----------------|----|-----|-----|-----|----------------|-----|----------------|-------|-------------------|------|----|
|                   | IEC | B             | A   | HA | BB  | AB  | AC  | H   | L   | LC             | AA | HD  | LF  | K   | O              | C   | LL             | D     | E,EA              | GA   | F  |
|                   | DIN | a             | b   | c  | e   | f   | g   | h   | k   | k <sub>1</sub> | n  | p   | q   | s   | s <sub>2</sub> | w   | x <sub>1</sub> | d     | I, I <sub>1</sub> | t    | u  |
| T56               |     | 71            | 90  | 6  | 87  | 106 | 110 | 56  | 191 | 217            | 22 | 145 | 82  | 5.8 | Pg11           | 36  | 75             | 9     | 20                | 10.2 | 3  |
| T63               |     | 80            | 100 | 7  | 98  | 120 | 123 | 63  | 216 | 244            | 24 | 151 | 86  | 7   | Pg11           | 40  | 75             | 11    | 23                | 12.5 | 4  |
| T71               |     | 90            | 112 | 7  | 110 | 135 | 140 | 71  | 244 | 278            | 30 | 167 | 97  | 7   | Pg11           | 45  | 75             | 14    | 30                | 16   | 5  |
| T80               |     | 100           | 125 | 10 | 140 | 160 | 157 | 80  | 282 | 332            | 35 | 204 | 121 | 10  | Pg16           | 50  | 90             | 19    | 40                | 21.5 | 6  |
| T90S              |     | 100           | 140 | 11 | 134 | 174 | 174 | 90  | 302 | 361            | 34 | 222 | 132 | 12  | Pg16           | 56  | 90             | 24    | 50                | 27   | 8  |
| T90L, LB          |     | 125           | 140 | 11 | 174 | 174 | 174 | 90  | 342 | 407            | 34 | 222 | 132 | 12  | Pg16           | 56  | 90             | 24    | 50                | 27   | 8  |
| T100, LA, LB      |     | 140           | 160 | 12 | 187 | 200 | 192 | 100 | 373 | 443            | 40 | 240 | 142 | 12  | Pg16           | 63  | 90             | 28    | 60                | 31   | 8  |
| T100LC-4          |     | 140           | 160 | 12 | 187 | 200 | 192 | 100 | 408 | 478            | 40 | 240 | 142 | 12  | Pg16           | 63  | 90             | 28    | 60                | 31   | 8  |
| T112              |     | 140           | 190 | 12 | 180 | 230 | 220 | 112 | 373 | 443            | 42 | 262 | 142 | 12  | Pg16           | 70  | 90             | 28    | 60                | 31   | 8  |
| T112MB-4          |     | 140           | 190 | 12 | 180 | 230 | 220 | 112 | 413 | 483            | 42 | 262 | 142 | 12  | Pg16           | 70  | 90             | 28    | 60                | 31   | 8  |
| T132S, SA, SB     |     | 140           | 216 | 12 | 197 | 254 | 257 | 132 | 446 | 535            | 46 | 313 | 171 | 12  | Pg21           | 89  | 110            | 38    | 80                | 41   | 10 |
| T132M, MA, MB     |     | 178           | 216 | 12 | 243 | 254 | 257 | 132 | 492 | 581            | 46 | 313 | 171 | 12  | Pg21           | 89  | 110            | 38    | 80                | 41   | 10 |
| T132M, MA-4, MB-4 |     | 178           | 216 | 12 | 243 | 254 | 257 | 132 | 531 | 621            | 46 | 313 | 171 | 12  | Pg21           | 89  | 110            | 38    | 80                | 41   | 10 |
| T160M             |     | 210           | 254 | 20 | 250 | 314 | 310 | 160 | 590 | 710            | 60 | 364 | 241 | 15  | Pg21           | 108 | 110            | 42    | 110               | 45   | 12 |
| T160L             |     | 254           | 254 | 20 | 304 | 314 | 310 | 160 | 635 | 755            | 60 | 364 | 241 | 15  | Pg21           | 108 | 110            | 42    | 110               | 45   | 12 |

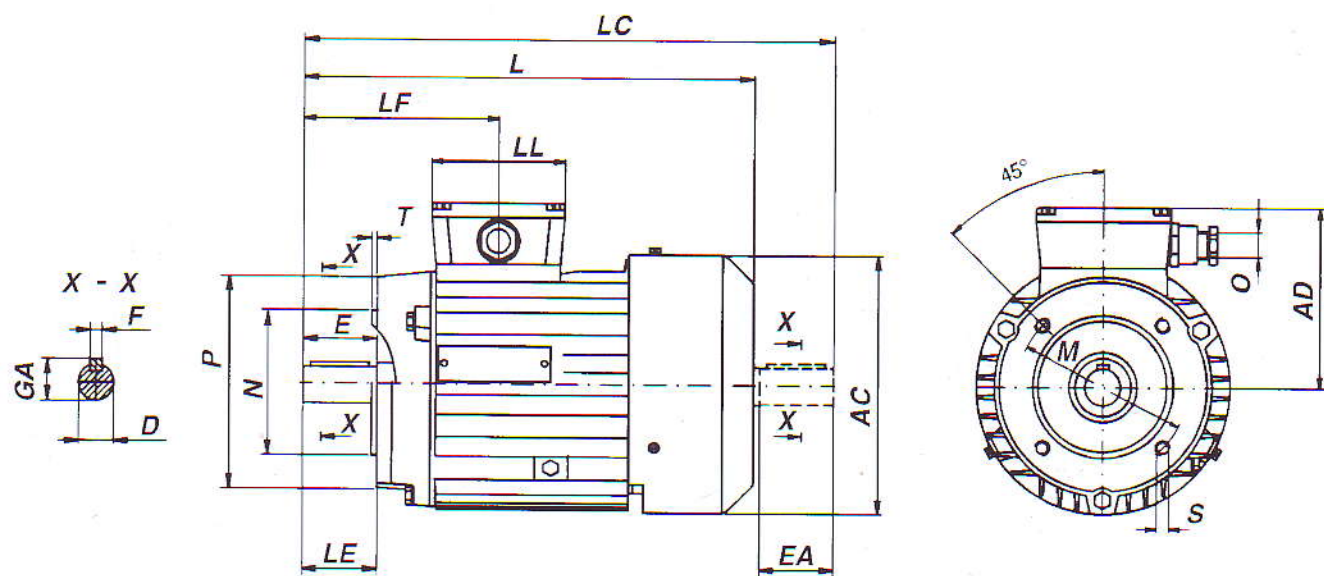
# OVERALL AND ASSEMBLY DIMENSIONS



## TYPE OF EXECUTION IM B5

| Type           |  | Dimensions, mm |                |                |                |                |                |                |     |                |     |                |                |                | Shaft |                   |      |    |
|----------------|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|----------------|-----|----------------|----------------|----------------|-------|-------------------|------|----|
| IEC            |  | P              | N              | LA             | M              | T              | AC             | AD             | L   | LC             | LF  | S              | O              | LL             | D     | E,EA              | GA   | F  |
| DIN            |  | a <sub>1</sub> | b <sub>1</sub> | c <sub>1</sub> | e <sub>1</sub> | f <sub>1</sub> | g <sub>1</sub> | g <sub>2</sub> | k   | k <sub>1</sub> | q   | s <sub>2</sub> | s <sub>3</sub> | x <sub>1</sub> | d     | l, l <sub>1</sub> | t    | u  |
| T56            |  | 120            | 80             | 8              | 100            | 3              | 110            | 89             | 191 | 217            | 82  | 7              | Pg11           | 75             | 9     | 20                | 10.2 | 3  |
| T63            |  | 140            | 95             | 10             | 115            | 3              | 123            | 88             | 216 | 244            | 86  | 10             | Pg11           | 75             | 11    | 23                | 12.5 | 4  |
| T71            |  | 160            | 110            | 8              | 130            | 3.5            | 140            | 96             | 244 | 278            | 97  | 10             | Pg11           | 75             | 14    | 30                | 16   | 5  |
| T80            |  | 200            | 130            | 10             | 165            | 3.5            | 157            | 124            | 282 | 332            | 121 | 12             | Pg16           | 90             | 19    | 40                | 21.5 | 6  |
| T90S           |  | 200            | 130            | 10             | 165            | 3.5            | 174            | 132            | 302 | 361            | 132 | 12             | Pg16           | 90             | 24    | 50                | 27   | 8  |
| T90L, LB       |  | 200            | 130            | 10             | 165            | 3.5            | 174            | 132            | 342 | 407            | 132 | 12             | Pg16           | 90             | 24    | 50                | 27   | 8  |
| T100L, LA, LB  |  | 250            | 180            | 12             | 215            | 4              | 192            | 140            | 373 | 443            | 142 | 15             | Pg16           | 90             | 28    | 60                | 31   | 8  |
| T100LC-4       |  | 250            | 180            | 12             | 215            | 4              | 192            | 140            | 408 | 478            | 142 | 15             | Pg16           | 90             | 28    | 60                | 31   | 8  |
| T112           |  | 250            | 180            | 12             | 215            | 4              | 220            | 150            | 373 | 443            | 142 | 15             | Pg16           | 90             | 28    | 60                | 31   | 8  |
| T112MB-4       |  | 250            | 180            | 12             | 215            | 4              | 220            | 150            | 413 | 483            | 142 | 15             | Pg16           | 90             | 28    | 60                | 31   | 8  |
| T132S, SA, SB  |  | 300            | 230            | 15             | 265            | 4              | 257            | 181            | 446 | 535            | 171 | 15             | Pg21           | 110            | 38    | 80                | 41   | 10 |
| T132M, MA, MB  |  | 300            | 230            | 15             | 265            | 4              | 257            | 181            | 492 | 581            | 171 | 15             | Pg21           | 110            | 38    | 80                | 41   | 10 |
| T132MA-4, MB-4 |  | 300            | 230            | 15             | 265            | 4              | 257            | 181            | 531 | 621            | 171 | 15             | Pg21           | 110            | 38    | 80                | 41   | 10 |
| T160M          |  | 350            | 250            | 15             | 300            | 5              | 310            | 204            | 590 | 710            | 241 | 19             | Pg21           | 110            | 42    | 110               | 45   | 12 |
| T160L          |  | 350            | 250            | 15             | 300            | 5              | 310            | 204            | 635 | 621            | 241 | 19             | Pg21           | 110            | 42    | 110               | 45   | 12 |

# OVERALL AND ASSEMBLY DIMENSIONS



## TYPE OF EXECUTION IM B14

| Type          |     | Dimensions, mm |                |                |                |                |                |                |     |                |     |                |                |                | Shaft |                |      |   |
|---------------|-----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|----------------|-----|----------------|----------------|----------------|-------|----------------|------|---|
|               | IEC | -              | P              | N              | M              | T              | AC             | AD             | L   | LC             | LF  | S              | O              | LL             | D     | E,EA           | GA   | F |
|               | DIN | -              | a <sub>1</sub> | b <sub>1</sub> | e <sub>1</sub> | f <sub>1</sub> | g <sub>1</sub> | g <sub>2</sub> | k   | k <sub>1</sub> | q   | s <sub>2</sub> | s <sub>3</sub> | x <sub>1</sub> | d     | l <sub>1</sub> | t    | u |
| T56           |     | F65            | 79             | 50             | 65             | 2.5            | 110            | 89             | 191 | 217            | 82  | M5             | Pg11           | 75             | 9     | 20             | 10.2 | 3 |
|               |     | F85            | 105            | 70             | 85             | 2.5            | 110            | 89             | 191 | 217            | 82  | M6             | Pg11           | 75             | 9     | 20             | 10.2 | 3 |
| T63           |     | F75            | 90             | 60             | 75             | 2.5            | 123            | 88             | 216 | 244            | 86  | M5             | Pg11           | 75             | 11    | 23             | 12.5 | 4 |
|               |     | F100           | 120            | 80             | 100            | 3              | 123            | 88             | 216 | 244            | 86  | M6             | Pg11           | 75             | 11    | 23             | 12.5 | 4 |
| T71           |     | F85            | 105            | 70             | 85             | 2.5            | 140            | 96             | 244 | 278            | 97  | M6             | Pg11           | 75             | 14    | 30             | 16   | 5 |
|               |     | F115           | 140            | 95             | 115            | 3              | 140            | 96             | 244 | 278            | 97  | M8             | Pg11           | 75             | 14    | 30             | 16   | 5 |
| T80           |     | F100           | 120            | 80             | 100            | 3              | 157            | 124            | 282 | 332            | 121 | M6             | Pg16           | 90             | 19    | 40             | 21.5 | 6 |
|               |     | F130           | 160            | 110            | 130            | 3.5            | 157            | 124            | 282 | 332            | 121 | M8             | Pg16           | 90             | 19    | 40             | 21.5 | 6 |
| T90S          |     | F115           | 140            | 95             | 115            | 3              | 174            | 132            | 302 | 61             | 132 | M8             | Pg16           | 90             | 24    | 50             | 27   | 8 |
|               |     | F130           | 160            | 110            | 130            | 3.5            | 174            | 132            | 302 | 361            | 132 | M8             | Pg16           | 90             | 24    | 50             | 27   | 8 |
| T90L, LB      |     | F115           | 140            | 95             | 115            | 3              | 174            | 132            | 342 | 407            | 132 | M8             | Pg16           | 90             | 24    | 50             | 27   | 8 |
|               |     | F130           | 160            | 110            | 130            | 3.5            | 174            | 132            | 342 | 407            | 132 | M8             | Pg16           | 90             | 24    | 50             | 27   | 8 |
| T100L, LA, LB |     | F130           | 160            | 110            | 130            | 3.5            | 192            | 140            | 373 | 443            | 142 | M8             | Pg16           | 90             | 28    | 60             | 31   | 8 |
|               |     | F165           | 200            | 130            | 165            | 3.5            | 192            | 140            | 373 | 443            | 142 | M10            | Pg16           | 90             | 28    | 60             | 31   | 8 |
| T100LC-4      |     | F130           | 160            | 110            | 130            | 3.5            | 192            | 140            | 408 | 478            | 142 | M8             | Pg16           | 90             | 28    | 60             | 31   | 8 |
|               |     | F165           | 200            | 130            | 165            | 3.5            | 192            | 140            | 408 | 478            | 142 | M10            | Pg16           | 90             | 28    | 60             | 31   | 8 |
| T112          |     | F130           | 160            | 110            | 130            | 3.5            | 220            | 150            | 373 | 443            | 142 | M8             | Pg16           | 90             | 28    | 60             | 31   | 8 |
|               |     | F165           | 200            | 130            | 165            | 3.5            | 220            | 150            | 373 | 443            | 142 | M10            | Pg16           | 90             | 28    | 60             | 31   | 8 |
| T112MB-4      |     | F130           | 160            | 110            | 130            | 3.5            | 220            | 150            | 413 | 483            | 142 | M8             | Pg16           | 90             | 28    | 60             | 31   | 8 |
|               |     | F165           | 200            | 130            | 165            | 3.5            | 220            | 150            | 413 | 483            | 142 | M10            | Pg16           | 90             | 28    | 60             | 31   | 8 |