

W EEx nA non-sparking motors



Frames 80 - 355L



**BROOK
CROMPTON**

W EEx nA non-sparking motors 80 - 355L



Brook Crompton

Brook Crompton is a leading manufacturer of electric motors for the global industrial market, with motor solutions which benefit a wide range of customers.

Our products are used in almost every industrial activity including water treatment, building services, chemical/petrochemicals, general processing and manufacturing where they drive fans, pumps, compressors and conveyors, amongst other things.

Brook Crompton incorporates many well known names including Brook Motors, Crompton Parkinson, Electrodrives, Newman, Bull Electric and Hawker Siddeley Electric Motors.

We have extensive stocks of motors around the world, backed-up by a network of distributors, ensuring excellent local support wherever needed.

Quality assurance

Stringent quality procedures are observed from first design to finished product in accordance with the ISO9001 documented quality systems.

All of our factories have been assessed to meet these requirements, a further assurance that only the highest possible standards of quality are accepted.

W EEx nA motors

Brook Crompton has one of the widest available ranges of electric motors for operation in hazardous atmospheres and hostile environments.

We have over 90 years' technical and design experience in this most specialised market and are able to ensure the correct selection of motors for any application, taking into full account the two most important factors to be considered - safety and economy.

The W EEx nA non-sparking motor range covers products with outputs from as little as 0.18kW to 400kW in frame sizes 80 to 355L. Motors are manufactured in factories that are licensed by a European notified body (eg EECS/BASEEFA, PTB), meeting rigorous quality controls.

Benefits include:

- high efficiency for low running costs
- high reliability for long life
- low noise levels
- cool running for long insulation life
- Eurovoltage: 400V \pm 10%
- dual frequency: 50Hz and 60Hz
- high power factors
- high torque with smooth acceleration and low current
- 2-year warranty
- IP55 protection
- 4-position cable entry

Efficiency

Brook Crompton are an approved manufacturer of ac electric motors within the UK Government's Enhanced Capital Allowance (ECA) scheme. A wide range of single and multi-speed motors are included on the UK Energy Technology List. Please check the ECA scheme website: www.eca.gov.uk at time of purchase for current listing.

ATEX

Brook Crompton's range of EEx nA motors are fully compliant with the requirements of ATEX Directive (94/9/EC).

Standards and environment

Standards

| Standards | | | | | | | |
|--------------------------|-----------------------------|----------------------|-----------------|----------------------|------------------------|--------------|-------------|
| Range | National standard | | | International | North American | | |
| | UK | European | | | | | |
| Standard | BS | BS | VDE | DIN | NF | IEC | NEMA* |
| Outputs | BS 5000 part 10, appendix A | BS 5000 part 10 | - | DIN 42673, DIN 42677 | NF C51-110 | - | MG1 part 10 |
| Performance | BS 4999 Part 101 | BS 4999 part 101 | VDE 0530 part 1 | - | NF C51-111 | IEC 60034-1 | MG1 part 12 |
| Dimensions | BS 4999 part 141 | as DIN and NF | - | DIN 42673, DIN 42677 | NF C51-105, NF C51-120 | IEC 60072-1 | MG1 part 4 |
| Mounting | EN 60034-7 | EN 60034-7 | - | DIN 42950 | NF C51-117 | IEC 60034-7 | MG1 part 4 |
| Degrees of IP protection | EN 60034-5 | EN 60034-5 | - | DIN 40050 | NF C51-115 | IEC 60034-5 | MG1-1.26B |
| EEx nA Non-sparking | EN 50014 EN 50021 | EN 50014 EN 50021 | - | - | - | IEC 60079-15 | - |

standard motor complies
 optional

*Motors complying with IEC 60034-1 also comply with many of the national standards of other European countries, eg CEI 203 (Italy), NBN7 (Belgium), NEN 3173 (Netherlands), SEN 2601 01 (Sweden) *Motors to NEMA standards have CSA approval and generally comply with Canadian (EEMAC) standards.*

Environment Enclosure

All motors have degrees of IP protection as defined in IEC EN 60034-5.

European directives

Four European directives apply in varying degrees to ac induction motors. Brook Crompton comply in the following manner:

Motor cooling

Motors are cooled in accordance with EN 60034-6. The normal arrangement is IC411 (Totally Enclosed Fan Ventilated) via a fan mounted at the non-drive end.

Alternative methods of cooling available on request.

| Compliance with European directives applying to AC induction motors | | | | |
|---|---|--|--------------------------------------|--|
| Directives | Low voltage (LV) | Machinery (MD) | Electromagnetic compatibility (EMC) | ATEX |
| Reference numbers | 73/23/EEC 93/68/EEC | 89/392/EEC 91/368/EEC 93/44/EEC 93/68/EEC | 89/336/EEC 92/31/EEC 93/68/EEC | 94/9/EC |
| Motor CE marked | Yes | No | No | YES |
| Standards | EN 60034 | Not applicable | EN 60034-1 | EN 50014 EN 50021 |
| Documentation for customers' technical file | Declaration of conformity | Certificate of incorporation | Statement ⁽¹⁾ | Declaration of conformity |
| Safety instructions with every motor | Yes | Yes | Yes | Yes |
| Comment | Relevant electrical equipment operating between 50 to 1000 volts AC | Statement ⁽²⁾ | Component | Hazardous atmosphere equipment - mandatory after July 2003 |

⁽¹⁾ Motors operating from a correctly applied, sinusoidal (AC) supply meet the requirements of the EMC directive and are within the limits specified in standard EN 60034-1

⁽²⁾ When installed in accordance with our customer safety and installation and maintenance instructions, they can be put into service only when the machinery into which they are being incorporated, has been declared to be in conformity with the machinery directive in accordance with Article 4(2) and Annex IIB of that Directive (98/37/EEC)

EEx nA and EEx nA EEMUA specification



EEx nA (non-sparking) motors

Frame Sizes W-DF80 to W-DF355
Suitable for use in Group II Zone 2 locations.

General

The construction of EEx nA motors is similar to standard TEFV motors, but with special attention to eliminate production of arcs, sparks or dangerous surface temperatures. Air gap concentricity is rigidly inspected throughout manufacture, and the structure of the motor is impact-tested. All motors comply with the requirements of the ATEX Directive (94/9/EC).

Temperature class

An important feature of the motor design is the limitation imposed on the external or internal surface temperature that can be attained under all conditions except starting. This range of motors is suitable for use in gases with auto ignition temperature not lower than T3, ie 200°C. For temperature classes T4, T5 and T6 - please consult Brook Crompton.

Terminal box

Standard and alternative terminal box positions are available as detailed in the table below (positions detailed are looking on drive end of motor).

| Terminal box positions available | | | |
|----------------------------------|-------------|-------------|-------------|
| Frame size | Top | LHS | RHS |
| W-DF80-90 | - | Alternative | Standard |
| W-DF100-180 | Alternative | Alternative | Standard |
| W-DF200-355 | Standard | Alternative | Alternative |

Impact covers

Designed to prevent the ingress of falling foreign bodies, impact covers are fitted on motors when mounted vertically, shaft down.

| Vertically mounted motors fitted with impact cover | | |
|--|---------------|-------------------|
| European frame | BS frame | Increase in L Dim |
| W-DF80M-90L | W-DF80M-90L | 29 |
| W-DF100L-112M | W-DF100L-112M | 30 |
| W-DF132S-180L | W-DF132S-180L | 40 |
| W-UDF200LX | W-DF200LX | 45 |
| W-UDF225S/M | W-DF225S/M | 45 |
| W-UDF250ME | W-DF250S | 45 |
| W-UDF280SE | W-DF250M | 48 |
| W-UDF280ME | W-DF280S | 48 |
| W-UDF315SE | W-DF280M | 48 |
| W-UDF315ME | W-DF315S | 48 |
| W-UDF315M/L | W-DF315M/L | 53 |
| W-UDF355S/M/L | W-DF355S/M/L | 65 |

Certification

The motors are certified by a European notified body who also grant the licence to manufacture

| Certificate Numbers | |
|---------------------|----------------|
| Frame size | Certificate No |
| W-DF80 to W-DF180 | BAS00ATEX3119X |
| W-DF200 to W-DF355L | BAS00ATEX3133X |



EEx nA motor certification plate

Dual zones

Some installations may be subjected to more than one type of hazard. The presence of gases and vapours etc may occur with combustible dusts. Under these circumstances, it is possible to supply motors with certification for both hazards. Further details are available from Brook Crompton.

| Frame size | Heater rating | |
|------------|---------------|------|
| | 240V | 110V |
| 80 | 12 | 12 |
| 90 | 12 | 12 |
| 100 | 12 | 12 |
| 112 | 14 | 14 |
| 132 | 24 | 24 |
| 160 | 40 | 40 |
| 180 | 40 | 40 |
| 200 | 29 | 29 |
| 225 | 48 | 42 |
| 250 | 48 | 42 |
| 280 | 96 | 84 |
| 315 | 96 | 84 |
| 355 | 192 | 169 |

| Terminal pin cable capacity and terminal nut tightening torque | | | | | |
|--|------------|-----------------------------------|---------------|------------------------|---------------|
| Frame size | T box size | Cable capacity (mm ²) | | Tightening torque (Nm) | |
| | | Mains terminals | Aux terminals | Mains terminals | Aux terminals |
| 80-100 | 80-100 | 4 (M4) | 4 | 1.5 | 0.5-0.8 |
| | 112-132 | 10 (M5) | 4 | 3 | 0.5-0.8 |
| 112-132 | 112-132 | 10 (M5) | 4 | 3 | 0.5-0.8 |
| | 160-180 | 16 (M6) | 4 | 5 | 0.5-0.8 |
| 160-180 | 160-180 | 16 (M6) | 4 | 5 | 0.5-0.8 |
| 200L-280S | 200-280S | 95 (M10) | 2.5 | 26 | 1 |
| 280M-355L | 280M-355L | 300 (M10) | 2.5 | 26 | 1 |

EEx nA EEMUA (non-sparking) motors

Frame sizes W-DF80 to W-DF355
Suitable for use in Group II Zone 2 locations.

General

The Brook Crompton EEx nA EEMUA motor range covers products from 0.18kW to 280kW.

Standards

All motors comply with the requirements of EEMUA (The Engineering Equipment and Materials Users Association) Pub no 132-1988 and with leading petro-chemical industry specifications. They are manufactured in accordance with EN 50021 and are certified for use in Zone 2, hazardous areas.

Performance

In accordance with BS 5000 Part 99 and IEC60034-1. Motors up to and including 40kW rated output have a starting characteristic in accordance with BS 4999 Part 112, design N. Motors above 40kW rated output have a characteristic in accordance with design D. Full performance data is available on request.

Temperature class

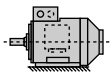
Maximum surface temperatures are limited to T3.

Mechanical features

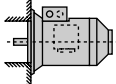
- Ferrous cooling fans
- Sheet steel fan covers
- Collar type eyebolts
- Cast iron stator frames and endshields
- Reduced balance
- IP55 enclosure
- Specially stamped nameplate
- Through greasing frames 160 and above
- Phase barriers, for use with either shell clamps or uninsulated cable lugs, are standard on motors to EEMUA. By fitting a larger terminal box, solid aluminium cables can be catered for.

Mounting options

Horizontal shaft:



**IM B3
IM 1001**
foot mounted



**IM B5
IM 3001**
flange at DE
no feet



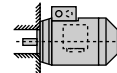
**IM B6
IM 1051**
foot wall mounted with
feet on left-hand side
when viewed from DE



**IM B7
IM 1061**
foot wall mounted with
feet on right-hand side
when viewed from DE

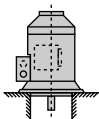


**IM B8
IM 1071**
ceiling mounted
with feet
above motor

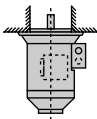


**IM B14
IM 3601**
face at DE
no feet

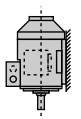
Vertical shaft:



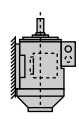
**IM V1
IM 3011**
flange at DE
shaft down
no feet



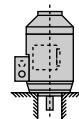
**IM V3
IM 3031**
flange at DE
shaft up
no feet



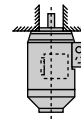
**IM V5
IM 1011**
vertical foot
wall mounted
shaft down



**IM V6
IM 1031**
vertical foot
wall mounted
shaft up



**IM V18
IM 3611**
face at DE
shaft down
no feet



**IM V19
IM 3631**
face at DE
shaft down
no feet

Approximate shipping specifications

| Type | | Net weight (kg) | Gross weight (kg) | Cubage (m ³) |
|------------|-----------|-----------------|-------------------|--------------------------|
| European | BS | | | |
| W-DF80M | W-DF80M | 15 | 16.5 | 0.02 |
| W-DF90S | W-DF90S | 19 | 20.5 | 0.03 |
| W-DF90L | W-DF90L | 22 | 23.5 | 0.03 |
| W-DF100L | W-DF100L | 35.5 | 38 | 0.03 |
| W-DF112M | W-DF112M | 45 | 48 | 0.05 |
| W-DF132S | W-DF132S | 68 | 71 | 0.08 |
| W-DF132M | W-DF132M | 72.5 | 78.5 | 0.08 |
| W-DF160M | W-DF160M | 121 | 133 | 0.15 |
| W-DF160L | W-DF160L | 133 | 145 | 0.15 |
| W-DF180M | W-DF180M | 162 | 178 | 0.21 |
| W-DF180L | W-DF180L | 177.5 | 193.5 | 0.21 |
| W-UDF200LX | W-DF200LX | 255 | 270 | 0.30 |
| W-UDF225S | W-DF225S | 320 | 335 | 0.37 |
| W-UDF225M | W-DF225M | 375 | 390 | 0.37 |
| W-UDF250ME | W-DF250S | 420 | 460 | 0.63 |
| W-UDF280SE | W-DF250M | 570 | 610 | 0.70 |
| W-UDF280ME | W-DF280S | 660 | 721 | 1.2 |
| W-UDF315SE | W-DF280M | 800 | 871 | 1.2 |
| W-UDF315ME | W-DF315S | 1000 | 1095 | 1.8 |
| W-UDF315M | W-DF315M | 1100 | 1195 | 1.8 |
| W-UDF315L | W-DF315L | 1300 | 1395 | 1.8 |
| W-UDF355S | W-DF355S | 2000 | 2120 | 2.3 |
| W-UDF355M | W-DF355M | 2300 | 2420 | 2.3 |
| W-UDF355L | W-DF355L | 2500 | 2620 | 2.3 |

Performance data

3000 min⁻¹ (2 pole)

Rated power
Full load speed in revolutions per minute
Frame reference and size
Full load current at rated voltage
Efficiency
Power factor
Full load torque
Direct on line starting torque ratio
Direct on line starting current ratio
Direct on line pull out torque ratio
Direct on line pull up torque
Star delta starting torque ratio⁽¹⁾
Star delta starting current ratio
Star delta pull up torque
Rotor inertia Mk^2
Mean sound pressure level @ 1m on no load

| P_N kW (hp) | n min ⁻¹ | Type | I_N | | | η 1.0 P_N 0.75 P_N 0.5 P_N | Cos ϕ 1.0 P_N 0.75 P_N 0.5 P_N | M_N Nm | $\frac{M_A}{M_N}$ | $\frac{I_A}{I_N}$ | $\frac{M_K}{M_N}$ | $\frac{M_S}{M_N}$ | $\frac{M_A}{M_N}$ Y | $\frac{I_A}{I_N}$ Y | $\frac{M_S}{M_N}$ Y | J kgm ² | L_{pA} dB(A) |
|---------------------|------------------------|---|------------|------------|------------|---|---|-------------|-------------------|-------------------|-------------------|-------------------|------------------------|------------------------|------------------------|-----------------------|-------------------|
| | | | 380 V A | 400 V A | 415 V A | | | | | | | | | | | | |
| 0.75 (1) | 2850 | W-DF80ME ⁽¹⁾ | 1.77 | 1.69 | 1.69 | $\left\{ \begin{matrix} 77.0 \\ 77.0 \\ 73.0 \end{matrix} \right\}$ | $\left\{ \begin{matrix} 0.83 \\ 0.77 \\ 0.65 \end{matrix} \right\}$ | 2.5 | 2.2 | 5.5 | 2.5 | 2.0 | - | - | - | 0.0014 | 64 |
| 1.1 (1.5) | 2875 | W-DF80MJ ⁽¹⁾ | 2.51 | 2.39 | 2.39 | $\left\{ \begin{matrix} 81.0 \\ 81.0 \\ 78.0 \end{matrix} \right\}$ | $\left\{ \begin{matrix} 0.82 \\ 0.75 \\ 0.63 \end{matrix} \right\}$ | 3.7 | 2.7 | 6.7 | 2.7 | 2.4 | - | - | - | 0.0019 | 64 |
| 1.5 (2) | 2850 | W-DF90SF ⁽¹⁾ | 3.4 | 3.2 | 3.2 | $\left\{ \begin{matrix} 82.0 \\ 83.0 \\ 81.0 \end{matrix} \right\}$ | $\left\{ \begin{matrix} 0.82 \\ 0.75 \\ 0.63 \end{matrix} \right\}$ | 5.0 | 2.5 | 6.0 | 3.0 | 2.2 | - | - | - | 0.0023 | 64 |
| 2.2 (3) | 2860 | W-DF90LM ⁽¹⁾ | 4.6 | 4.4 | 4.4 | $\left\{ \begin{matrix} 84.0 \\ 85.0 \\ 83.0 \end{matrix} \right\}$ | $\left\{ \begin{matrix} 0.86 \\ 0.81 \\ 0.71 \end{matrix} \right\}$ | 7.4 | 2.5 | 6.3 | 3.0 | 2.2 | - | - | - | 0.0028 | 64 |
| 3 (4) | 2880 | W-DF100LJ ⁽¹⁾ | 5.9 | 5.7 | 5.7 | $\left\{ \begin{matrix} 86.5 \\ 87.0 \\ 86.5 \end{matrix} \right\}$ | $\left\{ \begin{matrix} 0.88 \\ 0.83 \\ 0.75 \end{matrix} \right\}$ | 10.0 | 3.0 | 7.8 | 3.1 | 2.6 | - | - | - | 0.006 | 60 |
| 4 (5.5) | 2870 | W-DF112MM ⁽¹⁾ | 7.6 | 7.2 | 7.2 | $\left\{ \begin{matrix} 88.0 \\ 89.0 \\ 89.0 \end{matrix} \right\}$ | $\left\{ \begin{matrix} 0.91 \\ 0.89 \\ 0.85 \end{matrix} \right\}$ | 13.3 | 3.0 | 7.8 | 3.1 | 2.8 | 0.85 | 2.8 | 0.80 | 0.008 | 60 |
| 5.5 (7.5) | 2910 | W-DF132SE ⁽¹⁾ | 10.5 | 10.0 | 10.0 | $\left\{ \begin{matrix} 89.5 \\ 89.5 \\ 88.0 \end{matrix} \right\}$ | $\left\{ \begin{matrix} 0.89 \\ 0.85 \\ 0.73 \end{matrix} \right\}$ | 18.1 | 2.7 | 8.2 | 3.1 | 2.4 | 0.80 | 2.4 | 0.75 | 0.017 | 66 |
| 7.5 (10) | 2900 | W-DF132SJ ⁽¹⁾ | 14.0 | 13.3 | 13.3 | $\left\{ \begin{matrix} 89.5 \\ 90.0 \\ 89.0 \end{matrix} \right\}$ | $\left\{ \begin{matrix} 0.91 \\ 0.89 \\ 0.82 \end{matrix} \right\}$ | 24.7 | 2.5 | 8.2 | 3.0 | 2.3 | 0.75 | 2.5 | 0.70 | 0.02 | 66 |
| 11 (15) | 2935 | W-DF160MB ⁽¹⁾ | 20.7 | 19.7 | 19.7 | $\left\{ \begin{matrix} 90.5 \\ 90.8 \\ 89.7 \end{matrix} \right\}$ | $\left\{ \begin{matrix} 0.89 \\ 0.86 \\ 0.79 \end{matrix} \right\}$ | 35.8 | 2.2 | 7.8 | 3.0 | 1.8 | 0.65 | 2.5 | 0.60 | 0.039 | 68 |
| 15 (20) | 2935 | W-DF160MJ ⁽¹⁾ | 27.7 | 26.3 | 26.3 | $\left\{ \begin{matrix} 91.3 \\ 91.5 \\ 91.2 \end{matrix} \right\}$ | $\left\{ \begin{matrix} 0.90 \\ 0.88 \\ 0.80 \end{matrix} \right\}$ | 48.8 | 2.2 | 8.0 | 3.1 | 1.9 | 0.65 | 2.6 | 0.60 | 0.045 | 68 |
| 18.5 (25) | 2940 | W-DF160LR ⁽¹⁾ | 34 | 32 | 32 | $\left\{ \begin{matrix} 91.8 \\ 92.1 \\ 91.3 \end{matrix} \right\}$ | $\left\{ \begin{matrix} 0.91 \\ 0.89 \\ 0.81 \end{matrix} \right\}$ | 60.2 | 2.4 | 8.7 | 3.2 | 1.9 | 0.78 | 2.7 | 0.65 | 0.056 | 68 |
| 22 (30) | 2950 | W-DF180ME ⁽¹⁾ | 39 | 37 | 37 | $\left\{ \begin{matrix} 92.2 \\ 92.2 \\ 91.0 \end{matrix} \right\}$ | $\left\{ \begin{matrix} 0.92 \\ 0.90 \\ 0.84 \end{matrix} \right\}$ | 71.4 | 2.2 | 9.0 | 3.1 | 1.9 | 0.65 | 2.8 | 0.60 | 0.094 | 68 |
| 30 (40) | 2940 | W-UDF200LGX ⁽²⁾ W-DF200LGX ⁽³⁾ | 55 | 52 | 51 | $\left\{ \begin{matrix} 92.9 \\ 93.0 \\ 92.0 \end{matrix} \right\}$ | $\left\{ \begin{matrix} 0.89 \\ 0.86 \\ 0.80 \end{matrix} \right\}$ | 97 | 2.7 | 7.8 | 2.9 | 2.3 | 0.75 | 2.5 | 0.60 | 0.15 | 73 |
| 37 (50) | 2940 | W-UDF200LNX ⁽²⁾ W-DF200LNX ⁽³⁾ | 67 | 64 | 62 | $\left\{ \begin{matrix} 93.3 \\ 93.4 \\ 92.5 \end{matrix} \right\}$ | $\left\{ \begin{matrix} 0.89 \\ 0.86 \\ 0.80 \end{matrix} \right\}$ | 120 | 2.7 | 7.8 | 2.9 | 2.3 | 0.75 | 2.5 | 0.60 | 0.18 | 73 |
| 45 (60) | 2955 | W-UDF225MN ⁽²⁾ W-DF225MN ⁽³⁾ | 81 | 77 | 74 | $\left\{ \begin{matrix} 93.7 \\ 93.7 \\ 92.5 \end{matrix} \right\}$ | $\left\{ \begin{matrix} 0.90 \\ 0.88 \\ 0.83 \end{matrix} \right\}$ | 145 | 2.3 | 7.8 | 2.8 | 1.9 | 0.65 | 2.5 | 0.50 | 0.47 | 75 |
| 55 (75) | 2955 | W-UDF250MNE ⁽²⁾ W-DF250SN ⁽³⁾ | 99 | 94 | 90 | $\left\{ \begin{matrix} 94.0 \\ 94.2 \\ 93.0 \end{matrix} \right\}$ | $\left\{ \begin{matrix} 0.90 \\ 0.88 \\ 0.83 \end{matrix} \right\}$ | 178 | 2.3 | 7.8 | 2.8 | 1.9 | 0.65 | 2.5 | 0.50 | 0.56 | 75 |

⁽¹⁾ European and BS frame reference
⁽²⁾ European frame reference
⁽³⁾ BS frame reference

Performance data

3000 min⁻¹ (2 pole)

Rated power
Full load speed in revolutions per minute
Frame reference and size
Full load current at rated voltage
Efficiency
Power factor
Full load torque
Direct on line starting torque ratio
Direct on line starting current ratio
Direct on line pull out torque ratio
Direct on line pull up torque
Star delta starting torque ratio⁽¹⁾
Star delta starting current ratio
Star delta pull up torque
Rotor inertia Wk^2
Mean sound pressure level @ 1m on no load

| P _N kW (hp) | n min ⁻¹ | Type | I _N | | | η 1.0 P _N 0.75 P _N 0.5 P _N | Cos φ 1.0 P _N 0.75 P _N 0.5 P _N | M _N Nm | M _A M _N | I _A I _N | M _K M _N | M _S M _N | M _A M _N Y | I _A I _N Y | M _S M _N Y | J kgm ² | L _{PA} dB(A) |
|------------------------------|------------------------|--|----------------|------------|------------|--|--|----------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|-----------------------|--------------------------|
| | | | 380 V A | 400 V A | 415 V A | | | | | | | | | | | | |
| 75 (100) | 2960 | W-UDF280SNE ⁽²⁾ W-DF250MN ⁽³⁾ | 134 | 127 | 123 | { 94.6 94.9 93.4 } | { 0.90 0.88 0.83 } | 242 | 2.2 | 7.8 | 3.0 | 2.0 | 0.65 | 2.5 | 0.50 | 0.7 | 77 |
| 90 (125) | 2960 | W-UDF280MNE ⁽²⁾ W-DF280SN ⁽³⁾ | 160 | 152 | 146 | { 95.0 95.0 93.5 } | { 0.90 0.88 0.83 } | 290 | 2.2 | 7.8 | 3.0 | 2.0 | 0.65 | 2.5 | 0.50 | 0.8 | 77 |
| 110 (150) | 2978 | W-UDF315SNE ⁽²⁾ W-DF280MN ⁽³⁾ | 194 | 184 | 177 | { 95.8 95.4 94.0 } | { 0.90 0.88 0.83 } | 353 | 2.2 | 7.8 | 2.9 | 1.8 | 0.65 | 2.5 | 0.45 | 1.4 | 78 |
| 132 (175) | 2978 | W-UDF315MNE ⁽²⁾ W-DF315SN ⁽³⁾ | 233 | 221 | 213 | { 95.8 95.4 94.0 } | { 0.90 0.88 0.83 } | 423 | 2.2 | 7.8 | 2.9 | 1.8 | 0.65 | 2.5 | 0.45 | 1.7 | 78 |
| 150 (200) | 2980 | W-UDF315MN ⁽²⁾ W-DF315MN ⁽³⁾ | 260 | 247 | 238 | { 96.2 95.8 94.3 } | { 0.91 0.89 0.85 } | 481 | 2.0 | 7.8 | 2.75 | 1.7 | 0.60 | 2.5 | 0.45 | 2.4 | 80 |
| 160 (215) | 2980 | W-UDF315MP ⁽²⁾ W-DF315MP ⁽³⁾ | 277 | 264 | 254 | { 96.3 95.9 94.4 } | { 0.91 0.89 0.85 } | 513 | 2.0 | 7.8 | 2.75 | 1.7 | 0.60 | 2.5 | 0.45 | 2.6 | 80 |
| 185 (250) | 2980 | W-UDF315LN ⁽²⁾ W-DF315LN ⁽³⁾ | 320 | 304 | 294 | { 96.4 96.2 94.8 } | { 0.91 0.89 0.85 } | 593 | 2.0 | 7.8 | 2.75 | 1.7 | 0.60 | 2.5 | 0.45 | 2.8 | 80 |
| 200 (270) | 2978 | W-UDF315LN ⁽²⁾ W-DF315LN ⁽³⁾ | 346 | 329 | 317 | { 96.4 96.2 94.8 } | { 0.91 0.89 0.85 } | 641 | 1.85 | 7.2 | 2.5 | 1.6 | 0.55 | 2.3 | 0.42 | 2.8 | 80 |
| 225 (300) | 2982 | W-UDF355SG ⁽²⁾ W-DF355SG ⁽³⁾ | 398 | 379 | 364 | { 96.4 95.9 94.6 } | { 0.89 0.87 0.85 } | 721 | 2.0 | 7.5 | 2.7 | 1.6 | 0.65 | 2.3 | 0.45 | 5.0 | 80 |
| 250 (335) | 2982 | W-UDF355SJ ⁽²⁾ W-DF355SJ ⁽³⁾ | 445 | 421 | 405 | { 96.4 96.0 94.8 } | { 0.89 0.87 0.85 } | 801 | 2.0 | 7.5 | 2.7 | 1.6 | 0.65 | 2.3 | 0.45 | 5.3 | 80 |
| 280 (375) | 2982 | W-UDF355SN ⁽¹⁾ W-DF315SN ⁽³⁾ | 496 | 471 | 454 | { 96.4 96.1 94.9 } | { 0.89 0.87 0.85 } | 897 | 2.0 | 7.5 | 2.7 | 1.6 | 0.65 | 2.3 | 0.45 | 5.9 | 80 |
| 315 (420) | 2982 | W-UDF355MJ ⁽²⁾ W-DF355MJ ⁽³⁾ | 551 | 524 | 505 | { 96.5 96.2 95.2 } | { 0.90 0.89 0.86 } | 1009 | 2.0 | 7.5 | 2.7 | 1.6 | 0.65 | 2.3 | 0.45 | 6.3 | 80 |
| 355 (475) | 2982 | W-UDF355MN ⁽²⁾ W-DF355MN ⁽³⁾ | 621 | 590 | 569 | { 96.5 96.3 95.4 } | { 0.90 0.89 0.86 } | 1137 | 2.0 | 7.5 | 2.7 | 1.6 | 0.65 | 2.3 | 0.45 | 7.0 | 80 |
| 400 (535) | 2985 | W-UDF355LN ⁽²⁾ W-DF355LN ⁽³⁾ | 691 | 657 | 633 | { 96.6 96.4 95.6 } | { 0.91 0.90 0.87 } | 1280 | 2.0 | 7.5 | 2.7 | 1.6 | 0.65 | 2.3 | 0.45 | 8.0 | 80 |

⁽¹⁾ European and BS frame reference
⁽²⁾ European frame reference
⁽³⁾ BS frame reference

Performance data

1500 min⁻¹ (4 pole)

Rated power
Full load speed in revolutions per minute
Frame reference and size
Full load current at rated voltage
Efficiency
Power factor
Full load torque
Direct on line starting torque ratio
Direct on line starting current ratio
Direct on line pull out torque ratio
Direct on line pull up torque
Star delta starting torque ratio (1)
Star delta starting current ratio
Star delta pull up torque
Rotor inertia Jk²
Mean sound pressure level @ 1m, on no load

| P _N kW (hp) | n min ⁻¹ | Type | I _N | | | η | | Cos φ | | M _N Nm | M _Δ M _N | I _Δ I _N | M _K M _N | M _S M _N | M _Δ M _N Y | I _Δ I _N Y | M _S M _N Y | J kgm ² | L _{PA} dB(A) |
|------------------------------|------------------------|--|----------------|------------|------------|---|---|---|--|----------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|-----------------------|--------------------------|
| | | | 380 V A | 400 V A | 415 V A | 1.0 P _N 0.75 P _N 0.5 P _N | 1.0 P _N 0.75 P _N 0.5 P _N | 1.0 P _N 0.75 P _N 0.5 P _N | | | | | | | | | | | |
| 0.55 (0.75) | 1410 | W-DF80ME ⁽¹⁾ | 1.66 | 1.58 | 1.58 | 75.0 75.0 70.0 | 0.67 0.57 0.45 | | | 3.7 | 2.0 | 4.2 | 2.4 | 1.8 | - | - | - | 0.0015 | 47 |
| 0.75 (1) | 1410 | W-DF80MG ⁽¹⁾ | 1.97 | 1.88 | 1.88 | 78.0 79.0 77.0 | 0.74 0.65 0.50 | | | 5.1 | 1.8 | 4.4 | 2.2 | 1.6 | - | - | - | 0.0019 | 47 |
| 1.1 (1.5) | 1435 | W-DF90SE ⁽¹⁾ | 2.76 | 2.63 | 2.63 | 79.5 80.0 78.0 | 0.76 0.66 0.52 | | | 7.5 | 2.2 | 5.1 | 2.5 | 2.0 | - | - | - | 0.0028 | 48 |
| 1.5 (2) | 1435 | W-DF90LK ⁽¹⁾ | 3.7 | 3.5 | 3.5 | 81.0 82.0 80.0 | 0.77 0.68 0.55 | | | 10.1 | 2.5 | 5.6 | 2.8 | 2.2 | - | - | - | 0.0035 | 48 |
| 2.2 (3) | 1440 | W-DF100LJ ⁽¹⁾ | 5.0 | 4.8 | 4.8 | 83.5 83.5 83.0 | 0.80 0.74 0.61 | | | 14.8 | 2.2 | 5.5 | 2.5 | 1.9 | - | - | - | 0.008 | 54 |
| 3 (4) | 1445 | W-DF100LR ⁽¹⁾ | 6.7 | 6.4 | 6.4 | 84.5 85.5 85.0 | 0.80 0.74 0.61 | | | 20.2 | 2.3 | 5.8 | 2.5 | 2.1 | - | - | - | 0.09 | 54 |
| 4 (5.5) | 1445 | W-DF112MS ⁽¹⁾ | 8.7 | 8.3 | 8.3 | 86.5 87.0 86.0 | 0.80 0.74 0.60 | | | 26.5 | 2.5 | 7.0 | 2.9 | 2.1 | 0.75 | 2.2 | 0.65 | 0.015 | 56 |
| 5.5 (7.5) | 1450 | W-DF132SJ ⁽¹⁾ | 11.6 | 11.0 | 11.0 | 88.0 88.5 88.0 | 0.82 0.76 0.64 | | | 36.2 | 2.4 | 7.5 | 2.9 | 2.1 | 0.70 | 2.2 | 0.60 | 0.027 | 59 |
| 7.5 (10) | 1460 | W-DF132MR ⁽¹⁾ | 15.4 | 14.7 | 14.7 | 89.0 89.5 89.0 | 0.83 0.77 0.65 | | | 49.4 | 2.5 | 7.5 | 2.9 | 2.1 | 0.70 | 2.2 | 0.60 | 0.029 | 59 |
| 11 (15) | 1470 | W-DF160MJ ⁽¹⁾ | 22 | 21 | 21 | 91.0 91.2 90.5 | 0.83 0.79 0.67 | | | 71.5 | 2.5 | 7.7 | 2.9 | 2.0 | 0.65 | 2.3 | 0.50 | 0.068 | 63 |
| 15 (20) | 1470 | W-DF160LR ⁽¹⁾ | 29.5 | 28.1 | 28.1 | 91.8 92.3 91.7 | 0.84 0.79 0.68 | | | 97.5 | 2.5 | 7.7 | 2.9 | 2.0 | 0.65 | 2.3 | 0.50 | 0.084 | 63 |
| 18.5 (25) | 1470 | W-DF180ME ⁽¹⁾ | 36 | 34 | 34 | 92.2 92.3 91.3 | 0.84 0.79 0.64 | | | 120 | 2.8 | 8.4 | 3.2 | 2.2 | 0.80 | 2.6 | 0.65 | 0.16 | 62 |
| 22 (30) | 1470 | W-DF180LJ ⁽¹⁾ | 43 | 41 | 41 | 92.6 92.9 92.5 | 0.84 0.80 0.69 | | | 143 | 2.5 | 7.5 | 2.9 | 2.0 | 0.75 | 2.2 | 0.60 | 0.19 | 62 |
| 30 (40) | 1470 | W-UDF200LN ⁽²⁾ W-DF200LN ⁽³⁾ | 57 | 54 | 52 | 93.2 93.2 92.3 | 0.86 0.84 0.75 | | | 195 | 2.3 | 7.5 | 3.2 | 1.9 | 0.7 | 2.4 | 0.55 | 0.31 | 65 |
| 37 (50) | 1470 | W-UDF225SN ⁽²⁾ W-DF225SN ⁽³⁾ | 70 | 66 | 64 | 93.6 93.6 92.5 | 0.86 0.84 0.75 | | | 240 | 2.3 | 7.3 | 3.2 | 1.9 | 0.7 | 2.3 | 0.55 | 0.45 | 66 |
| 45 (60) | 1475 | W-UDF225MN ⁽²⁾ W-DF225MN ⁽³⁾ | 84 | 80 | 77 | 93.9 94.2 93.0 | 0.86 0.84 0.75 | | | 292 | 2.7 | 7.7 | 3.2 | 1.9 | 0.75 | 2.5 | 0.55 | 0.65 | 67 |
| 55 (75) | 1475 | W-UDF250MNE ⁽²⁾ W-DF250SN ⁽³⁾ | 103 | 98 | 94 | 94.2 94.6 93.5 | 0.86 0.84 0.75 | | | 357 | 2.7 | 7.7 | 3.2 | 1.9 | 0.75 | 2.5 | 0.55 | 0.75 | 67 |

⁽¹⁾ European and BS frame reference

⁽²⁾ European frame reference

⁽³⁾ BS frame reference

Performance data

1500 min⁻¹ (4 pole)

Rated power
Full load speed in revolutions per minute
Frame reference and size
Full load current at rated voltage
Efficiency
Power factor
Full load torque
Direct on line starting torque ratio
Direct on line starting current ratio
Direct on line pull out torque ratio
Direct on line pull up torque
Star delta starting torque ratio ⁽¹⁾
Star delta starting current ratio
Star delta pull up torque
Rotor inertia Wk²
Mean sound pressure level @ 1m on no load

| P _N kW (hp) | n min ⁻¹ | Type | I _N | | | η 0.75 P _N 0.5 P _N | Cos Ø 1.0 P _N 0.75 P _N 0.5 P _N | M _N Nm | M _Δ M _N | I _Δ I _N | M _κ M _N | M _S M _N | M _Δ M _N Y | I _Δ I _N Y | M _S M _N Y | J kgm ² | L _{PA} dB(A) |
|------------------------------|------------------------|--|----------------|------------|------------|--|--|----------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|-----------------------|--------------------------|
| | | | 380 V A | 400 V A | 415 V A | | | | | | | | | | | | |
| 75 (100) | 1475 | W-UDF280SNE ⁽²⁾ W-DF250MN ⁽³⁾ | 138 | 131 | 126 | 94.7 94.8 93.5 | 0.87 0.85 0.75 | 486 | 2.4 | 7.4 | 2.7 | 1.9 | 0.72 | 2.3 | 0.54 | 1.4 | 69 |
| 90 (125) | 1475 | W-UDF280MNE ⁽²⁾ W-DF280SN ⁽³⁾ | 165 | 157 | 151 | 95.0 95.1 93.8 | 0.87 0.85 0.75 | 583 | 2.5 | 7.4 | 2.8 | 2.0 | 0.75 | 2.4 | 0.55 | 1.6 | 69 |
| 110 (150) | 1480 | W-UDF315SNE ⁽²⁾ W-DF280MN ⁽³⁾ | 201 | 191 | 184 | 95.6 95.5 94.0 | 0.87 0.85 0.77 | 710 | 2.4 | 7.7 | 2.6 | 2.0 | 0.70 | 2.5 | 0.5 | 3.2 | 71 |
| 132 (175) | 1482 | W-UDF315MNE ⁽²⁾ W-DF315SN ⁽³⁾ | 241 | 229 | 220 | 95.8 95.6 94.2 | 0.87 0.85 0.77 | 852 | 2.4 | 7.7 | 2.6 | 2.0 | 0.70 | 2.5 | 0.5 | 3.7 | 71 |
| 150 (200) | 1485 | W-UDF315MN ⁽²⁾ W-DF315MN ⁽³⁾ | 270 | 257 | 247 | 95.9 95.7 94.7 | 0.88 0.86 0.78 | 965 | 2.4 | 7.8 | 2.7 | 2.0 | 0.70 | 2.5 | 0.5 | 4.4 | 73 |
| 160 (215) | 1487 | W-UDF315MP ⁽²⁾ W-DF315MP ⁽³⁾ | 288 | 274 | 264 | 95.9 95.7 94.7 | 0.88 0.86 0.78 | 1029 | 2.4 | 7.8 | 2.7 | 2.0 | 0.70 | 2.5 | 0.5 | 4.7 | 73 |
| 185 (250) | 1487 | W-UDF315LN ⁽²⁾ W-DF315LN ⁽³⁾ | 333 | 316 | 305 | 96.0 95.8 95.0 | 0.88 0.86 0.78 | 1190 | 2.4 | 7.8 | 2.7 | 2.0 | 0.70 | 2.5 | 0.5 | 5.5 | 73 |
| 200 (270) | 1485 | W-UDF315LN ⁽²⁾ W-DF315LN ⁽³⁾ | 360 | 342 | 329 | 96.0 95.8 95.0 | 0.88 0.86 0.78 | 1286 | 2.3 | 7.6 | 2.6 | 1.9 | 0.65 | 2.4 | 0.45 | 5.5 | 73 |
| 225 (300) | 1487 | W-UDF355SG ⁽²⁾ W-DF355SG ⁽³⁾ | 398 | 379 | 365 | 96.4 96.2 95.4 | 0.89 0.86 0.80 | 1445 | 2.1 | 7.2 | 2.5 | 1.7 | 0.65 | 2.2 | 0.5 | 8.2 | 76 |
| 250 (335) | 1487 | W-UDF355SJ ⁽²⁾ W-DF355SJ ⁽³⁾ | 442 | 420 | 405 | 96.6 96.4 95.6 | 0.89 0.86 0.80 | 1605 | 2.1 | 7.2 | 2.5 | 1.7 | 0.65 | 2.2 | 0.5 | 9.5 | 76 |
| 280 (375) | 1487 | W-UDF355SN ⁽²⁾ W-DF355SN ⁽³⁾ | 494 | 470 | 453 | 96.7 96.5 95.8 | 0.89 0.87 0.81 | 1798 | 2.1 | 7.2 | 2.5 | 1.7 | 0.65 | 2.2 | 0.5 | 10.6 | 76 |
| 315 (420) | 1487 | W-UDF355MJ ⁽²⁾ W-DF355MJ ⁽³⁾ | 556 | 528 | 509 | 96.8 96.7 96.0 | 0.89 0.88 0.83 | 2023 | 2.1 | 7.2 | 2.5 | 1.7 | 0.65 | 2.2 | 0.5 | 11.9 | 79 |
| 355 (475) | 1487 | W-UDF355MN ⁽²⁾ W-DF355MN ⁽³⁾ | 619 | 588 | 567 | 96.8 96.7 96.3 | 0.90 0.89 0.84 | 2280 | 2.1 | 7.2 | 2.5 | 1.7 | 0.65 | 2.2 | 0.5 | 13.2 | 79 |
| 400 (535) | 1487 | W-UDF355LN ⁽²⁾ W-DF355LN ⁽³⁾ | 697 | 662 | 638 | 96.9 96.8 96.5 | 0.90 0.89 0.84 | 2569 | 2.1 | 7.2 | 2.5 | 1.7 | 0.65 | 2.2 | 0.5 | 14.6 | 79 |

⁽¹⁾ European and BS frame reference
⁽²⁾ European frame reference
⁽³⁾ BS frame reference

Performance data

1000 min⁻¹ (6 pole)

Rated power
Full load speed in revolutions per minute
Frame reference and size
Full load current at rated voltage
Efficiency
Power factor
Full load torque
Direct on line starting torque ratio
Direct on line starting current ratio
Direct on line pull out torque ratio
Direct on line pull up torque
Star delta starting torque ratio (1)
Star delta starting current ratio
Star delta pull up torque
Rotor inertia Wkg²
Mean sound pressure level @ 1m on no load

| P _N kW (hp) | n min ⁻¹ | Type | I _N | | | η 1.0 P _N 0.75 P _N 0.5 P _N | Cos φ 1.0 P _N 0.75 P _N 0.5 P _N | M _N Nm | M _A M _N | I _A I _N | M _K M _N | M _S M _N | M _A M _N Y | I _A I _N Y | M _S M _N Y | J kgm ² | L _{PA} dB(A) |
|------------------------------|------------------------|---|----------------|------------|------------|--|--|----------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|-----------------------|--------------------------|
| | | | 380 V A | 400 V A | 415 V A | | | | | | | | | | | | |
| 0.37 (0.5) | 920 | W-DF80MG ⁽¹⁾ | 1.33 | 1.27 | 1.27 | { 69.0 0.61 68.0 0.51 64.0 0.40 } | 3.8 | 2.0 | 3.7 | 2.2 | 1.8 | - | - | - | 0.0015 | 49 | |
| 0.55 (0.75) | 920 | W-DF80MM ⁽¹⁾ | 1.86 | 1.77 | 1.77 | { 71.0 0.63 71.0 0.54 68.0 0.41 } | 5.7 | 2.0 | 3.7 | 2.3 | 1.8 | - | - | - | 0.0021 | 49 | |
| 0.75 (1) | 920 | W-DF90SG ⁽¹⁾ | 2.23 | 2.12 | 2.12 | { 74.0 0.69 74.0 0.59 72.0 0.45 } | 7.8 | 2.2 | 4.1 | 2.4 | 2.0 | - | - | - | 0.0028 | 65 | |
| 1.1 (1.5) | 940 | W-DF90LT ⁽¹⁾ | 3.4 | 3.2 | 3.2 | { 78.0 0.63 77.0 0.52 75.0 0.41 } | 11.2 | 2.8 | 4.5 | 3.0 | 2.5 | - | - | - | 0.0039 | 65 | |
| 1.5 (2) | 930 | W-DF100LR ⁽¹⁾ | 4.5 | 4.3 | 4.3 | { 79.0 0.64 79.0 0.54 77.0 0.42 } | 15.4 | 2.0 | 4.2 | 2.3 | 2.0 | - | - | - | 0.009 | 58 | |
| 2.2 (3) | 950 | W-DF112MS ⁽¹⁾ | 5.8 | 5.5 | 5.5 | { 82.5 0.70 82.5 0.60 80.5 0.47 } | 22.1 | 2.8 | 5.8 | 2.8 | 2.3 | - | - | - | 0.014 | 54 | |
| 3 (4) | 965 | W-DF132SG ⁽¹⁾ | 7.5 | 7.1 | 7.1 | { 86.0 0.71 86.0 0.64 84.0 0.52 } | 29.8 | 2.2 | 6.5 | 2.7 | 1.7 | 0.65 | 2.1 | 0.55 | 0.023 | 58 | |
| 4 (5.5) | 960 | W-DF132ML ⁽¹⁾ | 9.5 | 9 | 9 | { 86.5 0.74 86.5 0.67 86.0 0.55 } | 39.8 | 2.1 | 6.2 | 2.6 | 1.6 | 0.60 | 2.0 | 0.50 | 0.027 | 58 | |
| 5.5 (7.5) | 960 | W-DF132MM ⁽¹⁾ | 12.9 | 12.3 | 12.3 | { 87.0 0.74 87.0 0.67 86.5 0.54 } | 54.7 | 2.0 | 5.5 | 2.5 | 1.6 | 0.60 | 2.0 | 0.50 | 0.029 | 58 | |
| 7.5 (10) | 975 | W-DF160MM ⁽¹⁾ | 16.8 | 16 | 16 | { 90.0 0.75 90.5 0.70 89.0 0.60 } | 73.4 | 1.8 | 6.5 | 2.8 | 1.7 | 0.55 | 2.1 | 0.5 | 0.10 | 59 | |
| 11 (15) | 975 | W-DF160LV ⁽¹⁾ | 23.8 | 22.7 | 22.7 | { 91.0 0.77 91.0 0.72 89.5 0.60 } | 108 | 2.0 | 7.5 | 2.8 | 1.9 | 0.60 | 2.5 | 0.50 | 0.12 | 59 | |
| 15 (20) | 975 | W-DF180LM ⁽¹⁾ | 33 | 31 | 31 | { 91.0 0.78 91.0 0.73 89.5 0.60 } | 147 | 2.4 | 6.5 | 2.8 | 2.2 | 0.65 | 2.2 | 0.60 | 0.23 | 59 | |
| 18.5 (25) | 975 | W-UDF200LGX ⁽²⁾ W-DF200LGX ⁽³⁾ | 39 | 37 | 35 | { 91.2 0.80 91.2 0.76 90.0 0.67 } | 181 | 2.3 | 7.0 | 2.0 | 2.8 | 0.65 | 2.3 | 0.50 | 0.42 | 62 | |
| 22 (30) | 975 | W-UDF200LNX ⁽²⁾ W-DF200LNX ⁽³⁾ | 46 | 43 | 42 | { 91.7 0.80 91.7 0.76 90.5 0.67 } | 215 | 2.3 | 7.0 | 2.0 | 2.8 | 0.65 | 2.3 | 0.50 | 0.48 | 62 | |
| 30 (40) | 980 | W-UDF225MN ⁽²⁾ W-DF225MN ⁽³⁾ | 61 | 58 | 56 | { 92.7 0.80 92.7 0.76 91.7 0.67 } | 292 | 2.7 | 6.0 | 2.1 | 1.8 | 0.80 | 2.0 | 0.45 | 1.23 | 63 | |
| 37 (50) | 980 | W-UDF250MNE ⁽²⁾ W-DF250SN ⁽³⁾ | 74 | 70 | 67 | { 93.2 0.82 93.2 0.78 92.0 0.69 } | 361 | 2.7 | 6.0 | 2.1 | 1.8 | 0.80 | 2.0 | 0.45 | 1.47 | 63 | |
| 45 (60) | 985 | W-UDF280SNE ⁽²⁾ W-DF250MN ⁽³⁾ | 88 | 84 | 81 | { 93.4 0.83 93.3 0.79 92.3 0.71 } | 436 | 2.5 | 6.0 | 2.0 | 1.8 | 0.75 | 1.9 | 0.40 | 2.55 | 65 | |

⁽¹⁾ European and BS frame reference
⁽²⁾ European frame reference
⁽³⁾ BS frame reference

Performance data

1000 min⁻¹ (6 pole)

Rated power
Full load speed in revolutions per minute
Frame reference and size
Full load current at rated voltage
Efficiency
Power factor
Full load torque
Direct on line starting torque ratio
Direct on line starting current ratio
Direct on line pull out torque ratio
Direct on line pull up torque
Star delta starting torque ratio⁽¹⁾
Star delta starting current ratio
Star delta pull up torque
Rotor inertia WY²
Mean sound pressure level @ 1m on no load

| P _N kW (hp) | n min ⁻¹ | Type | I _N | | | η | | Cos φ | | M _N Nm | M _A M _N | I _A I _N | M _K M _N | M _S M _N | M _A M _N Y | I _A I _N Y | M _S M _N Y | J kgm ² | L _{PA} dB(A) |
|------------------------------|------------------------|--|----------------|------------|------------|---|---|---|---|----------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|-----------------------|--------------------------|
| | | | 380 V A | 400 V A | 415 V A | 1.0 P _N 0.75 P _N | 1.0 P _N 0.75 P _N | 0.75 P _N 0.5 P _N | 0.75 P _N 0.5 P _N | | | | | | | | | | |
| 55 (75) | 985 | W-UDF280MNE ⁽²⁾ W-DF280SN ⁽³⁾ | 107 | 102 | 98 | { 93.8 93.6 92.6 } | { 0.83 0.79 0.71 } | | 533 | 2.5 | 6.1 | 2.0 | 1.9 | 0.75 | 1.85 | 0.40 | 2.9 | 65 | |
| 75 (100) | 985 | W-UDF315SNE ⁽²⁾ W-DF280MN ⁽³⁾ | 144 | 137 | 132 | { 94.3 94.1 93.0 } | { 0.84 0.80 0.72 } | | 727 | 3.0 | 7.0 | 2.6 | 2.1 | 0.90 | 2.1 | 0.60 | 5.0 | 68 | |
| 90 (125) | 985 | W-UDF315MNE ⁽²⁾ W-DF315SN ⁽³⁾ | 172 | 164 | 158 | { 94.5 94.3 93.4 } | { 0.84 0.80 0.72 } | | 872 | 3.0 | 7.0 | 2.6 | 2.1 | 0.90 | 2.1 | 0.60 | 6.0 | 68 | |
| 110 (150) | 985 | W-UDF315MN ⁽²⁾ W-DF315MN ⁽³⁾ | 207 | 197 | 190 | { 94.8 94.7 93.8 } | { 0.85 0.81 0.73 } | | 1066 | 2.8 | 6.7 | 2.0 | 1.9 | 0.80 | 2.1 | 0.55 | 6.1 | 70 | |
| 132 (175) | 985 | W-UDF315LN ⁽²⁾ W-DF315LN ⁽³⁾ | 248 | 236 | 227 | { 95.0 94.9 94.1 } | { 0.85 0.81 0.73 } | | 1280 | 2.8 | 6.7 | 2.0 | 1.9 | 0.80 | 2.1 | 0.55 | 7.3 | 70 | |
| 150 (200) | 985 | W-UDF355SG ⁽²⁾ W-DF355SG ⁽³⁾ | 281 | 267 | 257 | { 95.5 95.4 94.5 } | { 0.85 0.83 0.76 } | | 1454 | 1.7 | 6.7 | 2.1 | 1.4 | 0.50 | 2.2 | 0.35 | 10 | 74 | |
| 160 (215) | 985 | W-UDF355SG ⁽²⁾ W-DF355SG ⁽³⁾ | 298 | 283 | 273 | { 95.9 95.7 94.9 } | { 0.85 0.83 0.76 } | | 1551 | 1.7 | 6.7 | 2.1 | 1.4 | 0.50 | 2.2 | 0.35 | 10 | 74 | |
| 185 (250) | 985 | W-UDF355SJ ⁽²⁾ W-DF355SJ ⁽³⁾ | 345 | 328 | 316 | { 95.9 95.8 95.1 } | { 0.85 0.83 0.76 } | | 1793 | 1.7 | 6.7 | 2.1 | 1.4 | 0.45 | 2.1 | 0.35 | 11.1 | 74 | |
| 200 (270) | 985 | W-UDF355SN ⁽²⁾ W-DF355SN ⁽³⁾ | 372 | 354 | 341 | { 96.0 95.9 95.2 } | { 0.85 0.83 0.76 } | | 1939 | 1.7 | 6.7 | 2.1 | 1.4 | 0.45 | 2.1 | 0.35 | 12.2 | 74 | |
| 225 (300) | 985 | W-UDF355MJ ⁽²⁾ W-DF355MJ ⁽³⁾ | 419 | 398 | 384 | { 96.0 96.0 95.4 } | { 0.85 0.83 0.76 } | | 2181 | 1.7 | 6.7 | 2.1 | 1.4 | 0.45 | 2.1 | 0.35 | 13.6 | 77 | |
| 250 (335) | 985 | W-UDF355MN ⁽²⁾ W-DF355MN ⁽³⁾ | 465 | 442 | 426 | { 96.1 96.1 95.6 } | { 0.85 0.83 0.76 } | | 2424 | 1.8 | 7.0 | 2.2 | 1.5 | 0.48 | 2.2 | 0.40 | 15.2 | 77 | |
| 280 (375) | 990 | W-UDF355LJ ⁽²⁾ W-DF355LJ ⁽³⁾ | 520 | 494 | 476 | { 96.2 96.2 95.7 } | { 0.85 0.83 0.76 } | | 2701 | 1.8 | 7.0 | 2.2 | 1.5 | 0.48 | 2.2 | 0.40 | 16.9 | 77 | |
| 315 (420) | 990 | W-UDF355LN ⁽²⁾ W-DF355LN ⁽³⁾ | 585 | 555 | 535 | { 96.3 96.3 95.9 } | { 0.85 0.83 0.76 } | | 3038 | 1.8 | 7.0 | 2.1 | 1.5 | 0.48 | 2.1 | 0.40 | 18.6 | 77 | |

⁽¹⁾ European and BS frame reference
⁽²⁾ European frame reference
⁽³⁾ BS frame reference

Performance data

750 min⁻¹ (8 pole)

Rated power
Full load speed in revolutions per minute
Frame reference and size
Full load current at rated voltage
Efficiency
Power factor
Full load torque
Direct on line starting torque ratio
Direct on line starting current ratio
Direct on line pull out torque ratio
Direct on line pull up torque
Star delta starting torque ratio (1)
Star delta starting current ratio
Star delta pull up torque
Rotor inertia Wk²
Mean sound pressure level @ 1m on no load

| P _N kW (hp) | n min ⁻¹ | Type | I _N | | | η | | Cos φ | | M _N Nm | M _A M _N | I _A I _N | M _K M _N | M _S M _N | M _A M _N Y | I _A I _N Y | M _S M _N Y | J kgm ² | L _{PA} dB(A) |
|------------------------------|------------------------|--|----------------|------------|------------|---|---|-------|-------|----------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|-----------------------|--------------------------|
| | | | 380 V A | 400 V A | 415 V A | 1.0 P _N 0.75 P _N 0.5 P _N | 1.0 P _N 0.75 P _N 0.5 P _N | | | | | | | | | | | | |
| 0.18 (0.25) | 695 | W-DF80MG ⁽¹⁾ | 1.01 | 0.96 | 0.96 | { 55.0 52.0 44.0 } | { 0.49 0.42 0.34 } | | 2.5 | 2.2 | 2.7 | 2.5 | 2.0 | - | - | - | 0.0017 | 46 | |
| 0.25 (0.33) | 695 | W-DF80MM ⁽¹⁾ | 1.26 | 1.2 | 1.2 | { 59.0 56.5 49.0 } | { 0.51 0.43 0.34 } | | 3.5 | 2.2 | 2.9 | 2.5 | 2.0 | - | - | - | 0.0021 | 46 | |
| 0.37 (0.5) | 700 | W-DF90SG ⁽¹⁾ | 1.71 | 1.63 | 1.63 | { 62.0 59.0 51.0 } | { 0.53 0.44 0.34 } | | 5.1 | 2.3 | 3.0 | 2.5 | 2.1 | - | - | - | 0.0028 | 50 | |
| 0.55 (0.75) | 680 | W-DF90LM ⁽¹⁾ | 2.4 | 2.3 | 2.3 | { 64.0 62.0 55.0 } | { 0.54 0.44 0.33 } | | 7.6 | 2.3 | 3.3 | 2.7 | 2.1 | - | - | - | 0.0035 | 50 | |
| 0.75 (1) | 690 | W-DF100LR ⁽¹⁾ | 2.77 | 2.64 | 2.64 | { 69.5 68.0 61.0 } | { 0.59 0.49 0.40 } | | 10.4 | 1.8 | 3.2 | 2.1 | 1.7 | - | - | - | 0.009 | 53 | |
| 1.1 (1.5) | 690 | W-DF100LS ⁽¹⁾ | 3.9 | 3.7 | 3.7 | { 71.5 70.5 68.0 } | { 0.60 0.51 0.39 } | | 15.2 | 1.8 | 3.2 | 2.1 | 1.7 | - | - | - | 0.0095 | 53 | |
| 1.5 (2) | 690 | W-DF112MS ⁽¹⁾ | 4.6 | 4.4 | 4.4 | { 74.5 74.0 71.0 } | { 0.66 0.56 0.44 } | | 20.7 | 1.9 | 4.0 | 2.0 | 1.7 | - | - | - | 0.015 | 57 | |
| 2.2 (3) | 720 | W-DF132SM ⁽¹⁾ | 6.2 | 5.9 | 5.9 | { 82.5 83.0 80.0 } | { 0.65 0.57 0.45 } | | 29.2 | 1.6 | 5.0 | 2.4 | 1.5 | - | - | - | 0.029 | 57 | |
| 3 (4) | 720 | W-DF132MR ⁽¹⁾ | 8.2 | 7.8 | 7.8 | { 84.0 84.0 82.0 } | { 0.66 0.58 0.45 } | | 39.8 | 1.6 | 5.0 | 2.4 | 1.4 | - | - | - | 0.031 | 57 | |
| 4 (5.5) | 725 | W-DF160ME ⁽¹⁾ | 10.4 | 9.9 | 9.9 | { 86.0 86.0 84.0 } | { 0.68 0.64 0.51 } | | 52.7 | 1.6 | 5.5 | 2.5 | 1.4 | 0.5 | 1.7 | 0.45 | 0.09 | 53 | |
| 5.5 (7.5) | 725 | W-DF160MM ⁽¹⁾ | 13.9 | 13.2 | 13.2 | { 87.0 87.0 85.5 } | { 0.69 0.65 0.52 } | | 72.4 | 1.6 | 5.7 | 2.5 | 1.4 | 0.5 | 1.7 | 0.45 | 0.11 | 53 | |
| 7.5 (10) | 725 | W-DF160LV ⁽¹⁾ | 18.2 | 17.3 | 17.3 | { 88.0 88.0 86.0 } | { 0.71 0.65 0.52 } | | 98.8 | 1.6 | 6.0 | 2.5 | 1.4 | 0.5 | 1.8 | 0.45 | 0.14 | 53 | |
| 11 (15) | 730 | W-DF180LM ⁽¹⁾ | 27.6 | 26.3 | 26.3 | { 90.0 90.0 88.0 } | { 0.67 0.59 0.48 } | | 143.9 | 2.0 | 4.5 | 2.5 | 1.7 | 0.63 | 1.4 | 0.55 | 0.24 | 58 | |
| 15 (20) | 730 | W-UDF200LN ⁽²⁾ W-DF200LN ⁽³⁾ | 35 | 33 | 32 | { 90.0 90.0 88.5 } | { 0.73 0.66 0.54 } | | 196 | 1.8 | 5.8 | 2.6 | 1.6 | 0.45 | 1.7 | 0.35 | 0.48 | 60 | |
| 18.5 (25) | 730 | W-UDF225SN ⁽²⁾ W-DF225SN ⁽³⁾ | 43 | 40 | 39 | { 90.5 90.5 89.5 } | { 0.73 0.66 0.54 } | | 242 | 2.0 | 5.5 | 2.25 | 1.6 | 0.5 | 1.6 | 0.35 | 0.75 | 60 | |
| 22 (30) | 730 | W-UDF225MN ⁽²⁾ W-DF225MN ⁽³⁾ | 50 | 47 | 45 | { 91.5 91.5 89.0 } | { 0.74 0.66 0.54 } | | 288 | 2.0 | 6.0 | 2.4 | 1.6 | 0.45 | 1.7 | 0.35 | 1.23 | 62 | |
| 30 (40) | 735 | W-UDF250MNE ⁽²⁾ W-DF250SN ⁽³⁾ | 67 | 64 | 61 | { 92.0 92.0 90.0 } | { 0.74 0.67 0.55 } | | 390 | 1.7 | 6.0 | 2.4 | 1.6 | 0.4 | 1.7 | 0.35 | 1.47 | 62 | |

⁽¹⁾ European and BS frame reference

⁽²⁾ European frame reference

⁽³⁾ BS frame reference

Performance data

750 min⁻¹ (8 pole)

Rated power
Full load speed in revolutions per minute
Frame reference and size
Full load current at rated voltage
Efficiency
Power factor
Full load torque
Direct on line starting torque ratio
Direct on line starting current ratio
Direct on line pull out torque ratio
Direct on line pull up torque
Star delta starting torque ratio (1)
Star delta starting current ratio
Star delta pull up torque
Rotor inertia Wk²
Mean sound pressure level @ 1m on no load

| P _N kW (hp) | n min ⁻¹ | Type | I _N | | | η | | Cos Ø | | M _N Nm | M _A M _N | I _A I _N | M _K M _N | M _S M _N | M _A M _N Y | I _A I _N Y | M _S M _N Y | J kgm ² | L _{PA} dB(A) |
|------------------------------|------------------------|--|----------------|------------|------------|---|---|-------|------|----------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|-----------------------|--------------------------|
| | | | 380 V A | 400 V A | 415 V A | 1.0 P _N 0.75 P _N 0.5 P _N | 1.0 P _N 0.75 P _N 0.5 P _N | | | | | | | | | | | | |
| 37 (50) | 735 | W-UDF280SNE ⁽²⁾ W-DF250MN ⁽³⁾ | 81 | 77 | 74 | { 92.5 92.5 91.5 } | { 0.75 0.68 0.56 } | | 481 | 1.7 | 6.0 | 2.4 | 1.6 | 0.40 | 1.7 | 0.35 | 2.55 | 63 | |
| 45 (60) | 735 | W-UDF280MNE ⁽²⁾ W-DF280SN ⁽³⁾ | 98 | 93 | 90 | { 93.0 92.8 91.6 } | { 0.75 0.69 0.57 } | | 585 | 1.7 | 6.0 | 2.4 | 1.4 | 0.40 | 1.7 | 0.3 | 2.9 | 63 | |
| 55 (75) | 740 | W-UDF315SNE ⁽²⁾ W-DF280MN ⁽³⁾ | 119 | 113 | 109 | { 93.5 93.3 92.0 } | { 0.75 0.70 0.58 } | | 710 | 2.5 | 6.0 | 2.0 | 1.5 | 0.60 | 1.7 | 0.35 | 5.0 | 64 | |
| 75 (100) | 740 | W-UDF315MNE ⁽²⁾ W-DF315SN ⁽³⁾ | 159 | 151 | 146 | { 94.1 93.9 92.2 } | { 0.76 0.72 0.60 } | | 968 | 2.5 | 6.0 | 2.0 | 1.5 | 0.60 | 1.7 | 0.35 | 6.0 | 64 | |
| 90 (125) | 740 | W-UDF315MN ⁽²⁾ W-DF315MN ⁽³⁾ | 188 | 179 | 172 | { 94.4 94.2 93.4 } | { 0.77 0.73 0.64 } | | 1161 | 2.4 | 6.0 | 2.0 | 1.8 | 0.65 | 1.7 | 0.45 | 6.1 | 65 | |
| 110 (150) | 740 | W-UDF315LN ⁽²⁾ W-DF315LN ⁽³⁾ | 227 | 218 | 210 | { 94.6 94.4 93.6 } | { 0.77 0.73 0.64 } | | 1419 | 2.4 | 6.0 | 2.0 | 1.8 | 0.65 | 1.7 | 0.45 | 7.3 | 65 | |
| 132 (175) | 740 | W-UDF355SJ ⁽²⁾ W-DF355SJ ⁽³⁾ | 274 | 260 | 251 | { 95.1 94.8 93.6 } | { 0.77 0.73 0.64 } | | 1703 | 1.6 | 6.1 | 2.0 | 1.3 | 0.40 | 1.8 | 0.3 | 12.2 | 72 | |
| 150 (200) | 740 | W-UDF355SN ⁽²⁾ W-DF355SN ⁽³⁾ | 310 | 294 | 284 | { 95.5 95.3 94.0 } | { 0.77 0.73 0.64 } | | 1936 | 1.6 | 6.1 | 2.0 | 1.3 | 0.40 | 1.8 | 0.3 | 13.6 | 72 | |
| 160 (215) | 740 | W-UDF355SN ⁽²⁾ W-DF355SN ⁽³⁾ | 331 | 315 | 303 | { 95.5 95.3 94.0 } | { 0.77 0.73 0.64 } | | 2065 | 1.6 | 6.1 | 2.0 | 1.3 | 0.40 | 1.8 | 0.3 | 13.6 | 72 | |
| 185 (250) | 740 | W-UDF355MJ ⁽²⁾ W-DF355MJ ⁽³⁾ | 383 | 364 | 350 | { 95.6 95.4 94.1 } | { 0.77 0.73 0.64 } | | 2387 | 1.6 | 6.1 | 2.0 | 1.3 | 0.40 | 1.8 | 0.3 | 15.2 | 74 | |
| 200 (270) | 740 | W-UDF355MN ⁽²⁾ W-DF355MN ⁽³⁾ | 413 | 393 | 378 | { 95.6 95.4 94.3 } | { 0.77 0.73 0.64 } | | 2581 | 1.6 | 6.1 | 2.0 | 1.3 | 0.40 | 1.8 | 0.3 | 16.9 | 74 | |
| 225 (300) | 740 | W-UDF355LN ⁽²⁾ W-DF355LN ⁽³⁾ | 464 | 441 | 425 | { 95.6 95.4 94.7 } | { 0.77 0.73 0.64 } | | 2903 | 1.6 | 6.1 | 2.0 | 1.3 | 0.40 | 1.8 | 0.3 | 18.6 | 74 | |

⁽¹⁾ European and BS frame reference

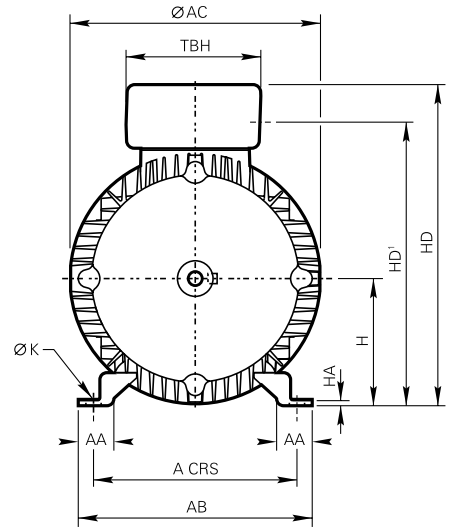
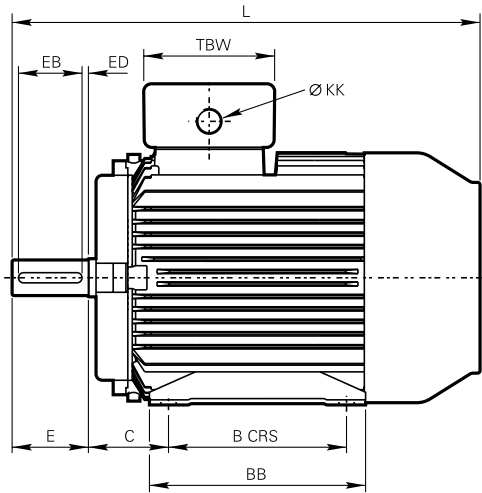
⁽²⁾ European frame reference

⁽³⁾ BS frame reference

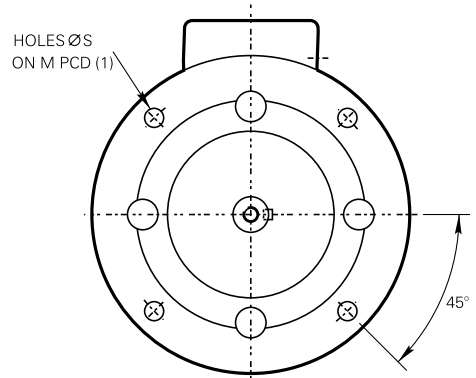
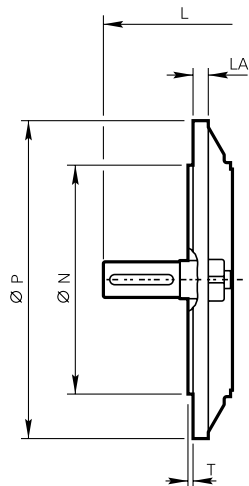
Dimensions- European & BS specifications

Foot, flange and face mounting - frames 80 - 180L

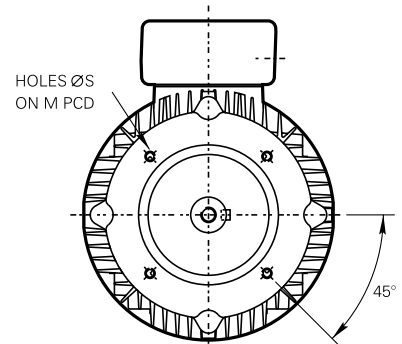
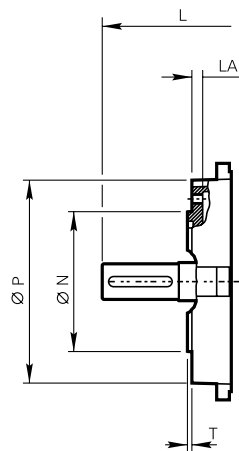
IM B3
IM 1001
Mounting options



IM B5/IM B35
IM 3001/IM 2001
Mounting options



IM B14/IM B34
IM 3601/IM 2101
Mounting options

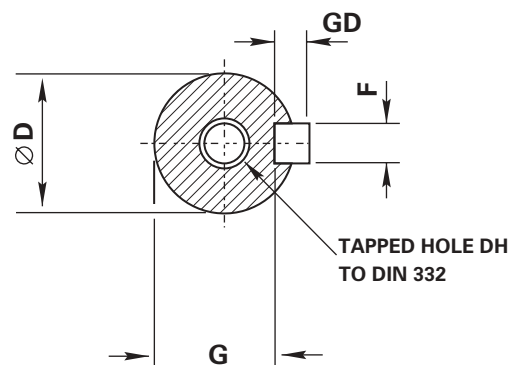


Foot, flange and face mounting - frames 80 - 180L

| Type | General | | | | | | | | | | | | | Terminal box | | |
|----------|---------|-----|-----|-----|----|------------------|----|-----|-----|-----|----|-----|-----|--------------|-----|---------|
| | A | B | C | H | K | L ⁽¹⁾ | AA | AB | AC | BB | HA | HD | HD1 | TBW | TBH | KK |
| W-DF80M | 125 | 100 | 50 | 80 | 10 | 278 | 35 | 157 | 158 | 127 | 10 | - | - | 116 | 116 | 1 X M20 |
| W-DF90S | 140 | 100 | 56 | 90 | 10 | 322 | 38 | 175 | 175 | 155 | 12 | - | - | 116 | 116 | 1 X M20 |
| W-DF90L | 140 | 125 | 56 | 90 | 10 | 322 | 38 | 175 | 175 | 155 | 12 | - | - | 116 | 116 | 1 X M20 |
| W-DF100L | 160 | 140 | 63 | 100 | 12 | 368 | 34 | 195 | 197 | 165 | 14 | 274 | 234 | 116 | 116 | 2 X M20 |
| W-DF112M | 190 | 140 | 70 | 112 | 12 | 382 | 40 | 230 | 220 | 182 | 16 | 305 | 257 | 131 | 131 | 2 X M25 |
| W-DF132S | 216 | 140 | 89 | 132 | 12 | 447 | 47 | 255 | 260 | 220 | 17 | 348 | 300 | 131 | 131 | 2 X M25 |
| W-DF132M | 216 | 178 | 89 | 132 | 12 | 447 | 47 | 255 | 260 | 220 | 17 | 348 | 300 | 131 | 131 | 2 X M25 |
| W-DF160M | 254 | 210 | 108 | 160 | 15 | 604 | 55 | 300 | 315 | 300 | 22 | 428 | 368 | 174 | 174 | 2 X M32 |
| W-DF160L | 254 | 254 | 108 | 160 | 15 | 604 | 55 | 300 | 315 | 300 | 22 | 428 | 368 | 174 | 174 | 2 X M32 |
| W-DF180M | 279 | 241 | 121 | 180 | 15 | 663 | 64 | 344 | 355 | 326 | 22 | 469 | 410 | 174 | 174 | 2 X M32 |
| W-DF180L | 279 | 279 | 121 | 180 | 15 | 663 | 64 | 344 | 355 | 326 | 22 | 469 | 410 | 174 | 174 | 2 X M32 |

| Type | IM B5 mounting | | | | | IM 1B14 mounting | | | | | | |
|-----------|----------------|-----|-----|------|-----|------------------|-----|-----|-----|-----|-----|------|
| | M | N | P | S | T | LA | M | N | P | S | T | LA |
| W-DF80M | 165 | 130 | 200 | 12 | 3.5 | 12 | - | 80 | 120 | M6 | 3 | 9 |
| W-DF90S/L | 165 | 130 | 200 | 12 | 3.5 | 12 | - | 95 | 120 | M8 | 3 | 9 |
| W-DF100L | 215 | 180 | 250 | 14.5 | 4 | 12 | 130 | 110 | 160 | M8 | 3.5 | 12.5 |
| W-DF112M | 215 | 180 | 250 | 14.5 | 4 | 12 | 130 | 110 | 164 | M8 | 3.5 | 13 |
| W-DF132S | 265 | 230 | 300 | 14.5 | 4 | 12 | 165 | 130 | 200 | M10 | 3.5 | 13 |
| W-DF132M | 265 | 230 | 300 | 14.5 | 4 | 12 | 165 | 130 | 200 | M10 | 3.5 | 13 |
| W-DF160M | 300 | 250 | 350 | 18.5 | 5 | 13 | 215 | 180 | 250 | M12 | 4 | 13 |
| W-DF160L | 300 | 250 | 350 | 18.5 | 5 | 13 | 215 | 180 | 250 | M12 | 4 | 13 |
| W-DF180M | 300 | 250 | 350 | 18.5 | 5 | 15 | - | - | - | - | - | - |
| W-DF180L | 300 | 250 | 350 | 18.5 | 5 | 15 | - | - | - | - | - | - |

| Type | Shaft | | | | | | | |
|-----------|-------|-----|----|------|----|-----|----|----------|
| | D | E | F | G | GD | EB | ED | DH |
| W-DF80M | 19 | 40 | 6 | 15.5 | 6 | 32 | 4 | M6 x 16 |
| W-DF90S/L | 24 | 50 | 8 | 20 | 7 | 40 | 5 | M8 x 19 |
| W-DF100L | 28 | 60 | 8 | 23.9 | 7 | 50 | 5 | M10 x 22 |
| W-DF112M | 28 | 60 | 8 | 23.9 | 7 | 50 | 5 | M10 x 22 |
| W-DF132S | 38 | 80 | 10 | 33 | 8 | 70 | 5 | M12 x 28 |
| W-DF132M | 38 | 80 | 10 | 33 | 8 | 70 | 5 | M12 x 28 |
| W-DF160M | 42 | 110 | 12 | 37 | 8 | 100 | 5 | M16 x 36 |
| W-DF160L | 42 | 110 | 12 | 37 | 8 | 100 | 5 | M16 x 36 |
| W-DF180M | 48 | 110 | 14 | 42.5 | 9 | 100 | 5 | M16 x 36 |
| W-DF180L | 48 | 110 | 14 | 42.5 | 9 | 100 | 5 | M16 x 36 |

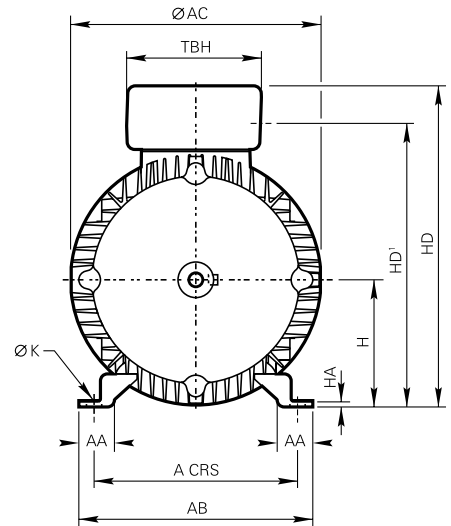
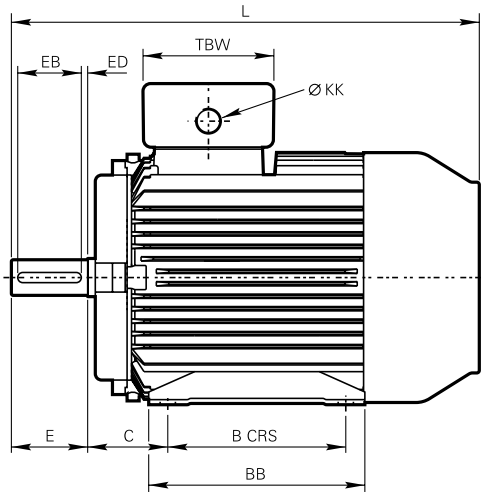


⁽¹⁾ For vertically mounted, shaft down motors see table on page 4 for increase in overall length due to the fitting of an impact cover.

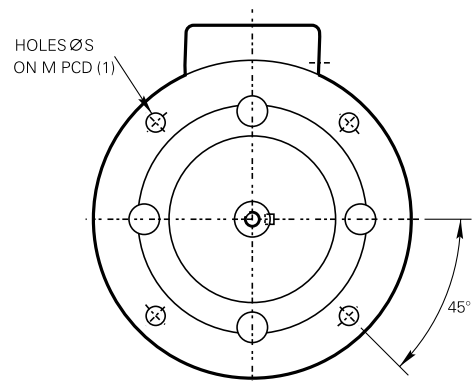
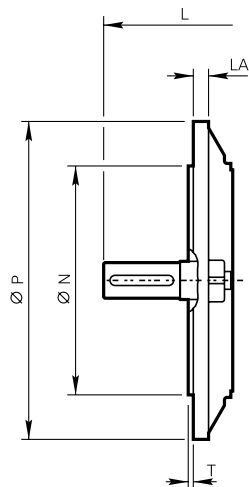
Dimensions - European specification

Foot and flange mounting - frames 200 - 355L

IM B3
IM 1001
Mounting options



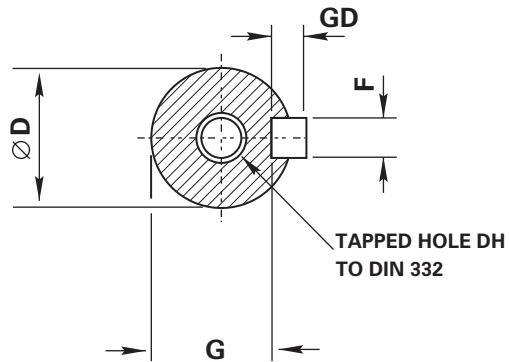
IM B5/IM B35
IM 3001/IM 2001
Mounting options



Foot and flange mounting - frames 200 - 355L

| Type | General | | C | H | K | 4-pole + | | 2-pole | | AA | AB | AC | BB | HA | HD | HD ¹ | TBW | Terminal box | |
|------------|---------|-----|-----|-----|-----|------------------|------------------|--------|-----|-----|-----|----|--------------------|-----|-----|-----------------|-----|-------------------|--|
| | A | B | | | | L ⁽¹⁾ | L ⁽²⁾ | TBH | KK | | | | | | | | | | |
| W-UDF200LX | 318 | 305 | 133 | 200 | M16 | 787 | 787 | 74 | 382 | 381 | 359 | 30 | 501 | 444 | 176 | 220 | 220 | 2 x M32 + 1 x M20 | |
| W-UDF225S | 356 | 286 | 149 | 225 | M16 | 875 | 845 | 70 | 426 | 410 | 349 | 25 | 550 ⁽²⁾ | 488 | 220 | 288 | 288 | 2 x M40 + 1 x M20 | |
| W-UDF225M | 356 | 311 | 149 | 225 | M16 | 915 | 885 | 70 | 426 | 448 | 374 | 25 | 570 | 510 | 220 | 288 | 288 | 2 x M40 + 1 x M20 | |
| W-UDF250ME | 406 | 349 | 168 | 250 | M20 | 985 | 985 | 79 | 482 | 448 | 419 | 28 | 595 ⁽³⁾ | 535 | 220 | 288 | 288 | 2 x M50 + 1 x M20 | |
| W-UDF280SE | 457 | 368 | 190 | 280 | M20 | 1065 | 1065 | 83 | 540 | 508 | 438 | 35 | 655 ⁽²⁾ | 595 | 220 | 288 | 288 | 2 x M50 + 1 x M20 | |
| W-UDF280ME | 457 | 419 | 190 | 280 | M20 | 1070 | 1070 | 83 | 540 | 508 | 489 | 35 | 655 ⁽²⁾ | 595 | 220 | 288 | 288 | 2 x M50 + 1 x M20 | |
| W-UDF315SE | 508 | 406 | 216 | 315 | M24 | 1145 | 1115 | 89 | 597 | 563 | 482 | 38 | 845 | 744 | 330 | 526 | 526 | 2 x M63 + 1 x M20 | |
| W-UDF315ME | 508 | 457 | 216 | 315 | M24 | 1215 | 1185 | 89 | 597 | 563 | 533 | 38 | 845 | 744 | 330 | 526 | 526 | 2 x M63 + 1 x M20 | |
| W-UDF315M | 508 | 457 | 216 | 315 | M24 | 1245 | 1215 | 89 | 597 | 640 | 533 | 38 | 875 | 776 | 330 | 526 | 526 | 2 x M63 + 1 x M20 | |
| W-UDF315L | 508 | 508 | 216 | 315 | M24 | 1315 | 1285 | 89 | 597 | 640 | 583 | 38 | 875 | 776 | 330 | 526 | 526 | 2 x M63 + 1 x M20 | |
| W-UDF355S | 610 | 500 | 254 | 355 | M24 | 1485 | 1415 | 100 | 710 | 732 | 626 | 27 | 975 | 874 | 330 | 526 | 526 | 2 x M63 + 1 x M20 | |
| W-UDF355M | 610 | 560 | 254 | 355 | M24 | 1605 | 1535 | 100 | 710 | 732 | 686 | 27 | 975 | 874 | 330 | 526 | 526 | 2 x M63 + 1 x M20 | |
| W-UDF355L | 610 | 630 | 254 | 355 | M24 | 1655 | 1585 | 100 | 710 | 732 | 756 | 27 | 975 | 874 | 330 | 526 | 526 | 2 x M63 + 1 x M20 | |

| Type | IM B5, IM B35 mounting | | | | | |
|------------|------------------------|-----|-----|----|---|----|
| | M | N | P | S | T | LA |
| W-UDF200LX | 350 | 300 | 400 | 19 | 5 | 19 |
| W-UDF225S | 400 | 350 | 450 | 19 | 5 | 19 |
| W-UDF225M | 400 | 350 | 450 | 19 | 5 | 19 |
| W-UDF250ME | 500 | 450 | 550 | 19 | 5 | 25 |
| W-UDF280SE | 500 | 450 | 550 | 19 | 5 | 25 |
| W-UDF280ME | 500 | 450 | 550 | 19 | 5 | 25 |
| W-UDF315SE | 600 | 550 | 660 | 24 | 6 | 29 |
| W-UDF315ME | 600 | 550 | 660 | 24 | 6 | 29 |
| W-UDF315M | 600 | 550 | 660 | 24 | 6 | 29 |
| W-UDF315L | 600 | 550 | 660 | 24 | 6 | 29 |
| W-UDF355S | 740 | 680 | 800 | 24 | 6 | 28 |
| W-UDF355M | 740 | 680 | 800 | 24 | 6 | 28 |
| W-UDF355L | 740 | 680 | 800 | 24 | 6 | 28 |



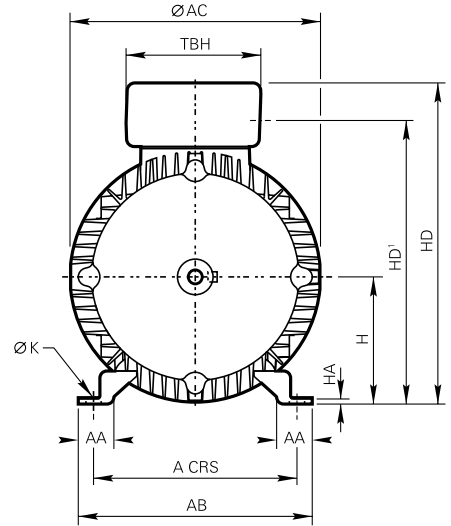
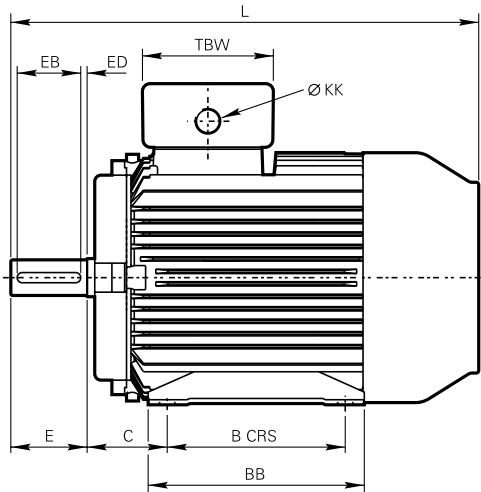
| Type | Shaft | | | | | | | | | | | | | | |
|------------|----------|-----|----|------|----|--------|----|----|-----|----|------|----|-----|----|----------|
| | 4 pole + | | | | | 2 pole | | | | | | | | | |
| | D | E | F | G | GD | EB | ED | D | E | F | G | GD | EB | ED | DH |
| W-UDF200LX | 55 | 110 | 16 | 49 | 10 | 100 | 5 | 55 | 110 | 16 | 49 | 10 | 100 | 5 | M20 x 42 |
| W-UDF225S | 60 | 140 | 18 | 53 | 11 | 125 | 10 | 55 | 110 | 16 | 49 | 10 | 100 | 5 | M20 x 42 |
| W-UDF225M | 60 | 140 | 18 | 53 | 11 | 125 | 10 | 55 | 110 | 16 | 49 | 10 | 100 | 5 | M20 x 42 |
| W-UDF250ME | 65 | 140 | 18 | 58 | 11 | 125 | 10 | 60 | 140 | 18 | 53 | 11 | 125 | 10 | M20 x 42 |
| W-UDF280SE | 75 | 140 | 20 | 67.5 | 12 | 125 | 10 | 65 | 140 | 18 | 53 | 11 | 125 | 10 | M20 x 42 |
| W-UDF280ME | 75 | 140 | 20 | 67.5 | 12 | 125 | 10 | 65 | 140 | 18 | 58 | 11 | 125 | 10 | M20 x 42 |
| W-UDF315SE | 80 | 170 | 22 | 71 | 14 | 160 | 5 | 65 | 140 | 18 | 58 | 11 | 125 | 10 | M20 x 42 |
| W-UDF315ME | 80 | 170 | 22 | 71 | 14 | 160 | 5 | 65 | 140 | 18 | 58 | 11 | 125 | 10 | M20 x 42 |
| W-UDF315M | 80 | 170 | 22 | 71 | 14 | 160 | 5 | 65 | 140 | 18 | 58 | 11 | 125 | 10 | M20 x 42 |
| W-UDF315L | 80 | 170 | 22 | 71 | 14 | 160 | 5 | 65 | 140 | 18 | 58 | 11 | 125 | 10 | M20 x 42 |
| W-UDF355S | 100 | 210 | 28 | 90 | 16 | 200 | 5 | 75 | 140 | 20 | 67.5 | 12 | 125 | 10 | M24 x 50 |
| W-UDF355M | 100 | 210 | 28 | 90 | 16 | 200 | 5 | 75 | 140 | 20 | 67.5 | 12 | 125 | 10 | M24 x 50 |
| W-UDF355L | 100 | 210 | 28 | 90 | 16 | 200 | 5 | 75 | 140 | 20 | 67.5 | 12 | 125 | 10 | M24 x 50 |

(1) For vertically mounted, shaft down motors see table on page 4 for increase in overall length due to the fitting of an impact cover.
 (2) add 25mm when cable entry is facing drive end
 (3) add 50mm when cable entry is facing drive end

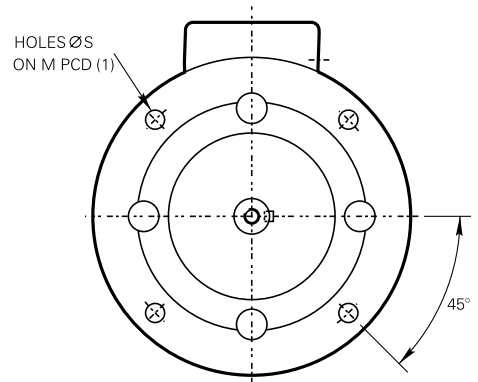
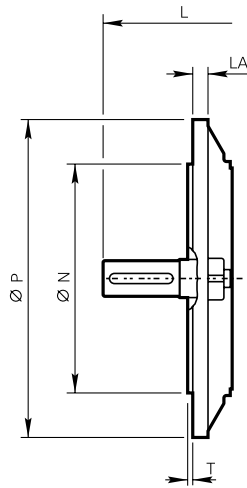
Dimensions - BS specification

Foot and flange mounting - frames 200 - 355L

IM B3
IM 1001
Mounting options



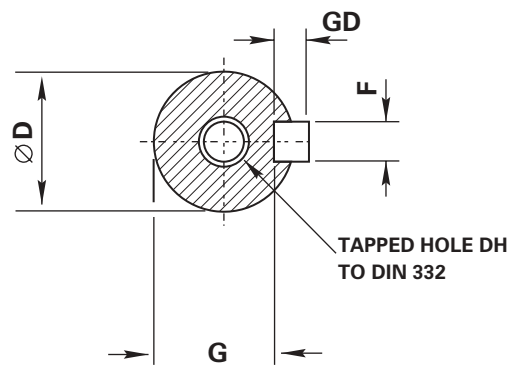
IM B5/IM B35
IM 3001/IM 2001
Mounting options



Foot and flange mounting - frames 200 - 355L

| Type | General | | | | | | 4 pole + | | 2 pole | | | | | | Terminal box | |
|-----------|---------|-----|-----|-----|-----|------------------|------------------|-----|--------|-----|-----|----|--------------------|-----|--------------|--|
| | A | B | C | H | K | L ⁽¹⁾ | L ⁽¹⁾ | AA | AB | AC | BB | HA | HD | TBW | TBH | |
| W-DF200LX | 318 | 305 | 133 | 200 | M16 | 787 | 787 | 74 | 382 | 381 | 359 | 30 | 501 | 176 | 220 | |
| W-DF225S | 356 | 286 | 149 | 225 | M16 | 875 | 845 | 70 | 426 | 410 | 349 | 25 | 550 ⁽²⁾ | 220 | 288 | |
| W-DF225M | 356 | 311 | 149 | 225 | M16 | 915 | 885 | 70 | 426 | 448 | 374 | 25 | 570 | 220 | 288 | |
| W-DF250S | 406 | 311 | 168 | 250 | M20 | 985 | 985 | 79 | 482 | 448 | 381 | 28 | 595 ⁽³⁾ | 220 | 288 | |
| W-DF250M | 406 | 349 | 168 | 250 | M20 | 1030 | 1030 | 79 | 482 | 508 | 419 | 28 | 625 ⁽²⁾ | 220 | 288 | |
| W-DF280S | 457 | 368 | 190 | 280 | M20 | 1100 | 1070 | 83 | 540 | 508 | 438 | 35 | 655 ⁽²⁾ | 220 | 288 | |
| W-DF280M | 457 | 419 | 190 | 280 | M20 | 1145 | 1115 | 83 | 540 | 563 | 487 | 35 | 810 | 330 | 526 | |
| W-DF315S | 508 | 406 | 216 | 315 | M24 | 1215 | 1185 | 89 | 597 | 563 | 483 | 38 | 845 | 330 | 526 | |
| W-DF315M | 508 | 457 | 216 | 315 | M24 | 1245 | 1215 | 89 | 597 | 640 | 533 | 38 | 875 | 330 | 526 | |
| W-DF315L | 508 | 508 | 216 | 315 | M24 | 1315 | 1285 | 89 | 597 | 640 | 583 | 38 | 875 | 330 | 526 | |
| W-DF355S | 610 | 500 | 254 | 355 | M24 | 1485 | 1415 | 100 | 710 | 732 | 626 | 27 | 970 | 330 | 526 | |
| W-DF355M | 610 | 560 | 254 | 355 | M24 | 1605 | 1535 | 100 | 710 | 732 | 686 | 27 | 970 | 330 | 526 | |
| W-DF355L | 610 | 630 | 254 | 355 | M24 | 1655 | 1585 | 100 | 710 | 732 | 756 | 27 | 970 | 330 | 526 | |

| Type | IM B5, IM B35 mounting | | | | | |
|-----------|------------------------|-----|-----|----|---|----|
| | M | N | P | S | T | LA |
| W-DF200LX | 350 | 300 | 400 | 19 | 5 | 19 |
| W-DF225S | 400 | 350 | 450 | 19 | 5 | 19 |
| W-DF225M | 400 | 350 | 450 | 19 | 5 | 19 |
| W-DF250S | 500 | 450 | 550 | 19 | 5 | 25 |
| W-DF250M | 500 | 450 | 550 | 19 | 5 | 25 |
| W-DF280S | 500 | 450 | 550 | 19 | 5 | 25 |
| W-DF280M | 500 | 450 | 550 | 19 | 5 | 25 |
| W-DF315S | 600 | 550 | 660 | 24 | 6 | 29 |
| W-DF315M | 600 | 550 | 660 | 24 | 6 | 29 |
| W-DF315L | 600 | 550 | 660 | 24 | 6 | 29 |
| W-DF355S | 740 | 680 | 800 | 24 | 6 | 28 |
| W-DF355M | 740 | 680 | 800 | 24 | 6 | 28 |
| W-DF355L | 740 | 680 | 800 | 24 | 6 | 28 |



| Type | Shaft | | | | | | | | | | | | | | DH |
|-----------|----------|-----|----|------|----|-----|----|--------|-----|----|------|----|-----|----|----------|
| | 4 pole + | | | | | | | 2 pole | | | | | | | |
| | D | E | F | G | GD | EB | ED | D | E | F | G | GD | EB | ED | |
| W-DF200LX | 55 | 110 | 16 | 49 | 10 | 100 | 5 | 55 | 110 | 16 | 49 | 10 | 100 | 5 | M20 x 42 |
| W-DF225S | 60 | 140 | 18 | 53 | 11 | 125 | 10 | 55 | 110 | 16 | 49 | 10 | 100 | 5 | M20 x 42 |
| W-DF225M | 60 | 140 | 18 | 53 | 11 | 125 | 10 | 55 | 110 | 16 | 49 | 10 | 100 | 5 | M20 x 42 |
| W-DF250S | 70 | 140 | 20 | 62.5 | 12 | 125 | 10 | 60 | 140 | 18 | 53 | 11 | 125 | 10 | M20 x 42 |
| W-DF250M | 70 | 140 | 20 | 62.5 | 12 | 125 | 10 | 60 | 140 | 18 | 53 | 11 | 125 | 10 | M20 x 42 |
| W-DF280S | 80 | 170 | 22 | 71 | 14 | 160 | 5 | 65 | 140 | 18 | 58 | 11 | 125 | 10 | M20 x 42 |
| W-DF280M | 80 | 170 | 22 | 71 | 14 | 160 | 5 | 65 | 140 | 18 | 58 | 11 | 125 | 10 | M20 x 42 |
| W-DF315S | 85 | 170 | 22 | 76 | 14 | 160 | 5 | 65 | 140 | 18 | 58 | 11 | 125 | 10 | M20 x 42 |
| W-DF315M | 85 | 170 | 22 | 76 | 14 | 160 | 5 | 65 | 140 | 18 | 58 | 11 | 125 | 10 | M20 x 42 |
| W-DF315L | 85 | 170 | 22 | 76 | 14 | 160 | 5 | 65 | 140 | 18 | 58 | 11 | 125 | 10 | M20 x 42 |
| W-DF355S | 100 | 210 | 28 | 90 | 16 | 200 | 5 | 75 | 140 | 20 | 67.5 | 12 | 125 | 10 | M24 x 50 |
| W-DF355M | 100 | 210 | 28 | 90 | 16 | 200 | 5 | 75 | 140 | 20 | 67.5 | 12 | 125 | 10 | M24 x 50 |
| W-DF355L | 100 | 210 | 28 | 90 | 16 | 200 | 5 | 75 | 140 | 20 | 67.5 | 12 | 125 | 10 | M24 x 50 |

⁽¹⁾ For vertically mounted, shaft down motors see table on page 4 for increase in overall length due to the fitting of an impact cover.

⁽²⁾ add 25mm when cable entry is facing drive end

⁽³⁾ add 50mm when cable entry is facing drive end

Technical information: Mechanical

Bearings and greasing arrangements

Bearings are pre-packed with a grease type dependant on frame size and re-greasing facility as detailed in table opposite:

| Standard and re-greasing facilities | | |
|-------------------------------------|-----------------|----------------------|
| Type | Standard grease | Re-greasing facility |
| 80 - 180 | EA6 Polyurea | Available |
| 200 - 355 | Esso Unirex N3 | Standard |

| Bearing references and oil seals for horizontally-mounted motors only | | | | | | |
|---|--------------|----------|-------------------------|---------------|-------------------------------|-------------------------------|
| Type | | Polarity | Bearings ⁽¹⁾ | | Oil seals ⁽²⁾ | |
| European | BS | | Drive end | Non-drive end | Drive end | Non-drive end |
| W-DF80M | W-DF80M | All | 62042Z | 62022Z | 20 x 30 x 7 ⁽³⁾ | 15 x 24 x 5 ⁽³⁾ |
| W-DF90S/L | W-DF90S/L | All | 62052Z | 62032Z | 25 x 35 x 7 ⁽³⁾ | 17 x 28 x 6 ⁽³⁾ |
| W-DF100L | W-DF100L | All | 62062Z | 62052Z | 30 x 42 x 7 ⁽³⁾ | 25 x 37 x 7 ⁽³⁾ |
| W-DF112M | W-DF112M | All | 62062Z | 62052Z | 30 x 42 x 7 ⁽³⁾ | 25 x 37 x 7 ⁽³⁾ |
| W-DF132S/M | W-DF132S/M | All | 62082Z | 63052Z | 40 x 52 x 7 ⁽³⁾ | 25 x 37 x 7 ⁽³⁾ |
| W-DF160M/L | W-DF160M/L | All | 63092Z | 63072Z | 45 x 60 x 8 ⁽³⁾ | 35 x 47 x 7 ⁽³⁾ |
| W-DF180M/L | W-DF180M/L | All | 63102Z | 63082Z | 50 x 65 x 8 ⁽³⁾ | 40 x 52 x 7 ⁽³⁾ |
| W-UDF200LX | W-DF200LX | All | 6312 | 6312 | 60 x 80 x 8 ⁽³⁾ | 60 x 80 x 8 ⁽³⁾ |
| W-UDF225S | W-DF225S | All | 6313 | 6313 | 65 x 90 x 10 ⁽⁴⁾ | 65 x 90 x 10 ⁽⁴⁾ |
| W-UDF225M | W-DF225M | All | 6314 | 6314 | 70 x 90 x 10 ⁽⁴⁾ | 70 x 90 x 10 ⁽⁴⁾ |
| W-UDF250ME | W-DF250S | 2 | 6314 | 6314 | 70 x 90 x 10 ⁽⁴⁾ | 70 x 90 x 10 ⁽⁴⁾ |
| | | 4 up | 6316 | 6316 | 80 x 110 x 10 ⁽⁴⁾ | 80 x 110 x 10 ⁽³⁾ |
| W-UDF280SE | W-DF250M | 2 | 6314 | 6314 | 70 x 90 x 10 ⁽⁴⁾ | 70 x 90 x 10 ⁽⁴⁾ |
| | | 4 up | 6318 | 6318 | 90 x 120 x 12 ⁽³⁾ | 90 x 120 x 12 ⁽³⁾ |
| W-UDF280ME | W-DF280S | 2 | 6314 | 6314 | 70 x 90 x 10 ⁽⁴⁾ | 70 x 90 x 10 ⁽⁴⁾ |
| | | 4 up | 6318 | 6318 | 90 x 120 x 12 ⁽³⁾ | 90 x 120 x 12 ⁽³⁾ |
| W-UDF315SE | W-DF280M | 2 | 6316 | 6316 | 70 x 90 x 10 ⁽⁴⁾ | 70 x 90 x 10 ⁽⁴⁾ |
| | | 4 up | 6319 | 6319 | 90 x 120 x 12 ⁽³⁾ | 90 x 120 x 12 ⁽³⁾ |
| W-UDF315ME | W-DF315S | 2 | 6316 | 6316 | 70 x 90 x 10 ⁽⁴⁾ | 70 x 90 x 10 ⁽⁴⁾ |
| | | 4 up | 6319 | 6319 | 90 x 120 x 12 ⁽³⁾ | 90 x 120 x 12 ⁽³⁾ |
| W-UDF315M | W-DF315M | 2 | 6316 | 6316 | 70 x 90 x 10 ⁽⁴⁾ | 70 x 90 x 10 ⁽⁴⁾ |
| | | 4 up | 6319 | 6319 | 90 x 120 x 12 ⁽³⁾ | 90 x 120 x 12 ⁽³⁾ |
| W-UDF315L | W-DF315L | 2 | 6316 | 6316 | 70 x 90 x 10 ⁽⁴⁾ | 70 x 90 x 10 ⁽⁴⁾ |
| | | 4 up | 6319 | 6319 | 90 x 120 x 12 ⁽³⁾ | 90 x 120 x 12 ⁽³⁾ |
| W-UDF355S/M/L | W-DF355S/M/L | 2 | N316 | 6316 | 75 x 100 x 10 ⁽⁴⁾ | 75 x 100 x 10 ⁽⁴⁾ |
| | | 4 up | N324 | 6324 | 115 x 145 x 14 ⁽³⁾ | 115 x 145 x 14 ⁽³⁾ |

⁽¹⁾ Frame sizes 80 and 90 have bearings with CN clearances, frame sizes 100 to 355 have bearings with C3 clearance 'medium' series
⁽²⁾ Sizes given are in mm, and represent bore x outside diameter x width
Material: ⁽³⁾ Nitrile rubber ⁽⁴⁾ Silicon rubber

| Grease life expected at 80°C bearing temperature x 10 ³ hours | | | | | | | | | |
|--|-----------------------------|------------------------|----------|------------------------|----------|------------------------|----------|-----------------------|----------|
| Type | | 3000 min ⁻¹ | | 1500 min ⁻¹ | | 1000 min ⁻¹ | | 750 min ⁻¹ | |
| European | BS | Horizontal | Vertical | Horizontal | Vertical | Horizontal | Vertical | Horizontal | Vertical |
| W-DF80-90 | W-DF80-90 | 22.0 | 22.0 | 32.0 | 32.0 | 35.0 | 35.0 | 35.0 | 35.0 |
| W-DF100-180L | W-DF100-180L | 26.0 | 26.0 | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 |
| W-UDF200LX | W-DF200LX | 12.6 | 8.2 | 30.0 | 20.3 | 30.0 | 27.8 | 30.0 | 30.0 |
| W-UDF225S | W-DF225S | 12.6 | 8.2 | 30.0 | 20.3 | 30.0 | 27.8 | 30.0 | 30.0 |
| W-UDF225M | W-DF225M | 11.3 | 7.4 | 29.5 | 19.2 | 30.0 | 26.0 | 30.0 | 30.0 |
| W-UDF250ME | W-DF250S | 11.3 | 7.4 | 26.3 | 17.1 | 30.0 | 23.6 | 30.0 | 29.3 |
| W-UDF280SE | W-DF250M | 11.3 | 7.4 | 23.4 | 15.2 | 30.0 | 21.3 | 30.0 | 27.8 |
| W-UDF280ME | W-DF280S | 11.3 | 7.4 | 23.4 | 15.2 | 30.0 | 21.3 | 30.0 | 27.8 |
| W-UDF315SE | W-DF280M | 9.4 | 6.1 | 21.3 | 13.8 | 30.0 | 20.3 | 30.0 | 26.0 |
| W-UDF315ME | W-DF315S | 9.4 | 6.1 | 21.3 | 13.8 | 30.0 | 20.3 | 30.0 | 26.0 |
| W-UDF315M | W-DF315M | 9.4 | 6.1 | 21.3 | 13.8 | 30.0 | 20.3 | 30.0 | 26.0 |
| W-UDF315L | W-DF315L | 9.4 | 6.1 | 21.3 | 13.8 | 30.0 | 20.3 | 30.0 | 26.0 |
| W-UDF355S/M/L ⁽¹⁾ | W-DF355S/M/L ⁽¹⁾ | 5.0 | 3.3 | 8.2 | 5.3 | 16.2 | 10.5 | 24.5 | 15.9 |
| W-UDF355S/M/L ⁽²⁾ | W-DF355S/M/L ⁽²⁾ | 9.4 | 6.1 | 13.5 | 8.8 | 22.5 | 14.6 | 30.0 | 19.5 |

⁽¹⁾ DE = Drive End
⁽²⁾ NDE = Non-Drive End

Technical information: Mechanical

Axial and radial loads

| Maximum permissible external axial thrust and radial loads in Newtons (N) | | | | | | | | |
|---|-------|--------------------|----------------------|--------------------|----------------------|--------------------|----------------------|---|
| Type | Poles | Horizontal shaft | | Vertical shaft | | | | Maximum permissible radial load at end of shaft (standard mounting) |
| | | Load towards motor | Load away from motor | Shaft up | | Shaft down | | |
| | | | | Load towards motor | Load away from motor | Load towards motor | Load away from motor | |
| W-DF80M | 2 | 339 | 539 | 321 | 562 | 362 | 521 | 774 |
| | 4 | 303 | 503 | 283 | 530 | 330 | 483 | 729 |
| | 6 | 284 | 484 | 260 | 516 | 316 | 460 | 653 |
| | 8 | 296 | 496 | 272 | 528 | 328 | 472 | 662 |
| W-DF90S/L | 2 | 444 | 684 | 421 | 716 | 476 | 661 | 915 |
| | 4 | 398 | 638 | 366 | 682 | 442 | 606 | 854 |
| | 6 | 349 | 589 | 309 | 641 | 401 | 549 | 720 |
| | 8 | 369 | 609 | 334 | 656 | 416 | 574 | 747 |
| W-DF100L | 2 | 781 | 1101 | 743 | 1159 | 839 | 1063 | 1295 |
| | 4 | 710 | 1030 | 655 | 1107 | 787 | 975 | 1215 |
| | 6 | 560 | 880 | 506 | 963 | 643 | 826 | 1145 |
| | 8 | 580 | 900 | 521 | 985 | 665 | 841 | 1018 |
| W-DF112M | 2 | 768 | 1088 | 715 | 1170 | 850 | 1035 | 1295 |
| | 4 | 690 | 1010 | 612 | 1131 | 811 | 932 | 1202 |
| | 6 | 541 | 861 | 463 | 979 | 659 | 783 | 1141 |
| | 8 | 565 | 885 | 487 | 1003 | 683 | 807 | 1009 |
| W-DF132S | 2 | 1355 | 1707 | 1266 | 1838 | 1486 | 1618 | 2114 |
| | 4 | 1269 | 1621 | 1168 | 1779 | 1427 | 1520 | 2095 |
| | 6 | 1186 | 1538 | 1074 | 1711 | 1359 | 1426 | 1997 |
| | 8 | 1002 | 1354 | 869 | 1556 | 1204 | 1221 | 1609 |
| W-DF132M | 4 | 1253 | 1605 | 1130 | 1794 | 1442 | 1482 | 2068 |
| | 6 | 1167 | 1519 | 1035 | 1718 | 1366 | 1387 | 1968 |
| | 8 | 997 | 1349 | 858 | 1561 | 1209 | 1210 | 1600 |
| W-DF160M | 2 | 2168 | 2663 | 2932 | 2002 | 2437 | 2497 | 3650 |
| | 4 | 2153 | 2648 | 2659 | 1960 | 2464 | 2160 | 3785 |
| | 6 | 2022 | 2517 | 2905 | 1777 | 2410 | 1977 | 3626 |
| | 8 | 1509 | 2004 | 2389 | 1250 | 1894 | 1450 | 3316 |
| W-DF160L | 2 | 2144 | 2639 | 2950 | 1951 | 2455 | 2151 | 3613 |
| | 4 | 2123 | 2618 | 2982 | 1895 | 2487 | 2095 | 3738 |
| | 6 | 1973 | 2468 | 2946 | 1669 | 2451 | 1869 | 3544 |
| | 8 | 1464 | 1959 | 2435 | 1144 | 1940 | 1344 | 3233 |
| W-DF180M | 2 | 2711 | 3274 | 3667 | 2465 | 3104 | 2665 | 4374 |
| | 4 | 2749 | 3312 | 3830 | 2426 | 3267 | 2626 | 4556 |
| W-DF180L | 6 | 2575 | 3138 | 3785 | 2166 | 3222 | 2366 | 4334 |
| | 8 | 2266 | 2829 | 3469 | 1850 | 2906 | 2050 | 3979 |

All figures are based on L10aah life of 20,000 hours

Technical information: Mechanical

Maximum permissible external axial thrust and radial loads in Newtons (N)

| Type | | Horizontal shaft | | | | Vertical shaft | | | | Maximum permissible radial load at end of shaft | | | |
|----------------|-----------|------------------|--------------------|----------------------|--------------------|----------------------|--------------------|----------------------|-----------------------|---|----------------|----------|--|
| | | Poles | Load towards motor | Load away from motor | Shaft up | | Shaft down | | Standard ball bearing | | Roller bearing | | |
| European frame | BS frame | | | | Load towards motor | Load away from motor | Load towards motor | Load away from motor | European frame | BS frame | European frame | BS frame | |
| W-UDF200LX | W-DF200LX | 2 | 5435 | 4775 | 5005 | 5361 | 6021 | 4345 | 5125 | 5125 | 7541 | 7541 | |
| | | 4 | 6058 | 5398 | 5531 | 6121 | 6781 | 4871 | 5588 | 5588 | 7541 | 7541 | |
| | | 6 | 6055 | 5395 | 5457 | 6215 | 6875 | 4797 | 5536 | 5536 | 7541 | 7541 | |
| W-UDF225S | W-DF225S | 8 | 5781 | 5121 | 5183 | 5941 | 6601 | 4523 | 5252 | 5252 | 7541 | 7541 | |
| | | 4 | 6692 | 6122 | 5941 | 7177 | 7747 | 5371 | 5963 | 5963 | 8202 | 8202 | |
| | | 6 | 6770 | 6200 | 5935 | 7371 | 7941 | 5365 | 5982 | 5982 | 8202 | 8202 | |
| W-UDF225M | W-DF225M | 8 | 6441 | 5871 | 5606 | 7042 | 7612 | 5036 | 5648 | 5648 | 8202 | 8202 | |
| | | 2 | 6729 | 6197 | 6084 | 7082 | 7614 | 6213 | 6602 | 6602 | 8745 | 8745 | |
| | | 4 | 7530 | 6998 | 6745 | 8099 | 8631 | 6213 | 6868 | 6876 | 8921 | 8921 | |
| W-UDF250ME | W-DF250S | 6 | 7640 | 7108 | 6673 | 8463 | 8995 | 6141 | 6856 | 6856 | 8921 | 8921 | |
| | | 8 | 7293 | 6761 | 6326 | 8116 | 8648 | 5794 | 6501 | 6501 | 8921 | 8921 | |
| | | 2 | 6640 | 6108 | 5837 | 7209 | 7741 | 5305 | 6262 | 6262 | 8921 | 8921 | |
| W-UDF280SE | W-DF250M | 4 | 9012 | 8418 | 8030 | 9794 | 10388 | 7436 | 8163 | 8163 | 11342 | 14166 | |
| | | 6 | 9391 | 8797 | 8311 | 10311 | 10905 | 7717 | 8477 | 8477 | 11342 | 14166 | |
| | | 8 | 9007 | 8413 | 7927 | 9927 | 10521 | 7333 | 8087 | 8087 | 11342 | 14166 | |
| W-UDF280ME | W-DF280S | 2 | 6505 | 5911 | 5472 | 7352 | 7946 | 4878 | 5692 | 5897 | 8242 | 8921 | |
| | | 4 | 10241 | 9579 | 8943 | 11377 | 12039 | 8281 | 9260 | 9627 | 17105 | 14166 | |
| | | 6 | 10846 | 10184 | 9423 | 12157 | 12819 | 8761 | 9336 | 10182 | 17105 | 14166 | |
| W-UDF280ME | W-DF280S | 8 | 10400 | 9738 | 8977 | 11711 | 12373 | 8315 | 9336 | 9706 | 17105 | 14166 | |
| | | 2 | 6268 | 5736 | 5101 | 7355 | 7887 | 4569 | 5824 | 5795 | 9825 | 9503 | |
| | | 4 | 9774 | 9112 | 8014 | 11534 | 12196 | 7352 | 9136 | 8842 | 17423 | 17348 | |
| W-UDF315SE | W-DF280M | 6 | 10582 | 9920 | 8704 | 12524 | 13186 | 8042 | 9698 | 9386 | 17423 | 17348 | |
| | | 8 | 10136 | 9474 | 8257 | 12077 | 12739 | 7595 | 9216 | 8919 | 17423 | 17348 | |
| | | 2 | 7443 | 6849 | 5921 | 8957 | 9551 | 5327 | 6804 | 6804 | 11342 | 11342 | |
| W-UDF315ME | W-DF315S | 4 | 10305 | 9965 | 8299 | 12719 | 13059 | 7959 | 9443 | 9443 | 17414 | 17414 | |
| | | 6 | 11190 | 10850 | 9050 | 13810 | 14150 | 8710 | 10042 | 10042 | 17414 | 17414 | |
| | | 8 | 10797 | 10457 | 8657 | 13417 | 13757 | 8317 | 9630 | 9630 | 17414 | 17414 | |
| W-UDF315ME | W-DF315S | 2 | 7337 | 6743 | 5654 | 9082 | 9676 | 5060 | 6680 | 6680 | 11342 | 11342 | |
| | | 4 | 10077 | 9737 | 7672 | 13044 | 13384 | 7332 | 9121 | 9121 | 17414 | 20887 | |
| | | 6 | 10958 | 10618 | 8419 | 14131 | 14471 | 8079 | 9734 | 9734 | 17414 | 20887 | |
| W-UDF315M | W-DF315M | 8 | 10347 | 10007 | 7798 | 13510 | 13850 | 7458 | 9312 | 9312 | 17414 | 20887 | |
| | | 2 | 7398 | 6804 | 5664 | 9154 | 9748 | 5070 | 6885 | 6885 | 11342 | 11342 | |
| | | 4 | 10192 | 9852 | 8006 | 12862 | 13202 | 7666 | 9482 | 9482 | 17414 | 20748 | |
| W-UDF315L | W-DF315L | 6 | 11060 | 10720 | 8715 | 13971 | 14311 | 8375 | 10066 | 10066 | 17414 | 20748 | |
| | | 8 | 10667 | 10327 | 8322 | 13578 | 13918 | 7982 | 9640 | 9640 | 17414 | 20748 | |
| | | 2 | 7055 | 6461 | 5050 | 9164 | 9758 | 4456 | 6603 | 6606 | 11342 | 11342 | |
| W-UDF355S | W-DF355S | 4 | 10008 | 9668 | 7501 | 13123 | 13463 | 7161 | 9207 | 9207 | 17414 | 20748 | |
| | | 6 | 10872 | 10532 | 8207 | 14229 | 14569 | 7867 | 9801 | 9801 | 17414 | 20748 | |
| | | 8 | 10263 | 9923 | 7587 | 13609 | 13949 | 7247 | 9367 | 9367 | 17414 | 20748 | |
| W-UDF355M | W-DF355M | 2 | 6118 | 5524 | 3136 | 9692 | 10286 | 2542 | - | - | 12627 | 12627 | |
| | | 4 | 12994 | 11454 | 8799 | 17389 | 18929 | 7259 | - | - | 27533 | 27533 | |
| | | 6 | 14038 | 12498 | 9387 | 19143 | 20683 | 7847 | - | - | 27533 | 27533 | |
| W-UDF355L | W-DF355L | 8 | 14106 | 12566 | 9455 | 19211 | 20751 | 7915 | - | - | 27533 | 27533 | |
| | | 2 | 5779 | 5185 | 2326 | 10050 | 10644 | 1732 | - | - | 12627 | 12627 | |
| | | 4 | 12528 | 10988 | 7511 | 18055 | 19595 | 5971 | - | - | 27533 | 27533 | |
| W-UDF355L | W-DF355L | 6 | 13148 | 11608 | 7523 | 19533 | 21073 | 5983 | - | - | 27533 | 27533 | |
| | | 8 | 13214 | 11674 | 7589 | 19599 | 21139 | 6049 | - | - | 27533 | 27533 | |
| | | 2 | 5595 | 5001 | 1734 | 10396 | 10990 | 1140 | - | - | 12627 | 12627 | |
| W-UDF355L | W-DF355L | 4 | 12343 | 10803 | 7038 | 18282 | 19822 | 5498 | - | - | 27533 | 27533 | |
| | | 6 | 12936 | 11396 | 6980 | 19794 | 21334 | 5440 | - | - | 27533 | 27533 | |
| | | 8 | 13002 | 11462 | 7046 | 19860 | 21400 | 5506 | - | - | 27533 | 27533 | |

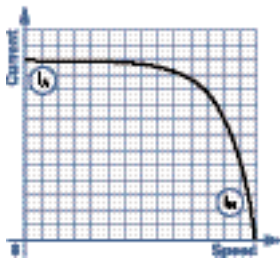
All figures are based on L10aah life of 20,000 hours

Performance data - page notes

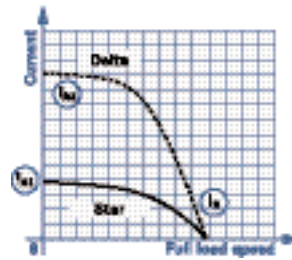
DOL starting
(BS EN 60034-12 Design N)

Star delta starting
(BS EN 60034-12 Design NY)

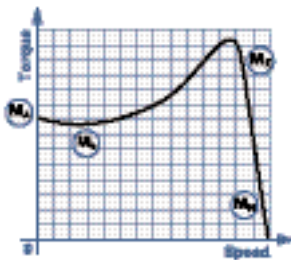
Typical speed/current curve



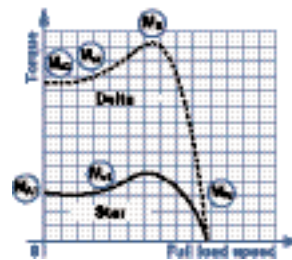
Typical speed/current curve



Typical speed/torque curve



Typical speed/torque curve



- (I_A) Starting current
- (I_N) Full load current
- (M_A) Starting torque or locked rotor torque
- (M_S) Pull up torque or run up torque
- (M_K) Pull out torque or breakdown torque
- (M_N) Full load torque

Torque/speed curves for specific motors can be supplied on request

During the run up period in Star, there must be an adequate excess of motor torque over the load torque. The change to Delta must not occur until the motor is near the operating speed. Refer to Brook Crompton for running up against a load in excess of 70% full load during Star Delta starting.

Performance figures are subject to IEC tolerances. Performance figures are based on a 400 volt winding. To calculate I_N on special voltages, multiply the I_N at 400 volts by the following factors:

| | | | | | | | |
|----------------|------|------|-----|------|------|------|------|
| Voltage | 220 | 346 | 365 | 420 | 440 | 500 | 550 |
| Factor | 1.82 | 1.16 | 1.1 | 0.95 | 0.91 | 0.80 | 0.73 |

Dimensions – page notes

| Flange | IEC 72-1 Annex C.1.7 Option 1 | |
|------------|----------------------------------|------------------|
| | Dim N | Tol Limits |
| 130 to 180 | j6 | +0.014 -0.011 |
| 230 to 250 | h6 | +0.016 -0.013 |
| 300 | h6 | +0.000 -0.032 |
| 350 | h6 | +0.000 -0.036 |
| 450 | h6 | +0.000 -0.040 |
| 550 | h6 | +0.000 -0.044 |
| 680 | h6 | +0.000 -0.050 |

| Shaft | British and European | |
|-----------|----------------------|------------------|
| | Dim D | Tol Limits |
| 11 to 18 | j6 | +0.008 -0.003 |
| 19 to 28 | j6 | +0.009 -0.004 |
| 32 to 48 | k6 | +0.018 +0.002 |
| 55 to 80 | m6 | +0.030 +0.011 |
| 82 to 120 | m6 | +0.035 +0.013 |

All dimensions in millimetres

Drain holes are standard on frames 160-355 and on request for frames 80-132

Please note that 80 frame motors are only available as terminal box right or left.

Cable entry can be arranged in any one of four positions at 90° intervals

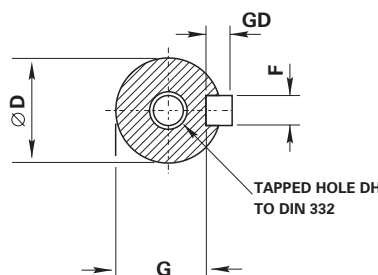
No eyebolts on frame sizes 80 (all poles) and 90 (6 and 8 pole)

Dimensions should not be used for installation purposes unless specially endorsed

B5 mounted motors have suffix 'D' in the frame reference, eg W-DF132MVX-D and B35 mounted motors have suffix 'H' in the frame reference, eg W-DF132MVX-H

B14 mounted motors have suffix 'C' in the frame reference, eg W-DF132MVX-C and B3/B14 mounted motors have suffix 'H' in the frame reference, eg W-DF132MVX-H

| Face | IEC 72-1 Annex C.1.7 Option 1 | |
|-------------|----------------------------------|------------------|
| | Dim N | Tol Limits |
| 60 and 80 | j6 | +0.012 -0.007 |
| 95 and 110 | j6 | +0.013 -0.009 |
| 130 and 180 | j6 | +0.014 -0.011 |



Rotating Electrical Machines

Worldwide sales and service network

Every care has been taken to ensure the accuracy of the information contained in this publication, but, due to a policy of continuous development and improvement the right is reserved to supply products which may differ slightly from those illustrated and described in this publication



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