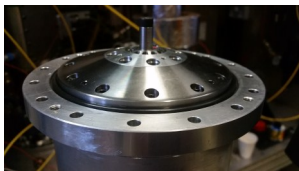
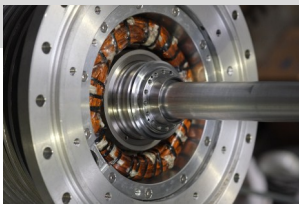
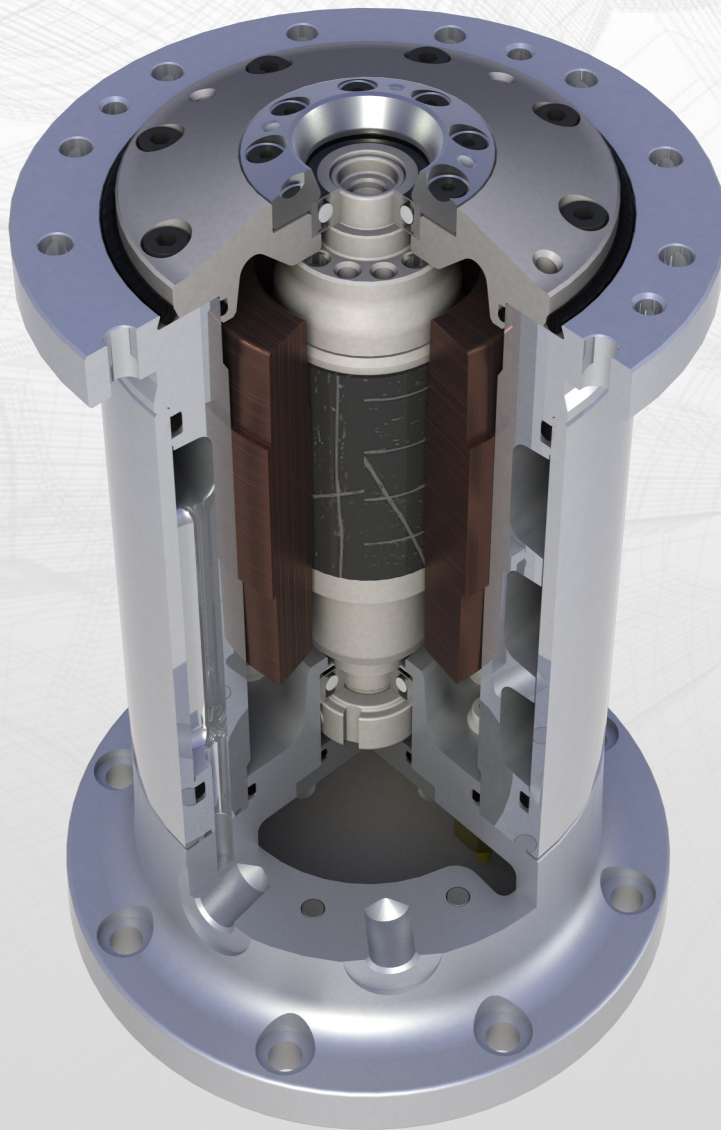


# DBS 'M' Series High-Speed Motors and Generators



Three phase synchronous or asynchronous

Grease packed or oil lubricated

Semi-hermetic sealing

20 to 75 krpm



# DBS 'M' Series Motors and Generators

## Fields of Application

Standalone high speed rotating machinery of all types especially where direct overhang of driven or driving components is required. The IAM series is equally suitable for motor or generator applications.

## Design

High power density and high speed capability with liquid cooling and oil lubricated ball bearings as standard. All machines exceed IE4 [Super premium efficiency] as per EU motor efficiency standard IEC/EN 60034-30-1: 2014. All machines are IP54 rated (up to IP67 on request). 3 phase, permanent magnet or induction machines available.

Proprietary VFD drives available from a number of suppliers to suit customer compliance requirements. Proprietary front flange with captive 'O' ring seal provides precise, concentric location. All key mechanical ancillaries incorporated directly into machine:

## Special Customer Requirements

Where rotational speed, power or other operational requirement fall outside our normal range of machines, DBS will be pleased to quote for bespoke designs.

## Operating Range

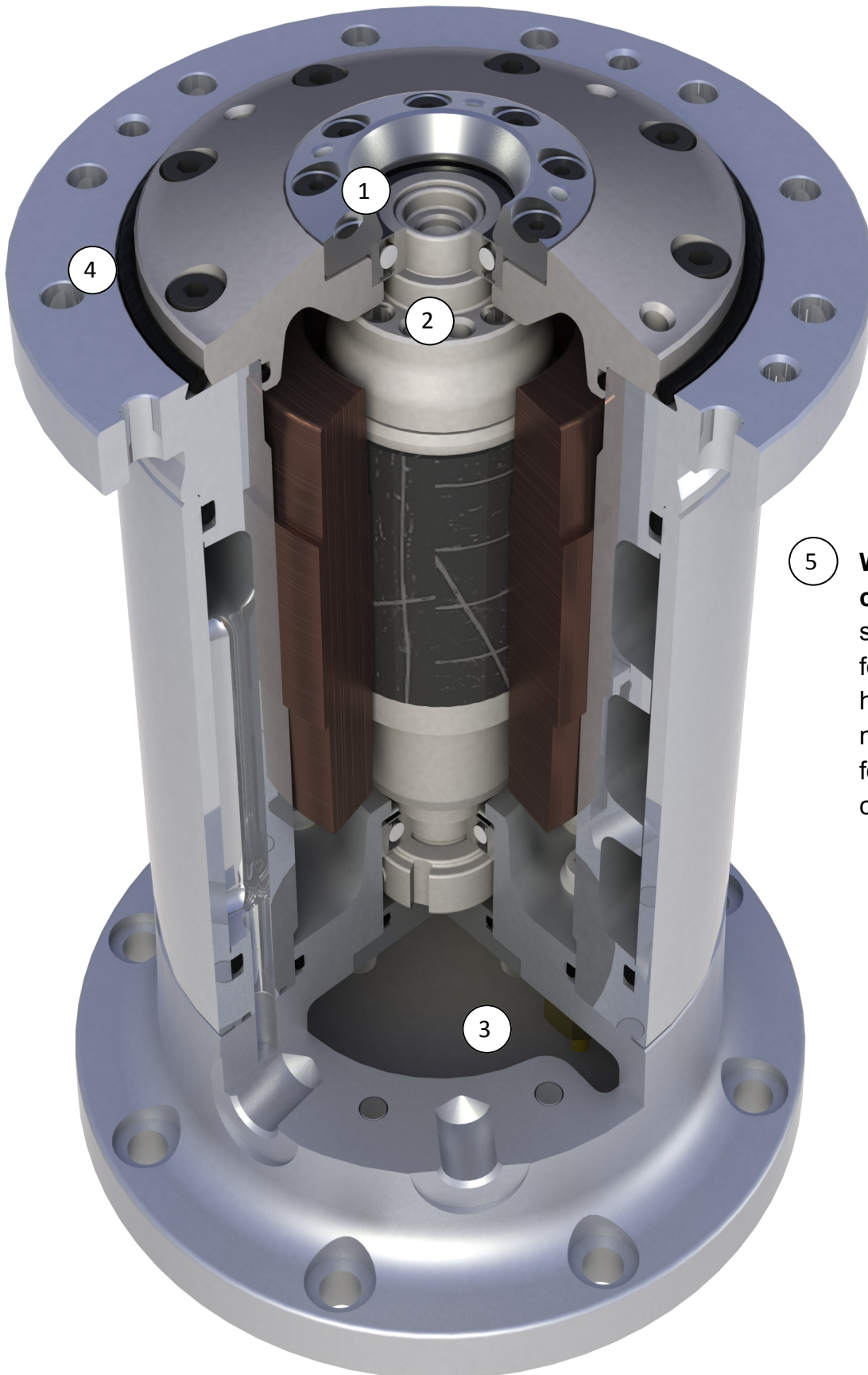
See page 4 for full operating range and performance graphs.

- Nominal Power: 1-150kW
- Nominal Speed: 30-100kRPM
- Operating temperature: -60/+70°C
- Operating pressures up to 40barg (580psi)\*

\* Dependant on the compatibility of working fluid of the driven machine with the bearings.

- 1 **Keyed shaft end provided as standard.** Special shaft ends to suit customer requirements available on request.
- 2 **Super precision, angular contact ball bearings** support magnetic rotor and overhung driven components. Bearings sized to withstand substantial radial and axial loads to meet customer requirements if required.
- 3 **Integrated terminal box** includes stud terminals for all power and sensor connections.

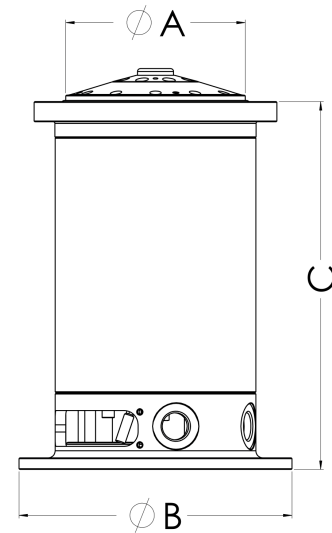
- 4 **DBS standard flange face** provides accurate location concentric and square with rotor shaft. Incorporates captive 'O' ring seal rated to body design pressure.



- 5 **Water, oil or glycol cooling** to remove stator heat. Coolant is fed first through hairpin heat exchanger mounted inside oil tank for simultaneous oil cooling.

## Selection Chart

The table below shows the range of powers and speeds that we offer. Standard frame sizes and/or machine properties can be adjusted to suit customer requirements. The examples are there to show indicative lengths. Please note: All values are indicative, it is possible to exceed powers and speeds in certain cases. Please direct enquiries to [enquiries@dynamicboost.com](mailto:enquiries@dynamicboost.com)



| Frame Size** | Rated Power Range [kW] | Maximum Speed [rpm] |         | Example Rating  | Dimensions [mm] |     |     |
|--------------|------------------------|---------------------|---------|-----------------|-----------------|-----|-----|
|              |                        | Grease              | Oil     |                 | A               | B   | C*  |
| M80          | 1 - 10                 | 75,000              | 110,000 | 2.35kW @110kRPM | 80 h6           | 114 | 160 |
|              |                        |                     |         | 3.5kW @110kRPM  |                 |     | 175 |
|              |                        |                     |         | 4.7kW @100kRPM  |                 |     | 190 |
|              |                        |                     |         | 6.3kW @90kRPM   |                 |     | 210 |
| M125         | 5 - 30                 | 55,000              | 75,000  | 10kW @75kRPM    | 125 h6          | 190 | 230 |
|              |                        |                     |         | 16kW @68kRPM    |                 |     | 250 |
|              |                        |                     |         | 21kW @60kRPM    |                 |     | 270 |
|              |                        |                     |         | 29kW @55kRPM    |                 |     | 300 |
| M170         | 10 - 60                | 45,000              | 70,000  | 12kW @60kRPM    | 170 h6          | 243 | 230 |
|              |                        |                     |         | 20kW @50kRPM    |                 |     | 260 |
|              |                        |                     |         | 27kW @45kRPM    |                 |     | 290 |
|              |                        |                     |         | 35kW @45kRPM    |                 |     | 330 |
| M240***      | 30 - 150               | 30,000              | 45,000  | 55kW @50kRPM    | 240 h6          | 344 | 300 |
|              |                        |                     |         | 85kW @45kRPM    |                 |     | 340 |
|              |                        |                     |         | 105kW @40kRPM   |                 |     | 380 |
|              |                        |                     |         | 125kW @40kRPM   |                 |     | 400 |

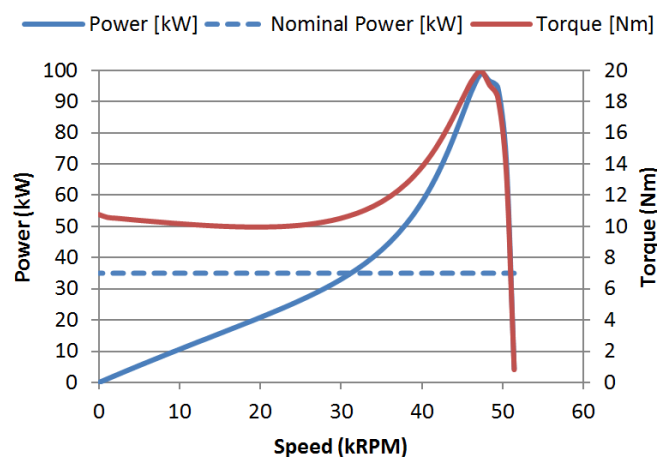
\*Length dimension C has been provided for water cooled motors, air cooled versions are also available.

\*\* Special custom sizes such as M60 & M100 available upon request. \*\*\* Custom larger motors are also available upon request.

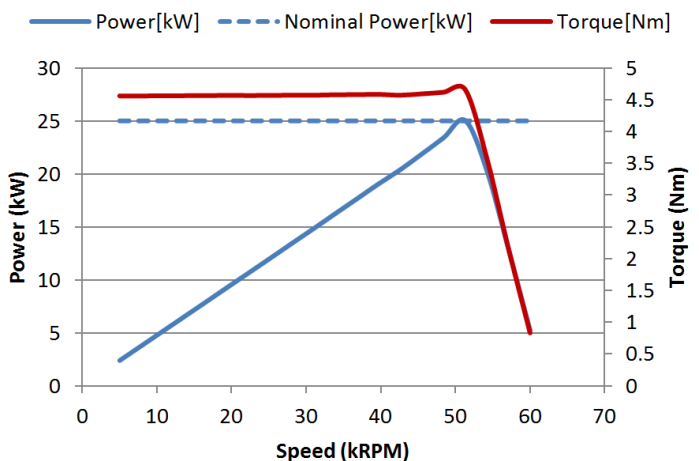
## Performance Curves

Typical performance curves for our synchronous and asynchronous machines are shown below. A set of performance curves and equivalent circuit are supplied with each quotation.

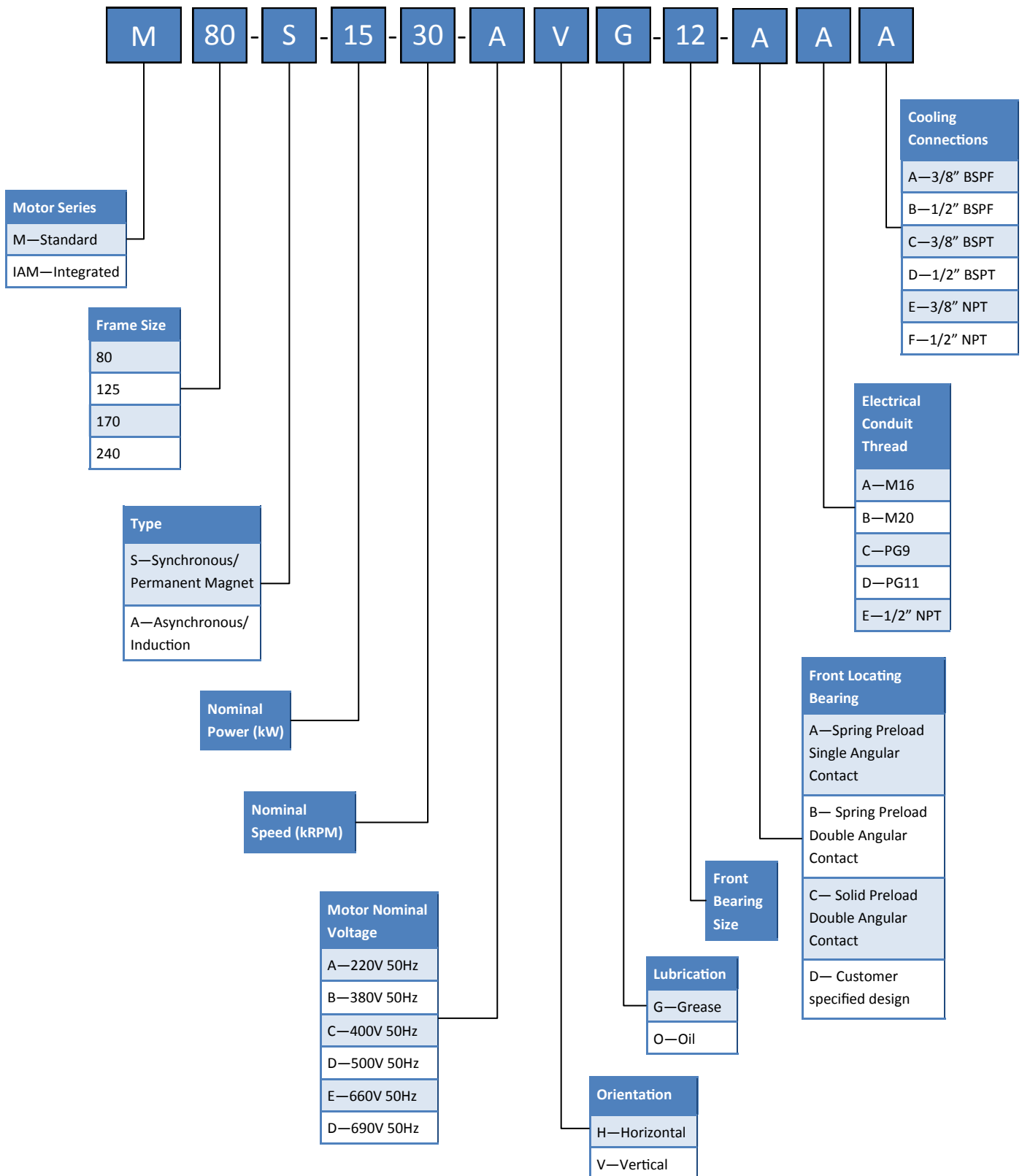
**Asynchronous/Induction 35 kW, 50kRPM**



**Synchronous/Permanent Magnet 25 kW, 50kRPM**



## Order Code & Scope of Supply



**Order Code Example:** M80-S-15-30-CVG-12-1-12-ABB

The scope of supply would be: M series motor/generator; DBS 80 frame size; Synchronous; 15kW; 30kRPM; 400 motor nominal voltage; vertical mount; grease packed bearings; 12 mm single angular contact front locating bearing; M20 conduit connection ; 1/2" BSPT threaded cooling connections.

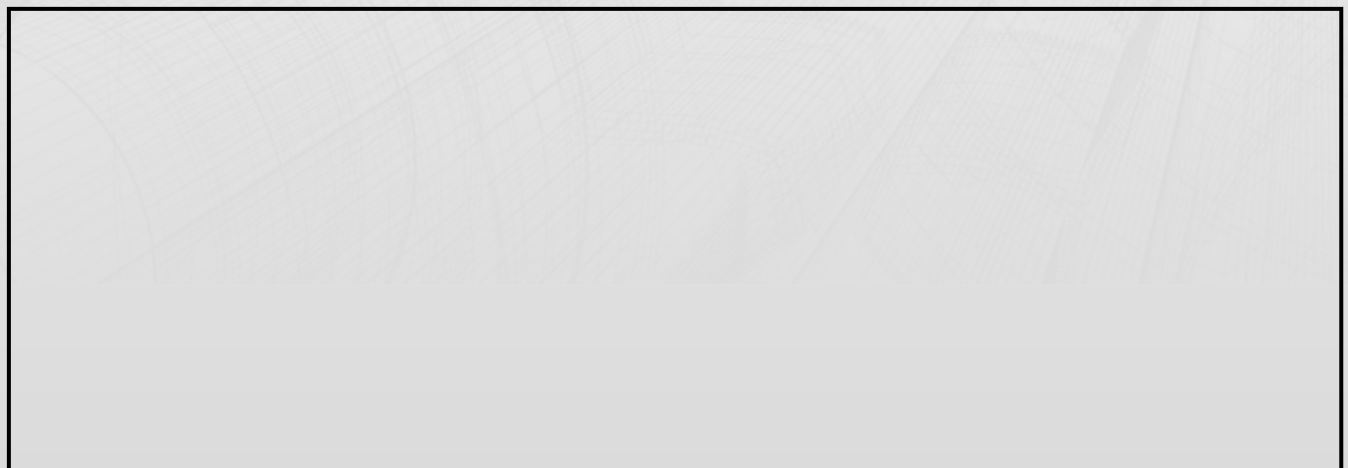


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**Presented by:**

This document is for informational purposes only and should not be considered as a binding description of the products or their performance in all applications. The performance data in this document depicts typical performance under controlled conditions. Actual performance may vary depending on the operating environment and application. Contact DBS to confirm suitability of the product for your application.