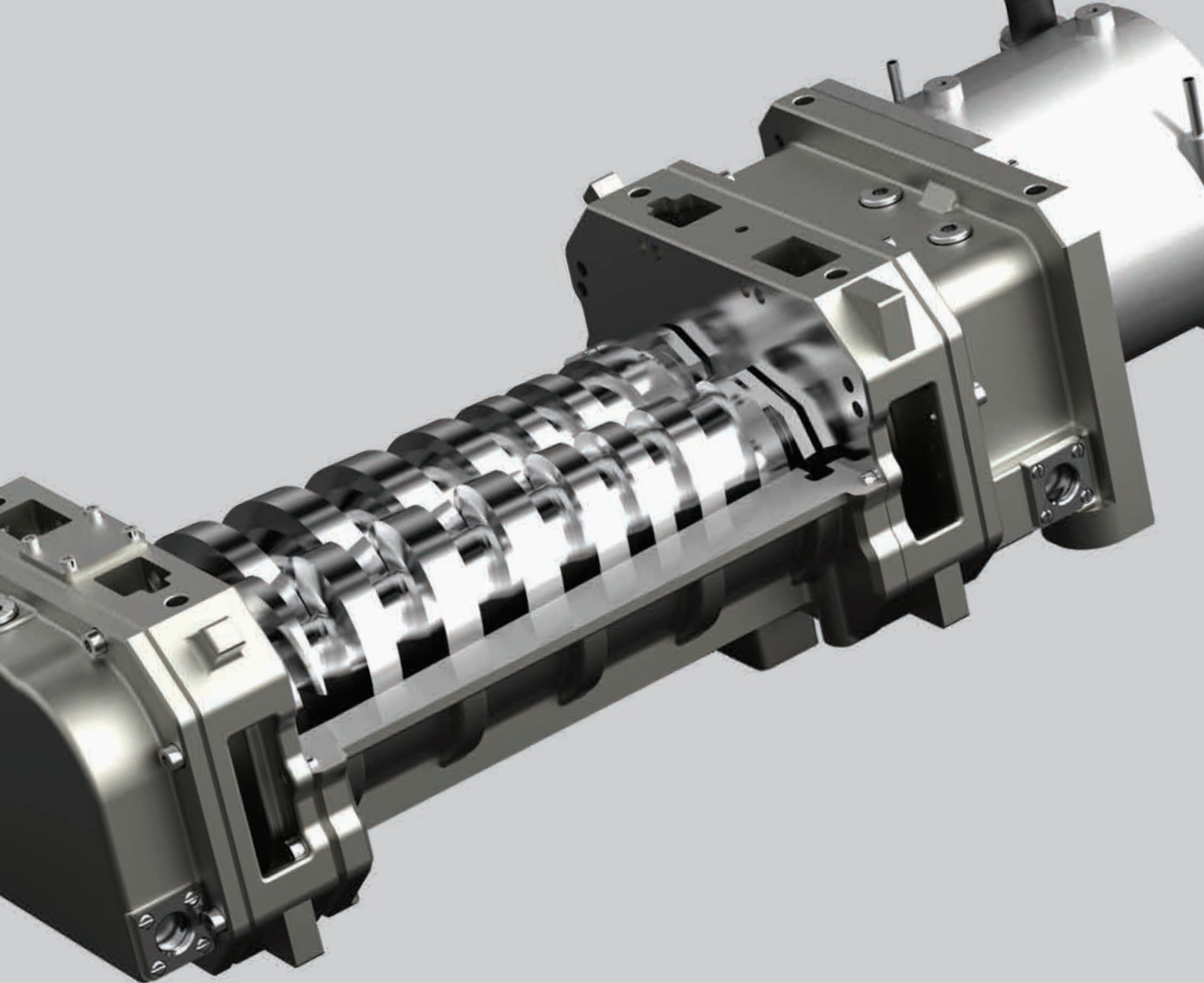


# GXS DRY SCREW VACUUM PUMPS





## EDWARDS THE PARTNER OF CHOICE

**Edwards is a world leader in the design, technology and manufacture of vacuum pumps with over 95 years' history and more than 75 years' manufacturing experience.**

Edwards believes in delivering results that bring value to our customers by using our breadth of industry experience to identify and apply solutions to your problems. Using the most innovative and up-to-date modelling techniques, we can optimise the pumping configuration for customers to provide a system design giving the maximum performance in the most reliable and cost-effective way.

# GXS DRY SCREW PUMPS AND COMBINATIONS

Our new GXS dry pumps take vacuum performance to the next level. With unique screw technology and world leading high efficiency drives, enabling advanced temperature control and long service intervals, you are guaranteed best-in-class pumping speeds and low running costs for many years to come.

## **Fast** – *Reduced pump down times with ultimate vacuum of $5 \times 10^{-4}$ mbar*

- **Increased productivity:** faster process
- **Improved product quality:** better ultimate vacuum

## **Robust** – *Reliable operation even in harsh industrial applications*

- **Low maintenance cost:** no unplanned down-time
- **Increased productivity:** longer intervals between service

## **Intelligent** – *On-board controller with extensive communication and automated control capabilities*

- **Reduced installation costs:** easy integration with other systems
- **Safe operation, consistent output:** automated control of your process

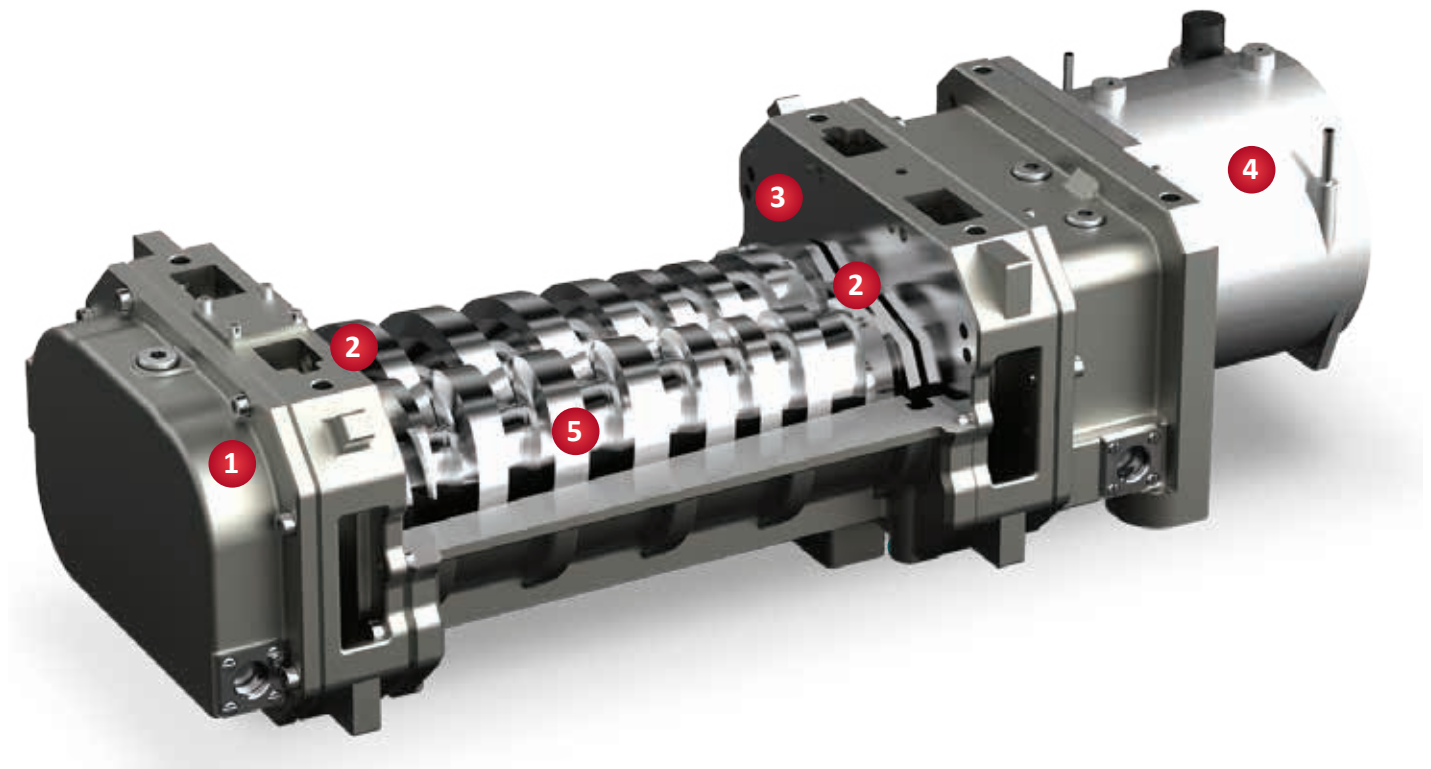
## **Economical** – *Affordable capital investment and low cost of ownership*

- **Substantial savings:** low utilities and energy usage costs
- **Save on space:** small footprint

## **Environmental** – *Smooth, quiet running with low power and utilities consumption*

- **Small carbon footprint:** low power and utilities usage
- **Easy on environment:** no contaminated or dirty disposable oil

# GXS innovative screw technology



1

## Double ended shaft support

- Non-cantilever design provides secure rotor support for extremely low vibration and superior starting reliability, especially on harsh processes
- Superior liquid and powder handling. Tests demonstrate a five litre water slug and one kilogram fine powder slug handling capability

2

## Bearing and lubrication

- Oil lubricated gears eliminate grease and the need for periodic maintenance
- Uses advanced quality bearings and special purpose oil with low vapour pressure for application compatibility and greatly improved life

3

## Advanced shaft sealing technology

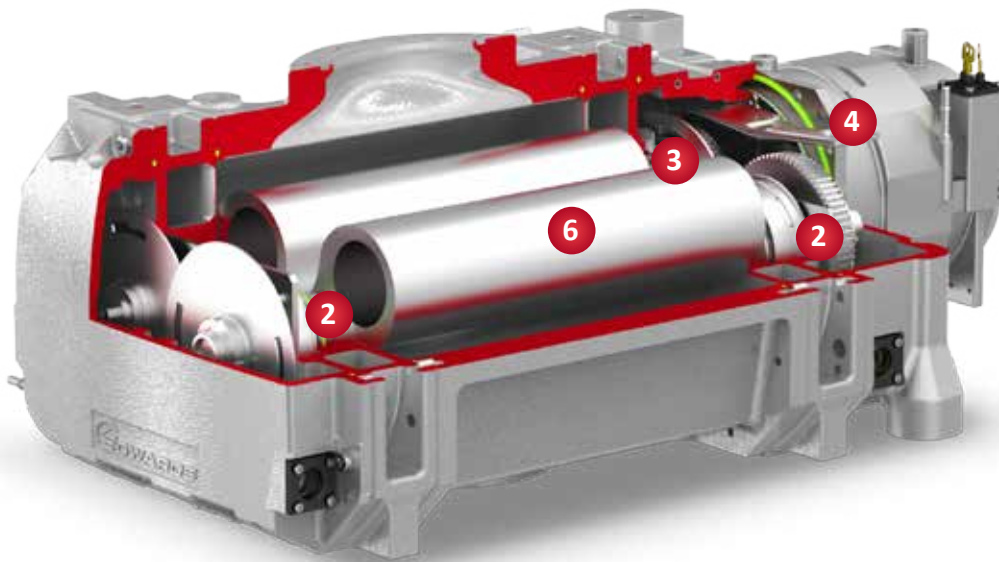
- Non-contacting long-life seals with integral oil blocking labyrinth seal provides for highly effective sealing
- Combined with a six litre per minute seal purge the gearbox is protected from contamination and the vacuum space is kept free of oil

## Fully enabled intelligent on-board control panel

- Running mode and fault status indicator with soft button control
- True “plug and pump” capability for immediate operation
- Intelligently programmed with automatic start/stop routines, power saving, green mode AUC and self cleaning options
- Remote control and monitoring functionality through Ethernet and serial connectors (including Profibus, simple text control protocol, and discrete hard-wired I/O options)
- Optional Pump Display Terminal (PDT) for improved diagnostic and configuration capacity



# GXS booster



4

## World leading motor and drive technology

- Extremely high efficiency motors with electronic drives deliver maximum torque performance for difficult processes
- Hermetically sealed motor eliminates oil leaks and improves pump reliability
- Water-cooled motors and drives provide for improved reliability and long life to reduce service costs

5

## Advanced pumping mechanism design

- Enhanced screw-type rotor design results in smooth, gradual compression along the length of the rotor for improved thermal control and optimised pumping at all inlet pressures
- Integrated heat management and unique rotor and stator design features provide argon gas pumping capability at full concentration
- Advanced machining techniques and design features eliminate the need for rotor coatings while maintaining superb ultimate vacuum performance
- Improved manufacturing technology and design contributes to low vibration and extremely quiet running without a silencer

6

## Roots booster mechanism

- High efficiency vacuum booster design
- Optimised for maximum performance with automatic thermal management



## Applications

### Metallurgy

- Vacuum Brazing
- E-beam welding
- Nitro carburising
- Low pressure nitriding
- Low pressure carburising
- Carbon vapour impregnation
- Sintering
- Metal injection moulding
- Precision investment casting
- Electroslag remelting
- Vacuum induction melting
- Vacuum arc refining
- Steel degassing

### Coating

- Roll web coating
- Hard coating (CVD/DLC)
- Surface activation
- Plasma spray
- Glass coating

### Drying

- Freeze drying
- Bushing filling
- Transformer drying
- Pipeline drying
- Capacitor drying
- Lithium-Ion battery drying

### Plasma processes

- Plasma welding
- Plasma nitriding

### Solar

- Silicon crystal-pulling
- PV lamination

### LED manufacture

### Vacuum chamber evacuation

- Space simulation chambers
- Gas recovery/circulation
- Load lock chambers

# Customised solutions for your application

Whether you require a single pump, pump and booster combination or complete vacuum system, we have a range of pumps designed to provide optimal performance in a wide range of applications.

Following are some typical applications where GXS is used. There are several other applications where GXS is suitable. For detailed advice and availability, please consult one of our application engineers.

| Application                                                 | GXS Pump type                          |                                                                                                                      |                                                                                                    |                                                                                      |                                                                               | Recommended Accessories            |                                             |
|-------------------------------------------------------------|----------------------------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|------------------------------------|---------------------------------------------|
|                                                             | LIGHT DUTY<br>Shaft Seal<br>Purge only | MEDIUM DUTY<br>Shaft Seal<br>Purge plus<br>adjustable Gas<br>Ballast.<br>Inlet purge on<br>start up and<br>shut down | MEDIUM DUTY<br>450 / 750<br>As standard<br>Medium duty<br>+ option of<br>additional<br>Gas Ballast | MEDIUM DUTY<br>+<br>As Medium<br>Duty plus<br>HIGH FLOW<br>PURGE ONLY at<br>shutdown | MEDIUM DUTY<br>+<br>High Flow<br>Purge AND<br>SOLVENT<br>FLUSH at<br>shutdown | INLET FILTER<br>Metal mesh<br>type | SILENCER<br>Cleanable and<br>drainable type |
| Annealing                                                   | ✓                                      |                                                                                                                      |                                                                                                    |                                                                                      |                                                                               |                                    |                                             |
| CVI carbon<br>vapour<br>impregnation                        |                                        | ✓                                                                                                                    | ✓                                                                                                  |                                                                                      | ✓                                                                             | ✓                                  | ✓                                           |
| EB welding                                                  |                                        | ✓                                                                                                                    |                                                                                                    |                                                                                      |                                                                               | ✓                                  |                                             |
| Gas<br>quenching                                            | ✓                                      |                                                                                                                      |                                                                                                    |                                                                                      |                                                                               |                                    |                                             |
| LPC low<br>pressure<br>carburising                          |                                        | ✓                                                                                                                    | ✓                                                                                                  |                                                                                      | ✓*                                                                            | ✓                                  | ✓                                           |
| LPN low<br>press.<br>Nitriding                              | ✓                                      |                                                                                                                      |                                                                                                    |                                                                                      |                                                                               |                                    |                                             |
| Sintering<br>(Metal<br>Injection<br>Molding) &<br>debinding |                                        | ✓                                                                                                                    | ✓                                                                                                  |                                                                                      | ✓***                                                                          |                                    |                                             |
| Oil quenching                                               |                                        | ✓                                                                                                                    |                                                                                                    |                                                                                      |                                                                               | ✓                                  |                                             |
| PIC precision<br>investment<br>casting & fast<br>cycling    |                                        | ✓                                                                                                                    |                                                                                                    | ✓                                                                                    |                                                                               | ✓                                  |                                             |
| Plasma<br>nitriding (PN)                                    | ✓                                      |                                                                                                                      |                                                                                                    |                                                                                      |                                                                               |                                    |                                             |
| Tempering                                                   | ✓                                      |                                                                                                                      |                                                                                                    |                                                                                      |                                                                               |                                    |                                             |
| Vacuum<br>brazing                                           |                                        | ✓                                                                                                                    |                                                                                                    |                                                                                      | ✓                                                                             | ✓                                  |                                             |
| VAR                                                         |                                        | ✓                                                                                                                    | ✓                                                                                                  | ✓                                                                                    |                                                                               | ✓                                  |                                             |
| VIM                                                         |                                        | ✓                                                                                                                    | ✓                                                                                                  | ✓                                                                                    |                                                                               | ✓                                  |                                             |

\* use MD+ for LPC with propane

\*\* use MD+ for waxy binders

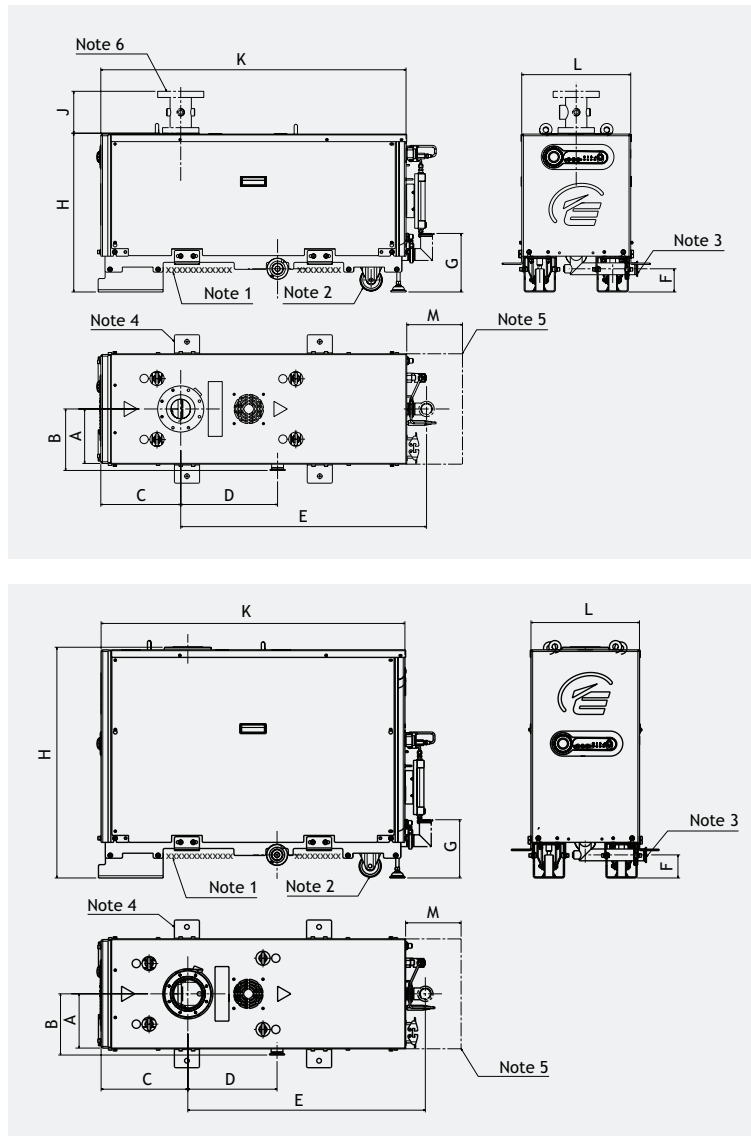
# Technical data

|                                    |                          | Unit                     | GXS160                                                                                                             | GXS160/1750                                | GXS250                                                                                                             | GXS250/2600                                |
|------------------------------------|--------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| Peak Pumping Speed                 |                          | m <sup>3</sup> /hr (cfm) | 160 (94)                                                                                                           | 1200 (706)                                 | 250 (147)                                                                                                          | 1900 (1118)                                |
| Ultimate Pressure (without purge)  |                          | mbar (Torr)              | 7x10 <sup>-3</sup> (5.3x10 <sup>-3</sup> )                                                                         | 7x10 <sup>-4</sup> (5.3x10 <sup>-4</sup> ) | 4x10 <sup>-3</sup> (3.0x10 <sup>-3</sup> )                                                                         | 5x10 <sup>-4</sup> (3.8x10 <sup>-4</sup> ) |
| Full Load Power                    | @ ultimate pressure      | kW (hp)                  | 3.8 (5.1)                                                                                                          | 5.1 (6.8)                                  | 4.0 (5.4)                                                                                                          | 5.3 (7.1)                                  |
|                                    | @ peak pumping load      | kW (hp)                  | 5.0 (6.7)                                                                                                          | 7.4 (9.9)                                  | 9.0 (12.1)                                                                                                         | 9.7 (13.0)                                 |
| Electrical                         | Supply options           | High volt                | 380-460V 3Ø 50/60Hz                                                                                                |                                            | 380-460V 3Ø 50/60Hz                                                                                                |                                            |
|                                    |                          | Low volt                 | 200-230V 3Ø 50/60Hz                                                                                                |                                            | 200-230V 3Ø 50/60Hz                                                                                                |                                            |
|                                    | Connection               | High volt                | Harting Han K 4/4-F                                                                                                |                                            | Harting Han K 4/4-F                                                                                                |                                            |
|                                    |                          | Low volt                 |                                                                                                                    |                                            |                                                                                                                    |                                            |
| Vacuum Couplings                   | Inlet                    |                          | ISO63                                                                                                              | ISO100                                     | ISO63                                                                                                              | ISO160                                     |
|                                    | Exhaust                  |                          | NW40                                                                                                               |                                            | NW40                                                                                                               |                                            |
| Cooling Water                      | Supply pressure (max)    | bar (psig)               | 6.9 (100)                                                                                                          |                                            | 6.9 (100)                                                                                                          |                                            |
|                                    | DP across pump (min)     | bar (psig)               | 1.0 (14.7)                                                                                                         |                                            | 1.0 (14.7)                                                                                                         |                                            |
|                                    | Flow @ min DP            | l/min (gal/min)          | 4.0 (1.1)                                                                                                          | 7.0 (1.9)                                  | 4.0 (1.1)                                                                                                          | 7.0 (1.9)                                  |
|                                    | Temperature              | °C (°F)                  | 5-40 (41-104) All variants                                                                                         |                                            | 5-40 (41-104) All variants                                                                                         |                                            |
|                                    | Connection               |                          | 3/8" BSP Male (G 3/8")                                                                                             |                                            | 3/8" BSP Male (G 3/8")                                                                                             |                                            |
| Purge Gas*                         | Pressure                 | bar (psig)               | 2.5-6.9 (36-100)                                                                                                   |                                            | 2.5-6.9 (36-100)                                                                                                   |                                            |
|                                    | Light Duty               | sl/min                   | 12                                                                                                                 |                                            | 12                                                                                                                 |                                            |
|                                    | Medium Duty              | sl/min                   | 18-52                                                                                                              |                                            | 18-52                                                                                                              |                                            |
|                                    | Connection               |                          | Swagelok* Ø ¼" tube with olive                                                                                     |                                            | Swagelok* Ø ¼" tube with olive                                                                                     |                                            |
| High Flow Purge/<br>Solvent Flush  | Supply pressure          | bar (psig)               | 2.5-6.9 (36-100)                                                                                                   |                                            | 2.5-6.9 (36-100)                                                                                                   |                                            |
|                                    | Control valve connection |                          | Swagelok* Ø 3/8" tube with olive                                                                                   |                                            | Swagelok* Ø 3/8" tube with olive                                                                                   |                                            |
|                                    | Filter connection        |                          | ½" NPT Male                                                                                                        |                                            | ½" NPT Male                                                                                                        |                                            |
|                                    | Solvent connection       |                          | 3/8" BSP Male (G 3/8")                                                                                             |                                            | 3/8" BSP Male (G 3/8")                                                                                             |                                            |
| Mass                               |                          | Kg (lbs)                 | 305 (672)                                                                                                          | 475 (1047)                                 | 305 (672)                                                                                                          | 515 (1035)                                 |
| Noise (with suitable exhaust pipe) |                          | dB(A)                    | <64                                                                                                                |                                            | <64                                                                                                                |                                            |
| Operating Temperature              |                          | °C (°F)                  | 5-40 (41-104)                                                                                                      |                                            | 5-40 (41-104)                                                                                                      |                                            |
| Exhaust Back Pressure (MAX)        |                          | mbar (psia)              | 1400 (20)                                                                                                          |                                            | 1400 (20)                                                                                                          |                                            |
| System IP rating                   | Standard                 |                          | 21D                                                                                                                |                                            | 21D                                                                                                                |                                            |
| Lubrication                        | Type                     |                          | PFPE Drynert* 25/6                                                                                                 |                                            | PFPE Drynert* 25/6                                                                                                 |                                            |
|                                    | Volume                   | l (gal)                  | 0.7 (0.2)                                                                                                          | 1.4 (0.4)                                  | 0.7 (0.2)                                                                                                          | 1.4 (0.4)                                  |
| Monitoring & Control               | Standard                 | Control                  | Front panel "Dashboard" Serial - RS232                                                                             |                                            | Front panel "Dashboard" Serial - RS232                                                                             |                                            |
|                                    |                          | Monitoring               | Ethernet Webserver                                                                                                 |                                            | Ethernet Webserver                                                                                                 |                                            |
|                                    | Option                   | Control                  | Parallel - MCM MicroTIM                                                                                            |                                            | Parallel - MCM MicroTIM                                                                                            |                                            |
|                                    |                          | Control & Monitoring     | Profibus DP Pump Display Terminal (PDT)                                                                            |                                            | Profibus DP Pump Display Terminal (PDT)                                                                            |                                            |
|                                    |                          | Monitoring               | FabWorks*                                                                                                          |                                            | FabWorks*                                                                                                          |                                            |
| *Pump combinations                 |                          | Light duty               | Shaft Seal Purge only                                                                                              |                                            | Shaft Seal Purge only                                                                                              |                                            |
|                                    |                          | Medium duty              | Shaft Seal Purge, High Vac Purge, Inlet Purge, variable Gas Ballast & Exhaust Purge (with Exhaust Pressure Sensor) |                                            | Shaft Seal Purge, High Vac Purge, Inlet Purge, variable Gas Ballast & Exhaust Purge (with Exhaust Pressure Sensor) |                                            |
|                                    |                          | Medium duty +            | As Medium duty, plus High Flow Purge / Solvent Flush                                                               |                                            | As Medium duty, plus High Flow Purge / Solvent Flush                                                               |                                            |

\* Purge Gas information, Light duty: shaft seal purge only, Medium duty: Shaft seal purge, inlet purge, variable gas ballast & exhaust purge (with exhaust pressure sensor), Medium duty plus: As Medium duty, plus High Flow Purge/Solvent Flush

| GXS450                                                                                                             | GXS450/2600                                | GXS450/4200 | GXS750                                                                                                             | GXS750/2600                                | GXS750/4200 |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-------------|
| 450 (265)                                                                                                          | 2200 (1295)                                | 3026 (1781) | 740 (436)                                                                                                          | 2300 (1354)                                | 3450 (2031) |
| 5x10 <sup>-3</sup> (3.8x10 <sup>-3</sup> )                                                                         | 5x10 <sup>-4</sup> (3.8x10 <sup>-4</sup> ) |             | 3x10 <sup>-3</sup> (2.3x10 <sup>-3</sup> )                                                                         | 5x10 <sup>-4</sup> (3.8x10 <sup>-4</sup> ) |             |
| 7.2 (9.6)                                                                                                          | 8.8 (11.8)                                 | 9.4 (12.6)  | 10.0 (13.4)                                                                                                        | 11.1 (14.9)                                | 11.5 (15.4) |
| 17.3 (23.2)                                                                                                        | 20.0 (26.8)                                | 21.1 (28.3) | 37.0 (49.6)                                                                                                        | 40.0 (53.6)                                | 40.0 (53.6) |
|                                                                                                                    | 380-460V 3Ø 50/60Hz                        |             |                                                                                                                    | 380-460V 3Ø 50/60Hz                        |             |
|                                                                                                                    | 200-230V 3Ø 50/60Hz                        |             |                                                                                                                    | 200-230V 3Ø 50/60Hz                        |             |
| Harting Han K 4/4-F                                                                                                | Harting Han 100A-F                         |             |                                                                                                                    | Harting Han 100A-F                         |             |
|                                                                                                                    |                                            |             |                                                                                                                    | Harting Han 200A-F                         |             |
| ISO100                                                                                                             | ISO160                                     |             | ISO100                                                                                                             | ISO160                                     |             |
|                                                                                                                    | NW50                                       |             |                                                                                                                    | NW50                                       |             |
|                                                                                                                    | 6.9 (100)                                  |             |                                                                                                                    | 6.9 (100)                                  |             |
| 1 (15)                                                                                                             | 1 (15)                                     |             | 1 (15)                                                                                                             | 0.75 (11)                                  |             |
| 10 (2.6)                                                                                                           | 12 (3.2)                                   |             | 12 (3.2)                                                                                                           | 15 (4)                                     |             |
|                                                                                                                    | 5-40 (41-104) All variants                 |             |                                                                                                                    | 5-40 (41-104) High Volt variants           |             |
|                                                                                                                    |                                            |             |                                                                                                                    | 5-30 (41-86) Low Volt variants             |             |
|                                                                                                                    | 1/2" BSP Male (G 1/2")                     |             |                                                                                                                    | 1/2" BSP Male (G 1/2")                     |             |
|                                                                                                                    | 2.5-6.9 (36-100)                           |             |                                                                                                                    | 2.5-6.9 (36-100)                           |             |
|                                                                                                                    | 12                                         |             |                                                                                                                    | 12                                         |             |
|                                                                                                                    | 18-146                                     |             |                                                                                                                    | 18-146                                     |             |
|                                                                                                                    | Swagelok® Ø ¼" tube with olive             |             |                                                                                                                    | Swagelok® Ø ¼" tube with olive             |             |
|                                                                                                                    | 2.5-6.9 (36-100)                           |             |                                                                                                                    | 2.5-6.9 (36-100)                           |             |
|                                                                                                                    | Swagelok® Ø 3/8" tube with olive           |             |                                                                                                                    | Swagelok® Ø 3/8" tube with olive           |             |
|                                                                                                                    | ½" NPT Female                              |             |                                                                                                                    | ½" NPT Female                              |             |
|                                                                                                                    | 3/8" BSP Male (G 3/8")                     |             |                                                                                                                    | 3/8" BSP Male (G 3/8")                     |             |
| 640 (1411)                                                                                                         | 860 (1996)                                 | 868 (1914)  | 640 (1411)                                                                                                         | 908 (2002)                                 | 953 (2101)  |
|                                                                                                                    | <64                                        |             |                                                                                                                    | <70                                        |             |
|                                                                                                                    | 5-40 (41-104)                              |             |                                                                                                                    | 5-40 (41-104)                              |             |
|                                                                                                                    | 1400 (20)                                  |             |                                                                                                                    | 1400 (20)                                  |             |
|                                                                                                                    | 21D                                        |             |                                                                                                                    | 21D                                        |             |
|                                                                                                                    | PFPE Drynert® 25/6                         |             |                                                                                                                    | PFPE Drynert® 25/6                         |             |
| 1.8 (0.5)                                                                                                          | 2.5 (0.7)                                  | 3.6 (1.0)   | 2.4 (0.6)                                                                                                          | 3.1 (0.8)                                  | 4.2 (1.1)   |
|                                                                                                                    | Front panel "Dashboard"<br>Serial - RS232  |             |                                                                                                                    | Front panel "Dashboard"<br>Serial - RS232  |             |
|                                                                                                                    | Ethernet Webserver                         |             |                                                                                                                    | Ethernet Webserver                         |             |
|                                                                                                                    | Parallel - MCM MicroTIM                    |             |                                                                                                                    | Parallel - MCM MicroTIM                    |             |
|                                                                                                                    | Profibus DP<br>Pump Display Terminal (PDT) |             |                                                                                                                    | Profibus DP<br>Pump Display Terminal (PDT) |             |
|                                                                                                                    | FabWorks®                                  |             |                                                                                                                    | FabWorks®                                  |             |
|                                                                                                                    | Shaft Seal Purge & High Vac Purge only     |             |                                                                                                                    | Shaft Seal Purge & High Vac Purge only     |             |
| Shaft Seal Purge, High Vac Purge, Inlet Purge, variable Gas Ballast & Exhaust Purge (with Exhaust Pressure Sensor) |                                            |             | Shaft Seal Purge, High Vac Purge, Inlet Purge, variable Gas Ballast & Exhaust Purge (with Exhaust Pressure Sensor) |                                            |             |
| As Medium duty, plus High Flow Purge / Solvent Flush                                                               |                                            |             | As Medium duty, plus High Flow Purge / Solvent Flush                                                               |                                            |             |

# Dimensions



## Notes:

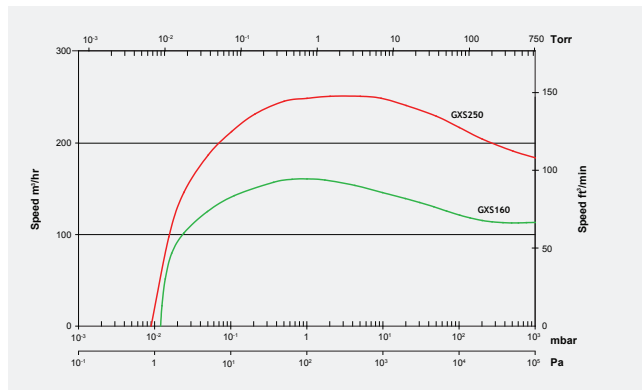
- xxxxxx indicate forklift/pallet truck access points.
- Pumps are available either with skids (side-exit exhaust) or castors (rear-exit exhaust). Both options are shown for clarity.
- Pumps supplied with side or rear exhaust only; both options shown in views. The side exhaust outlet direction is customer adjustable.
- Earthquake restraints are provided only for pumps with castors.
- Minimum required service area for access to the rear panel connections.
- The High-Flow Purge / Solvent Flush accessory is located outside of the pump enclosure for dry pump only. It is inside the enclosure for pump/booster combinations.

|             | A                | B                | C                | D                | E                 | F            | G                | H                 | J            | K               | L              | M             |
|-------------|------------------|------------------|------------------|------------------|-------------------|--------------|------------------|-------------------|--------------|-----------------|----------------|---------------|
| GXS160      |                  |                  | 285.9<br>(11.26) | 346.5<br>(13.64) | 879.5<br>(34.63)  |              |                  | 568<br>(22.36)    | 150<br>(5.9) |                 |                |               |
| GXS250      | 195<br>(7.68)    | 220<br>(8.66)    |                  |                  |                   |              | 209.4<br>(8.24)  |                   |              | 1092<br>(42.99) | 390<br>(15.35) | 250<br>(9.84) |
| GXS160/1750 |                  |                  | 311.6<br>(12.27) | 320.8<br>(12.63) | 853.8<br>(33.61)  |              |                  | 829.5<br>(32.66)  |              |                 |                |               |
| GXS250/2600 |                  |                  |                  |                  |                   |              |                  |                   |              |                 |                |               |
| GXS450      |                  |                  | 394<br>(15.51)   | 300<br>(11.81)   | 871.6<br>(34.31)  |              |                  |                   |              | 1186<br>(46.69) |                |               |
| GXS750      |                  |                  | 576.4<br>(22.69) | 413<br>(16.23)   | 1133.6<br>(44.63) | 83<br>(3.27) |                  | 717<br>(28.23)    | 150 (5.9)    | 1622<br>(63.86) |                |               |
| GXS450/2600 | 258.5<br>(10.18) | 283.5<br>(11.16) | 361.8<br>(14.24) |                  | 903.8<br>(33.58)  |              | 261.4<br>(10.29) |                   |              | 1186<br>(46.69) | 517<br>(20.35) | 250<br>(9.84) |
| GXS450/4200 |                  |                  |                  | 332.3<br>(13.08) |                   |              |                  | 1030.5<br>(40.57) |              |                 |                |               |
| GXS750/2600 |                  |                  |                  |                  |                   |              |                  |                   |              |                 |                |               |
| GXS750/4200 |                  |                  | 657.2<br>(25.87) |                  | 1052.8<br>(41.45) |              |                  |                   |              | 1622<br>(63.86) |                |               |

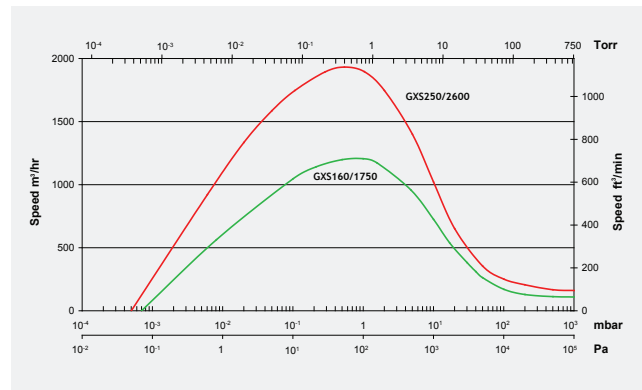
Key pump dimensions: mm (ins)

# Performance curves

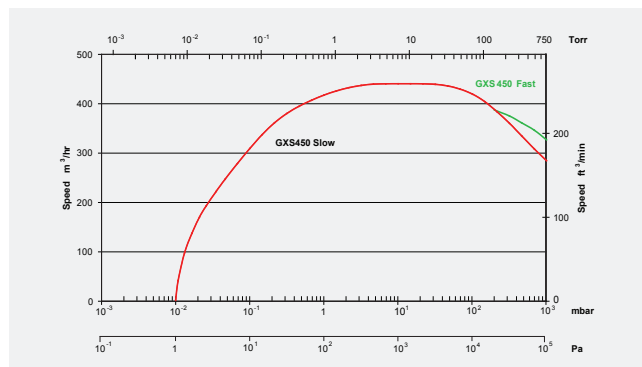
Pumping speed curves for  
GXS160 & GXS250



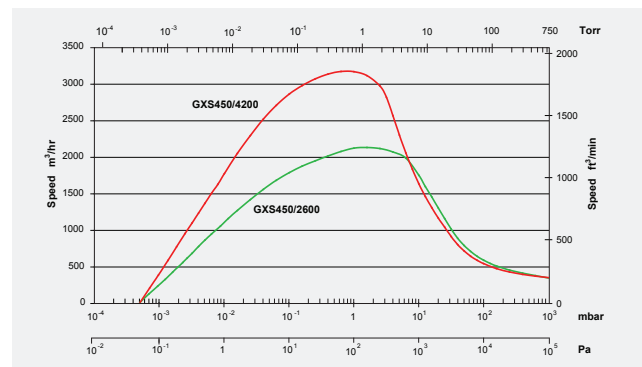
Pumping speed curves for GXS160/1750  
& GXS250/2600



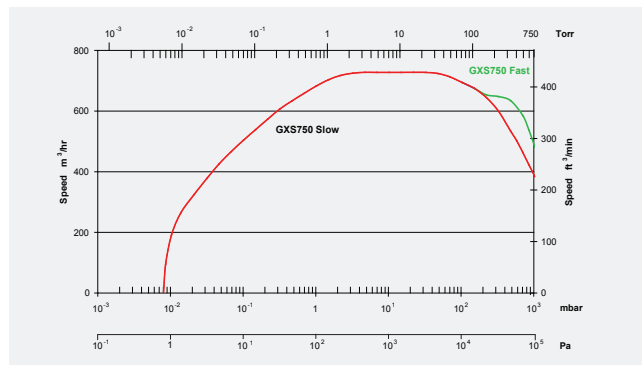
Pumping speed curves  
for GXS450



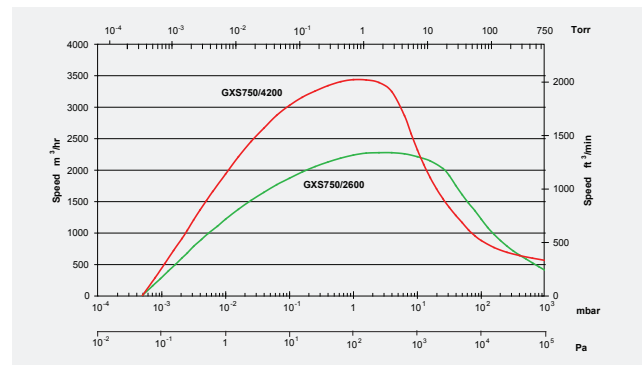
Pumping speed curves for GXS450/2600  
& GXS450/4200



Pumping speed curves  
for GXS750



Pumping speed curves for GXS750/2600  
& GXS750/4200



NOTE: Performance curves displayed are with purge.



## Accessories

There are a range of accessories available with the GXS to suit a variety of applications. These provide reduced engineering and systemisation resulting in low cost of ownership. All accessories are fully integrated with GXS to provide an efficient and safe system.

### Inlet and exhaust accessories

Inlet and exhaust accessories have been especially designed to match the pumping capacities of the GXS range and optimise performance.

- Foreline spool adapters for mounting instrumentation
- Fully integrated Inlet isolation valves
- Inlet filter housing with polyester or stainless steel elements
- Exhaust silencers with cleanable drainable options
- Exhaust check valves

### Control and monitoring accessories

We have designed a range of control and monitoring accessories specifically for the GXS range to enable complete integration into your control systems.

- Hand held terminals
- Profibus / Digital interface modules
- Water / N<sub>2</sub> flow monitoring kits
- Pressure and temperature transmitters
- Visual pressure and temperature gauges

## Inlet Vacuum Filters

The GXS range of pumps all have excellent powder handling capabilities and under fault conditions they will succeed where other dry pumps fail. However dry vacuum pumps aren't designed to continuously pump solid material so on certain applications an inlet filter would dramatically extend the time between services.

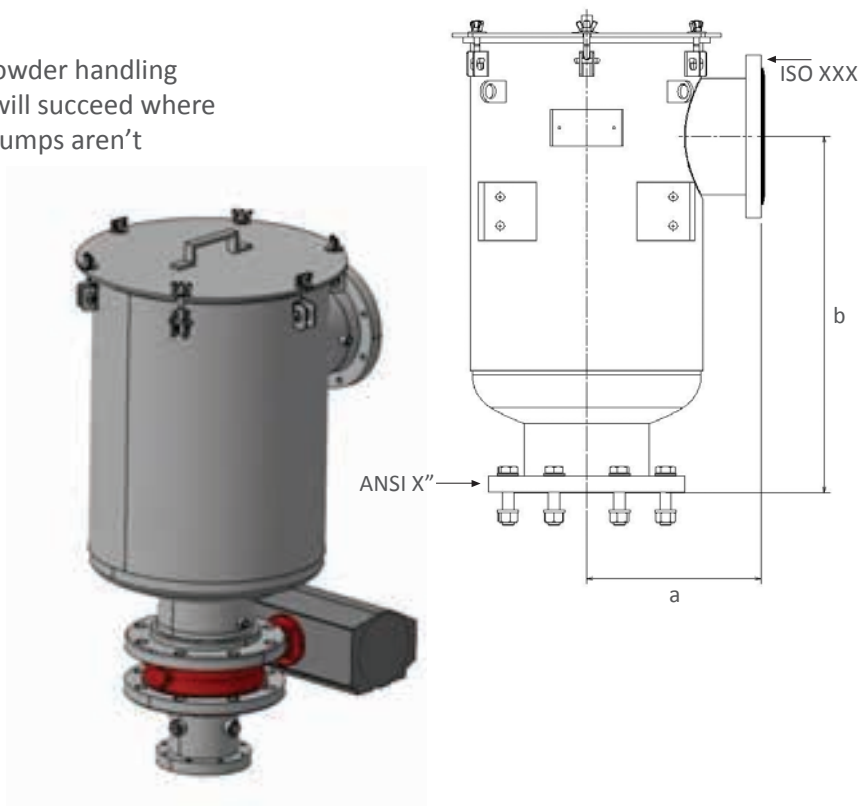
## Specifications

Helium leak tested to  $1 \times 10^{-6}$  mbar/l/sec

- Polyester Elements: >99% efficient to  $5\mu\text{m}$
- Rugged carbon steel construction
- Large dirt holding capacity

## Options

- Stainless steel housing construction
- Stainless steel mesh filter elements



| Pump Type                                  | Recommended Inlet Filter |             |             | Inlet Connection<br>ISO Flange | Outlet Connection<br>ANSI Flange | Dimensions |            |
|--------------------------------------------|--------------------------|-------------|-------------|--------------------------------|----------------------------------|------------|------------|
|                                            | Size                     | CS Part No. | SS Part No. |                                |                                  | a          | b          |
| All Pump only and 1750 booster combination | 4"                       | M58808005   | M58808137   | 100                            | 4"                               | 254 (10.0) | 251 (9.9)  |
| All 2600 booster combinations              | 6"                       | M5882805    | M58828137   | 160                            | 6"                               | 305 (12.0) | 521 (20.5) |
| All 4200 booster combinations              | 8"                       | M59848005   | M59848137   | 200                            | 8"                               | 305 (12.0) | 622 (24.5) |

| Element Construction        | Replacement Filter Element |                |                | Particle Size | Efficiency |
|-----------------------------|----------------------------|----------------|----------------|---------------|------------|
|                             | 4" Part Number             | 6" Part Number | 8" Part Number |               |            |
| Polyester / Galvanised      | A22304363                  | A22304367      | A22304371      | 5 micron      | >99%       |
| Polyester / Stainless Steel | A22304365                  | A22304369      | A22304373      | 5 micron      | >99%       |
| Stainless Mesh              | A22304366                  | A22304370      | A22304374      | 300 micron    | 90%        |

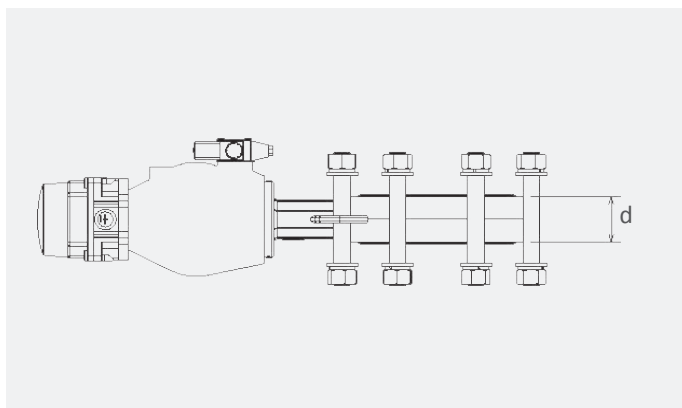
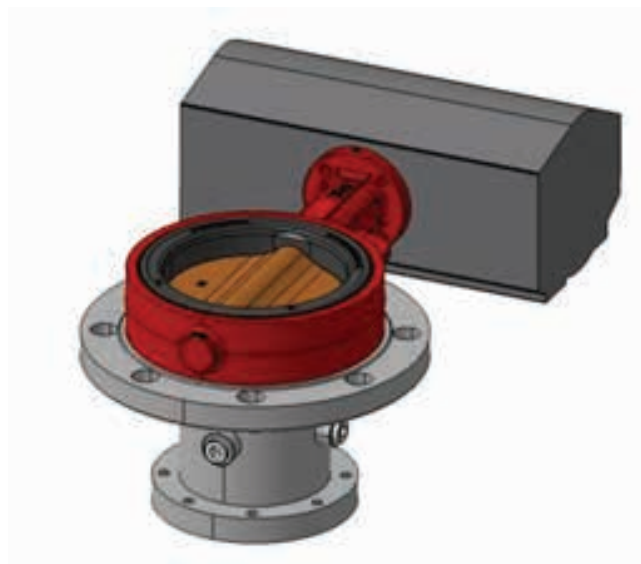
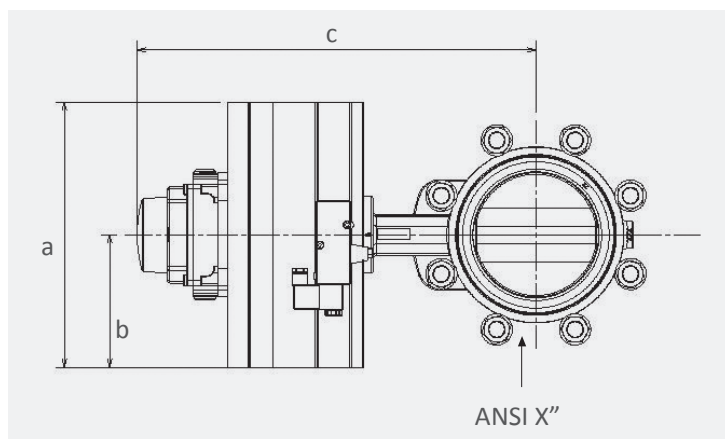
## Automatic Inlet Isolation Valves

The automatic GXS isolation valve is designed to fully integrate into the GXS control system to protect the pump and your process.

The valve will close in the event of an alarm or power failure and will isolate the process when in green mode for energy saving between production batches.

### Specifications

- Stainless steel and EPDM construction for corrosion resistance
- High CV, low pressure drop
- Pneumatic actuation with spring return
- Fully integrated to enable 'green' energy saving mode
- Protects pump by not allowing it to go online until it is up to operating temperature



| Pump Type                                  | Recommended Silencer |           | Connection ANSI Flange Pattern | Dimensions mm (inches) |             |              |            |
|--------------------------------------------|----------------------|-----------|--------------------------------|------------------------|-------------|--------------|------------|
|                                            | Size                 | Part No.  |                                | a                      | b           | c            | d          |
| All Pump only and 1750 booster combination | 4"                   | M58808004 | 4"                             | 302 (11.9)             | 152.5 (6.0) | 424.4 (16.7) | 51.2 (2.0) |
| All 2600 booster combinations              | 6"                   | M58828004 | 6"                             | 313 (12.3)             | 156.5 (6.2) | 470 (18.5)   | 55.3 (2.2) |
| All 4200 booster combinations              | 8"                   | M59848004 | 8"                             | 452 (17.8)             | 228 (8.9)   | 595 (23.4)   | 59.3 (2.3) |

## Harsh Duty Exhaust Silencers

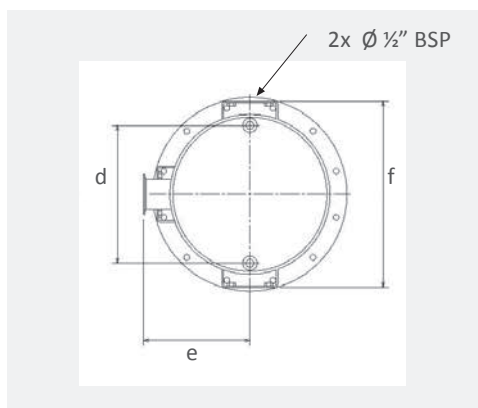
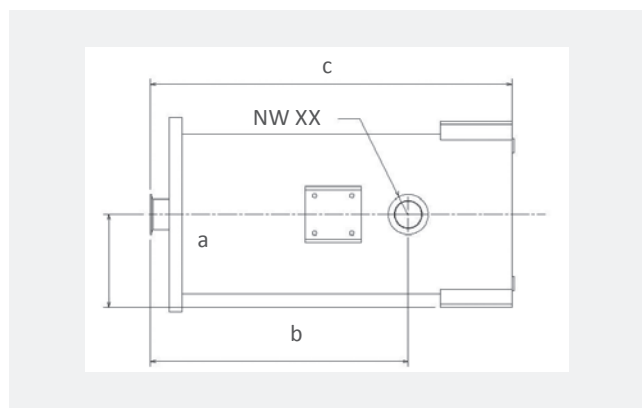
The GXS already has 'best in class' decibel ratings but in some tricky installations noise attenuation is essential. A range of silencers have a bespoke design tailored to the pumping capacity of the GXS high speed screw pumps.

### Specifications

- Painted carbon steel or stainless steel construction
- Drainable and cleanable design for condensable / harsh processes
- Greater than 15 dBA noise reduction on some installations

### Options

- Drain valve assembly
- Mounting kits



| Pump Type               | Recommended Silencer |                 | Inlet and exhaust connection type | Dimensions mm (inches) |            |            |            |           |            |
|-------------------------|----------------------|-----------------|-----------------------------------|------------------------|------------|------------|------------|-----------|------------|
|                         | Carbon Steel         | Stainless Steel |                                   | a                      | b          | c          | d          | e         | f          |
| All GXS 160 and GXS 250 | M58808161            | M58808162       | NW40                              | 105 (4.1)              | 333 (13.1) | 525 (20.7) | 132 (5.2)  | 105 (4.1) | 210 (8.3)  |
| All GXS 450 and GXS 750 | M59838161            | M59838162       | NW50                              | 175 (6.9)              | 485 (19.1) | 680 (26.8) | 259 (10.2) | 200 (7.9) | 350 (13.8) |

## Silencer Mounting Kits



### Rear Exhaust (RE)

|                                      |           |
|--------------------------------------|-----------|
| GXS 160 / 250 & booster combinations | M58808151 |
| GXS 450 / 750 & booster combinations | M59808151 |

### Side Exhaust (SE)

|                                      |           |
|--------------------------------------|-----------|
| GXS 160 / 250 & booster combinations | M58808009 |
| GXS 450 / 750 & booster combinations | M59838009 |

\* SE mounting kit raises pump to accommodate silencer.



## Inlet Spools

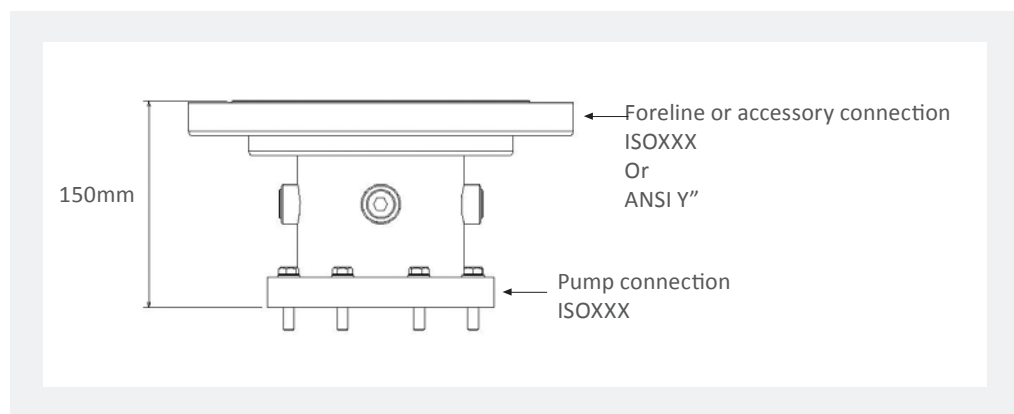
As every installation is different, a range of inlet spools are available for the GXS pumps. These are designed to mount our inlet valves and filters but also have instrumentation ports and the number of options ensure ease of connection to customers pipework.

## Specifications

- Painted carbon steel or stainless steel construction
- ½" BSP ports to connect GXS accessories or other ancillary devices
- Sizes available for complete range of GXS pumps and accessories

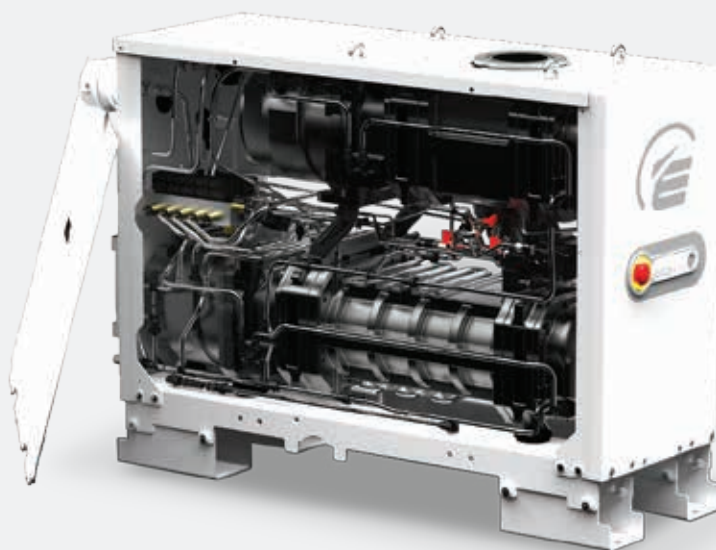
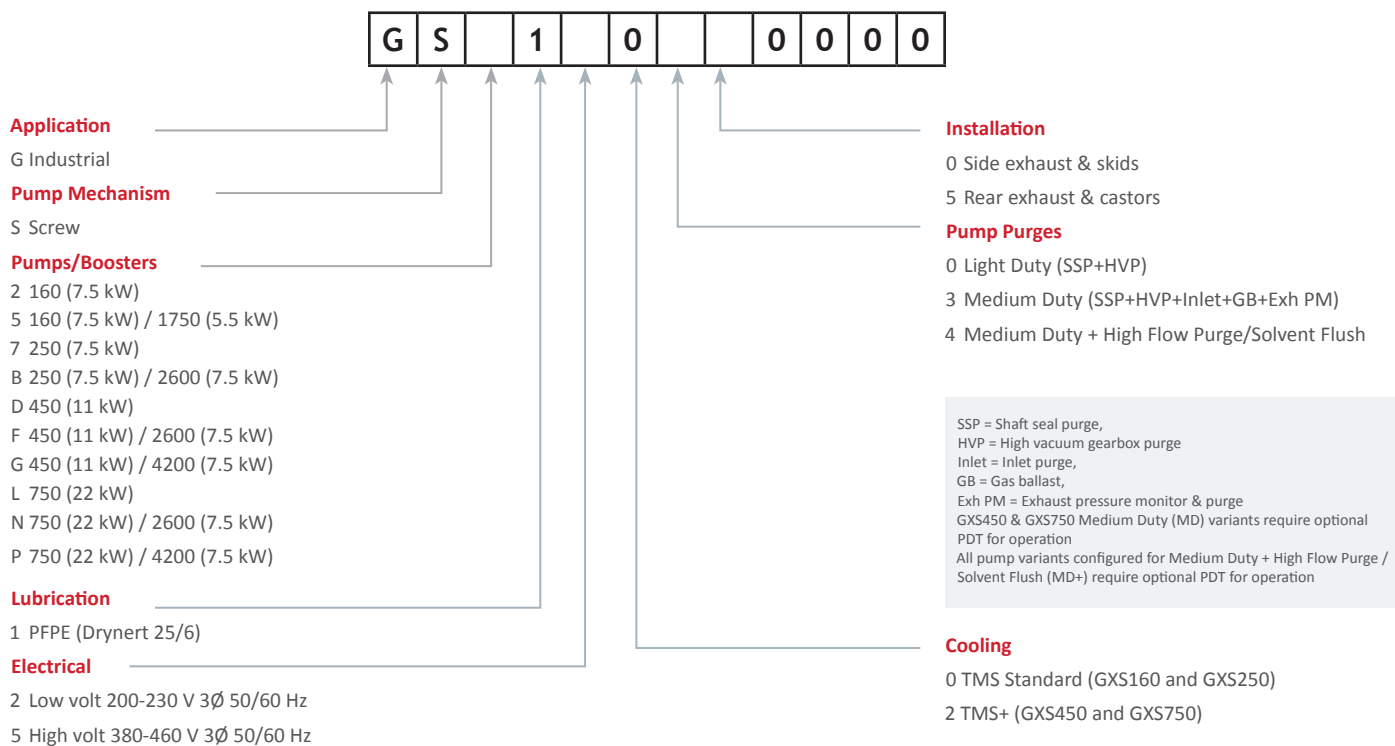
## Options

- Pressure gauge assembly
- Pressure transducer assembly (For PID control)
- Temperature transmitter assembly



| Description                      | Part Number  |                 | Mass / Kg | Pump Connection | Foreline / Accessory Connection | Height /mm | Accessory Ports                                |
|----------------------------------|--------------|-----------------|-----------|-----------------|---------------------------------|------------|------------------------------------------------|
|                                  | Carbon Steel | Stainless Steel |           |                 |                                 |            |                                                |
| Inlet spool ISO63 - ANSI 4 inch  | M58808002    | M58808134       | 10        | ISO63           | 4 inch ANSI                     | 150        | 1 x 1 inch BSP female<br>3 x ¾ inch BSP female |
| Inlet spool ISO100 - ANSI 4 inch | M59808002    | M59808134       | 12        | ISO100          | 4 inch ANSI                     | 150        | 1 x 1 inch BSP female<br>3 x ¾ inch BSP female |
| Inlet spool ISO100 - ANSI 6 inch | M58938002    | M58938134       | 16        | ISO100          | 6 inch ANSI                     | 150        | 4 x ¾ inch BSP female                          |
| Inlet spool ISO160 - ANSI 6 inch | M58858002    | M58828134       | 20        | ISO160          | 6 inch ANSI                     | 150        | 4 x ¾ inch BSP female                          |
| Inlet spool ISO160 - ANSI 8 inch | M59848002    | M59848134       | 25        | ISO160          | 8 inch ANSI                     | 150        | 4 x ¾ inch BSP female                          |
| Inlet spool ISO163 - ISO100      | M58808138    | M58808135       | 9         | ISO63           | ISO100                          | 150        | 1 x 1 inch BSP female<br>3 x ¾ inch BSP female |
| Inlet spool ISO100 - ISO100      | M59808138    | M59808135       | 10        | ISO100          | ISO100                          |            | 1 x 1 inch BSP female<br>3 x ¾ inch BSP female |
| Inlet spool ISO100 - ISO160      | M58828003    | M58828135       | 13        | ISO100          | ISO160                          | 150        | 4 x ¾ inch BSP female                          |
| Inlet spool ISO160 - ISO160      | M58938003    | M58938135       | 15        | ISO160          | ISO160                          | 150        | 4 x ¾ inch BSP female                          |
| Inlet spool ISO160 - ISO200      | M59848003    | M59848135       | 19        | ISO160          | ISO160                          | 150        | 4 x ¾ inch BSP female                          |

# GXS ordering information



# Complementary accessories

| Control & Communication              |           |
|--------------------------------------|-----------|
| Pump Display Terminal (PDT)*         | D37280700 |
| Virtual Pump Display Terminal (VPDT) | D37488500 |
| MCM MicroTIM                         | D37360320 |
| Connector kit for MCM MicroTIM       | D37422802 |
| Profibus® Module                     | D39753000 |
| Equipment support toolkit            | D37217090 |

| Instrumentation                          |           |
|------------------------------------------|-----------|
| Water flow monitoring                    | A50783000 |
| N2 Flow Switch                           |           |
| Standard - Up to and including GXS450 LD | A50633000 |
| High Flow - GXS450 MD pumps and higher   | A50634000 |
| Pressure Indicator Assembly              | M58808141 |
| Pressure Transducer Assembly (ASG)       | M58808152 |
| Temp Trans Assy                          |           |
| Pump only                                | M58808160 |
| Combinations                             | M58828160 |

| Ancillary Equipment                   |           |
|---------------------------------------|-----------|
| 3/8" SS quick connector for water     | A50721000 |
| 3/8" BSPF to 3/8" NPTM Brass Adaptor  | U30011199 |
| 3/8" BSPM to 3/8" NPTM Brass Adaptor  | U30011200 |
| Connector plug 06 IL CM XLR           | D37207061 |
| Holster pump display module           | D37209800 |
| GXS Auxiliary gauge cable (0-10V)     | D37241017 |
| GXS Pressure input cable (4-20mA)     | D37241019 |
| GXS Pressure input connector (4-20mA) | D37241023 |
| Drynert 25/6 fluid 1 kg (528 ml)      | H11312021 |
| Drynert 25/6 fluid 5 kg (2646 ml)     | H11312025 |



## Service and Support

Your business success depends on maximum equipment uptime and minimum total cost of ownership, and we constantly strive to support those objectives. As a global leader in vacuum technology and processes, we understand how vacuum pumps and systems perform in real life. Our wide portfolio of services is designed with you in mind: to help keep your processes and equipment running in the most economical and environmentally efficient manner.

Services include:

- Overhaul and repair using genuine Edwards OEM parts
- OEM spares and kits available for immediate despatch
- ReManufactured products available for cost-effective expansion and backups
- Global network of expert field service engineers available to respond quickly to unexpected equipment failures
- Extended warranty, to help manage the cost of the unexpected

Our Expert Advantage Service Plans provide you with the on-going support necessary to continuously improve your operational efficiency and meet your business objectives. As service offerings may vary slightly from product to product, please contact your Edwards representative to discuss your specific requirements.





## GLOBAL CONTACTS

Publication Number: 3602 100 6 01  
© Edwards Limited 2016. All rights reserved  
Edwards and the Edwards logo are trademarks of  
Edwards Limited

Whilst we make every effort to ensure that we  
accurately describe our products and services,  
we give no guarantee as to the accuracy or  
completeness of any information provided in  
this brochure.

Edwards Ltd, registered in England and Wales  
No. 6124750, registered office: Innovation Drive,  
Burgess Hill, West Sussex, RH15 9TW, UK.

### EMEA

|                |                                               |
|----------------|-----------------------------------------------|
| <b>UK</b>      | +44 1444 253 000<br>(local rate) 08459 212223 |
| <b>Belgium</b> | +32 2 300 0730                                |
| <b>France</b>  | +33 1 4121 1256                               |
| <b>Germany</b> | 0800 000 1456                                 |
| <b>Italy</b>   | + 39 02 48 4471                               |
| <b>Israel</b>  | + 972 8 681 0633                              |

### ASIA PACIFIC

|                  |                  |
|------------------|------------------|
| <b>China</b>     | +86 400 111 9618 |
| <b>India</b>     | +91 20 4075 2222 |
| <b>Japan</b>     | +81 47 458 8836  |
| <b>Korea</b>     | +82 31 716 7070  |
| <b>Singapore</b> | +65 6546 8408    |
| <b>Taiwan</b>    | +886 3758 1000   |

### AMERICAS

|               |                  |
|---------------|------------------|
| <b>USA</b>    | +1 800 848 9800  |
| <b>Brazil</b> | +55 11 3952 5000 |