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Subject: Electric Motor Drivers for the LubriMist® IVT Oil Mist Reclamation Option

Where Customer requirements specify LubriMist® *Closed Loop Oil Mist Technology*, the LubriMist® Model IVT can be configured to meet Customers demands. The IVT Oil Mist Reclamation option utilizes a motor driven centrifugal coalescer for stripping the oil from the returning oil mist. The electric motor drivers for the IVT Oil Mist Reclamation unit are available in various voltages and explosion protection methods to suit a variety of customer requirements.

The centrifugal coalescer includes a rotating drum mounted on the end of a motor shaft. The returning oil mist particles collide with the spinning drum and are coalesced into liquid. The liquid oil is then collected and transferred to the oil mist generator where it is reused for oil mist production.

In the initial design and development of the IVT Oil Mist Reclamation Unit, a non standard motor was used. These motors had a special shaft design for mounting the drum. Since these motors were “non-standard”, managing availability for sales orders was a constant challenge for the LSC Manufacturing Department. Costs were also high when compared to that of a standard motor. Additionally, the attachment method between the drum and the motor made it difficult to service and replace motors in the field. And recently, when LSC decided to obtain ATEX certification for the LubriMist Model IVT Oil Mist Generator, it was recognized that an even greater challenges would be have to be met if the IVT Oil Mist Reclamation option was to be included.

In our pursuit of continuous improvement, we have now redesigned the motor / drum interface for the IVT Oil Mist Reclamation Unit. The electric motor drivers now being used for the LubriMist® IVT Oil Mist Reclamation option are standard components available from our motor suppliers. Rather than a keyed / close-fit attachment between the drum and motor shaft, the drum is now mounted via a mechanical locking wedge type coupling. Sense these couplings are keyless and easily attach and detach from the motor shaft, installation and replacement is easier.

The motor frame sizes have also been changed. In the IVT-NEC construction a 2 HP NEMA 145TC motors is used rather than the special NEMA 56C. The IVT Oil Mist Reclamation Unit in the ATEX construction includes a 1.5 KW IEC 90 frame motor. All motors are manufactured with standard shaft dimensions. These larger frame motors will provide improved service life.



Due to availability and cost, replacements for the prior use NEMA 56C motor are no longer available. When an IVT Oil Mist Reclamation Unit requires motor replacement, a Demisting Drum / Motor Assembly listed in Table 1 is required for first use. Before ordering, refer to the motor nameplate information on the motor being replaced to insure proper voltage selection. Replacement motors are available for the newer IVT Oil Mist Reclamation Units and for other equipment once this conversion has been made. When used with an IVT Oil Mist Generator in LubriMist® Closed Loop Oil Mist Systems, the electric motor determines the overall hazardous area classification of the oil mist generator. IVT Oil Mist Generators are suitable for the hazardous area classification shown in Table 1 when these motors are used.

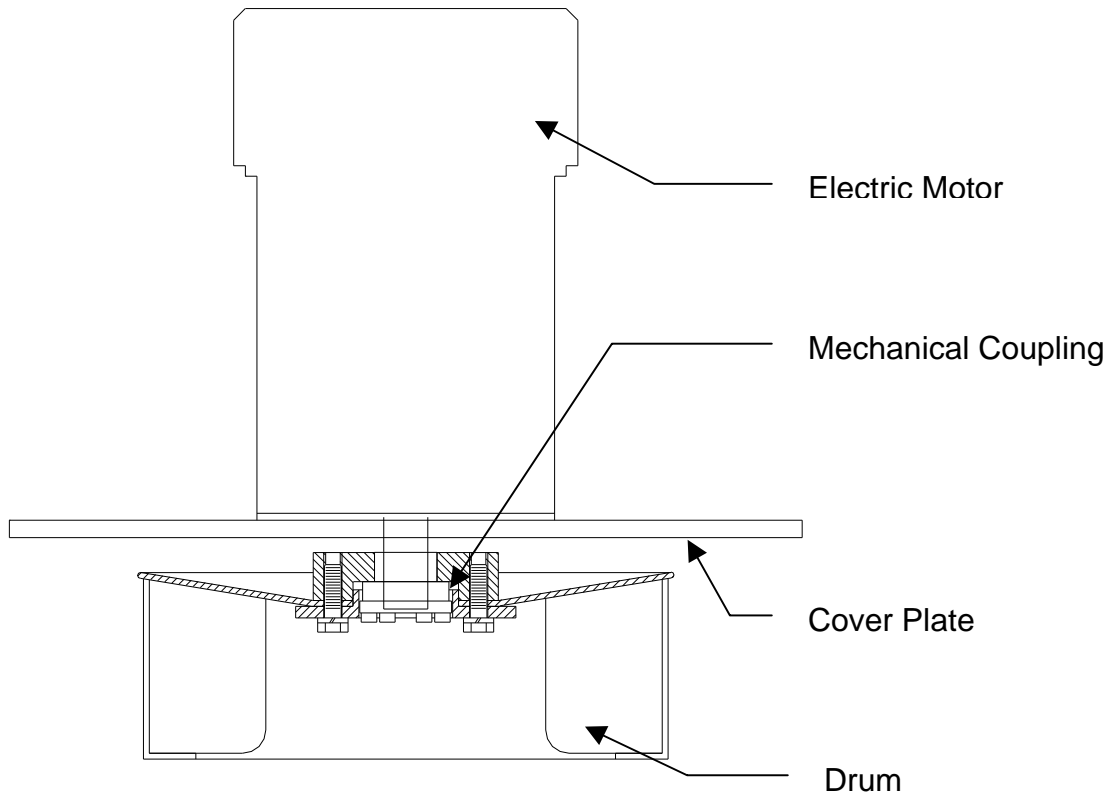
Assem P/N	Description	Motor P/N	IVT Hazardous Area Suitability
77780496	Demisting Drum / Motor Assembly - ATEX Construction, 380-415 VAC, 3 Ph (Flame Proof Motor)	77780492	CE II 3 G EEx nC IIC T4
77780497	Demisting Drum / Motor Assembly - NEC Construction, 115/230 VAC, 1 Ph, (Exp Proof Motor)	77780493	CLASS 1 DIV 2 GRP D CLASS 1 ZONE 2 GRP IIA Temp Code T2C
77780498	Demisting Drum / Motor Assembly - NEC Construction, 230/460 VAC, 3 Ph (Exp Proof Motor)	77780494	CLASS 1 DIV 2 GRP C & D CLASS 1 ZONE 2 GRP IIB Temp Code T3C
77780499	Demisting Drum / Motor Assembly - NEC Construction, 575 VAC, 3 Ph (Exp Proof Motor)	77780495	CLASS 1 DIV 2 GRP C & D CLASS 1 ZONE 2 GRP IIB Temp Code T3C
77780500	Demisting Drum / Motor Assembly - ATEX Construction, 230 VAC, 1 Ph (Flame Proof Motor)	77780502	CE II 3 G EEx nC IIC T4
77780501	Demisting Drum / Motor Assembly - NEC Construction, 250 VAC, 1 Ph, (Exp Proof Motor)	77780503	CLASS 1 DIV 2 GRP D CLASS 1 ZONE 2 GRP IIA Temp Code T2C

Note: Temperature Code ratings are based on 40C ambient.

Demisting Drum / Motor Assemblies
Table 1



Demisting Drum / Motor Assemblies include the electric motor, drum with coalescing media pads, mechanical locking wedge type coupling and necessary hardware ready assembled onto a cover plate. Assemblies are pre-balanced prior to shipment. Field replacement is made by replacement of the entire assembly.



Demisting Drum / Motor Assembly

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