



*ATEX Declarations
System One Pumps*

| | |
|-------------|----------|
| Page Number | Form 577 |
| Effective | Feb 2012 |
| Replaces | Jun 2010 |
| Section | Forms |

**Blackmer, A Dover Company,
1809 Century Avenue S.W., Grand Rapids, Michigan 49503-1530, United States of America**

DECLARATION OF CONFORMITY

as defined by the ATEX directive 94/9/EC

Herewith we declare that all sizes of Blackmer System One pump models to which this declaration relates are in conformity with the provisions of the ATEX Directive 94/9/EC. The above equipment is a centrifugal pump designed for liquid transfer applications. This device is not intended to act as a safety accessory. Technical file is archived with LCIE notified body number 0081, file no. LCIE 60052731-553645.

Applied Harmonized Standards: EN1127-1, EN13463-1

29 February 2012

Thomas Madden Date
Vice President and General Manager

DECLARATION OF CONFORMITY

As defined by the Machinery Directive 2006/42/EC

Herewith we declare that all sizes of Blackmer System One pump models to which this declaration relates are in conformity with the provisions of the Machinery Directive, 2006/42/EC. The above equipment is a centrifugal pump designed for liquid transfer applications. This device is not intended to act as a safety accessory.

This component must not be operated until the machine into which it is incorporated has been declared in conformity with the provision of the directive.

Applied Harmonized Standards: EN809, EN292

29 February 2012

Thomas Madden Date
Vice President and General Manager

ATEX/ Machinery Directive Notifications:

Pump Temperature Classification: Pumps are devices whose surface temperatures depend on the product temperature. Therefore, temperature classifications of Blackmer pumps are obtained with the temperature limits of the product pumped, see the table listing below. Any overshooting of the maximum product temperature is considered an abnormal operation, that can lead to surface temperatures higher than the certified temperature classification. The user of the pump must ensure that the product temperature must never exceed the maximum temperature specified. For example, installing a temperature sensor upstream of pump is an acceptable means to control product temperature.

Intended Use: Blackmer Pumps are intended to be used for transferring fluids. Pumps must be operated in systems, with fluids and at conditions for which it is specifically designed and sized. Operation of any pumping system with a blocked suction and discharge must be avoided in all cases. Operation, even for a brief period under these conditions, can cause superheating of enclosed pumpage and result in a violent explosion. All necessary measures must be taken by the end user to ensure this condition is avoided. Applying heat to impellers and/or impeller retaining devices to aid removal is strictly forbidden. Trapped liquid can rapidly expand and result in violent explosion and injury.

Possible Misuse Warning: The pump must only be installed in systems designed for its intended use.

Mechanical Ignition Sources: Guards, intended to protect from personal injury from rotating components, must be fabricated from ATEX compliant materials to prevent a potential ignition source. The pump and its' drive system must be properly grounded to prevent electrostatic discharge. ATEX certified elastic couplings must be used. These couplings must have a level of protection equivalent or better than that of the pump unit. The pump has internal parts that rub together. These parts require pumpage to lubricate the rubbing surfaces. If the pump is run dry for periods of over one minute, maximum surface temperature may exceed the pump classification temperature. Consequently, every time the pump is started, an operator must check that there is a flow through the pump. Liquid level or flow detector controls may be necessary to prevent dry running. These devices must comply with the standards in force, especially those related to electric devices in explosive atmospheres and/or standard prEN 13463-6 related to the protection of non-electric equipment in explosive atmospheres by controlling sources of ignition. Pumps must be properly maintained and lubricated, see IOM (Installation, Operation, & Maintenance Instructions) for service information. Ball bearings should be replaced every 2 years of use.

Packing Seal Pumps: Some System One pumps are equipped with packing seals that must be properly adjusted, See IOM Manual. All pumps equipped with packing must be equipped with a temperature controlling device to prevent exceeding the maximum surface temperature.

Sound Measurements: Sound Levels for pumping equipment vary greatly, depending on operating conditions, piping system design, foundation design, etc. Probably the greatest effect on sound level is the presence of cavitation, which is primarily dependent on system design and often, increases dramatically during system upset.

You can expect the following sound levels when operating a System One pump at its' maximum rated speed and discharge pressure with NO cavitation. Sound levels are measured at 1 meter from the pump and 1.6 meters from the foundation per European Machinery Directive 98/37/EC.

Maximum Noise Level: 85 dba generated by the pump and motor or motor noise level plus 3 dba.

Equipment Marking: All pump models are classified Group II Category 2 & 3, Gas Group IIB. Temperature limiting devices are required for all models which need to be classified as Category 2. Contact Blackmer Customer Care Group for your specific requirements. Blackmer will process those requests as a special order. See attached chart for Temperature rating for various models.

| Temperature Class | Maximum Product Temperature | Pump Model (inclusive all sizes, drive options) |
|-------------------|-----------------------------|--|
| T2 | 230 ° C | Frame SD, Frame S, Frame A, Frame LD17, Frame A IPP, Frame LD17 IPP, Frame M |
| T3 | 130 ° C | Frame SD, Frame S, Frame A, Frame LD17, Frame A IPP, Frame LD17 IPP, Frame M |
| T4 | 70 ° C | Frame SD, Frame S, Frame A, Frame LD17, Frame A IPP, Frame LD17 IPP, Frame M |
| T5 | 30 ° C | Frame SD, Frame S, Frame A, Frame LD17, Frame A IPP, Frame LD17 IPP, Frame M |