Shell Tactic EMV

Electro Mechanical Variable Single Point Lubricators

Shell Tactic EMV is an electro-mechanical single point lubricator that is designed to provide optimal lubrication to greased machinery components such as rolling element bearings. Shell Tactic EMV provides a reliable alternative to manual lubrication, a superior solution when compared to gas / chemical type lubricators and an alternative solution where centralised lubrication systems are not practical.

Description

Manufactured in Germany, Shell Tactic EMV provides precise and reliable grease dispensing for the lubrication of a single point. The grease is delivered at an output pressure of approximately 8 bar via a battery powered, mechanical drive system.

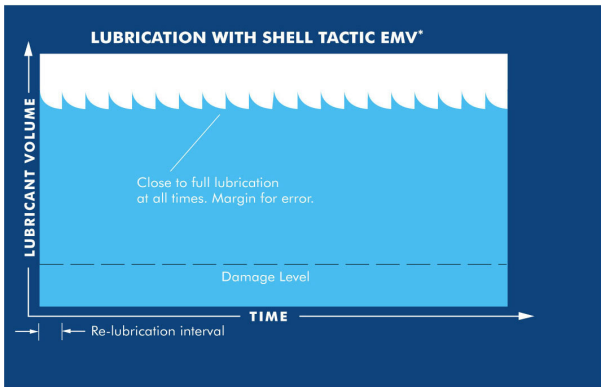
Shell Tactic EMV comprises three primary components: 1) Mechanical Drive Unit, 2) Grease Canister and 3) Battery Power Pack. The Drive Unit is reusable, while the Grease Canister and Batteries are designed to be single use items only.

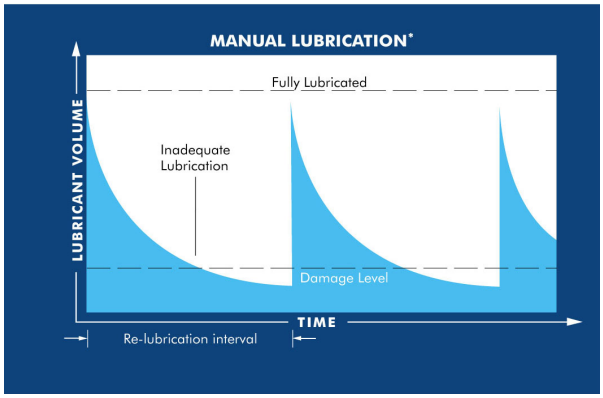
The rate of grease dispensing does not depend upon temperature and can be varied by means of simple-to-apply settings, which are set via two dipswitches located on the Drive Unit.

Unlike many chemical / gas type lubricators, the pressure output from Shell Tactic EMV remains unchanged across a broad range of operating temperatures and for the duration of the dispensing period. Also, because Shell Tactic EMV does not rely on gas accumulation for grease dispensing, there is no delay between unit activation and grease delivery.

Performance Features and Benefits

- ***Variable Settings - Versatility***
  Shell Tactic EMV can be set to dispense between 0.3 and 8.2 cc of grease per day. The broad range of settings means that you can lubricate everything from electric motor bearings, which require relatively little grease, through to large bearings in harsh environments, which demand greater amounts. See Figure 3 for a summary of the available settings.
- ***Remote Installation Options – Safety and Work Practice Improvements***
  Shell Tactic EMV can be used to reduce the level of manual intervention for the purposes of bearing lubrication. Also, because Shell Tactic EMV can be remote mounted up to a distance of 5 meters away from the bearing, potentially unsafe work practices can be eliminated by locating the units outside of machinery guards or in positions, which can be easily accessed.
- ***LED Signals and Transparent Grease Canister – Management Simplicity and Peace of Mind.***
  Shell Tactic EMV is easy to inspect via the visual inspection of the transparent grease canister and the status messages communicated by the flashing LEDs. See Figure 4 for detail on the LED messages.
- ***Electro-Mechanical Positive Displacement – Reliable Design and Operating Principle.***
  Shell Tactic EMV does not rely on gas generation for its operation. The electro-mechanical pumping mechanism is well designed, robust and intuitive.
- ***Automated Lubrication – Maintenance Practice Improvements***
  Shell Tactic EMV delivers small volumes of grease at pre-set, regular intervals to reduce grease starvation related failures and to preclude the entry of contaminants to bearings. The diagrams below represent the difference between manual and Tactic EMV lubrication.





Grease Types

Shell Tactic EMV grease canisters are filled with a carefully chosen range of high performance greases, in a combination of grease canister sizes. Refer to Figure 5 for a list of the grease types and relevant canister sizes.

Installation Recommendations

The installation of Shell Tactic EMV first requires assessment of a number of lubrication and maintenance practices parameters:

- The required grease type.
- The required re-lubrication rate.
- Whether or not the operating conditions are suitable for the long-term operation of the product.
- Whether or not the units should be direct mounted to the bearing or remote mounted via a hose / piping.

For detailed information on the installation guidelines for the lubricators contact your Shell Representative.

Advice

Advice on applications not covered in this leaflet may be obtained form your Shell Representative.

Health and Safety

Contact Shell for a copy of the Material Safety Data Sheet for the relevant grease that you are using in Shell Tactic EMV.

Shell Tactic EMV is not rated as intrinsically safe or explosion proof. Consequently the product should not be used in work environments where this is a requirement such as underground coal mines and petro-chemical refineries.

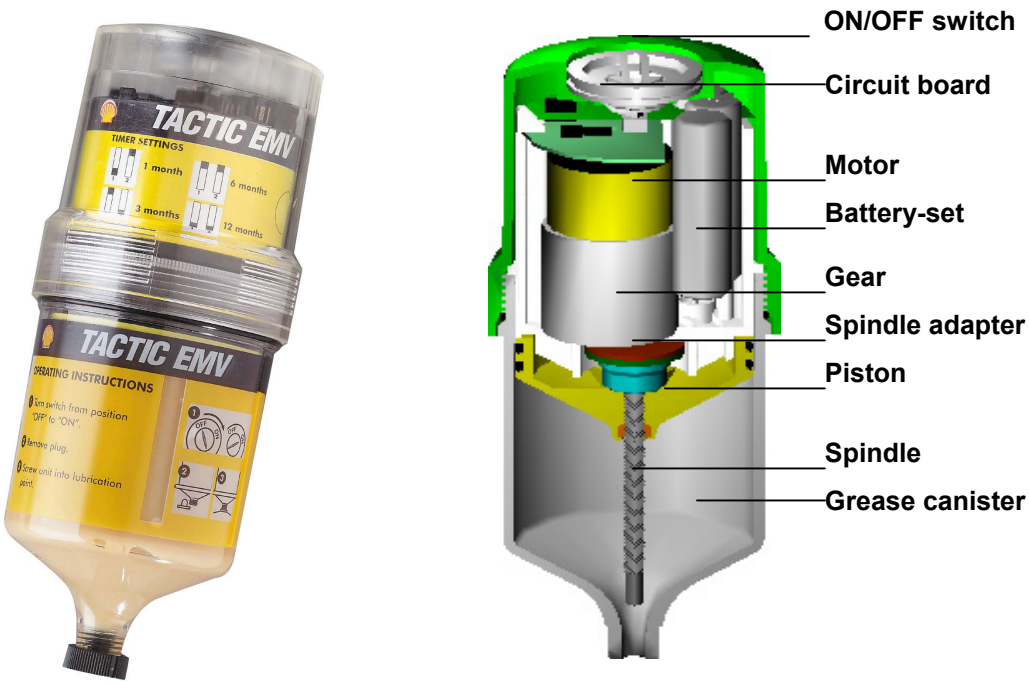


Figure 1: Photograph and Cross Sectional Drawing of Tactic EMV (with 120cc size grease canister.

Operating Parameter	Specification
Minimum Grease Output Pressure	8 bar
Acceptable Operating Temperature Range	Average ambient from -10°C to +50°C
Maximum Remote Mount Distance	5 meters of 3/8" hose / pipe for average ambient of 15°C or more

Figure 2: Typical Operating Parameters.

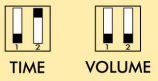
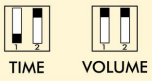
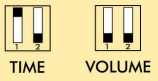
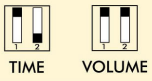
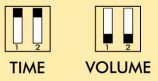
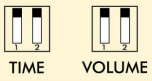
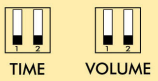
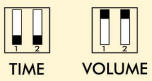
TIMER SETTINGS	GREASE CANISTER SIZES	
	120cm³	250cm³
1 Month	3.9 cc per day 	8.2 cc per day 
3 Month	1.3 cc per day 	2.7 cc per day 
6 Month	0.7 cc per day 	1.4 cc per day 
12 Month	0.3 cc per day 	0.7 cc per day 

Figure 3: Settings, Dipswitch Positions and Dispensing Rates for Shell Tactic EMV.

Operational Status	LED Message
Self Check when first turned on	Steady Red LED for 25 seconds
System on and operating correctly*	Grease flash every 15 seconds
System error	Red flash every 8 seconds
Grease Canister empty	Green & red flash every 3 seconds (together)
Drive Unit discharging	Steady Red for 1 to 5 seconds

* Shell Tactic EMV cannot detect all failure modes.

Figure 4: LED Status Messages for Shell Tactic EMV.

Grease Type	Available Canister Size(s)	Short Description of Grease**
Shell Albida Grease HDX 2	250cc	High performance, lithium complex thickened grease with 480 cSt base oil and molybdenum disulphide for heavily loaded roller and journal bearings, pins and shackles. Suitable for bearings subject to shock load.
Shell Cassida Grease EPS 1	120cc	Food grade grease with excellent water washout resistance (NSF H1 accredited).
Shell Stamina Grease EP 2	250cc	High temperature, extreme pressure, high performance polyurea thickened grease, which can be utilised in a broad range of applications. Suitable for grease rationalisation programs.
Shell Stamina Grease RL 2	120cc and 250cc	High temperature, non-extreme pressure grease for superior electric motor bearing lubrication.

Figure 5: Grease Types and Canister Sizes for Shell Tactic EMV