SONED®
CENTRALIZED LUBRICATION

Single Line System

The main characteristic of Single Line System is at its metering valves that are volumetric and each actuation sends a precise quantity of lubricant, either oil or soft grease. An intermittent working pump, manual, pneumatic or electrical driven sends lubricant under pressure through a distribution equipped with metering valves which, by its turn, individually lubricates each point of the machine. A controller / timer may be supplied as optional to control the system.

Single Line Lubrication may be applied to small and average size machines to obtain efficient and safe lubrication in a Single way and little investment.

Flow diagram

Gear pump for oil - Simple Line

Controller / timer

Manifold Simple Line

Pressure Gauge

1 or 2-terminal pressure switch

Electrical level indicator

Automatic Lubricating Pump for Oil SONED® model SSM

Description

Lubricating Pump SONED® model SSM is composed by a motor and pump set mounted on a rectangular reservoir with further accessories. Pumping is performed by means of gear, contitioning operation to oil systems. Control is from an electrical panel.

Due to its compact size and safe, easy operation, it offers totally reliable lubrication. Easy installation and low acquisition and maintenance cost complete its advantages.

SSM pumps are designed for centralized systems that use dividers. It is composed by filler cup with strainer, column type oil level sight indicator and pressure relief valve.

This lubricating pump is regularly used in small and average size equipment such as milling machines, lathes, reamer machines, rectifying machines, printing machines and textile machines.

Specifications

Lubricant	Oil 50 to 1000 cSt
Maximum operating temperature	70º C
Maximum pressure	30 kg/cm² (adjustable)
Reservoir	3-liter cast aluminium or 7 & 15-liter SAE 1020 steel
Motor	Electrical 1/8 HP / 3500 rpm / 220/380 V or 400 V three-phase or 110/220 V single-phase
Maximum oil discharge	0.2 or 0.5 liter/min.
Minimum oil level switch	1.5 A / 250 V AC / NA

Opctional:

- Pressure Gauge
- Pressure Switch

(Continue)

Automatic Lubricating Pump for Oil SONED® model SSM

(Continued)

Model 3-liter aluminum reservoir

Model 3-liter aluminum reservoir

Purchasing codes

Code	Reference	Model	Flow L/min	Max. Pressure kg/cm^2 adjustable	Three-phase motor 220/380-440 V	Single-phase motor 110/220 V	Level Switch NO/NC	Pressure Gauge	Pressure Switch
10736	SSM-1016	SSM	0,2	30	***		***		
10737	SSM-1017	SSM	0,2	30	***		***	***	
10738	SSM-1018	SSM	0,2	30	***		***		***
10739	SSM-1019	SSM	0,2	30	***		***	***	***
10740	SSM-1020	SSM	0,2	30		***	***		
10741	SSM-1021	SSM	0,2	30		***	***	***	
10742	SSM-1022	SSM	0,2	30		***	***		***
10743	SSM-1023	SSM	0,2	30		***	***	***	***
10744	SSM-1024	SSM	0,5	30	***		***		
10745	SSM-1025	SSM	0,5	30	***		***	***	
10746	SSM-1026	SSM	0,5	30	***		***		***
10747	SSM-1027	SSM	0,5	30	***		***	***	***
10748	SSM-1028	SSM	0,5	30		***	***		
10749	SSM-1029	SSM	0,5	30		***	***	***	
10750	SSM-1030	SSM	0,5	30		***	***		***
10751	SSM-1031	SSM	0,5	30		***	***	***	***

Purchasing information

- Quantity, model, maximum oil flow, capacity of the reservoir, power requirements.
  Example: 2/SSM/0.2/7/220 V three-phase

(Continue)

Automatic Lubricating Pump for Oil SONED® model SSM

(Continued)

Model 7-liter SAE 1020 steel reservoir

Purchasing codes

Code	Reference	Model	Flow L/min	Max. Pressure kg/cm^2 adjustable	Three-phase motor 220/380-440 V	Single-phase motor 110/220 V	Level Switch NO/NC	Pressure Gauge	Pressure Switch
10768	SSM-1048	SSM	0,2	30	***		***		
10769	SSM-1049	SSM	0,2	30	***		***	***	
10770	SSM-1050	SSM	0,2	30	***		***		***
10771	SSM-1051	SSM	0,2	30	***		***	***	***
10772	SSM-1052	SSM	0,2	30		***	***		
10773	SSM-1053	SSM	0,2	30		***	***	***	
10774	SSM-1054	SSM	0,2	30		***	***		***
10775	SSM-1055	SSM	0,2	30		***	***	***	***
10776	SSM-1056	SSM	0,5	30	***		***		
10777	SSM-1057	SSM	0,5	30	***		***	***	
10778	SSM-1058	SSM	0,5	30	***		***		***
10779	SSM-1059	SSM	0,5	30	***		***	***	***
10780	SSM-1060	SSM	0,5	30		***	***		
10781	SSM-1061	SSM	0,5	30		***	***	***	
10782	SSM-1062	SSM	0,5	30		***	***		***
10784	SSM-1063	SSM	0,5	30		***	***	***	***

Purchasing information

- Quantity, model, maximum oil flow, capacity of the reservoir, power requirements.
  Example: 2/SSM/0.2/7/220 V three-phase

(Continue)

Automatic Lubricating Pump for Oil SONED® model SSM

(Continued)

Model 15-liter SAE 1020 steel reservoir

Purchasing codes

Code	Reference	Model	Flow L/min	Max. Pressure kg/cm^2 adjustable	Three-phase Motor 220/380-440 V	Single-phase Motor 110/220 V	Level Switch NO/NC	Pressure Gauge	Pressure Switch
10785	SSM-1064	SSM	0,2	30	***		***		
10786	SSM-1065	SSM	0,2	30	***		***	***	
10787	SSM-1066	SSM	0,2	30	***		***		***
10788	SSM-1067	SSM	0,2	30	***		***	***	***
10789	SSM-1068	SSM	0,2	30		***	***		
10790	SSM-1069	SSM	0,2	30		***	***	***	
10791	SSM-1070	SSM	0,2	30		***	***		***
10792	SSM-1071	SSM	0,2	30		***	***	***	***
10793	SSM-1072	SSM	0,5	30	***		***		
10794	SSM-1073	SSM	0,5	30	***		***	***	
10795	SSM-1074	SSM	0,5	30	***		***		***
10796	SSM-1075	SSM	0,5	30	***		***	***	***
10797	SSM-1076	SSM	0,5	30		***	***		
10798	SSM-1077	SSM	0,5	30		***	***	***	
10799	SSM-1078	SSM	0,5	30		***	***		***
10800	SSM-1079	SSM	0,5	30		***	***	***	***

Purchasing information

- Quantity, model, maximum oil flow, capacity of the reservoir, power requirements.
  Example: 2/SSM/0.2/15/220 V three-phase

SONED®

CENTRALIZED LUBRICATION

Automatic Lubricating Pump for Oil
SONED® model SSM equipped with nylon made reservoir

Description

Lubricating Pump SONED® model SSM is composed by a motor and pump vertical set mounted on a rectangular reservoir with further accessories. Pumping unit is by means of gear, conditioning operation to oil systems. Control is made from an electrical panel.

Due to compact size and safe, easy operation, it offers totally reliable lubrication. Easy installation and low acquisition and maintenance cost complete its advantages.

SSM pump is designed for centralized systems that use dividers. It is composed by filler cup with strainer, column type oil level sight indicator and pressure relief valve.

This lubricating pump is regularly used in small and average size equipment such as milling machines, lathes, reamer machines, rectifying machines, printing machines and textile machines.

Specifications

Lubricant	Oil 50 to 1000 cSt
Maximum operation temperature	70 ºC
Maximum pressure	30 kg/cm² (adjustable)
Reservoir	3 or 6-liter, nylon made
Motor	Electrical 1/8 HP / 3500 rpm / 220/380 V or 400 V three-phase or 110/220 V single-phase 1/6 HP
Maximum oil discharge	0.2 or 0.5 liter / min.
Oil minimum level switch	1.5 A / 250 V AC / NO /NC

Opctional:

- Pressure Gauge
- Pressure Switch

	3L	6L
H1	172	277
H2	354	459
H3	195	300

(Continue)

Automatic Lubricating Pump for Oil
SONED® model SSM equipped with nylon made reservoir

(Continued)

Purchasing codes

Code	Reference	Model	Flow L/min	Max. Pressure kg/cm^2 adjustabe	Three-phase Motor 220/380-440 V	Single-phase Motor 110/220 V	Level Switch NO/NC	Pressure Gauge	Pressure Switch	Reservoir
4898	SSM-1000	SSM	0,2	30	***		***			3 / NY
2524	SSM-1001	SSM	0,2	30	***		***	***		3 / NY
2526	SSM-1002	SSM	0,2	30	***		***		***	3 / NY
3156	SSM-1003	SSM	0,2	30	***		***	***	***	3 / NY
2527	SSM-1004	SSM	0,2	30		***	***			3 / NY
2525	SSM-1005	SSM	0,2	30		***	***	***		3 / NY
8942	SSM-1006	SSM	0,2	30		***	***		***	3 / NY
10734	SSM-1007	SSM	0,2	30		***	***	***	***	3 / NY
2530	SSM-1008	SSM	0,5	30	***		***			3 / NY
2531	SSM-1009	SSM	0,5	30	***		***	***		3 / NY
2529	SSM-1010	SSM	0,5	30	***		***		***	3 / NY
4911	SSM-1011	SSM	0,5	30	***		***	***	***	3 / NY
3930	SSM-1012	SSM	0,5	30		***	***			3 / NY
2528	SSM-1013	SSM	0,5	30		***	***	***		3 / NY
5102	SSM-1014	SSM	0,5	30		***	***		***	3 / NY
10735	SSM-1015	SSM	0,5	30		***	***	***	***	3 / NY
10752	SSM-1032	SSM	0,2	30	***		***			6 / NY
10753	SSM-1033	SSM	0,2	30	***		***	***		6 / NY
10754	SSM-1034	SSM	0,2	30	***		***		***	6 / NY
10755	SSM-1035	SSM	0,2	30	***		***	***	***	6 / NY
10756	SSM-1036	SSM	0,2	30		***	***			6 / NY
10757	SSM-1037	SSM	0,2	30		***	***	***		6 / NY
10758	SSM-1038	SSM	0,2	30		***	***		***	6 / NY
10759	SSM-1039	SSM	0,2	30		***	***	***	***	6 / NY
10760	SSM-1040	SSM	0,5	30	***		***			6 / NY
10761	SSM-1041	SSM	0,5	30	***		***	***		6 / NY
10762	SSM-1042	SSM	0,5	30	***		***		***	6 / NY
10763	SSM-1043	SSM	0,5	30	***		***	***	***	6 / NY
10764	SSM-1044	SSM	0,5	30		***	***			6 / NY
10765	SSM-1045	SSM	0,5	30		***	***	***		6 / NY
10766	SSM-1046	SSM	0,5	30		***	***		***	6 / NY
10767	SSM-1047	SSM	0,5	30		***	***	***	***	6 / NY

Purchasing information

- Quantity, model, maximum oil flow, capacity of the reservoir, power requirements.
  Example: 2/SSM/0.2/6/220 V three-phase

SONED®

CENTRALIZED LUBRICATION

Automatic Lubricating Pump for Oil SONED® model SSM without reservoir

Description

Lubricating Pump SONED® model SSM is composed by a vertical motor and pump. Pumping is performed by means of gear, conditioning operation to oil systems. Control is made from an electrical panel.

Due to the compact size and safe, easy operation, it offers totally reliable lubrication. Easy installation and low acquisition and maintenance cost complete its advantages.

SSM pump is designed for centralized systems that use dividers. It is equipped with pressure relief valve.

This lubricating pump is regularly used in small and average size equipment such as milling machines, lathes, reamer machines, rectifying machines, printing machines and textile machines.

Specifications

Lubricant	Oil 50 to 1000 cSt
Maximum operating temprerature	70º C
Maximum pressure	30 kg/cm² (adjustable)
Motor	Electrical 1/8 HP / 3500 rpm / 220/380 V or 400 V three-phase or 110/220 V single-phase, 1/6 HP
Maximum oil discharge	0.2 or 0.5 liters/min.

FLOW	L1	L2	L3
0,2 liters	48,1	148,8	344,5
0,5 liters	44,9	145,6	341,3

Purchasing codes

Code	Reference	Model	Flow L/min	Max. Pressure kg/cm² ajustable	Three-phase Motor 220/380-440 V	Single-phase Motor 110/220 V
3915	SSM-1080	SSM	0,2	30	***	
5103	SSM-1081	SSM	0,2	30		***
3914	SSM-1082	SSM	0,5	30	***	
9100	SSM-1083	SSM	0,5	30		***

Purchasing information

- Quantity, model, maximum oil flow, capacity of the reservoir, power requirements
  Example: 2/SSM/0.2/220 V three-phase

Automatic Lubricating Pump for Oil SONED® model SSMF

Description

Lubricating Pump SONED® model SSMF is composed by a vertical motor and a pump set assembled on a rectangular reservoir with further accessories. Pumping is performed by means of gear, conditioning operation to oil systems. Control is made from an electrical panel.

Due to its compact size and safe, easy operation, it offers totally reliable lubrication. Easy installation and low acquisition and maintenance cost complete its advantages.

SSMF pump is designed for centralized systems that use dividers. It is equipped with filler nozzle with strainer.

This lubricating pump is regularly used in small and average size equipment such as milling machines, lathes, reamer machines, rectifying machines, printing machines and textile machines.

Specifications

Lubricant	Oil 50 to 1000 cSt
Maximum operation temperature	70º C
Maximum pressure	15 kg/cm² (constant) / 30 kg/cm² (constant)
Reservoir	3 or 6-liter nylon made
Motor	Electrical 1/8 HP / 3500 rpm / 220/380 V or 400 V three-phase or 110/220 V single-phase
Maximum oil discharge	0.2 or 0.5 liters/min.
Oil minimum level switch	1,5A / 250 V AC / NO / NC
Pressure Gauige	0 - 60 bar 1/8 NPT

Opctional:

- Pressure Gauge

	3L	6L
H1	329,5	434,5
H2	195	300

(Continue)

Automatic Lubricating Pump for Oil SONED® model SSMF

(Continued)

Purchasing codes

Code	Reference	Model	Flow L/min	Three-phase Motor 220/380-440 V	Single-phase Motor 110/220 V	Level Switch NO/NC	Pressure Gauge	Reservoir Liters
3969	SSMF-2000	SSMF	0,2	***		***		3 / NY
10801	SSMF-2001	SSMF	0,2	***		***	***	3 / NY
9901	SSMF-2002	SSMF	0,2		***	***		3 / NY
10802	SSMF-2003	SSMF	0,2		***	***	***	3 / NY
3951	SSMF-2004	SSMF	0,5	***		***		3 / NY
10803	SSMF-2005	SSMF	0,5	***		***	***	3 / NY
9902	SSMF-2006	SSMF	0,5		***	***		3 / NY
10804	SSMF-2007	SSMF	0,5		***	***	***	3 / NY
3985	SSMF-2008	SSMF	0,2	***		***		6 / NY
10805	SSMF-2009	SSMF	0,2	***		***	***	6 / NY
10100	SSMF-2010	SSMF	0,2		***	***		6 / NY
10806	SSMF-2011	SSMF	0,2		***	***	***	6 / NY
3986	SSMF-2012	SSMF	0,5	***		***		6 / NY
10101	SSMF-2013	SSMF	0,5	***		***	***	6 / NY
10807	SSMF-2014	SSMF	0,5		***	***		6 / NY
10808	SSMF-2015	SSMF	0,5		***	***	***	6 / NY

Purchasing information

- Quantity, model, maximum oil flow, capacity of the reservoir, power requirements
  Example: 2/SSM/0.2/6/220 V three-phase

SONED®

CENTRALIZED LUBRICATION

Manual Lubricating Pump for Oil SONED® Model SS

Description

These pumps are recommended for smal size equipment such as machine tools, textile machines, printing machines, etc.

Due to its compact size, it is of easy application and low cost of acquisition and maintenance.

Oil pump SONED® model SS is designed for centralized systems that use dividers model DDS or DDM. It is available in two versions: with reservoir integrated into the machine and with reservoir to be mounted on the machine wall.

Pump is equipped with relief valve to avoid overload problems. With a minimum quantity of movable parts, it safely lubricates all points of the system each time lever it is commanded for. It returns to its original resting mode due to spring action.

SS 2A

Operation

Pump is actuated by pulling lever until resistance is felt. Manual force is conveyed to the piston that pressurizes lubricant main line up to the divider. During the pump operation, metered quantities of lubricant at divider are injected into lubricating points. After lever is released, main line pressure is released thus allowing divider refilling for the next cycle.

Lubrication exits at right side (D) or left side (E).

SS 2B

Specifications:

Lubricant	Oil 30 to 352 cSt at 40 °C
Maximum operating temperature	70 °C
Maximum pressure	30 kg/cm²
Reservoir	750 cm³ - SS2A 450 cm³ - SS2B
Maximum flow	15 cm³ per actuation

Purchasing codes

Code	Reference	Model	Max. Flow cm³ per actuation	Max. Pressure kg/cm²	Reservoir Liters
2535	SS-1001	SS-2AD	15	30	0,75 / Aluminum
10863	SS-1002	SS-2AE	15	30	0,75 / Aluminum
2532	SS-1003	SS-2BD	15	30	0,45 / Aluminum
2537	SS-1004	SS-2BE	15	30	0,45 / Aluminum

SONED®

CENTRALIZED LUBRICATION

Pneumatic Lubricating Pump for Oil SONED® model SS

Description

This lubricating pump is regularly used in small and average size equipment such as machine tools, textile and printing machines that require periodical lubrication. Due to its compact size, it is of easy application and low cost of acquisition and maintenance.

Oil pump SONED® model SS is designed for centralized systems that use dividers model DDS or DDM.

Pump is equipped with relief valve to avoid overload problems. With a minimum quantity of movable parts, it safely lubricates all points of the system each time lever it is commanded for. It returns to its original resting mode due to spring action.

Operation

Actuation is done when it is pressurized with compressed air. Force is conveyed to the piston that pressurizes lubricating main line up to divider. During pump operation, metered quantities of lubricant at dividers are injected into lubrication points. After pressure is relieved, main line is released and divider may reload for next cycle.

Lubricant may exits at right side (R) or at left side (L).

Specifications:

Lubricant	Oil 30 to 352 cSt at 40 ºC
Maximum operation temperature	70 ºC
Maximum pressure	30 kg/cm²
Reservoir	0.75 liter - SS2A / 0.45 liter - SS2B
Maximum discharge	15 cm³ per actuation
Air pressure	From 4 to 7 kg/cm²
Ratio	5:1

SS2AP

SS2BP

Purchasing codes

Code	Reference	Model	Max. Flow cm³ per actuation	Max. Air Pressure kg/cm²	Ratio	Max. Pressure kg/cm²	Reservoir Liters
2536	SS-1005	SS-2AP D	15	4 a 7	5:1	30	0,75 / Aluminum
2533	SS-1006	SS-2AP E	15	4 a 7	5:1	30	0,75 / Aluminum
2534	SS-1007	SS-2BP D	15	4 a 7	5:1	30	0,45 / Aluminum
10864	SS-1008	SS-2BP E	15	4 a 7	5:1	30	0,45 / Aluminum

SONED®

CENTRALIZED LUBRICATION

Pneumatic Lubricating Pump for Oil SONED® model SS 2BP

Description

This lubricating pump is regularly used in small size equipment such as machine tools, textile and printing machines, etc. that require periodical lubrication.

Due to its compact size, it is of easy application and low cost of acquisition and maintenance.

Oil pump SONED® model SS2BP is designed for centralized systems that use dividers model DDS or DDM. It is available either with own reservoir or with reservoir to be mounted on the machine.

Pump is equipped with relief valve to avoid overload problems. With a minimum quantity of movable parts, it safely lubricates all points of the system each time lever it is commanded for. It returns to its original resting mode due to spring action.

Operation:

Actuation is done when it is pressurized with compressed air. Force is conveyed to the piston that pressurizes lubricating main line up to the divider. During pump operation, metered quantities of lubricant at dividers are injected into lubrication points. After pressure is relieved, main line is released and divider may refill for next cycle.

Specifications:

Lubricant	Oil 30 to 352 cSt at 40 ºC
Maximum operation temperature	70 ºC
Maximum pressure	30 kg/cm²
Reservoir	3 or 6-liter
Maximum flow	15 cm³ per actuation
Air pressure	From 4 to 7 kg/cm²
Ratio	5:1
Minimum level switch	1.5A / 250 V AC / NO/NC

	3L	6L
H1	181	286
H2	221	326
H3	195	300

Purchasing codes

Code	Reference	Model	Max. Flow cm³ per actuation	Max. Air Pressure kg/cm²	Ratio	Max. Pressure kg/cm²	Level Switch NO/NC	Reservoir Liters
2522	SS-1009	SS-2BP	15	4 to 7	5:1	30	***	3 / NY
2523	SS-1010	SS-2BP	15	4 to 7	5:1	30	***	6 / NY

SONED®

CENTRALIZED LUBRICATION

Oil Metering Dividers
SONED® Model DDM

Description

Metering divider SONED® is designed to supply rigorously exact metered quantities of oil at lubrication points. This is accomplished with the use of either manual or automatic pump, according to the needs.

It is manufactured with 1, 2, 3, 4, 5 and 6 outlets and may be grouped according to the needs of the machine, i.e., according to the variable number of outlets.

Volume of oil supplied at each lubrication point is determined by simple, interchangeable metering units.

Volume is indicated on each metering nipple.

Simple to install in both new and existing machines, this product is readily installed or removed.

It can also be purchased separately.

Operation

With the pump on, lubricant pressurizes main line. Metering unit actuation is done by the lubricant itself, by injecting a pre-defined volume into respective points to be lubricated.

The moment main line is pressure relieved, pistons return to their original position, metering unit is refilled and are then ready for the next cycle.

OUTLETS	A	B	L
1	21	–	42
2	27,5	–	55
3	22,7	22,7	68
4	27	27	81
5	31,3	31,3	94
6	37,8	31,3	107

Specifications

Lubricant	Oil 50 to 500 cSt at 40 °C
Max. operation temperature	70 °C
Operation pressure	From 15 to 40 kg/cm²
Volume delivered/actuation (cm³)	0.01 / 0.02 / 0.03 / 0.06 / 0.10 / 0.16
Material and No. of Outlets	Aluminum blocks w/ 1, 2, 3, 4, 5 and 6
Refilling time	20 s
Pausing time	60 s

Purchasing information

- Quantity
- Model
- Number of outlets: 1, 2, 3, 4, 5 and 6
- Volume displaced per cycle at each outlet: 0,03 / 0,06 / 0,10 / 0,16 cm³

Example : 2 DDM - 3 (0,03 - 0,06 - 0,10)

SONED®

CENTRALIZED LUBRICATION

Oil Metering Unit Divider
SONED® Model DDS

Description

Oil metering unit divider SONED® is designed to supply rigorously exact metered quantities of oil at lubrication points. This is accomplished with the use of manual or automatic pumps, according to the needs.

It is manufactured with 1, 2, 3, 4 and 5 outlets and may be grouped according to the needs of the machine, i.e., with a variable number of outlets.

Volume of oil supplied at each lubrication point is simply determined by interchangeable metering unit. Volume is indicated on each metering unit.

Single to install in both new and existing machines, this product is readily installed or removed.

Metering units may also be purchased separately.

Operation

With the pump on, lubricant pressurizes main line. Metering units manifold actuation is done by the lubricant itself, by injecting a pre-defined volume into respective points to be lubricated.

The moment main line is pressure relieved, pistons return to their original position, distributors are refilled and are then ready for the next cycle.

OUTLETS	A	L
01	19,5	39
02	27,5	55
03	35,5	71
04	43,5	87
05	51,5	103

Specifications

Lubricant	Oil 50˘ to 500 cSt at 40 ºC
Max. operation temperature	70 ºC
Operation pressure	From 15 to 40 kg/cm²
Volume delivered/actuation	0,1 cm³, 0,2 cm³, 0,4 cm³, 0,6 cm³
Material & Outlets	Aluminum blocks w/ 1, 2, 3, 4 & 5
Refilling time	20 s
Pausing time	60 s

Purchasing information:

- Quantity
- Model
- Number of outlets: 1, 2, 3, 4 or 5
- Volume displaced per cycle at each outlet: 0,1 / 0,2 / 0,4 / 0,6 cm³
- Example : 3 DDS-2 (0,2 - 0,4) / 1 DDS-3 (0,1 - 0,4 - 0,6)

Oil Metering Unit Divider
SONED® Model DDM

Description

These oil metering unit dividers SONED® may be purchased separately or assembled on M8 x 1 threaded dividing bars. Orders may be placed for dividers up to 6 outlets.

Note: when complete metering units are ordered, they are supplied with sleeve flange adequate for Ø 4 mm tube plus sealing washer at distributing bar.

Specifications:

Code	Reference	Metering (cm^3)	Marking
2544	DDM-001	0,01	1
2568	DDM-002	0,02	2
2569	DDM-003	0,03	3
2570	DDM-006	0,06	6
3917	DDM-010	0,10	10
10097	DDM-016	0,16	16

Oil Metering Unit Divider SONED® Model DDS

Description

These oil metering unit dividers SONED® may be purchased separately or assembled on M10 x 1 threaded dividing bars. Orders may be placed for dividers up to 5 outlets.

Note: when complete metering units are ordered, they are supplied with sleeve flange adequate for Ø 4 mm tube plus sealing washer at distributing bar.

Specifications:

Code	Reference	Metering (cm^3)	Marking
2545	DDS-010	0,1	1
2571	DDS-020	0,2	2
2572	DDS-040	0,4	4
2573	DDS-060	0,6	6

Electrical Pump for Oil and Soft Grease
Model MPT

Description

MPT pump is indicated for application in small and average size oil lubricating systems single line type with volumetric metering units.

Motor driven pump set is assembled on a metallic plate with an orifice that also serves to cover the reservoir. Gear pump is supplied with a set of valves: 1) Priming (for automatic air blow down, when motor starts up pump operation); 2) Relief (that opens when pump stops operation, so relieving system pressure); 3) Safety (that acts whenever there is an excess pressure in the system).

Pump is equipped with strainer at filler cup, suction strainer, oil minimum level electrical switch and pressure gauge.

Operation

At the end of pausing period (time), operational electrical tension is applied to the pump motor, so starting up working period. Pump is on and pumps oil through main pressure line (piping) to metering units at divider that, by its turn, send pre-defined quantities of oil through secondary line (piping) until the respective points of the machine intended to be lubricated.

Pump stops to run at the end of working cycle. Lubrication cycle is so complete.

Following, the pressure is relieved thus allowing metering device to refill and further lubricating cycles to repeat according to defined pausing period. A pressure switch signalizes pressure changes in the system. Level switch signs low reservoir level.
A pressure switch installed at main pressure line, during working cycle, indicates if pressure is the pre-defined one to act metering units to send oil to lubrication points. At pausing period, it indicates if there is pressure drop, so metering units refill for next working cycle.

SONED®

CENTRALIZED LUBRICATION

Electrical Pump for Oil
Model MPT-200

Description

This pump may be used at small and medium size machines for lubricating a limited number of points

Specifications

Discharge/Minute	0.2 liter
Working pressure	Adjustable 5 - 25 kg/cm^2
Relief valve	0.7 kg/cm^2
Plastic reservoir	3 liters
Suction strainer	250 micron
Pressure gauge	0 - 60 kg/cm^2 or 0 - 870 psi
Discharge port	M 12 x 1, Ø 6 mm tube
Lubricant	Oil 50 - 1000 cSt 40 ^{o}C
Oil minimum level electrical switch	1.5 A 250 V AC, 200 V DC, 50 W
Motor	Please, refer to Table 01
Working temperature	From -20 ^{o}C to +80 ^{o}C

Table 1

Working voltage	220-240 or 380-420 V
	254-280 or 440-480 V
Cycles	50/60 Hz
Current	0,6 - 0,35 A
Power	90 W
Protection	IP - 55
Service	S1 continuous
Insulation	Class F
Construction	B14
Type	MEC - 56

Overall dimensions

Pump	A	B	C	D	E	F
MPT-3-NY	155	181	335	167	165	230

Purchasing codes

Code	Reference	Pressure	Type	Capacity of Reservoir
5341	60.821.1	5 - 25 kg/cm^2	MPT - 3 - NY - 200-25	3 liters / plastic

SONED®

CENTRALIZED LUBRICATION

Electrical Pump for Oil
Model MPT-500

Description

This pump may be used for lubricating medium and large size machines with a large number of lubricating points.

Specifications

Discharge/Minute	0.5 liter
Working pressure	Adjustable 15 - 50 kg/cm^2
Relief valve	0.7 kg/cm^2
Plastic reservoir	3 liters - 6 liters
Suction strainer	250 micron
Pressure gauge	0 - 60 kg/cm^2 or 0 - 870 psi
Discharge port	M 12x1 tube Ø 6 mm
Lubricant	Oil 50 - 1000 cSt 40 ^{o}C
Minimum level electrical switch	1.5 A, 250 V AC, 200 V DC, 50 W
Motor	Please refer to Table 1
Working temperature	From -20 ^{o}C to +80 ^{o}C

Table 1

Working voltage	220-240 or 380-420 V
	254-280 or 440-480 V
Cycles	50/60 Hz
Current	0.6 - 0.35 A
Power	90 W
Protection	IP - 55
Service	S1 continuous
Insulation	Class F
Construction	B14
Type	MEC - 56

Overall dimensions

Pump	A	B	C	D	E	F
MPT-3-NY	155	181	335	167	165	230
MPT-6-NY	250	276	430	167	165	230

Purchasing codes

Code	Reference	Pressure	Type	Capacity of Reservoir
5340	60.822.2	15-50 kg/cm^2	MPT - 3 - NY - 500-50	3 liters / plastic
5342	60.822.3	15-50 kg/cm^2	MPT - 6 - NY - 500-50	6 liters / plastic

SONED®

CENTRALIZED LUBRICATION

Single-Phase Gear Pump
Model CME

Description

This series of electrical pumps has been precisely tailored to meet the widest possible requirements of operating requirements for medium and large size lubricating systems in machines with a large number of lubricating points.

CME pump handles 50 to 1000 cSt oil and NLGI 00-000 soft grease. It has been developed for single line with 200 cm^3/minute metering units, single-phase motor, 115 V or 230 V, oil minimum level electrical switch, integrated electronic board (optional) and a pressure switch protected under a sturdy plastic cover.

Plastic reservoir capacity is either 3 or 6 liter.

Electrical pump is complete with relief and air blow-down valve and by pass valve. Electronic board controls the system in a variety of ways and holds the possibility to regulate pausing set up time (from 5 to 250 minutes) and working set up time (from 5 to 90 seconds) by means of a bipolar switch. It may also control the system through an internal or external pressure switch and controls alarm in case of lack of pressure in the line and minimum oil level, including pre-lubricating option or not.

Specifications

Motor	Single-phase	
Power	110 W	
Current	0,75 A (230 V) 1,5 A (115 V)	
Protection	IP 33 - Class B	
Discharge/minute	0.2 liter	
Working pressure	24 kg/cm^2 maximum for oil	
	30 kg/cm^2 maximum for soft grease	
Electrical working tension	115 V - 230 V 50/60 Hz	
Reservoir	3 or 6 liters, plastic	
Lubricant	50 - 1000 cSt mineral oil	
	NLGI 00-000 grease	
Suction strainer	250 micron	
Oil minimum level electrical switch	Oil	1.5 A - 250 V AC - 150 V DC
	Soft grease	2 A 24 V DC
Pressure gauge	0 - 60 kg/cm^2 (optional)	
Pause time	From 5 to 250 minutes	
Working time	From 5 to 90 seconds	
Discharge port	M 12x1 tube Ø 6 mm	
Push button	Extra cycles - Reset	
Green light	Electrical power on	
Yellow light	Pump working	
Red light	Oil low level alarm	
	Pressure alarm	
Working temperature	From -10 °C to +60 °C	

Opctional:

- Pressure Gauge

Electrical Pump for Oil
Model CME

Purchasing codes

Code	Reference	Type	Reservoir	
5344	00.870.4	CME CE + PFL 115 V	3 liters	Without timer / With pressure gauge
5345	00.870.5	CME CE + PFL 230 V	3 liters	Without timer / With pressure gauge
5346	00.870.6	CME CC + PFL 115 V	3 liters	With timer / With pressure gauge
5347	00.870.7	CME CC + PFL 230 V	3 liters	With timer / With pressure gauge

Purchasing codes

Code	Reference	Type	Reservoir	
5348	00.875.0	CME CE + PFL 230 V	6 liters	Without timer / With pressure gauge
5353	00.875.2	CME CC + PFL 230 V	6 liters	Without timer / With pressure gauge

Electrical Pump for Soft Grease
Model CME-G

Purchasing codes

Code	Reference	Type	Reservoir	
5352	00.872.5	CME-G CE + PFL 230 V	3 liters	Without timer / With pressure gauge
5351	00.872.7	CME-G CC + PFL 230 V	3 liters	With timer / With pressure gauge

Purchasing codes

Code	Reference	Type	Reservoir	
5350	00.877.5	CME-G CE + PFL 230 V	6 litros	Without timer / With pressure gauge
5349	00.877.7	CME-G CC + PFL 230 V	6 litros	With timer / With pressure gauge

Metering Valve
Model Ilcomatic - 2

Description

Ilcomatic-2 metering valve is suitable both for oil and soft grease lubricating systems fed by an intermittent pump. Function of such metering valve consists in metering and sending previously established quantity of lubricant to the lubricating point. This is done by means of metering exchangeable nipples that may easily be substituted later on.

By varying interval frequency of pump, quantity of lubricant sent is successively regulated. Those meters are pre-assembled on an aluminum divider and have a defined number of outlets

During the project phase of a lubrication system, it is necessary to define a metering valve for each point, calculate total quantity of lubricant and choose the most adequate pump. Pausing time between cycles is, at least, 60 seconds.

General Features

Phase 1
At each pump actuation, pressurized oil flow passes through inlet orifice (1) and reaches lip seal (2) so allowing lubricant flow into the chamber (3). Piston (4) movement causes lubricant going to chamber (5).

Phase 2
At pressure relief phase, piston (4) starts returning to the initial position due to the action of the spring. Sealing valve (2) moves away thus opening the orifice (6). The lubricant accumulated in the chamber (3) is transferred into the chamber (5).

Phase 3
Piston (4) has completed its returning stroke. Lubricant has reached chamber (5) and sealing valve (2) has blocked communication orifice (6). Metering valve is now ready for a new cycle

Metering Valve
Model Ilcomatic-2 GR.2

Description

These metering valves may be supplied separately or mounted on dividers with M10x1 thread.

It is possible to supply dividers with maximum 6 outlets.

Purchasing codes

Code	Reference	Metered Qty	Mark
5376	02.611.5	0.10 cm^3	01
5377	02.611.6	0.20 cm^3	02
5378	02.611.7	0.40 cm^3	04
5379	02.611.8	0.60 cm^3	06

Ilcomatic-2 GR.2 metering niples may also be purchased separately. Markings are made at hexagonal side.

Specifications

Discharge/cycle (cm^3)	0.10 - 0.20 - 0.40 - 0.60
Number of outlets	1- 2 - 3 - 4 or 5
Working pressure	From 15 to 40 kg/cm^2
Filling time	20 s
Pausing time	60 s
Lubricant	Oil 50-1000 cSt / soft grease NLGI 00-000
Gasket	Viton

Code of metering niples

Code	Reference	Metered Qty	Mark
5380	02.615.4	0.10 cm^3	01
5381	02.615.5	0.20 cm^3	02
5382	02.615.6	0.40 cm^3	04
5383	02.615.7	0.60 cm^3	06

Divider
Model DDM/DDS for Metering Units Models Ilcomatic - 2 GR.2

Manifold type DDM

Manufacturing table

Code	Reference	Nº Outlets	A	B	L	Weight
2511	DDM-113A	01	21	-	42	0,021
2512	DDM-113B	02	27,5	-	55	0,027
2513	DDM-113C	03	22,7	22,7	68	0,036
2514	DDM-113D	04	27	27	81	0,043
2515	DDM-113E	05	31,3	31,3	94	0,050
2516	DDM-113F	06	37,8	31,3	107	0,057

Manifold type DDS

Manufacturing table

Code	Reference	Nº Outlets	A	B	L	Weight
2517	DDS-112A	01	19,5	19,5	39	0,036
2518	DDS-112B	02	27,5	19,3	55	0,046
2519	DDS-112C	03	35,5	19	71	0,065
2520	DDS-112D	04	43,5	18,8	87	0,080
3556	DDS-112E	05	51,5	18,5	103	0,095

Metering Valve
Model Ilcomatic-1

Description

Ilcomatic-1 metering valves are indicated for applications both in oil and soft grease automatic lubrication systems. They may be assembledboth on a single-joint divider or directly on lubricating points. For correct operation, pressure at main line shall not be lower than 15 kg/cm^2.

Flow Diagram

Figure 1

When the pump pumps lubricant through the inlet hole (1), pressure at valve lip (2) increases up to a pre-defined limit and then it allows lubricant entering into vane (3). Piston (4) moves forward to release lubricant previously stored at vane (5).

Figure 2

During relief phase, piston (4) returns to the initial position due to the action of spring. Its movement causes sealing valve (2) to open hole (6). Lubricant then is transferred from vane (3) to (5).

Figure 3

Now piston (4) has completed its course and lubricant has been fully transferred from vane (3) to vane (5). Sealing valve (2) has closed hole (6).

System is now ready for a new cycle.

Valve for Divider
Model Ilcomatic-1

Metering Valve for Divider / Oil 50-1000 cSt and Soft Grease NLGI 00-000

These metering valves are indicated to be assembled on 1 to 6-way single-joint aluminium dividers.

Specifications

Discharge/cycle (cm^3)	0,025 / 0,05 / 0,10 / 0,15 / 0,20 / 0,30 / 0,75 / 1,00
Number of outlets	1 to 6
Working pressure	From 15 to 40 kg/cm^2
Refilling time	15 sec
Pausing time	60 sec
Lubricant	Oil 50-1000 cSt Oil / Soft grease NLGI 00-000

Purchasing codes

Code	Reference	Marking	Metered Qty	A	B
5419	02.601.0	0	0,025 cm^3	18,8	13
5420	02.601.1	1	0,05 cm^3	22,2	13
5421	02.601.2	2	0,10 cm^3	22,2	13
5422	02.601.3	3	0,15 cm^3	22,2	13
5423	02.601.4	4	0,20 cm^3	25,7	13
5424	02.601.5	5	0,30 cm^3	25,7	13
5425	02.601.6	6	0,50 cm^3	34,5	17
5426	02.601.7	7	0,75 cm^3	34,5	17
5427	02.601.8	8	1,00 cm^3	34,5	17

Divider for Ilcomatic - 1 and Ilcomatic - 3 Metering Valves

Single-joint Dividers M12x1 - M10x1

Purchasing codes

Code	Reference	Outlets	A	B
5402	01.520.0	1	31	20
5403	01.521.0	2	52	41
5404	01.522.0	3	73	62
5405	01.523.0	4	94	83
5406	01.524.0	5	115	104
5407	01.525.0	6	136	125

Metering Valve
Model Ilcomatic-3

Description

Ilcomatic-3 metering valves are indicated for applications both in oil and soft grease automatic lubrication systems. They may be assembledboth on a single-joint divider or directly on lubricating points.

Flow Diagram

Figure 1

When the pump pumps lubricant under pressure pulls sealing valve (2), allowing so oil entering into vane (3) towards orifice (1). Piston (4) then moves forward to release lubricant previously stored at vane (5).

Figure 2

During relief phase, piston (4) returns to the initial position due to the action of spring. Its movement causes sealing valve (2) to open orifice (6). Lubricant then is transferred from vane (3) to (5).

Figure 3

Now piston (4) has alrready completed its course and lubricant has been fully transferred from vane (3) to vane (5). Sealing valve (2) has closed orifice (6).

System is now ready for a new cycle.

Metering Valve
Model Ilcomatic - 3 for Dividers

Metering Valve for Divider / Oil 50-1000 cSt and Soft Grease NLGI 00-000

These metering valves are indicated to be assembled on 1 to 6-way single-joint aluminium dividers.

Specifications

Discharge/cycle (cm^3)	30 / 60 / 100 / 160 / 200 / 300
Number of outlets	1 to 6
Working pressure	From 15 to 40 kg/cm^2
Refilling time	15 s
Pausing time	60 s
Lubricant	Oil 50-1000 cSt Oil / Soft grease NLGI 00-000

Purchasing codes

Code	Reference	Marking	Metered Qty	L (mm)
5566	02.709.1	30	30 cm^3	32
10689	02.709.2	60	60 cm^3	32
10690	02.709.3	100	100 cm^3	32
10691	02.709.4	160	160 cm^3	32
10692	02.709.5	200	200 cm^3	37.6
10693	02.709.6	300	300 cm^3	37.6

Metering Valve
Model Ilcomatic - 3 for Lubricating Points

Metering Valve for Lubricating Points / Oil 50-1000 cSt and Soft Grease NLGI 00-000

These metering valves are indicated to be assembled directly on point to be lubricated.

Specifications

Discharge/cycle (cm^3)	30 / 60 / 100 / 160 / 200 / 300
Number of outlets	1 to 6
Working pressure	From 15 to 40 kg/cm^2
Refilling time	15 s
Pausing time	60 s
Lubricant	Oil 50-1000 cSt Oil / Soft grease NLGI 00-000

Purchasing codes

Code	Reference	Marking	Metered Qty	L (mm)
10648	02.711.1	30	30 cm^3	32
10694	02.711.2	60	60 cm^3	32
10695	02.711.3	100	100 cm^3	32
10696	02.711.4	160	160 cm^3	32
11199	02.711.5	200	200 cm^3	37.6
11200	02.711.6	300	300 cm^3	37.6

Metering Valve
Model Ilcomatic - 3 for Lubricating Points

Fittings Used at Ilcomatic - 3 for Lubricating Points

Code.: 9777
Reference: 02.658.0

Code: 9778
Reference: 02.659.0

Code.: 9804
Reference: 02.660.0

Code: 9805
Reference: 02.661.0

Code: 10697
Reference: 02.663.0

Code: 11201
Reference: 02.665.0

Code: 9806
Reference: 02.666.0

Code: 9807
Reference: 02.667.0

(Continue)

Metering Valve
Model Ilcomatic - 3 for Lubricating Points

(Continued)

Fittings used at Ilcomatic - 3 for lubricating points

Samples of applications

SONED®

CENTRALIZED LUBRICATION

Metering Valve Air-Oil Mixer

Specifications

Air Inlet	1/8” BSP
Oil Inlet	1/8” BSP
Air + Oil Outlet	1/8” BSP
Oil Discharge/Cycle	30 mm^2 / 60 mm^2 / 100 mm^2 / 160 mm^2
Oil Pressure	Minimum 16 bar and maximum 60 bar
Air Pressure	Minimum 0.5 bar and maximum 8 bar
Assembling Bolt	M5 x 60 thread
Lubricant	Oil maximum 220 cSt I

Dimensions

Outlets	L
1	24
2	64
3	88
4	112
5	136
6	160

Purchasing codes

Code	Reference	Metered Qty (cm^3)	Marking
11340	MI-1003	0,03	3
11341	MI-1006	0,06	6
11342	MI-1010	0,10	10
11343	MI-1016	0,16	16

Purchasing information

- Quantity
- Model
- Number of Outlets: 1, 2, 3, 4, 5 or 6
- Displaced volume per cycle at every outlet: 0.03 / 0.06 / 0.10 / 0.16 cm^3

- Example: 2 mixer - 3 (0.03 - 0.06 - 0.10)