Double Line System

This system was designed for application in large size equipment (sugar mills, steel mills, etc.).

Double Line System may operate both with oil and grease to be intermittently and alternately pumped to dividers by means of two main lines, so avoiding loss of pressure head in the system as a function of large distances between points to be lubricated. Several optional devices such as controllers, inverting valves, relief valves, safety valves, strainers, etc., allow ample choice in meeting requirements of each project and installation.

Flow diagram

Observações:
1- As linhas 1 e 2 trabalham alternadamente
2 - A linha "T" é o retorno para o tanque

Legend

Multiple outlet grease pump | Pressure gauge | One and two-contact pressure switch | Double line distributor | Electrical level indicator | Controlling timer

Double Line Lubricating Pump
SONED® Model LDS 01

Description

Lubricating pump SONED® model LDS 01 is indicated for applications in double line lubricating systems of large size machines or a series of grouped machines requiring safe and efficient lubrication.

Mounted on a set of dividers model DA , DB, DBM or DBU, this pump meets the most diversified project requirements including a large number of points to be lubricated and posted at large mutual distance, yet offering flexible application and installation.

Specifications

Work pressure	400 kg/cm² maximum
Discharge	1,5 cm³ / cycle
Lubricant	Soft grease until NLGI 3
Motor	Three-phase 220 / 380 V or 440 V
Reservoir	30 / 60 / 100 liters
Accessories	Pressure gauge, safety valve, level switch, fittings, pressure switch
Reduction ratio	60:1 / 50:1 / 20:1 / 10:1 / 5:1
Temperature	From -10 ºC to +80 ºC
Nº of outlets	1

Optional: Minimum or maximum or minimum and maximum level switch. Please, inform your choice.

Table A

Reservoir	Size (mm)
30 liters	761
60 liters	1161
100 liters	1711

(Continue)

Double Line Lubricating Pump SONED® Model LDS 01

(Continued)

OiL Pump LDS

Code	Reference	Model	Reduction	Level Switch NO/ NC	Reservoir Liters
5008	LDS-1001	LDS-01	1:60		
11038	LDS-1033	LDS-01	1:60	***	30
5009	LDS-1002	LDS-01	1:60		60
11039	LDS-1034	LDS-01	1:60	***	60
5010	LDS-1003	LDS-01	1:60		100
11040	LDS-1035	LDS-01	1:60	***	100
10867	LDS-1007	LDS-01	1:50		30
11044	LDS-1039	LDS-01	1:50	***	30
10868	LDS-1008	LDS-01	1:50		60
11045	LDS-1040	LDS-01	1:50	***	60
10869	LDS-1009	LDS-01	1:50		100
11046	LDS-1041	LDS-01	1:50	***	100
10873	LDS-1013	LDS-01	1:30		30
11050	LDS-1045	LDS-01	1:30	***	30
10874	LDS-1014	LDS-01	1:30		60
11051	LDS-1046	LDS-01	1:30	***	60
10875	LDS-1015	LDS-01	1:30		100
11052	LDS-1047	LDS-01	1:30	***	100
10879	LDS-1019	LDS-01	1:20		30
11056	LDS-1051	LDS-01	1:20	***	30
10880	LDS-1020	LDS-01	1:20		60
11057	LDS-1052	LDS-01	1:20	***	60
10881	LDS-1021	LDS-01	1:20		100
11058	LDS-1053	LDS-01	1:20	***	100
10885	LDS-1025	LDS-01	1:15		30
11062	LDS-1057	LDS-01	1:15	***	30
10886	LDS-1026	LDS-01	1:15		60
11063	LDS-1058	LDS-01	1:15	***	60
11887	LDS-1027	LDS-01	1:15		100
11064	LDS-1059	LDS-01	1:15	***	100

Grease Pump LDS

Code	Reference	Model	Reduction	Level Switch NO/ NC	Reservoir Kilos
5015	LDS-1001	LDS-01	1:60		30
11041	LDS-1036	LDS-01	1:60	***	30
10865	LDS-1005	LDS-01	1:60		60
11042	LDS-1037	LDS-01	1:60	***	60
10866	LDS-1006	LDS-01	1:60		100
11043	LDS-1038	LDS-01	1:60	***	100
10870	LDS-1010	LDS-01	1:50		30
11047	LDS-1042	LDS-01	1:50	***	30
10871	LDS-1011	LDS-01	1:50		60
11048	LDS-1043	LDS-01	1:50	***	60
10872	LDS-1012	LDS-01	1:50		100
11049	LDS-1044	LDS-01	1:50	***	100
10876	LDS-1016	LDS-01	1:30		30
11053	LDS-1048	LDS-01	1:30	***	30
10877	LDS-1017	LDS-01	1:30		60
11054	LDS-1049	LDS-01	1:30	***	60
10878	LDS-1018	LDS-01	1:30		100
11055	LDS-1050	LDS-01	1:30	***	100
10882	LDS-1022	LDS-01	1:20		30
11059	LDS-1054	LDS-01	1:20	***	30
10883	LDS-1023	LDS-01	1:20		60
11060	LDS-1055	LDS-01	1:20	***	60
10884	LDS-1024	LDS-01	1:20		100
11061	LDS-1056	LDS-01	1:20	***	100
10888	LDS-1030	LDS-01	1:15		30
11065	LDS-1060	LDS-01	1:15	***	30
10889	LDS-1031	LDS-01	1:15		60
11066	LDS-1061	LDS-01	1:15	***	60
11890	LDS-1032	LDS-01	1:15		100
11067	LDS-1062	LDS-01	1:15	***	100

SONED®

CENTRALIZED LUBRICATION

Oil Lubricating Manual Pump
Model BMO

Description

Pump model BMO was designed to be used in Progressive and Double, centralized systems of oil installations. That is recommended for heavy duty service, superseding automatic pumps serving equipment that does not require too frequent lubrication or to be used as spare pumps of large systems.

The pump model BMO may supplied both with and without manual acted flow inverting valve.

By acting the lever, a double action internal piston moves. This, by its turn, continualy pressurizes the lubricant to one of the lines. When desired pressure is reached, inverting valve shall be acted causing the lubricant flow under pressure going to the other line, so operating the dividers.

Specifications:

Flow / action	4 cm^3
Working pressure	max. 150 kg/cm^2
Reservoir	4 liters (acrylic)
Lubricant	Oil 50 - 1000 cSt
Temperatures	from -10 °C to +60 °C
Outlet union	3/8 NPT
Assembly	vertical
No. of outlets	1 or 2

Note: With or without manual inverting valve.

Ordering Code:

Code	Reference	Model
10892	BMO-1001	BMO-1
10893	BMO-1002	BMO-2

SONED®

CENTRALIZED LUBRICATION

Grease Lubrication Manual Pump
Model BMG

Description

Pump model BMG was designed to be used both in Double Line and Progressive Line type centralized systems of grease installations. That is recommended for heavy duty service, superseding automatic pumps of equipment that does not require too frequent lubrication or to be used as spare pumps of large systems.

The pump model BMG is equipped with manual acted flow inverting valve.

By acting the lever, a double action internal piston moves. This, by its turn, continually pressurizes the lubricant to one of the lines. When desired pressure is reached, inverting valve shall be acted causing the lubricant flow under pressure going to the other line, so operating the dividers.

Specifications:

Flow / action	4 cm³
Working pressure	max. 150 kg/cm²
Reservoir	2 kg (metallic or acrylic)
Lubricant	grease up to NLGI 2
Temperatures	from -10 °C to +60 °C
Outlet union	3/8 NPT
Assembly	vertical
No. of outlets	1 or 2

Note: With or without with manual inverting valve.

Ordering Code:

Code	Reference	Model	Reservoir (kg)
5012	BMG-1001	BMG-1	2 / Acrylic
10891	BMG-1002	BMG-2	2 / Acrylic
5011	BMG-1003	BMG-1	2 / Metallic
5013	BMG-1004	BMG-2	2 / Metallic

Electrical Inverting Valve for Double Line
Model VIS

Description

This is a key mandatory component for any Double Line type installation. This valve alternates the flow at two main supplying lines in automatic or manual mode.

Inverters may operate in two modes: time or end-of-line.

Specifications

Maximum flow	120 liters/min
Maximum pressure	300 kg/cm²
Number of solenoids	1
Working temperature	From -30 ºC to +80 ºC
Voltage	12 V, 24 V, 110 V or 220 V

Code: 5014
Reference: VIS.1001

SONED®

CENTRALIZED LUBRICATION

Double Line Divider for Oil or Grease SONED® Model DA and DB

Description

Manufactured for oil or grease lubrication, this allows metered injection of lubricant at each outlet according to the demand of point to be safely and efficiently lubricated.

Lubricant is released at each point controlled by a controlling piston and another injecting piston, through hydraulic actuation according to the inversion of pressure and relief caused by the central pump of the system at two feeding lines.

Model DA

These are composed by blocks with 1 to 4 outlets and which flows may be individually regulated within the limits indicated in the attached table.

Model DB

These may be supplied with 2, 4, 6 or 8 outlets, however flows may only be regulated in couples, as they only have a regulating bolt for every two outlets. Yet, there is the possibility to close one outlet thus multiplying discharge volume by two at remaining branch case in which flow may be individually regulated.

Model DA

Specifications

Distributors measures	Dimensions in millimeters															Connecting tubing	
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Inlet	Outlet
DA -31	44,45	100,8	22,2	36,5	-	11,1	11,9	20,6	40,0	Ø21/64	63,5	26,9	38,0	26,9	9,1	3/8"NPT	1/8"NPT
DA - 32	73,0	100,8	22,2	36,5	28,57	11,1	36,5	-	40,0	Ø21/64	63,5	26,9	38,0	26,9	9,1	3/8"NPT	1/8"NPT
DA - 33	102,0	100,8	22,2	36,5	28,57	11,1	36,5	28,57	40,0	Ø21/64	63,5	26,9	38,0	26,9	9,1	3/8"NPT	1/8"NPT
DA - 34	130,0	100,8	22,2	36,5	28,57	11,1	36,5	57,15	40,0	Ø21/64	63,5	26,9	38,0	26,9	9,1	3/8"NPT	1/8"NPT
DA - 41	48,0	121,4	23,6	39,5	-	10,3	10,1	27,0	48,0	Ø21/64	76,0	28,7	40,0	28,7	11,27	3/8"NPT	1/4"NPT
DA - 42	79,0	121,4	23,6	39,5	31,75	10,3	10,1	58,8	48,0	Ø21/64	76,0	28,7	40,0	28,7	11,27	3/8"NPT	1/4"NPT
DA - 43	111,0	121,4	23,6	39,5	31,75	10,3	10,1	90,5	48,0	Ø21/64	76,0	28,7	40,0	28,7	11,27	3/8"NPT	1/4"NPT
DA - 44	143,0	121,4	23,6	39,5	31,75	10,3	10,1	122,5	48,0	Ø21/64	76,0	28,7	40,0	28,7	11,27	3/8"NPT	1/4"NPT
DA - 51	54,0	141,28	25,5	43,7	-	13,5	10,3	33,3	53,2	Ø21/64	82,0	32,85	45,0	32,85	12,5	3/8"NPT	1/4"NPT
DA - 52	90,0	141,28	25,5	43,7	36,5	13,5	10,3	69,8	53,2	Ø21/64	82,0	32,85	45,0	32,85	12,5	3/8"NPT	1/4"NPT
DA - 53	127,0	141,28	25,5	43,7	36,5	13,5	10,3	106,3	53,2	Ø21/64	82,0	32,85	45,0	32,85	12,5	3/8"NPT	1/4"NPT
DA - 54	164,0	141,28	25,5	43,7	36,5	13,5	10,3	142,8	53,2	Ø21/64	82,0	32,85	45,0	32,85	12,5	3/8"NPT	1/4"NPT
DA - 61	66,0	164,4	33,2	56,2	-	16,0	10,2	46,0	55,2	Ø21/64	89,0	36,9	57,0	36,9	12,2	3/8"NPT	1/4"NPT
DA - 62	108,0	164,4	29,2	52,1	46,0	16,0	10,2	87,9	55,2	Ø21/64	89,0	36,9	57,0	36,9	12,2	3/8"NPT	1/4"NPT

Purchasing Codes

Code	Reference	Model
10136	DA-0131001	DA-31
10137	DA-0131002	DA-32
5039	DA-0131003	DA-33
5040	DA-0131004	DA-34

Code	Reference	Model
10138	DA-0131005	DA-41
10139	DA-0131006	DA-42
10140	DA-0131007	DA-43
10141	DA-0131008	DA-44

Code	Reference	Model
10142	DA-0131009	DA-51
10143	DA-0131010	DA-52
10144	DA-0131011	DA-53
10145	DA-0131012	DA-54

Code	Reference	Model
10146	DA-0131013	DA-61
10147	DA-0131014	DA-62

(Continue)

Double Line Divider for Oil or Grease
SONED® Model DA and DB

(Continued)

Model DB

Distributors measure	Dimensions in millimeters															Connecting pipes	
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Entrada	Saída
DB - 32	44,0	116,0	24,0	16,0	32,0	11,0	7,0	30,0	27,0	Ø21/64”	79,0	44,0	54,0	27,0	11,5	3/8”NPT	1/4”NPT
DB - 34	76,0	116,0	24,0	16,0	32,0	11,0	7,0	62,0	27,0	Ø21/64”	79,0	44,0	54,0	27,0	11,5	3/8”NPT	1/4”NPT
DB - 36	108,0	116,0	24,0	16,0	32,0	11,0	7,0	94,0	27,0	Ø21/64”	79,0	44,0	54,0	27,0	11,5	3/8”NPT	1/4”NPT
DB - 38	140,0	116,0	24,0	16,0	32,0	11,0	7,0	126,0	27,0	Ø21/64”	79,0	44,0	54,0	27,0	11,5	3/8”NPT	1/4”NPT
DB - 42	44,0	124,0	24,0	16,0	32,0	11,0	7,0	30,0	27,0	Ø21/64”	79,0	44,0	54,0	27,0	11,5	3/8”NPT	1/4”NPT
DB - 44	76,0	124,0	24,0	16,0	32,0	11,0	7,0	62,0	27,0	Ø21/64”	79,0	44,0	54,0	27,0	11,5	3/8”NPT	1/4”NPT
DB - 46	108,0	124,0	24,0	16,0	32,0	11,0	7,0	94,0	27,0	Ø21/64”	79,0	44,0	54,0	27,0	11,5	3/8”NPT	1/4”NPT
DB - 48	140,0	124,0	24,0	16,0	32,0	11,0	7,0	126,0	27,0	Ø21/64”	79,0	44,0	54,0	27,0	11,5	3/8”NPT	1/4”NPT
DB - 52	44,0	138,0	24,0	16,0	32,0	11,0	7,0	30,0	27,0	Ø21/64”	79,0	44,0	54,0	27,0	11,5	3/8”NPT	1/4”NPT
DB - 54	76,0	138,0	24,0	16,0	32,0	11,0	7,0	62,0	27,0	Ø21/64”	79,0	44,0	54,0	27,0	11,5	3/8”NPT	1/4”NPT
DB - 56	108,0	138,0	24,0	16,0	32,0	11,0	7,0	94,0	27,0	Ø21/64”	79,0	44,0	54,0	27,0	11,5	3/8”NPT	1/4”NPT
DB - 58	140,0	138,0	24,0	16,0	32,0	11,0	7,0	126,0	27,0	Ø21/64”	79,0	44,0	54,0	27,0	11,5	3/8”NPT	1/4”NPT

Purchasing codes

Code	Reference	Model
10148	DB-0141001	DB-32
10149	DB-0141002	DB-34
10150	DB-0141003	DB-36
10151	DB-0141004	DB-38
10152	DB-0141005	DB-42
10153	DB-0141006	DB-44

Code	Reference	Model
10154	DB-0141007	DB-46
10155	DB-0141008	DB-48
10156	DB-0141009	DB-52
10157	DB-0141010	DB-54
9421	DB-0141011	DB-56
10158	DB-0141012	DB-58

(Continue)

Double Line Divider for Oil or Grease
SONED® Model DA and DB

(Continued)

Specifications

Series	Model	Weight (kg)	Lubri-cant	Nº of outlets	Volume displaced per inversion		Loss due to inversion (1)	Quantity adjusted per 1 turn of regulating screw	Working pressure		Temperature
					Minimum	Maximum			Minimum	Maximum (2)	
30	DA - 31	0,700	OIL OR GREASE Max. NLGI 2	1	0,2 cm³ (0.012 pol³)	1,2 cm³ (0.072 pol³)	0,5 cm³ (0.030 pol³)	0,06 cm³ (0.003 pol³)	15 kg / cm² (213 psi)	210,9 kg / cm² (3000 psi)	90 ºC maximum
	DA - 32	1,200		2							
	DA - 33	1,600		3							
	DA - 34	2,200		4							
30	DB - 32	1,200		1to 2			0,2 cm³ (0.012 pol³)				
	DB - 34	2,150		2to 4							
	DB - 36	3,060		3 to 6							
	DB - 38	4,020		4 to 8							
40	DA - 41	0,900		1	0,6 cm³ (0.036 pol³)	2,2 cm³ (0.134 pol³)	0,55 cm³ (0.033 pol³)	0,10 cm³ (0.006 pol³)			
	DA - 42	1,600		2							
	DA - 43	2,200		3							
	DA - 44	2,900		4							
40	DB - 42	1,220		1to 2			0,2 cm³ (0.012 pol³)				
	DB - 44	2,150		2to 4							
	DB - 46	3,080		3 to 6							
	DB - 48	4,000		4 to 8							
50	DA - 51	1,300		1	1,2 cm³ (0.073 pol³)	5 cm³ (0.305 pol³)	0,63 cm³ (0.038 pol³)	0,15 cm³ (0.009 pol³)	12 kg / cm² (170 psi)		
	DA - 52	2,200		2							
	DA - 53	3,400		3							
	DA - 54	4,400		4							
50	DB - 52	1,340		1to 2			0,2 cm³ (0.012 pol³)				
	DB - 54	2,160		2to 4							
	DB - 56	3,080		3 to 6							
	DB - 58	4,060		4 to 8							
60	DA - 61	2,500		1	3 cm³ (0.183 pol³)	14 cm³ (0.854 pol³)	0,63 cm³ (0.038 pol³)	0,68 cm³ (0.041 pol³)			
	DA - 62	3,800		2							

(1) Quantity of lubricant needed to operate controlling piston. (2) In oil system, do not surpass 100 kg / cm² (1420 psi)

SONED®

CENTRALIZED LUBRICATION

Double Line Modular Distributors with Modular Base SONED® - Model DBM

Description

Distributor DBM is sturdy and versatile, designed to work both with oil an grease. It has two outlets or only a single one but with double flow.

It is composed by a totally modular base that can accept from 1 to 10 distributors. Featuring hydraulic actuator, you may visually see and follow-up operation and regulate flow. It is totally interchangeable among any position of modular base.

Characteristics

- Low maintenance
- Easy changing configuration
  - Changing position of distributors at base
  - Increasing or decresing quantity of distibutors
  - One or two outlets per distributor
- Flow regulation

Specifications

Model	Lubricant	Volume displaced per inversion		Loss due to inversion	Quantity adjusted per 1 turn of regulating screw	Working Pressure		Maximum Temperature
		Minimum	Maximum			Minimum	Maximum	
DBM-30	OIL OR GREASE Max. NLGI 2	0,2 cm^3 (0,012 pol^3)	1,2 cm^3 (0,072 pol^3)	0,27 cm^3 (0,016 pol^3)	0,07 cm^3 (0,004 pol^3)	15 bar	300 bar	90º
DBM-50		1,2 cm^3 (0,072 pol^3)	5,0 cm^3 (0,305 pol^3)		0,16 cm^3 (0,010 pol^3)			

Operation:

Lubricating oil fills up guiding piston chamber and displaces it up to opening passage to metering piston chamber. When this chamber is filled up, the inversion happens, i.e., lubricant fills up guiding piston chamber through the other inlet and fills up the other chamber of guiding piston until meeting way to metering piston. As the other chamber is filled up, when the lubricant pressures metering piston to the other side, automatically the lubricant of the other chamber is expelled from the distributor, following its way up to the lubricating point.

The quantity of lubricant to be metered is regulated through the regulating bolt by limiting visualization rod to operate. The closer to the distributor body, the smaller is the flow.

In order to supersede or to move the distributor, just release fastening bolts, remove existing distributor and position the new distributor and fasten it back with fastening bolts.

When several distributors are to be assembled, release 4 inlet couplings at connecting pipe. Align side by side all distributors intended to be assembled. Assemble corresponding connecting pipes on the base and lock inlet coupling at 4 tips of pipes and fasten the assembly.

Double Line Modular Distributors with Modular Base SONED® - Model DBM

Specifications

DETAIL OF BASE ASSEMBLING

Purchasing codes

Model	Nº of Outlets	L1(mm)	L2 (mm)	Reference	Code
DBM-30-1	1 or 2	78	54	0121031	10894
DBM-50-1				0121051	10904
DBM-30-2	2 to 4	108	84	0121032	10895
DBM-50-2				0121052	10905
DBM-30-3	3 to 6	138	114	0121033	10896
DBM-50-3				0121053	10906
DBM-30-4	4 to 8	168	144	0121034	10897
DBM-50-4				0121054	10907
DBM-30-5	5 to 10	198	174	0121035	10898
DBM-50-5				0121055	10908
DBM-30-6	6 to 12	228	204	0121036	10899
DBM-50-6				0121056	10909
DBM-30-7	7 to 14	258	234	0121037	10900
DBM-50-7				0121057	10910
DBM-30-8	8 to 16	288	264	0121038	10901
DBM-50-8				0121058	10911
DBM-30-9	9 to 18	318	294	0121039	10902
DBM-50-9				0121059	10912
DBM-30-10	10 to 20	348	324	0121040	10903
DBM-50-10				0121060	10913

Double Line Modular Distributors with Modular Base SONED® - Model DBU

Description

Distributor DBU is sturdy and versatile, designed to work both with oil an grease. It has two outlets or only a single one but with double flow.

It is composed by a totally modular base that can accept from 1 to 10 distributors. Featuring hydraulic actuator, you may visually see and follow-up operation and regulate flow. It is totally interchangeable among any position of modular base.

Characteristics

- Low maintenance
- Easy changing configuration
  - Changing position of distributors at base
  - Increasing or decresing quantity of distibutors
  - One or two outlets per distributor
- Flow regulation

Specifications

Model	Lubricant	Volume displaced per inversion		Loss due to inversion	Quantity adjusted per 1 turn of regulating screw	Working Pressure		Maximum Temperature
		Minimum	Maximum			Minimum	Maximum	
DBU-30	OIL OR GREASE Max. NLGI 2	0,2 cm^3 (0,012 pol^3)	1,2 cm^3 (0,072 pol^3)	0,27 cm^3 (0,016 pol^3)	0,07 cm^3 (0,004 pol^3)	15 bar	300 bar	90º
DBU-50		1,2 cm^3 (0,072 pol^3)	5,0 cm^3 (0,305 pol^3)		0,16 cm^3 (0,010 pol^3)			

Operation:

Lubricating oil fills up guiding piston chamber and displaces it up to opening passage to metering piston chamber. When this chamber is filled up, the inversion happens, i.e., lubricant fills up guiding piston chamber through the other inlet and fills up the other chamber of guiding piston until meeting way to metering piston. As the other chamber is filled up, when the lubricant pressures metering piston to the other side, automatically the lubricant of the other chamber is expelled from the distributor, following its way up to the lubricating point.

The quantity of lubricant to be metered is regulated through the regulating bolt by limiting visualization rod to operate. The closer to the distributor body, the smaller is the flow.

In order to supersede or to move the distributor, just release fastening bolts, remove existing distributor and position the new distributor and fasten it back with fastening bolts.

When several distributors are to be assembled, release 4 inlet couplings at connecting pipe. Align side by side all distributors intended to be assembled. Assemble corresponding connecting pipes on the base and lock inlet coupling at 4 tips of pipes and fasten the assembly.

(Continue)

Double Line Modular Distributors with Modular Base SONED® - Model DBU

(Continued)

Dimensions

Model	A	B	C
DBU - 1	46	9	29
DBU - 2	68	34	-x-
DBU - 3	100	34	32
DBU - 4	132	34	64

Purchasing odes

Code	Reference	Model
10914	DBU-0111001	DBU-30-1
10915	DBU-0111002	DBU-30-2
10916	DBU-0111003	DBU-30-3
10917	DBU-0111004	DBU-30-4
10918	DBU-0111005	DBU-50-1
10919	DBU-0111006	DBU-50-2

Code	Reference	Model
10920	DBU-0111007	DBU-50-3
10921	DBU-0111008	DBU-50-4
10594	DBU-0111030	MODULO 30
10922	DBU-0111050	MODULO 50