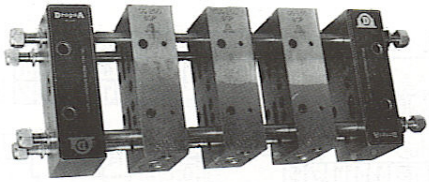
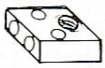
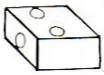
PROGRESSIVE METERING ELEMENTS WITH STEEL BODY, HARDENED PISTON, HIGH PRESSURE SEALING RING, DEVICE FOR CONNECTING OR SEPARATING THE OUTLETS



CODES TABLE

Nut	Washer	Tie rod	Inlet Element	Metering Element	End Elem.
					
QUANTITY FOR GROUP					
8	8	4	1	max. 10	1

Part No.	Part No.	No. of * Elements	Part No.	Part No. BSP 1/2	Part No. NPTF 1/2	Part No. Metric M 22x1.5	Q cc	Q cu.in.	Part No. BSP 1/4	Part No. NPTF 1/4	Part No. Metric. M 14x1.5	Part No.
		3	640030									
		4	640031									
		5	640032				2.5	.15	644058	643308	645071	
49031	16136	6	640033	640010	643095	645002	5	.30	644059	643309	645072	640011
		7	640034				7.5	.45	644060	643310	645073	
		8	640035				10	.61	644061	643311	645074	
		9	640036				12.5	.76	644062	643312	645075	
		10	640037									

* No. metering elements in assembled unit.

TECHNICAL DATA

Working pressure: max. 400 bar (5700 psi)
min. 20 bar (290 psi)
Working pressure without check valves (for recirculating systems): min. 12 bar (170 psi)
No. cycles per minute: max. 70
Driving torque for tie rods: max. 3 kgm (21 lbs.ft)

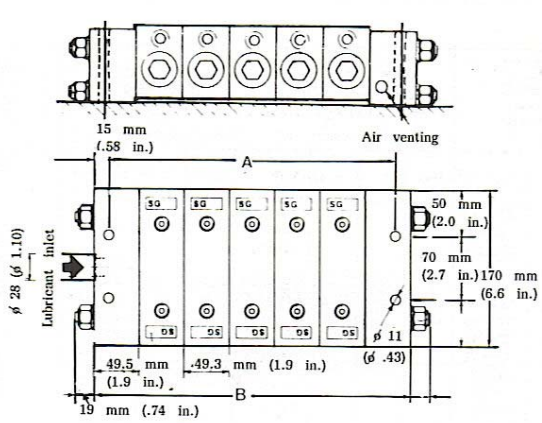
SPARE PARTS

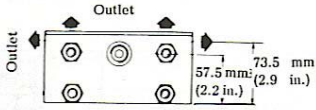
Complete set of "O-rings" for:
Inlet element - no sealing ring
Metering element - Part No. 640814
End element - Part No. 640815
Inlet element (Viton) - Part No. 640640
Metering element (Viton) - Part No. 640641

Use this schedule for prices of assembly units in price list. The assembly unit comprises: inlet element, metering elements, end element, tie rods with nuts and washers.

No. Metering Elements	THREADS BSP Part No.	NPTF Part No.	Metric Part No.
3	640910	643020	645063
4	640911	643021	645064
5	640912	643022	645065
6	640913	643023	645066
7	640914	643024	645067
8	640915	643025	645068
9	640916	643026	645069
10	640917	643017	645070

OVERALL DIMENSIONS



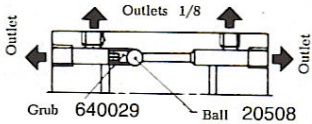


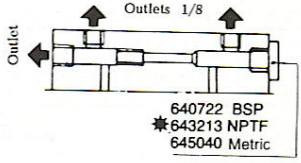
No. Metering Elements	Dimensions A mm	A in.	B mm	B in.
3	246.9	9.6	216.9	8.5
4	296.2	11.5	266.4	10.4
5	345.5	13.5	315.5	12.3
6	394.8	15.4	364.8	14.1
7	444.1	17.3	414.1	16.1
8	493.4	19.2	463.4	18.0
9	542.7	21.2	512.7	20.0
10	592.0	23.0	562.0	22.0

In order to get a perfect working, ensure that the group has been correctly ported.
You can double the delivery by converting from single outlet.
Remove gasket 640029 and replace screw 20508 as shown in the side drawing.

The top outlets are always 1/8" BSP, also for manufacture metric type.

TO CONNECT OUTLETS

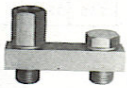




* Order separately

CONNECTIONS FOR ELEMENTS

CHARACTERISTICS				FITTING (R) Hex mm	L mm	Pipe seat C mm	Part N°	BRIDGE CONNECTIONS Hex mm	L mm	H mm	I mm	Part N°	Hex mm	L mm	H mm	I mm	Part N°
Thread	A	B	C														
BSP Silver colour	1/8	1/8	1/8	12	36.5	6	640999	12	29	14	14.7	640041	12	29	23.5	14.7	640061
								Silver colour thread									
NPTF Black colour	1/8	1/8	1/8	12	34.5	-	640101	12	29	18.5	14.7	643156	12	29	23	14.7	643158
								Black colour thread									
Metric Yellow colour	M10x1	1/8 BSP	M10x1	12	36.5	6	640102	12	29	14	14.7	645016	12	29	23.5	14.7	645017
								Yellow colour thread									

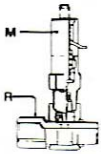


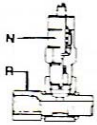
1 mm = .039 inches

PRESSURE INDICATORS

CHARACTERISTICS				Normal (N)				with memory (m)				with membrane (P)		
Thread	Max. Pressure bar	Max. Pressure psi	Colour of rod or membrane	Hex mm	L mm	C max. mm	Part N.°	Hex mm	L mm	C max. mm	Part N.°	Hex mm	L mm	Part N.°
	20	290	Blue				3290019							
	30	430	Silver				3290006				3290000			3290012
	50	710	Bronze				3290007				3290001			
	50	710	Red											3290013
BSP	75	1080	White	12	31.5	5	—	12	44	5	3290022	14	28.5	
1/8	100	1430	Yellow	(.46	(1.2	(.20	3290008	(.46	(1.7	(.20	3290002	(.55	(1.1	3290014
	150	2140	Black	in.)	in.)	in.)	3290009	in.)	in.)	in.)	3290003	in.)	in.)	3290015
Silver	200	2850	Green				3290010				3290004			3290016
colour	250	3560	Light blue				3290011				3290005			3290017
	20	290	Blue				850712							
	30	430	Silver				850713				850700			850707
	50	710	Bronze				850714				850710			
	50	710	Red											850704
NPTF	75	1080	White	12	31.5	5	—	12	44	5	850719		28.5	
1/8	100	1430	Yellow	(.46	(1.2	(.20	850715	(.46	(1.7	(.20	850701	14	(1.1	850708
	150	2140	Black	in.)	in.)	in.)	850716	in.)	in.)	in.)	850702	(.55	in.)	850705
Black	200	2850	Green				850717				850703	in.)		850706
colour	250	3560	Light blue				850718				850711			850709

PRESSURE INDICATORS FOR SIDE MOUNTING





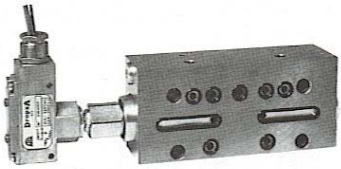
Pressure max. bar	Pressure max. psi	Part No. BSP thread with memory M · R	Part No. BSP thread normal N · R	Part No. NPTF thread with memory M · R	Part No. NPTF thread normal N · R	Part No. Metric thread with memory M · R	Part No. Metric thread normal N · R
20	290	–	644031	–	643345	–	645166
30	430	644021	644032	643338	643346	645173	645167
50	710	644022	644033	643339	643347	645174	645168
75	1080	644023	–	643340	–	645175	–
100	1430	644024	644034	643341	643348	645176	645169
150	2140	644025	644035	643342	643349	645177	645170
200	2850	644026	644036	643343	643350	645178	645171
250	3560	644027	644037	643344	643351	645179	645172

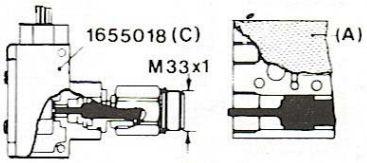
CYCLE CONTROL ELEMENTS

MOVEMENT MONITORING OF METERING ELEMENT PISTON BY MEANS OF A MICROSWITCH

A microswitch with a change over contact is controlled by an extended rod, integral with the metering element piston. This device is suitable for the control of the lubrication cycle at preselected intervals.
Life: 1 milion cycles approximately.
Characteristics of the contact:
Max. 220V 50-60 Hz 5A

Outlets	Part No. A		Part No. A • C	
cc.	5	12.5	5	12.5
cu.in.	.30	.76	.30	.76
BSP	644167	644168	644185	644186
NPTF	643362	643363	643380	643381
Metric	645083	645084	645101	645102

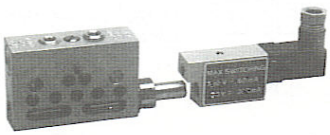


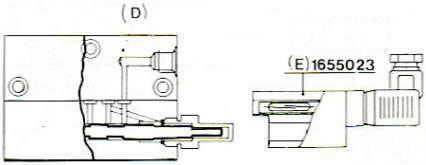


MOVEMENT MONITORING OF METERING ELEMENT PISTON BY MEANS OF A MAGNETIC CONTACT

A permanent magnet applied to the piston acts on a "reed" contact, which if connected to an electronic counter, can visualize up to 500 movements per minute. The Reed contact is inserted in a water tight container and can be easily substituted. The metering element with such a device, if fixed to a metal part, must have a gap of at least 10 mm (.39 in.). The best mounting is with the device upwards and the outlets downwards.
Characteristics of the contact:
Max. 220V 50-60 Hz 0.8 A

Outlets	Part No. D		Part No. D • E	
cc.	5	12.5	5	12.5
cu.in.	.30	.76	.30	.76
BSP	644194	644195	644203	644204
NPTF	643389	643390	643398	643399
Metric	645110	645111	645119	645120

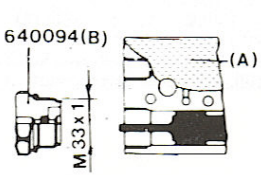


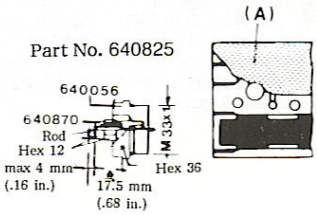


VISUAL MONITORING OF THE METERING ELEMENT PISTON'S MOVEMENT STANCH FITTING

It can be installed for visual indication or using the movement of the piston pin.

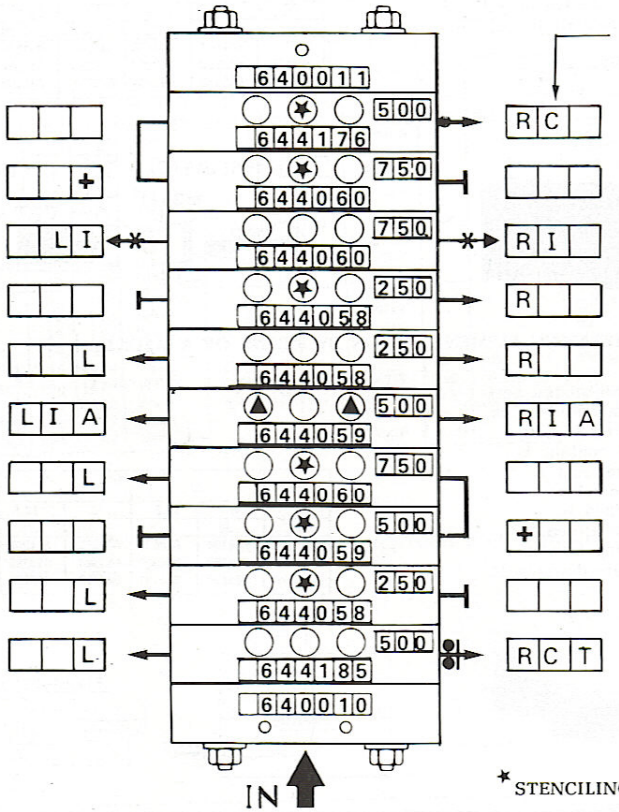
Outlets	Part No. A	
cc.	5	12.5
cu.in.	.30	.76
BSP	644167	644168
NPTF	643362	643363
Metric	645083	645084
Outlets	Part No. A • B	
cc.	5	12.5
cu.in.	.30	.76
BSP	644176	644177
NPTF	643371	643372
Metric	645092	645093





IDENTIFICATION DIAGRAM FOR ALL DEVICES, WHICH CAN BE USED IN A BLOCK OF 10 METERING ELEMENTS

For description of the legend, see at bottom of page 37



Identification references

Outlet on the right with visual control of metering element's piston run.

Side closing plug.

Outlet on the right with pressure gauge.

Outlet on the right.

Outlet on the right.

Outlet on the right with pressure gauge.

Connection element between two metering elements.

Side closing plug.

Outlet on the right with microswitch.

* STENCILING SHOWING SINGLE LINE

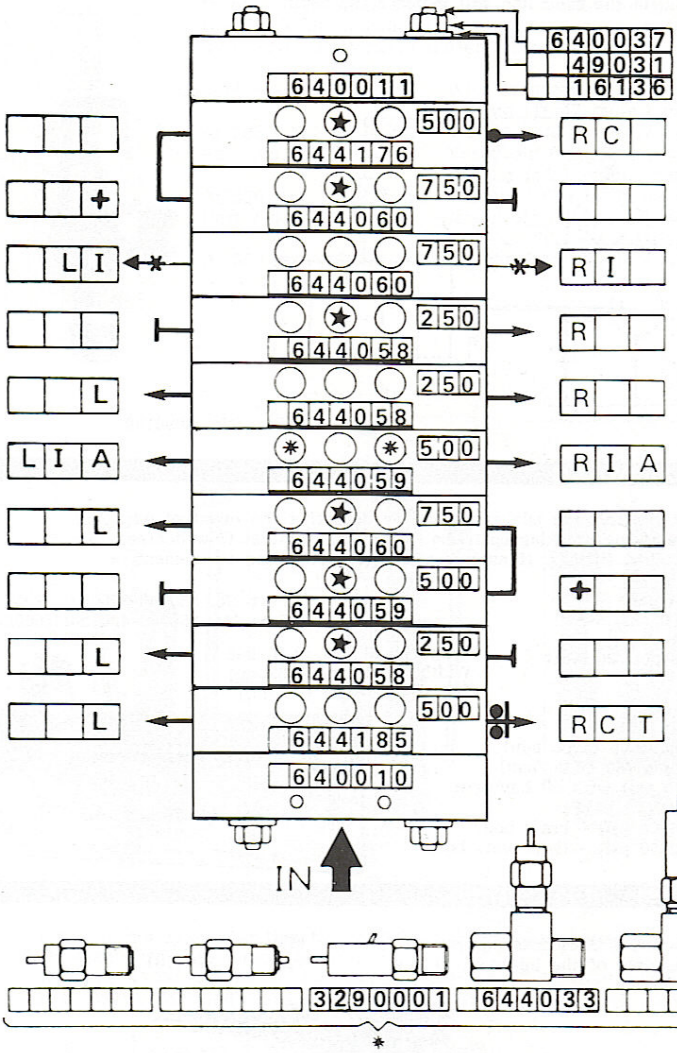
Note: Letter "R" indicates assembly on the right.
Letter "L" indicates assembly on the left.

The block may be ordered without giving the single code numbers, but just using the identification references. In this case the block will be identified as follows:
500LRCT 250L 500+750L 500LIARA 250LR 250R 750LIRI 750+500RC
Symbol + shows that the two components are connected by means of a bridge connection.
Identification number of the component refers to the number of the metering element given on the catalogue: with the Q value multiplied by 100, e.g. 500 corresponds at an SG component with 25 metering element 5 cc.

COMPOSITION OF SERIAL "SG" METERING ELEMENTS BLOCKS

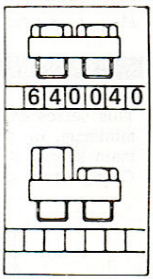
LISTING DIAGRAM FOR ORDERING A BLOCK MADE OF DIFFERENT PARTS

For codes and characteristics of the single components, see at pages 32 : 35



Components List	
Qnt.	Part No.
1	6 4 0 0 1 0
1	6 4 0 0 1 1
4	6 4 0 0 3 7
8	4 9 0 3 1
8	1 6 1 3 6
1	6 4 4 1 8 5
1	6 4 4 1 7 6
3	6 4 4 0 5 8
2	6 4 4 0 5 9
3	6 4 4 0 6 0
2	6 4 4 0 3 3
2	3 2 9 0 0 0 1
2	6 4 0 0 4 0
4	6 4 0 7 2 2

Connection element



Side closing plug for single outlet metering elements. 6 4 0 7 2 2

LEGEND

CT	Microswitch		+	Bridge connection.	R	Outlet on the right
CC	Reed	*	I	Pressure gauge	L	Outlet on the left
C	Rod	▲	IA	Pressure gauge	⊢	Side closing