

# Progressive Central Lubrication Systems

## Progressive distributors

LX-3

### Technical description

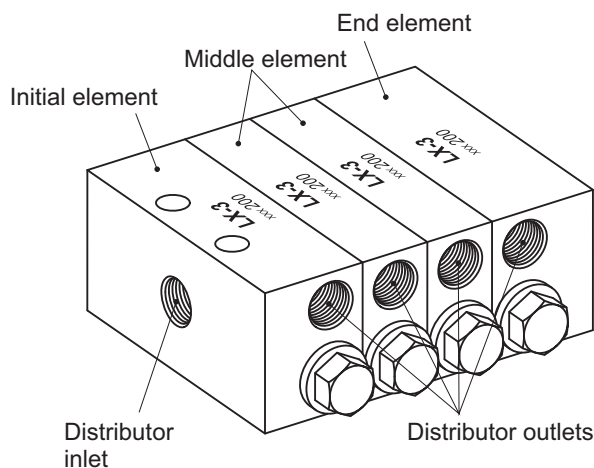
The progressive distributor LX-3 is built in a variable disk construction. Therefore the distributor can be, depending on the number of lubrication points, extended or shortened.

A progressive distributor needs at least three pistons for function, i.e. an initial and end element as well as a middle element for distributor LX-3.

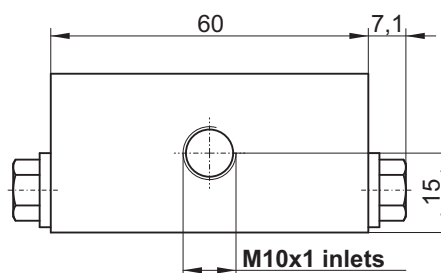
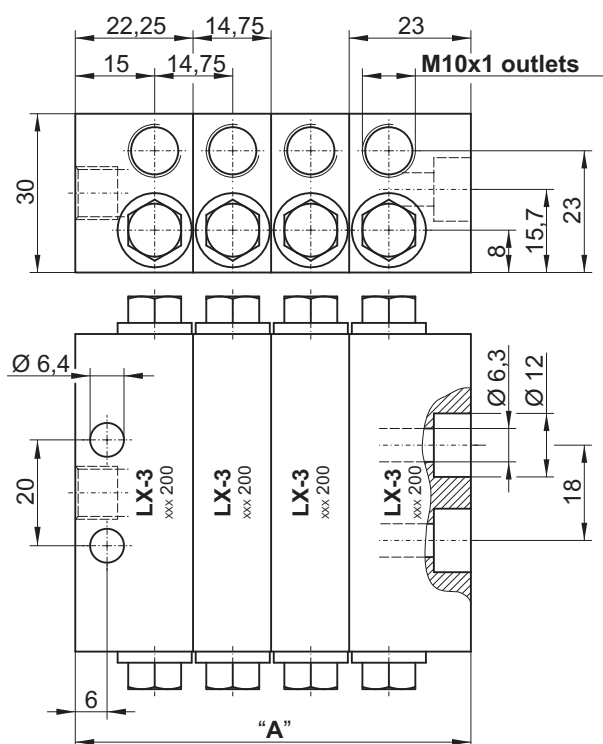
### Technical data

Operating pressure inlet:	max. 300 bar
Temperature range:	-30 °C to 80 °C
Metering medium:	oil - fluid grease - grease up to NLGI-cl. 2
Metering volume:	200 mm <sup>3</sup> /stroke per outlet
No of revolutions:	max. 60 rpm
Material:	V4A (1.4404 / 1.4401)
Number of piston elements:	
min. 3 piston elements:	LX-3 3/6
max. 10 piston elements:	LX-3 10/20

Progressive distributor LX-3 with four piston elements and eight outlets:



Dimensional drawing of progressive distributor LX-3:



Number of piston elements	Number of outlets (max.)	Dim. "A" (mm)
3	6	60,00
4	8	74,75
5	10	89,50
6	12	104,25
7	14	119,00
8	16	133,75
9	18	148,50
10	20	163,25

#### Elements

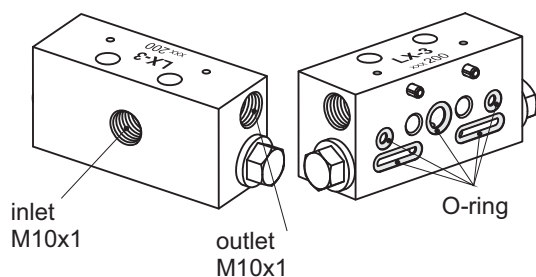
The progressive distributor LX-3 consists of one initial element, up to eight middle elements and one end element. All elements contain a piston.

The distributor inlet (at initial element) as well as all inlets (at initial-, middle and end element) are designed as threaded connections M10x1.

All pipe fittings with suitable connection threads and nominal pressure can be screwed into the inlet of the initial element as well as into the outlets of all elements (see “accessories progressive distributor” or “fittings and accessories”).

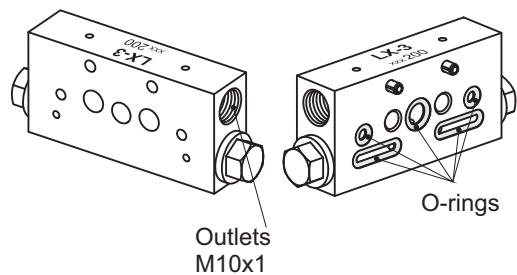
#### Initial element

for order-no.: 3972970000



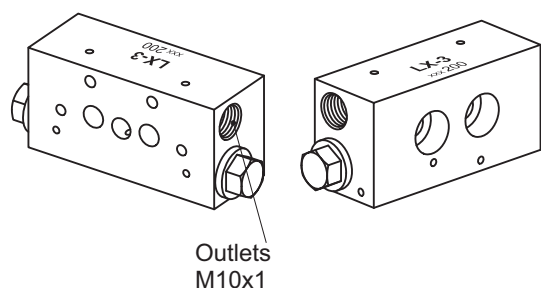
#### Middle element

for LX-3 order-no.: 3973980000



#### End element

for LX-3 order-no.: 3973990000



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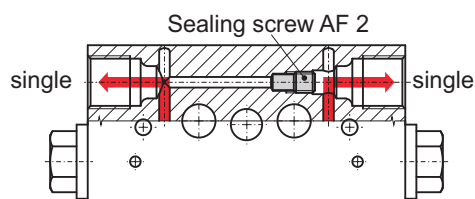
## Progressive distributors

LX-3

### Combination of outlets

For larger lubrication points it could be necessary to combine two or more outlets at the progressive distributor.

The individual disks have two outlets.



### Combination of outlets

Screw plug M10x1 for closing outlets:

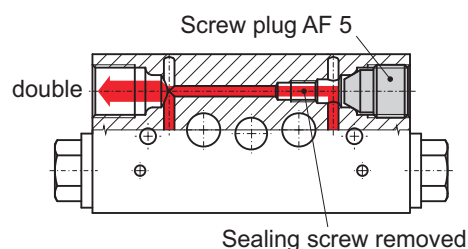


Screw plug with sealing (1.4571):

**Order number** 040301583013

### Combination of outlets at one distributor disk

When two outlets are combined, the two outlets of one disk are connected. To this purpose, the sealing screw, which separates the two sides, is removed and a screw plug is screwed into the side to be closed. The metering volume of the locked side now comes out of the other side, i.e. the metering volume at the open side doubles.



### Separation of outlets

To separate combined outlets again, the sealing screw has to be screwed in again.

Sealing screw for separating outlets at progressive distributors:



**Order number**

LX-3 sealing screw: 0802000455

#### Combination of outlets at several distributor disks

When the total metering volume of the outlets combined in one disk should be insufficient, for very large bearing points or main distributors e.g., there is also the possibility to combine the outlets of several distributor disks.

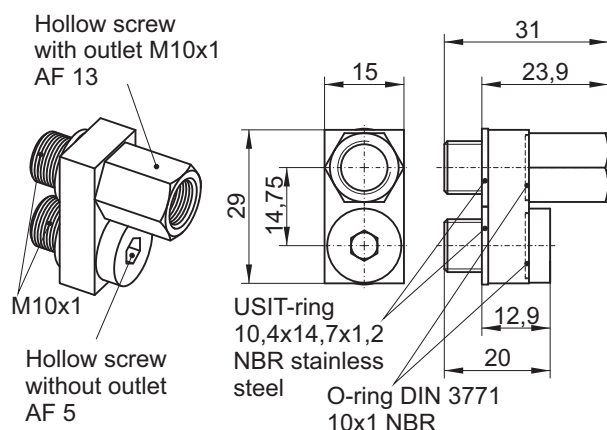
The metering volume of all combined outlets is calculated of their metering volume code number.

#### Distributor bridge with outlet

With the help of distributor bridges with outlet two, three or four outlets can be connected at different adjacent distributor disks.

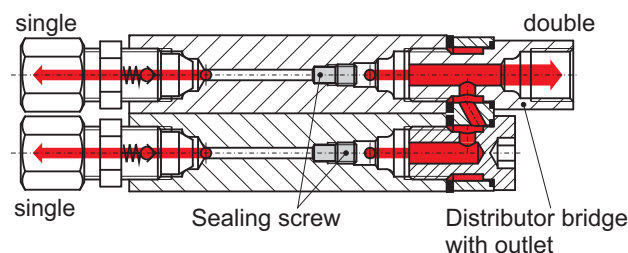
#### Order number total:

for LX-3 (V4A, 1.4404): 4096960010012



#### Two outlets combined at two different distributor disks

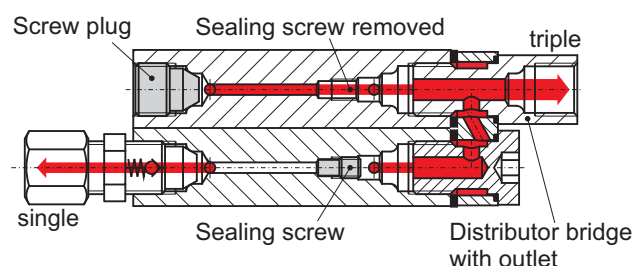
When only two outlets at different, adjacent distributor disks are combined, the sealing screw must not be removed from none of the two distributor disks.



#### Three outlets combined at two different distributor disks

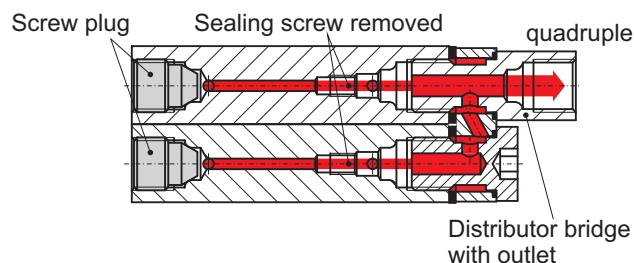
When three outlets shall be combined, the sealing screw has to be removed from one of the concerned distributor disks. The outlet opposite the distributor bridge of the distributor disk at which that sealing screw has been removed, must be locked with a screw plug.

All three outlets' metering volume then comes out of the outlet of the distributor bridge.



#### Four outlets combined at two different distributor disks

When four outlets should be combined, the sealing screws have to be removed in both distributor disks and a screw plug has to be screwed into each of the two outlets opposite to the distributor bridge. All four outlets' metering volume then comes out of the distributor bridge's outlet.

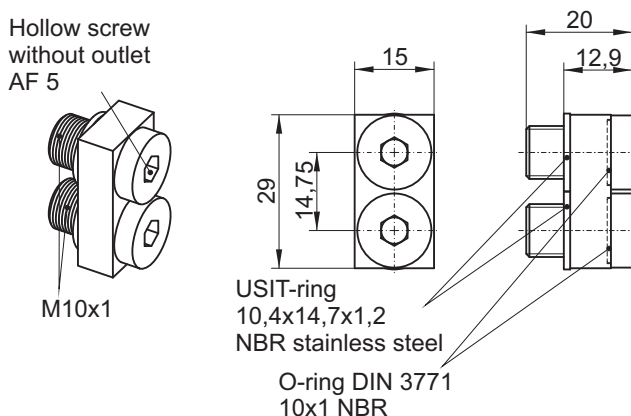


### Distributor bridges without outlet and pipe bridge

Distributor bridges without outlet have the same function as pipe bridges. With their help, three or four outlets at different, adjacent distributor disks can be combined.

#### Order number total:

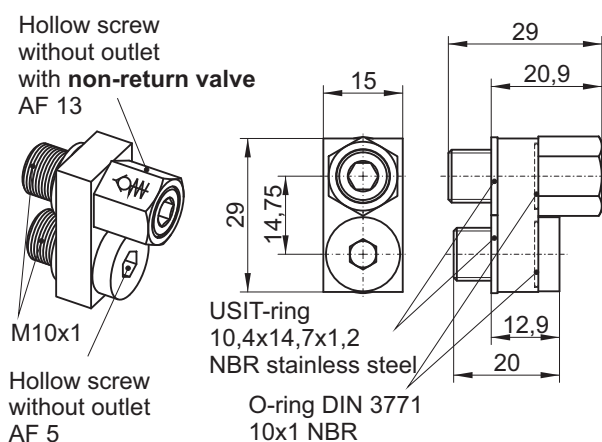
for LX-3 (V4A, 1.4404): 4096960010013



### Distributor bridge without outlet, with non-return valve

#### Order number total:

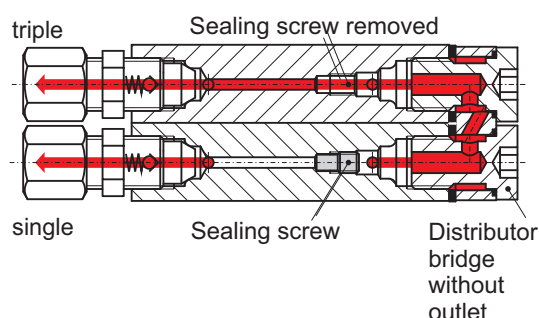
for LX-3 (V4A, 1.4404): 4096960010016



When a LX-3 3/2 is used where three outlets are combined, a distributor bridge without outlet but **with integrated non-return valve** has to be used.

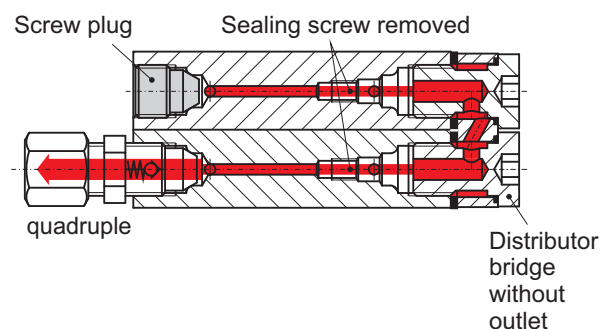
### Three outlets combined at two different distributor disks

When outlets are combined with a pipe bridge (standard) or with a distributor bridge without outlet, at least three outlets are always concerned, as the metering volume has to be directed through one of the disks of the progressive distributor. The sealing screw always has to be removed in one of the two combined distributor disks.



### Four outlets combined at two different distributor disks

Also four outlets can be combined with a pipe bridge (standard) or a distributor bridge without outlet. To this purpose, the sealing screws have to be removed from both distributor disks and one of the two outlets opposite to the pipe bridge have to be closed with a screw plug.



### Proximity switch

For monitoring the system or when using stroke controls to count the piston strokes, proximity switches can be installed at the progressive distributors LX-3.

Proximity switches can be retrofitted at all elements at any time. Remove the screw with O-ring and insert the proximity switch.

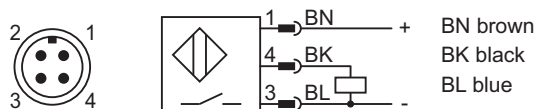
**Attention:** Take care of utmost cleanness.

The proximity switches are delivered with a cable of 0,3 m and cable and plug M12x1. Depending on the application, bushes with different cable lengths can be connected to the plug, but those bushes must be ordered separate (see accessories progressive distributor).

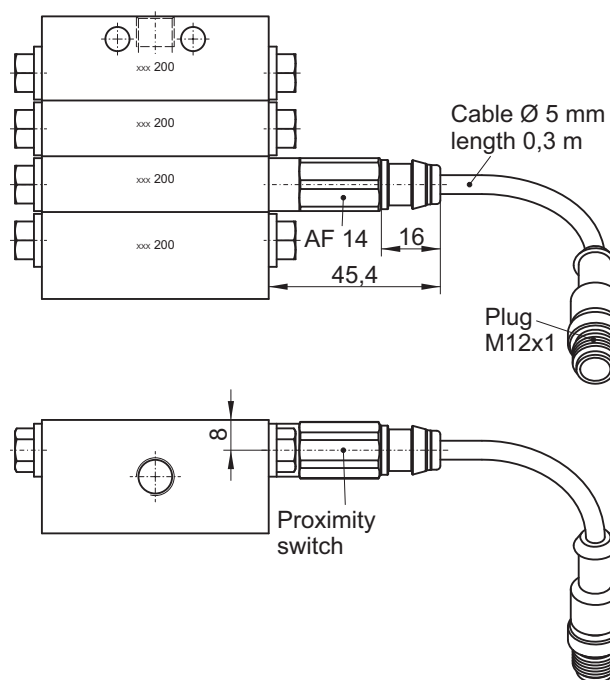
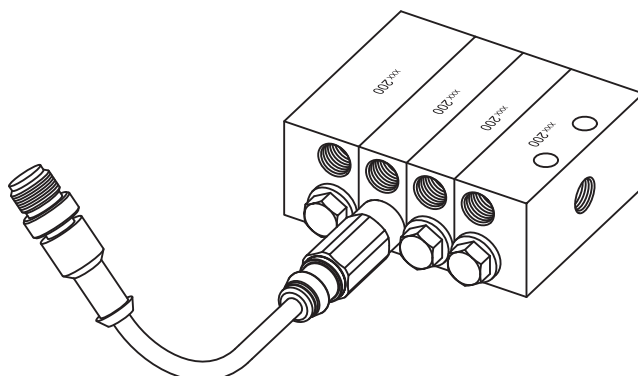
### Technical data of proximity switch

Connection:	M12x1 pluggable
Switch type:	PNP NO contact
Operating voltage:	10 - 60 V DC incl. residual ripple
Current load,	Duration: 100 mA
	Short-term: 100 mA
Current consumption:	< 15 mA
Permitted temperature (ambient):	-25 °C to 70 °C
Function indication:	LED yellow
Protection class:	IP 67
Housing material:	V4A(1.4571)
Threaded connection:	M11x1

### Circuit diagram



Progressive distributor or LX-3 with proximity switch:



### Order number

Proximity switch with 0,3 m cable and plug M12x1  
1000912960

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## Progressive distributors

LX-3

### Extension or shortening of distributors

The distributor LX-3 can any time be adapted to the application conditions because of their disk construction. If new lubrication points should be added or some become unnecessary, the distributor can be extended or shortened by mounting additional distributor disks or removing unnecessary ones.

### Description:

- Remove the cylinder screws, which keep the distributor together
- Separate the distributor at the desired point
- Add new middle elements or remove the unnecessary ones
- Screw the distributor together again with the corresponding cylinder screws with internal hexagon socket and one tooth lock washer each (see table)

Table for order number for cylinder screws with hexagon socket DIN 912, in A4 (1.4401), (1 pcs):

Distributor size	Cylinder screw	Order-no.
LX-3 3/6	M6 x 40	090091204371
LX-3 4/8	M6 x 55	090091204671
LX-3 5/10	M6 x 70	090091203671
LX-3 6/12	M6 x 85	090091211371
LX-3 7/14	M6 x 100	090091212071
LX-3 8/16	M6 x 115	090091212171
LX-3 9/18	M6 x 130	090091216871
LX-3 10/20	M6 x 145	090091218871

**Note:** A LX-3 distributor always has to consist of at least 3 piston elements and 10 as a maximum.

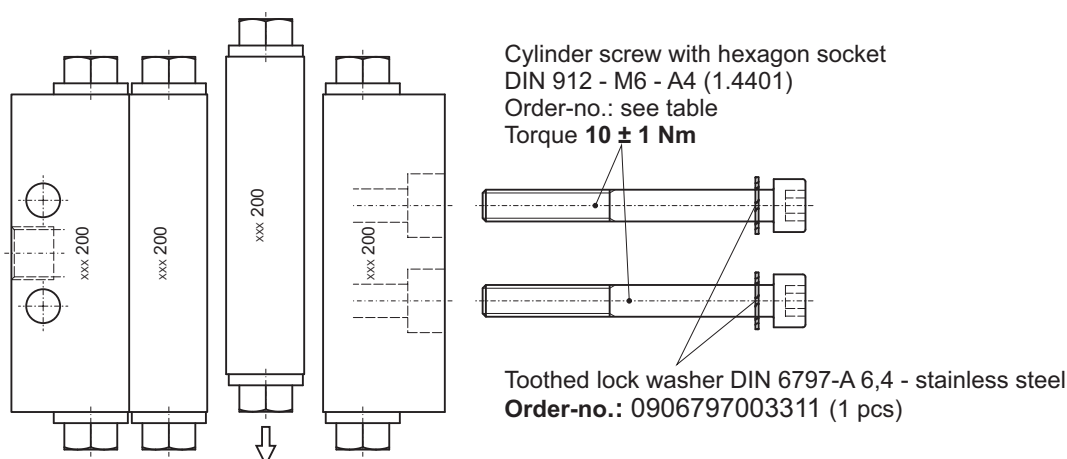
Should one of the O-rings, which are used for sealing the distributor between the individual elements be damaged and does not seal anymore, a set of seals can be ordered, containing all O-rings installed into the LX-3 distributors.

Set of seals for initial and middle elements:

**Order-no.:** 397297D001

Shown is a LX-3 3/6 distributor that is enlarged by a middle element:

**Attention: Take care of utmost cleanness.**



#### Order key

##### Distributor inlet

The LX-3 distributor can be delivered with or without fittings. If the inlet fitting shall already be installed in the distributor, indicate this by means of fitting type, pipe diameter and the series when order (see table).

Inlet	Designation
<b>M10x1</b>	without fitting
<b>GE06L</b>	male stud coupling, pipe-Ø 6, series L
<b>WE06L</b>	elbow screw fitting, pipe-Ø 6, series L
<b>WE08L</b>	<b>Attention: only possible for LX-3</b> elbow screw fitting, pipe-Ø 8, series L
<b>WS06L</b>	elbow swivelling screw fitting, pipe-Ø 6, series L

Fittings can also be ordered separate (see accessories progressive distributor or fittings and accessories).

When no indication concerning the fittings is made, the delivery is without fittings as standard!

##### Distributor outlet

The distributor outlet can be delivered with union screws, plug-in connections and two types of non-return valves.

Outlets	Designation
<b>M10x1</b>	without fitting
<b>ÜS06</b>	union nut, pipe-Ø 6
<b>RVB06</b>	non-return valve, pipe-Ø 6 ( <b>with</b> cutting ring and union nut)
<b>RVS06</b>	<b>Attention: only possible for</b> non-return valve with <b>plug-type connection</b> , for pipe-Ø 6
<b>RVA</b>	<b>Attention: only possible for LX-3</b> non-return valve, internal thread M10x1 ( <b>w/o</b> olive and union screw)
<b>RVA06</b>	<b>Attention: only possible for LX-3</b> non-return valve, pipe-Ø 6 ( <b>with</b> olive and union screw)

When the description of the fitting is missing, the LX-3 is delivered with union screw Ø 6.

##### Metering volume

The metering code number **200** of the elements have to be indicated on each side of the distributor inlet in the order, in which lubricant comes out and they have to be separated by a **slash (/)**. For distributor bridges, a **plus (+)** has to be indicated instead of the slash.

Non-return valves in the distributor bridges are marked with **RV**.

For combined outlets, the metering code numbers accumulate (see "Combination of outlets").

Screw plugs and outlets which are closed with distributor bridges are marked with a **line (---)**. The sealing screw, which has to be removed, is marked with a **star (\*)** in the drawing (see "Combination of outlets").

##### Proximity switch

Distributor elements to which a proximity switch should be attached, have to be marked with **NS** (proximity switch) after the number for the metering volume.

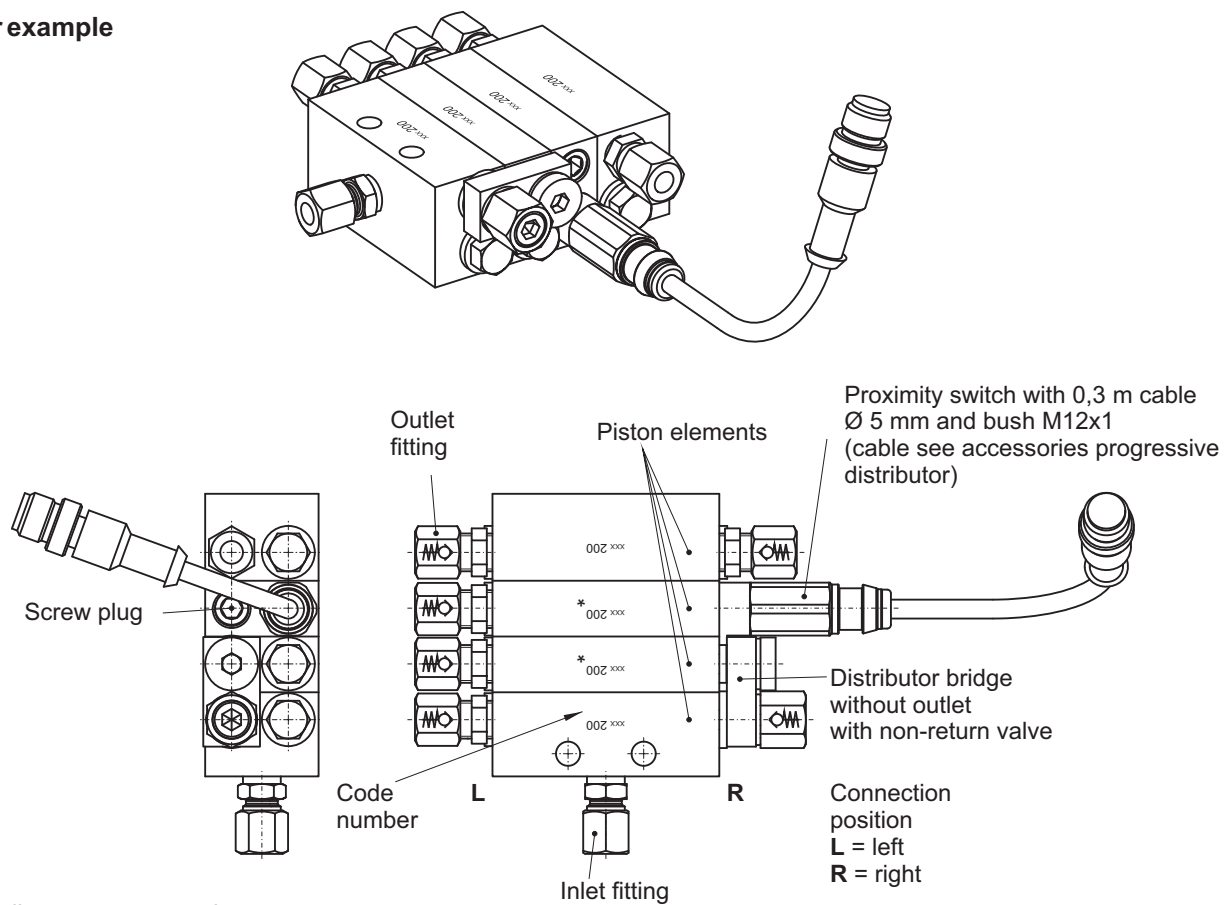


# Progressive Central Lubrication Systems

## Progressive distributors

LX-3

### Order example



\* = Sealing screw removed

Type	LX-3	04 / 05 - GE06L / RVB06	R	---	RV +	---	---	NS / 200
Number of piston elements			L	200	/	600	/	400 / 200
Number of outlets								
Inlet fitting								
Outlet fitting								
Connection position								
Metering code-no. at outlets								