PRODUCT CATALOGUE · GREASE

CENTRALISED LUBRICATION SYSTEMS

# Grease Lubrication Catalogue

High, middle and low pressure grease pumps, progressive and volumetric distributors, fittings and hose for centralised lubrication of heavy and mobile machinery.

| PUMPS | DISTRIBUTORS | DOCUMENT | REVISION |
|---|---|---|---|
| 05 | 08 | AMAG-CAT-GRS-01 | Rev A |

# 00 Contents



### PRESSURE DECIDES EVERYTHING

Grade of grease, pump family, distributor type and hose rating all follow from one number: the output pressure the circuit runs at.

### PROGRESSIVE VS VOLUMETRIC

Progressive feeds points one after another from one pressure source. Volumetric meters a dose per point per cycle. Pick before you pick a pump.

### CONTINUOUS IS WASTE

Intermittent delivery forms and keeps the lubricant film. Continuous delivery adds heat, wastes grease and rarely lubricates better.

**HOW TO ORDER** Send the full model code on WhatsApp — +91 73976 31796. Every model number in this catalogue is built position by position; the coding rules are printed with each product. If you are unsure, send a photo of the fitting on the machine.

# 01 Three pressure classes

A grease circuit is classified by the output pressure of its drive source, and that one number decides everything downstream: which pump, which grease grade, which distributor family, which hose. High, middle and low. Every product in this catalogue belongs to one of the three, and mixing across them is the most common specification error we see.

### 01 High pressure progressive system

ZJ series piston pump + SD or U-shaped progressive distributors

A piston pump raises grease to as much as 30 MPa and feeds a master progressive distributor, which feeds secondary distributors, which feed the points in sequence. Full pump pressure reaches every point — none of it is divided. A blocked point raises system pressure until grease leaves the safety valve, so the circuit monitors itself.

NLGI 1# and 2#, also 0# / 00# / 000#
16 – 32 MPa · ZJ set to 30 MPa

### 02 Middle pressure system

PJ pump or NKGH manual pump with take-off + 35 type pressure volumetric distributors

The pump pressure drives the piston in each volumetric distributor, delivering the stored, metered dose to the point. The pump then stops and its pressure take-off valve relieves the line; the distributor re-meters and re-stores, ready for the next cycle.

NLGI 000# to 0#
10 – 16 MPa

### 03 Low pressure system

AP type motor-driven pump + AD, RH-3 or 35 type distributors

The same volumetric metering at chassis pressure. Two forms: inspecting volumetric, where a spring compressed during charging injects the dose at spring pressure; and pressure volumetric, where pump pressure itself makes the delivery.

NLGI 000# to 0#
Below 10 MPa · AP set to 3.8 MPa

#### PROGRESSIVE

Points are fed one after another from a single pressure source. Full pump pressure reaches every point in turn — nothing is divided — so a progressive circuit will push grease into a bearing that a volumetric circuit cannot.

One blocked point stops the whole assembly and raises pressure until the safety valve opens. That is a feature: the circuit reports its own failure.

#### VOLUMETRIC

Each outlet meters a stated dose per cycle, set at the distributor. Points work independently, so one blocked branch starves one point and leaves the rest running.

Needs a pump with a pressure take-off mechanism: the distributor re-meters only when the main line is relieved. Choose volumetric when doses differ point to point.

## WHERE THESE CIRCUITS RUN

| | | |
|---|---|---|
| HIGH PRESSURE · ZJ + SD<br>**Engineering & construction**<br>Excavators, cranes, loaders — points that are hard to reach and easy to forget | HIGH PRESSURE · ZJ + SD3<br>**Wind energy**<br>Main, pitch, blade and yaw bearings, and generators in wind turbines | HIGH PRESSURE · ZJ + SD2<br>**Steel & heavy machinery**<br>Rolling mills, forging presses, mining and material handling plant |
| MIDDLE PRESSURE · GM + 35 TYPE<br>**Plastic injection moulding**<br>Tie bars, toggle pins and platens on horizontal and vertical machines | MIDDLE PRESSURE · PJ + 35 TYPE<br>**Presses & die casting**<br>Slides, gibs and ejector mechanisms under continuous shock load | LOW PRESSURE · AP + AD<br>**Automotive chassis**<br>Buses, trucks and trailers — the low pressure AP circuit's home ground |

Section A

# Pumps for grease lubrication

Five pumps across the three pressure classes: one manual, four motor-driven. Choose the class first, then the reservoir and the controller.

A-01 · PUMPS FOR GREASE LUBRICATION GM-3204 · GM-3214 · GM-3234

# GM Type Motor-Driven Grease Pump

Alloy-steel gear pump raising grease to 35 kgf/cm² on a 2 L or 4 L tank — the standard middle-pressure pump for plastic and engineering machinery.

| NOMINAL PRESSURE | DISCHARGE |
|---|---|
| 3.5 MPa (35 kgf/cm²) | 260 – 300 ml |
| **RESERVOIR** | **GREASE** |
| 2 L / 4 L | NLGI 00# / 000# |

A special alloy-steel gear set gives stable output pressure and low noise at 90 W. Nominal pressure is 3.5 MPa, maximum 5.0 MPa — enough to cycle a 35 type pressure volumetric block, a progressive distributor or a resist-type distributor, and to feed each point a precise dose or a fixed proportion.

A grease level sensor raises an inadequate-grease alarm on its own. A point-action switch lubricates the machine at any moment between cycles. With the pressure switch fitted, the pump reports line pressure to the main unit for fully automatic control; with the automatic pressure take-off device fitted, it forms a complete moderate-pressure circuit with our 35 type distributors.

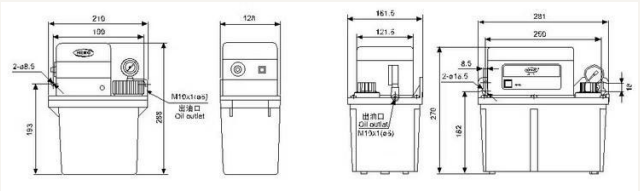
## SPECIFICATION

| | |
|---|---|
| Type | Motor-driven gear grease pump |
| Supply voltage | 380 V, three-phase |
| Nominal rotary speed | 2750 r/min (50 Hz) · 3300 r/min (60 Hz) |
| Motor power | 90 W |
| Current | 0.32 A (50 Hz) · 0.29 A (60 Hz) |
| Nominal pressure | 3.5 MPa |
| Max pressure | 5.0 MPa |
| Discharge capacity | 260 ml (50 Hz) · 300 ml (60 Hz) |
| Oil tank volume | 2 L or 4 L |
| Grease used | NLGI 00# / 000# |

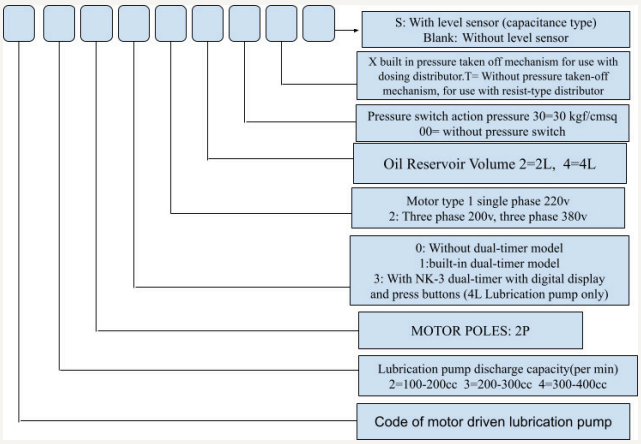
| | |
|---|---|
| Monitoring | **Grease level sensor standard · pressure switch optional** |
| Options | **Point-action switch · automatic pressure take-off device** |

## MODEL SELECTION

| MODEL | TANK | PRESSURE TAKE-OFF | TYPICAL CIRCUIT |
|---|---|---|---|
| GM-3204-2 | 2 L | Per order | 35 type pressure volumetric |
| GM-3204-4 | 4 L | Per order | 35 type pressure volumetric |
| GM-3234-4 | 4 L | Per order | Progressive or resist-type |



Overall and mounting dimensions




GM model number — position by position

## WHERE IT IS USED

- Plastic machinery
- Engineering machinery
- Textile and printing machinery
- Woodworking, chemical and food machinery

## ORDER ALONGSIDE

- 35 type pressure volumetric distributor
- SD progressive distributors
- Resist-type distributors
- NKGH-1804 manual pump for refilling

**CHECK BEFORE ORDERING** Three-phase 380 V supply. Confirm the supply at the machine before ordering — this pump has no single-phase variant.

A-02 · PUMPS FOR GREASE LUBRICATION

ZJ-3512 · ZJ-3612 · ZJ-3X12 · ZJ-3522 · ZJ-3622 · ZJ-3X22

# ZJ Series High Pressure Piston Grease Pump

Piston pump rated 30 MPa on DC 12 V or 24 V, handling grease up to NLGI 2# — the drive source for a high pressure progressive circuit.

| RATED PRESSURE | GREASE |
|---|---|
| 30 MPa (≈4350 psi) | NLGI 000# – 2# |
| **RESERVOIR** | **SUPPLY** |
| 2 · 3 · 4 · 8 L | DC 12 V / 24 V · AC 230 V |

Each outlet is served by its own piston mechanism, and the pump accepts up to two. Two mechanisms are available: ZJ-3602-05 with fixed output and ZJ-3602-05V with variable output, so dose per outlet is set at the pump rather than downstream.

The piston pair is special alloy steel, precision ground, for stable pressure and long life. An oil scraper releases air trapped in the grease as the paddle turns. A pressure switch gives a pressure signal and a liquid level switch gives a level signal, so a machine hundreds of metres away can be monitored from one panel.

Control is either time-programme (ZJ-3602-08-02A) or time-travel (ZJ-3602-08-02B), on the pump's own controller or from the main equipment's PLC.

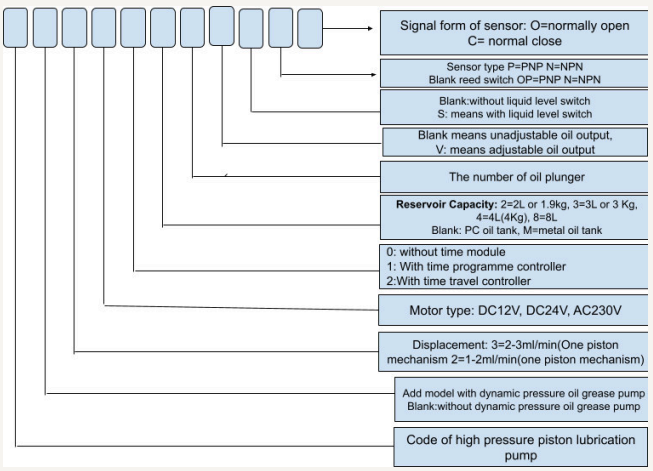
## SPECIFICATION

| | |
|---|---|
| Type | High pressure piston grease pump |
| Rated operating pressure | 30 MPa |
| Piston mechanisms (outlets) | 1 or 2 sets · fixed (ZJ-3602-05) or variable (ZJ-3602-05V) |
| Reservoir capacity | PC: 2 / 3 / 4 / 8 L · metal: 2 / 4 L |
| Lubricants used | NLGI 000# · 00# · 0# · 1# · 2# grease · mineral oil 40 mm²/s |
| Paddle rotation | Counterclockwise |
| Motor operating voltage | DC 12 V · DC 24 V · AC 230 V |
| Operating rotary speed | 22 r/min |

| | |
|---|---|
| Operating current | 0.8 / 0.4 / 0.1 / 4.0 / 2.0 / 0.3 A, by supply |
| Fusing current | 5 A / 3 A / 1 A |
| Controller | Time-programme (-08-02A) or time-travel (-08-02B), or external PLC |
| Protection rating | IP65 |

## MODEL SELECTION

| MODEL | PISTON MECHANISMS | RESERVOIR | CONTROLLER |
|---|---|---|---|
| ZJ-3512 · ZJ-3612 · ZJ-3X12 | 1 set | 2 L PC (1.9 kg) | Time-programme or time-travel |
| ZJ-3522 · ZJ-3622 · ZJ-3X22 | 1 set | 2 L PC (1.9 kg) | Time-programme or time-travel |
| ZJ-3512/2 · ZJ-3612/2 · ZJ-3X12/2 | 2 sets | 2 L PC (1.9 kg) | With controller |
| ZJ-3522/2 · ZJ-3622/2 · ZJ-3X22/2 | 2 sets | 2 L PC (1.9 kg) | With controller |




ZJ model number — position by position

## WHERE IT IS USED

Engineering and mobile machinery

Heavy equipment needing continuous monitored lubrication

Progressive circuits with U-shaped or SD distributors

## ORDER ALONGSIDE

SD1 / SD2 / SD3 progressive distributors

U-shaped integrated progressive distributor

High pressure hose rated above 30 MPa

**CHECK BEFORE ORDERING** Grease up to NLGI 2# only. The precision piston mechanism will be destroyed by sand, abrasive slurry or contaminated grease — filter what goes into the reservoir.

A-03 · PUMPS FOR GREASE LUBRICATION PJ SERIES

# PJ Series Motor-Driven Grease Pump

Tank-type grease pump supplied in two builds — with pressure relief for volumetric circuits, without it for progressive circuits.

| GREASE | TWO BUILDS |
|---|---|
| NLGI 000# – 1# | With / without pressure relief |
| **CONTROL** | **TANK** |
| PLC or dedicated controller | Pressure floating platform |

Which build you order decides which distributor it can drive. Without the pressure relief mechanism, the PJ feeds progressive distributors — SDA, SD and DX series, and the U-shaped integrated block. With the pressure relief mechanism, it feeds positive volumetric distributors — 35 type, DK, AD and RH-3.

A pressure regulating valve sets the working pressure and protects the pump. A bleed valve clears air from the pump cavity so delivery starts clean. The tank uses a pressure floating platform, which draws grease down without leaving it to settle when a packed vacuum cartridge is used, and can carry a low-level alarm switch.

## SPECIFICATION

| | |
|---|---|
| Nominal pressure | 8.0 MPa |
| Nominal flow | 20 mL/min |
| Reservoir | 0.3 · 0.8 · 1.5 · 2.5 L |
| Motor | AC 220 V · AC 380 V · DC 24 V |
| Type | Motor-driven tank-type grease pump |
| Builds | Without pressure relief (progressive) · with pressure relief (volumetric) |
| Control | Machine PLC or dedicated pump controller |
| Safety | Pressure regulating valve · bleed valve |
| Tank | Pressure floating platform, vacuum cartridge compatible |

| | |
|---|---|
| Monitoring | Low level switch, on request |
| Grease used | NLGI 000# – 1# — calcium, sodium, lithium, EP complex lithium, graphite calcium |

### WHERE IT IS USED

Die casting equipment

Pressing machines

Plastic injection moulding machines

CNC machines and machining centres

Buses, robots and construction machinery

### ORDER ALONGSIDE

SDA / SD / DX / U-shaped progressive distributors — build without pressure relief

35 type, DK, AD, RH-3 distributors — build with pressure relief

NKGH-1804 manual pump for filling

**CHECK BEFORE ORDERING** State the distributor type on the order. A PJ without the pressure relief mechanism will not cycle a volumetric distributor, and the mechanism is not a field-fit part.

A-04 · PUMPS FOR GREASE LUBRICATION NKGH-1804

# NKGH Type Manual Grease Pump

Hand lever delivering 1.8 cc per stroke at up to 10 MPa, with two outlets — and the pump used to refill a PJ tank.

| DISCHARGE | WORKING PRESSURE |
|---|---|
| 1.8 cc / stroke | 10 MPa |
| **RESERVOIR** | **GREASE** |
| 0.5 L, PC | NLGI 000# – 0# |

Reciprocating the handle delivers grease to a separator or to a dosing distributor. On a resist-type circuit it feeds each point in proportion; on a U-shaped or SD progressive circuit it feeds the metered dose to each point in sequence.

Two outlets are provided, one blocked by a blank plug. Remove whichever suits the installation — left, right or both. On a progressive circuit only one outlet may be used.

## SPECIFICATION

| | |
|---|---|
| Model | NKGH-1804 |
| Reservoir capacity | 0.5 L |
| Reservoir material | PC |
| Suitable grease | NLGI 000# – 0# |
| Discharge capacity | 1.8 cc / stroke |
| Working pressure | 10 MPa |
| Pressure take-off | Not fitted |
| Outlets | 2, one supplied plugged |

## WHERE IT IS USED

- Small progressive circuits
- Resist-type grease circuits
- Refilling PJ series pump tanks

## ORDER ALONGSIDE

- U type progressive distributor
- SD type progressive distributor
- Resist-type proportion distributors
- PJ series pump — as its filling pump

**CHECK BEFORE ORDERING** On a progressive circuit use one outlet only, with the second left plugged. Two live outlets break the progressive sequence.

A-05 · PUMPS FOR GREASE LUBRICATION AP-31-300X · AP-32-300X

# AP Type Motor-Driven Grease Pump

DC 12 V or 24 V chassis pump delivering 260 ml/min at 3.5 – 3.8 MPa, for vehicles and mobile plant.


| WORKING PRESSURE | DISCHARGE |
|---|---|
| 3.5 – 3.8 MPa | 260 ml/min |
| **RESERVOIR** | **SUPPLY** |
| 3 L (3 kg), PC | DC 12 V / 24 V |

Designed for automotive chassis — buses, trucks, trailers — and for engineering machinery, running off vehicle supply. Rated output pressure is 3.8 MPa, which is the ceiling of the low pressure class.

With a pressure take-off device fitted it drives AD volumetric, RH-3 and 35 type distributors. Without one it drives U type and SD progressive distributors. Both circuits are common on vehicles; say which you are building.

## SPECIFICATION

| | |
|---|---|
| Model | AP-31-300X · AP-32-300X |
| Reservoir capacity | 3 L (3 kg) |
| Reservoir material | PC |
| Used lubricants | NLGI 000# – 0# |
| Operating voltage | DC 12 V / 24 V |
| Discharge capacity | 260 ml/min |
| Working pressure | 3.5 – 3.8 MPa |


AP model number — position by position

## WHERE IT IS USED

Bus, truck and trailer chassis

Engineering and construction machinery

Mobile plant on vehicle supply

## ORDER ALONGSIDE

AD volumetric distributor

RH-3 positive volumetric distributor

35 type pressurised volumetric distributor

U type / SD progressive distributors — pump without take-off device

**CHECK BEFORE ORDERING** 3.8 MPa maximum. Do not specify an AP for a progressive circuit that needs high pressure at the point — that is a ZJ application.

Section B

# Grease distributors

Progressive blocks first — SD1, SD2, SD3 and the integrated U-shape — then the volumetric families for middle and low pressure circuits.

B-01 · GREASE DISTRIBUTORS SD1-08T · SD1-16T · SD1-24T

# SD1 Series Block Progressive Distributor

The smallest modular progressive block: three to ten working blocks assembled between an inlet and an end plate, feeding 1 to 20 points in strict sequence.

| MAX PRESSURE | MIN STARTING PRESSURE |
|---|---|
| 25 MPa | 1.4 MPa |
| **POINTS** | **DOSE PER OUTLET** |
| 1 – 20 per assembly | 0.08 – 0.48 ml/cyc |

Each working block's piston pair completes its stroke only after the adjacent block has completed its own, so the assembly delivers to the points one after another in a fixed order. While pressurised lubricant reaches the primary block the cycle continues indefinitely, dispensing the same metered dose every time; the moment supply stops, every piston stops where it is and restarts from that same point.

An assembly is a first and last block plus three to ten middle working blocks. Middle blocks with double outlets carry the suffix T; the second outlet can be taken from either end of the block, with a blank plug in the other. A built-in check valve is available on every block.

## SPECIFICATION

| | |
|---|---|
| Max working pressure | 25 MPa |
| Min starting pressure | 1.4 MPa |
| Lube points | 1 – 20 per combined distributor |
| Suitable lubricant | Oil ≥ 68 mm²/s at 40 °C · grease penetration ≥ 265 at 25 °C, 150 g |
| Working temperature | –20 °C to +80 °C |
| Max cycling rate | 200 cyc/min · 60 cyc/min on blocks with an indicator pin |
| Block assembly | 3 to 10 working blocks |
| Optimum tube | Ø4 mm, 0.5 – 2.5 m · Ø6 mm, 1.2 – 3.5 m |
| Outlet thread | Rc 1/8 |

## MODEL SELECTION

| CODE | DOUBLE OUTLET | SINGLE OUTLET | DOUBLE | DOUBLE + PIN | SINGLE + PIN |
|---|---|---|---|---|---|
| 08 | 0.08 ml | 0.16 ml | SD1-08T | — | SD1-08SR |
| 16 | 0.16 ml | 0.32 ml | SD1-16T | — | SD1-16SR |
| 24 | 0.24 ml | 0.48 ml | SD1-24T | SD1-24JTR | SD1-24SR / SD1-24JSR |

MODEL NUMBER — WORKED EXAMPLE

## SD1-24JTR

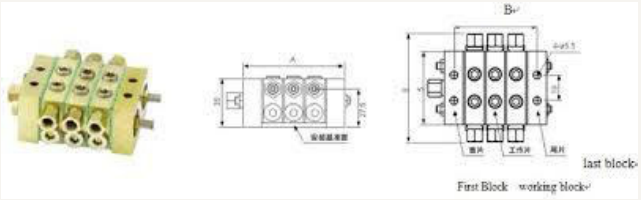
SD1 series block, 0.24 ml discharge per outlet per cycle, double outlet (T), with mechanical indicator pin on the right (JR).

RULES

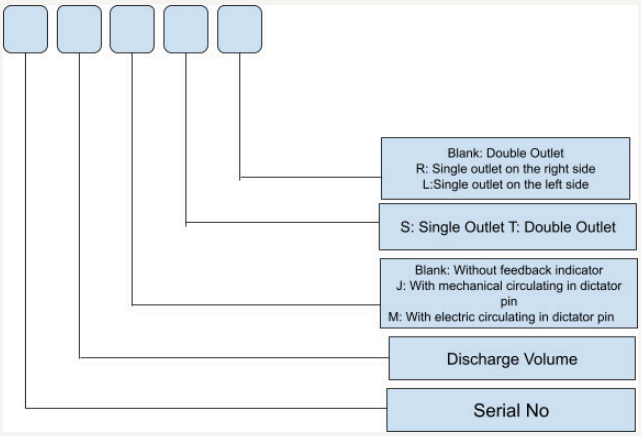
> Discharge volume is per outlet, on one complete cycle of the block.

> T = double outlet · S = single outlet · R = outlet or pin on the right · J = with indicator pin.

> Block assembly sizes: 3 blocks 73.3 mm, 4 = 88.7, 5 = 103.5, 6 = 118.6, 7 = 133.6, 8 = 148.7 mm overall.




Block assembly and installation dimensions




SD1 order method

### WHERE IT IS USED

Large machinery and equipment

Master distributors on single-line systems

Any circuit where every point must be proved to have been fed

### ORDER ALONGSIDE

ZJ series high pressure piston pump

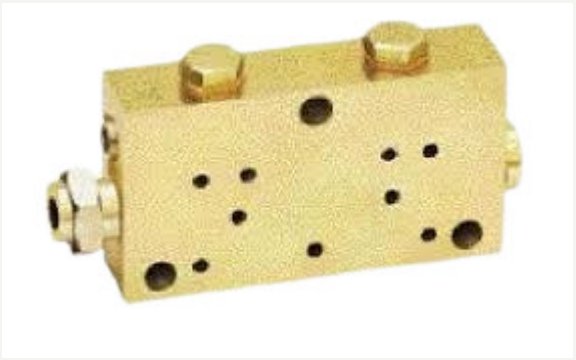
PJ pump without pressure relief

Ø4 / Ø6 branch tube

**CHECK BEFORE ORDERING** Progressive means sequential — one blocked point stops the whole assembly. That is the design intent: fit the safety valve at the pump and watch it.

# SD2 Series Block Progressive Distributor

The mid-size progressive block: seven discharge volumes from 0.16 to 1.12 ml per outlet, three to ten blocks per assembly.



| MAX PRESSURE | MIN STARTING PRESSURE |
|---|---|
| 25 MPa | 1.4 MPa |
| **POINTS** | **DOSE PER OUTLET** |
| 1 – 20 per assembly | 0.16 – 1.12 ml/cyc |

Same progressive principle as SD1, in a larger frame with a wider dose range — the block to specify when the points need more grease per cycle than an SD1 can deliver.

Two indicator options. The mechanical pin extends and retracts with each cycle so the pump and distributor can be judged by eye. The electric micro-switch version is pushed by the piston to give a turn-on and turn-off signal, normally open or normally closed, which feeds back to the pump controller or the machine PLC.

## SPECIFICATION

| | |
|---|---|
| Max working pressure | 25 MPa |
| Min starting pressure | 1.4 MPa |
| Lube points | 1 – 20 per combined distributor |
| Suitable lubricant | Oil ≥ 68 mm²/s at 40 °C · grease penetration ≥ 265 at 25 °C, 150 g |
| Working temperature | –20 °C to +80 °C |
| Max cycling rate | 200 cyc/min · 60 cyc/min on blocks with an indicator pin |
| Block assembly | 3 to 10 working blocks |
| Optimum tube | Ø6 mm, 1.2 – 3.5 m and 1.5 – 4.5 m |

## MODEL SELECTION

| CODE | DOUBLE OUTLET | SINGLE OUTLET | DOUBLE | DOUBLE + PIN | SINGLE + PIN |
|---|---|---|---|---|---|
| 16 | 0.16 ml | 0.32 ml | SD2-16T | — | SD2-16SR |

| CODE | DOUBLE OUTLET | SINGLE OUTLET | DOUBLE | DOUBLE + PIN | SINGLE + PIN |
|---|---|---|---|---|---|
| 20 | 0.20 ml | 0.40 ml | SD2-20T | — | SD2-20SR |
| 24 | 0.24 ml | 0.48 ml | SD2-24T | — | SD2-24SR |
| 32 | 0.32 ml | 0.64 ml | SD2-32T | SD2-32JT | SD2-32SR / SD2-32JSR |
| 40 | 0.40 ml | 0.80 ml | SD2-40T | SD2-40JT | SD2-40SR / SD2-40JSR |
| 48 | 0.48 ml | 0.96 ml | SD2-48T | SD2-48JT | SD2-48SR / SD2-48JSR |
| 56 | 0.56 ml | 1.12 ml | SD2-56T | SD2-56JT | SD2-56SR / SD2-56JSR |

MODEL NUMBER — WORKED EXAMPLE

## SD2-40JT

SD2 series block, 0.40 ml per outlet per cycle, double outlet, with indicator pin.

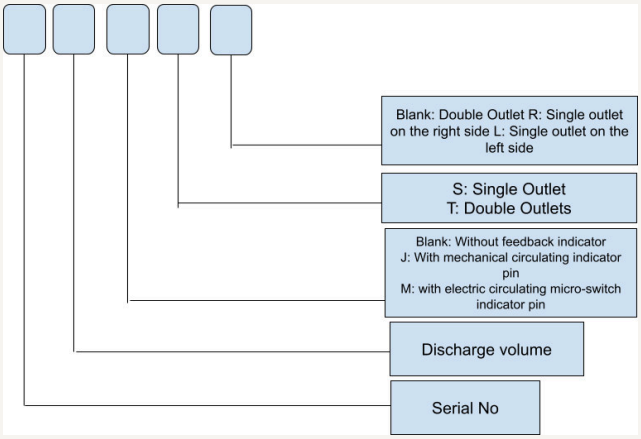
RULES

> Assembly sizes A: 3 blocks 103.4 mm · 4 = 124 · 5 = 144.6 · 6 = 165.2 · 7 = 185.8 · 8 = 206.4 · 9 = 227 · 10 = 247.6 mm.

> Sizes B run 89.4 mm at 3 blocks to 233.6 mm at 10.

> A and B are theoretical values for reference — cumulative assembly deviation applies. Confirm before machining a mounting.

Working block with electric micro-switch indicator pin




SD2 order method

### WHERE IT IS USED

Heavy machinery

Steel processing and forging plant

Master distributors feeding secondary blocks

### ORDER ALONGSIDE

ZJ series high pressure piston pump

SD1 or SD3 blocks as secondary distributors

Ø6 branch tube

**CHECK BEFORE ORDERING** Assembly dimensions are theoretical. Measure the built assembly before drilling the mounting plate.

# SD3 Series Block Progressive Distributor

The largest progressive block: 0.40 to 4.80 ml per outlet per cycle, for points that need a lot of grease and get it rarely.

| MAX PRESSURE | MIN STARTING PRESSURE |
|---|---|
| 25 MPa | 1.4 MPa |
| **POINTS** | **DOSE PER OUTLET** |
| 1 – 20 per assembly | 0.40 – 4.80 ml/cyc |

Six discharge volumes from 40 to 240, single-outlet doses reaching 4.80 ml per cycle. Used where the master distributor has to move a large volume onward to secondary blocks, and on large bearings that take a substantial charge at long intervals.

Mechanical indicator pin or electric micro-switch, as SD2. Blocks are available with single or double outlets throughout the assembly.

## SPECIFICATION

| | |
|---|---|
| Max working pressure | 25 MPa |
| Min starting pressure | 1.4 MPa |
| Lube points | 1 – 20 per combined distributor |
| Suitable lubricant | Oil viscosity ≥ 68 mm²/s |
| Working temperature | –20 °C to +80 °C |
| Max cycling rate | 200 cyc/min · 60 cyc/min on blocks with an indicator pin |
| Block assembly | 3 to 10 working blocks |
| Optimum tube | Ø6 mm, 1.2 – 3.5 m and 1.5 – 4.5 m |

## MODEL SELECTION

| CODE | DOUBLE OUTLET | SINGLE OUTLET | DOUBLE | DOUBLE + PIN | SINGLE + PIN |
|---|---|---|---|---|---|
| 40 | 0.40 ml | 0.80 ml | SD3-40T | — | SD3-40SR |
| 80 | 0.80 ml | 1.60 ml | SD3-80T | SD3-80JT | SD3-80SR / SD3-80JSR |

| CODE | DOUBLE OUTLET | SINGLE OUTLET | DOUBLE | DOUBLE + PIN | SINGLE + PIN |
|---|---|---|---|---|---|
| 120 | 1.20 ml | 2.40 ml | SD3-120T | SD3-120JT | SD3-120SR / SD3-120JSR |
| 160 | 1.60 ml | 3.20 ml | SD3-160T | SD3-160JT | SD3-160SR / SD3-160JSR |
| 200 | 2.00 ml | 4.00 ml | SD3-200T | SD3-200JT | SD3-200SR / SD3-200JSR |
| 240 | 2.40 ml | 4.80 ml | SD3-240T | SD3-240JT | SD3-240SR / SD3-240JSR |

MODEL NUMBER — WORKED EXAMPLE

## SD3-120JSR

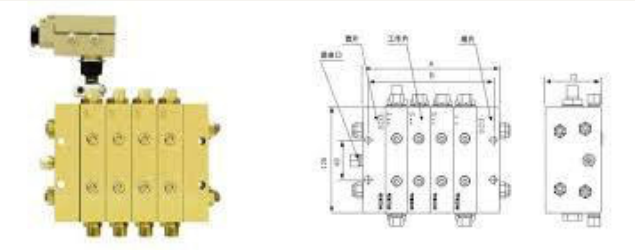
SD3 series block, 1.20 ml per outlet per cycle, single outlet on the right, with indicator pin.

RULES

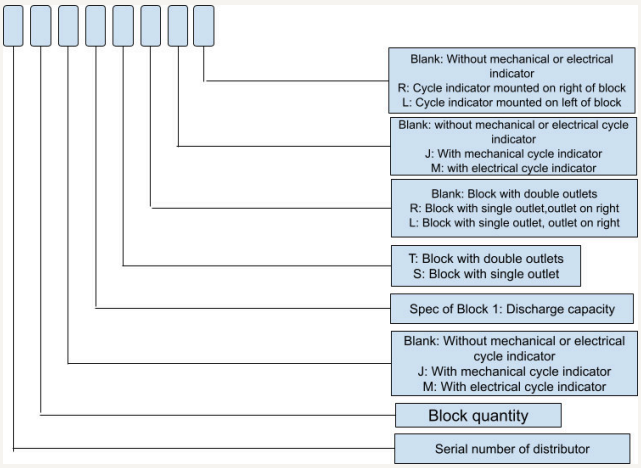
Assembly sizes A: 3 blocks 141.5 mm · 4 = 169.9 · 5 = 198.5 · 6 = 226.7 · 7 = 255.0 · 8 = 283.5 · 9 = 311.9 · 10 = 340.4 mm.

Sizes B run 129.1 mm at 3 blocks to 330.7 mm at 10.

T = double outlet · S = single · R = right · J = indicator pin.



Assembly and installation dimensions




SD series model number rules

### WHERE IT IS USED

Wind, hydro and thermal power machinery

Mining and material handling plant

Master distributors on large single-line systems

### ORDER ALONGSIDE

ZJ series high pressure piston pump

SD1 / SD2 blocks as secondary distributors

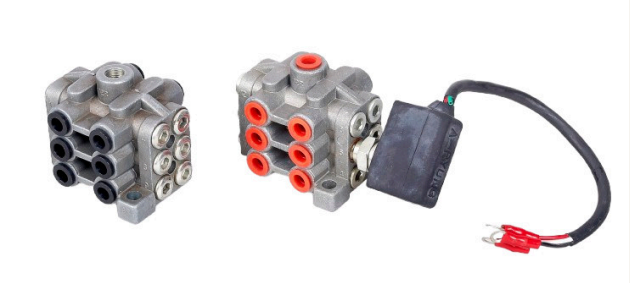
High pressure hose

**CHECK BEFORE ORDERING** Large doses need proportionally long pump run times. Size the pump's discharge against the whole assembly, not against one block.

B-04 · GREASE DISTRIBUTORS U-4R … U-12R · U-4M … U-12M

# U-Shaped Integrated Progressive Distributor

One-piece progressive valve for 4 to 12 points at 0.3 ml per cycle each — no blocks to assemble, no joints to leak.



| POINTS | STANDARD DISCHARGE |
|---|---|
| 4 · 6 · 8 · 10 · 12 | 0.3 ml / cyc |
| **MAX NOMINAL PRESSURE** | **GREASE** |
| 15 MPa | NLGI 000# – 1# |

Each trunk piston set delivers its fixed volume to a point using the hydraulic pressure produced by the progressive action of the set before it. Supply the valve with lubricant at pressure and the sequence runs continuously; stop the supply and every piston set stops, resuming from the same point when pressure returns.

R models have no cycling feedback switch. M models have one, so the controller or PLC can confirm that the valve is actually cycling rather than merely being fed.

## SPECIFICATION

| | |
|---|---|
| Number of lube points | 4 · 6 · 8 · 10 · 12 |
| Standard discharge | 0.3 ml per cycle, per point |
| Ambient temperature | –20 °C to +80 °C |
| Grease used | NLGI 000# – 1# |
| Max cycle rate | 200 cyc/min · 60 cyc/min with feedback switch |
| Max nominal pressure | 15 MPa |
| Preferred output pipe | Ø4 mm, 0.5 – 2.5 m · Ø6 mm, 1.2 – 3.5 m |

## MODEL SELECTION

| MODEL | POINTS | FEEDBACK SWITCH |
|---|---|---|
| U-4R / U-4M | 4 | No / Yes |
| U-6R / U-6M | 6 | No / Yes |
| U-8R / U-8M | 8 | No / Yes |

| MODEL | POINTS | FEEDBACK SWITCH |
|---|---|---|
| U-10R / U-10M | 10 | No / Yes |
| U-12R / U-12M | 12 | No / Yes |

MODEL NUMBER — WORKED EXAMPLE

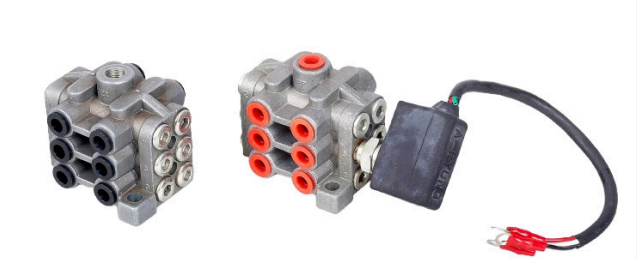
**U-4M**

Four-outlet U-shaped progressive distributor with cycling feedback switch.

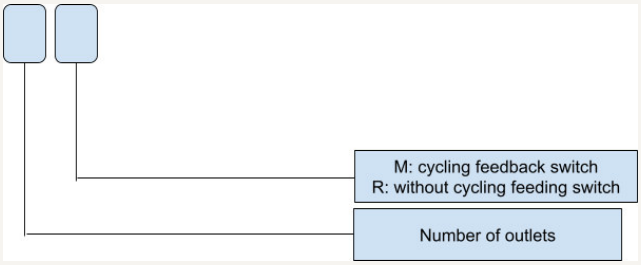
RULES

> R = without cycling feedback switch. M = with.

> The number is the outlet count, not the dose — dose is fixed at 0.3 ml per cycle.



U-M type with cycling feedback switch




U-shaped model number rules

## WHERE IT IS USED

Mobile machinery

Compact circuits with a fixed point count

Secondary distributors on a progressive master

## ORDER ALONGSIDE

ZJ or NKGH pump

PJ pump without pressure relief

AP pump without take-off device

**CHECK BEFORE ORDERING** The dose is fixed at 0.3 ml per point. Where points need different doses, use an SD assembly instead.

B-05 · GREASE DISTRIBUTORS AD2 · AD3 · AD4 · AD6

# AD Volume Type Distributor

Two to six metered outlets in a compact body designed around awkward installations and tight piping runs.

| OUTLETS | DOSE PER OUTLET |
|---|---|
| 2 · 3 · 4 · 6 | 0.1 · 0.2 · 0.4 cc |
| **WORKING PRESSURE** | **GREASE** |
| 2.5 – 5.5 MPa | NLGI 0# / 00# / 000# |

Derived from the patented RH volumetric distributor and re-bodied for installation and piping constraints. Vibration-resistant construction and full testing at assembly; hole centres are 50 mm across all four sizes so one drilling pattern covers the family.

## SPECIFICATION

| | |
|---|---|
| Number of outlets | 2 (AD2) · 3 (AD3) · 4 (AD4) · 6 (AD6) |
| Working pressure | 2.5 – 5.5 MPa |
| Common discharge volume | 0.1 · 0.2 · 0.4 cc per outlet, per cycle |
| Grease used | NLGI 0# / 00# / 000# |
| Installation hole | 2 × Ø6.5 mm, 50 mm centres |

## MODEL SELECTION

| MODEL | OUTLETS | OVERALL L × H × T |
|---|---|---|
| AD2 | 2 | 62 × 76 × 55 mm |
| AD3 | 3 | 79 × 76 × 55 mm |
| AD4 | 4 | 96 × 76 × 55 mm |
| AD6 | 6 | 130 × 76 × 55 mm |

MODEL NUMBER — WORKED EXAMPLE

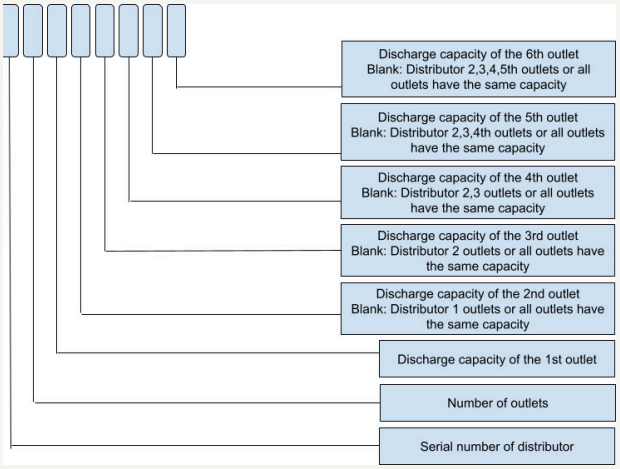
## AD6103010203030

AD type, six outlets, doses 0.1 · 0.3 · 0.1 · 0.2 · 0.3 · 0.3 ml per cycle in outlet order.

RULES

> Dose codes: 10 = 0.1 ml · 20 = 0.2 · 30 = 0.3 · 40 = 0.4 ml per cycle.

> AD230 — two outlets, both 0.3 ml per cycle. One dose code means every outlet is the same.




AD model number rules

### WHERE IT IS USED

Automobile chassis

Railway vehicles

Engineering machinery

### ORDER ALONGSIDE

AP type motor-driven grease pump

PJ pump with pressure relief

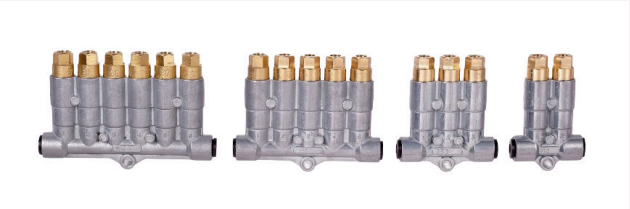
Ø4 / Ø6 branch tube

**CHECK BEFORE ORDERING** 2.5 – 5.5 MPa working range. Below 2.5 MPa the distributor will not complete its stroke and points will be starved without any visible fault.

B-06 · GREASE DISTRIBUTORS 352 · 353 · 355 · 356

# 35 Type Pressure Volumetric Distributor

The middle-pressure workhorse: 0.1 to 0.6 ml per outlet per cycle, action guaranteed on grease at 30 – 40 kgf/cm².



| OUTLETS | DOSE PER OUTLET |
|---|---|
| 2 · 3 · 4 · 5 | 0.1 – 0.6 ml |
| **ACTION PRESSURE** | **GREASE** |
| Grease 30 – 40 kgf/cm² | NLGI 00# / 000# |

Three stages per cycle. One: pressure take-off complete and the dose accumulated, waiting to feed. Two: the pump raises pressure and the metered dose is fed to the points. Three: pressure is taken off in the main tube, the piston restores and fresh grease enters the chamber.

The same block handles oil at 12 – 15 kgf/cm², which makes it the one distributor to hold in stock for a plant running both.

## SPECIFICATION

| | |
|---|---|
| Number of outlets | 2 (352) · 3 (353) · 5 (355) · 6 (356) |
| Common discharge capacity | 0.1 · 0.2 · 0.3 · 0.4 · 0.5 · 0.6 ml per outlet, per cycle |
| Action guarantee pressure | Grease 30 – 40 kgf/cm² · oil 12 – 15 kgf/cm² |
| Recommended lubricant | Grease NLGI 00# / 000# · oil 20 – 500 cst |
| Main tube connection | M12×1 at both ends |

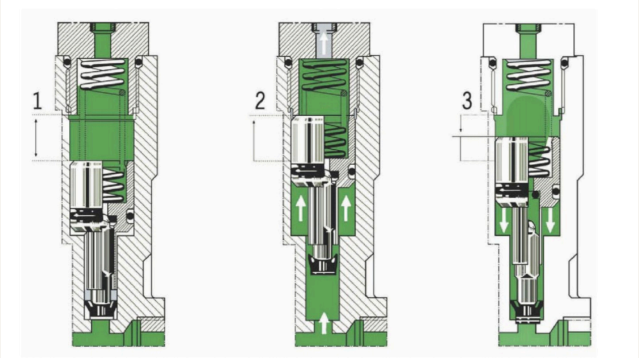
### MODEL NUMBER — WORKED EXAMPLE

**356102040601020**

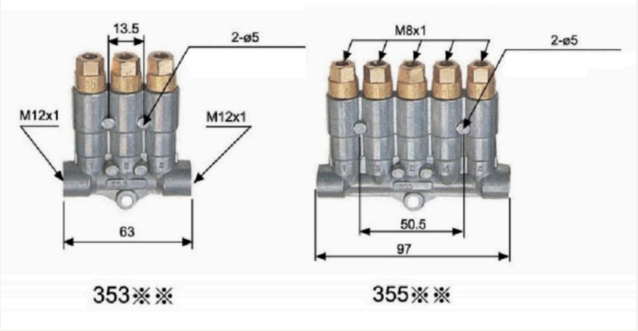
35 type, six outlets, doses 0.1 · 0.2 · 0.4 · 0.6 · 0.1 · 0.2 ml per cycle in outlet order.

### RULES

- Dose codes: 10 = 0.1 ml · 20 = 0.2 · 40 = 0.4 · 6 = 0.6 ml per cycle.
- 35610 — six outlets, all 0.1 ml.
- 3521020 — two outlets at 0.1 and 0.2 ml.




Working principle — take-off, pressurise, restore




Overall dimensions

## WHERE IT IS USED

Injection moulding machines

Presses and die casting machines

Punching and heavy machinery

## ORDER ALONGSIDE

GM or PJ pump with pressure take-off

AP pump with take-off device

PD35612 / PD35812 adapters

**CHECK BEFORE ORDERING** The M12×1 ports need a PD35612 or PD35812 adapter to connect Ø8 or Ø6 main tube at either end. Order the adapters with the block. NLGI 00# or 000# only — a stiffer grade will stall the piston.

B-07 · GREASE DISTRIBUTORS RH-32G · RH-33G · RH-34G · RH-35G

# RH-3 Inspecting Volume Type Distributor

Volumetric block with a signal pin per outlet, in its grease build: two to five outlets, 0.03 to 0.4 ml, action guaranteed at 2.0 – 5.0 MPa.

| OUTLETS | DOSE PER OUTLET |
|---|---|
| 2 · 3 · 4 · 5 | 0.03 – 0.4 ml |
| **ACTION PRESSURE** | **GREASE** |
| Grease 2.0 – 5.0 MPa | NLGI 00# / 000# |

Grease injected through main tube A pushes open the umbrella-shaped double-sided valve B and passes via path C into piston chamber F. The piston moves down, spring G compresses, and the dose is measured and accumulated.

When pressure in main tube A is taken off, the valve moves down under the pressure difference and opens outlet E. The measured charge leaves via E into branch tube H and reaches the point. Signal pin I extends while metering and retracts on delivery, so the circuit can be proved by eye.

## SPECIFICATION

| | |
|---|---|
| Number of outlets | 2 (RH-32G) · 3 (RH-33G) · 4 (RH-34G) · 5 (RH-35G) |
| Common discharge capacity | 0.03 · 0.06 · 0.1 · 0.2 · 0.3 · 0.4 ml per outlet, per cycle |
| Action guarantee pressure | Grease 2.0 – 5.0 MPa · oil 1.2 – 1.5 MPa |
| Recommended lubricant | Grease NLGI 00# / 000# · oil 20 – 500 cst |
| Confirmation | Mechanical signal pin per outlet |

MODEL NUMBER — WORKED EXAMPLE

**RH-350306102030**

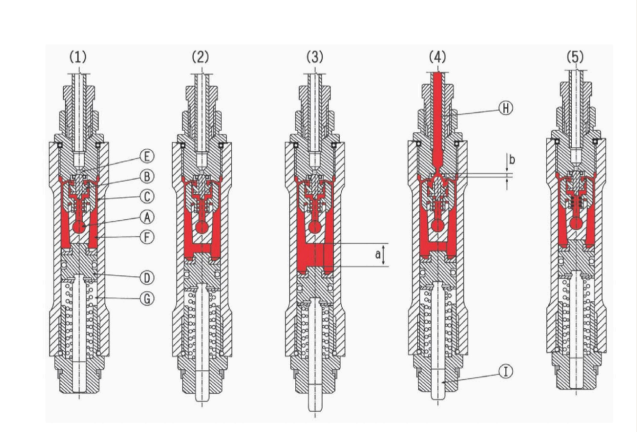
RH-3 type, five outlets, doses 0.03 · 0.06 · 0.1 · 0.2 · 0.3 ml per cycle in outlet order.

RULES

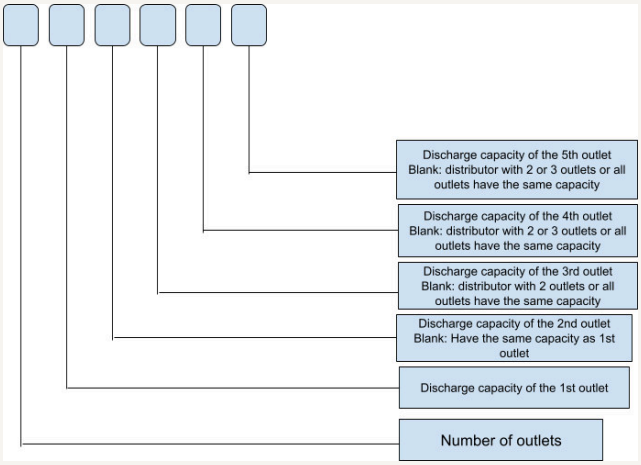
> Dose codes: 03 = 0.03 ml · 06 = 0.06 · 10 = 0.1 · 20 = 0.2 · 30 = 0.3 · 40 = 0.4 ml per cycle.

> RH-3503 — five outlets, all 0.03 ml.

> G suffix denotes the grease build. Oil models carry no suffix.




Operating principle — charge, meter, deliver




RH-3 model number rules

## WHERE IT IS USED

Low pressure vehicle and chassis circuits

Machine tools running grease at the point

Circuits needing a different dose per point

## ORDER ALONGSIDE

AP or PJ pump with pressure relief

Ø4 / Ø6 branch tube

**CHECK BEFORE ORDERING** The pump must have a pressure take-off mechanism. Without pressure relief the piston never returns and no dose is delivered.

B-08 · GREASE DISTRIBUTORS DK-05G … DK-50G

# DK Type Single Distributor

One metered outlet in one small body, fitted at the point — for the point a block distributor cannot reach.

| OUTLETS | DOSE |
|---|---|
| 1 | 0.05 – 0.5 ml |
| **ACTION PRESSURE** | **OUTLET TUBE** |
| Grease 30 – 40 kgf/cm² | Ø4 |

Used with PA and PB fittings on Ø4 tube and combinable with a TH type connector, so a single awkward point receives a stated dose without running a branch back to a manifold.

## MODEL SELECTION

| MODEL | DOSE PER CYCLE | LENGTH |
|---|---|---|
| DK-05 / DK-05G | 0.05 ml | 46.5 mm |
| DK-10 / DK-10G | 0.1 ml | 46.5 mm |
| DK-20 / DK-20G | 0.2 ml | 53.5 mm |
| DK-30 / DK-30G | 0.3 ml | 53.5 mm |
| DK-50 / DK-50G | 0.5 ml | 65.5 mm |

MODEL NUMBER — WORKED EXAMPLE

**DK-30G**

Grease distributor, single outlet, 0.3 ml per cycle.

RULES

> Dose codes: 05 = 0.05 ml · 10 = 0.1 · 20 = 0.2 · 30 = 0.3 · 50 = 0.5 ml per cycle.

> G = grease build. Oil models carry no suffix.

## WHERE IT IS USED

Single remote points

Points added after commissioning

Machines with no room for a block

## ORDER ALONGSIDE

PA / PB fittings, Ø4 tube

TH type connector

**CHECK BEFORE ORDERING** Grease models take NLGI 000# and 00# only.

Section C

# Filling & service equipment

Barrel pumps, guns, tube and cutting tools. A grease circuit is only as reliable as the way it gets refilled.

### Barrel grease replenish unit

Motorised

Fills pump reservoirs from a standard grease barrel without opening the tank to workshop dust.

### Pneumatic grease gun

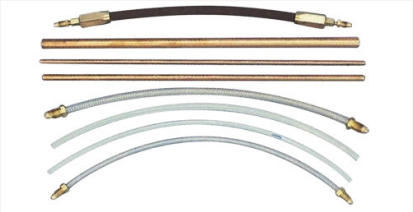
Air operated

Shop-air gun for manual top-up points and for priming a new circuit before first run.

### Manual grease gun

Lever type

For filling PJ and AP reservoirs and for points deliberately left off the circuit.



### Copper tube assemblies

Ø4 · Ø6

Pre-formed with fittings both ends, for hot or exposed runs.

### Nylon tube

Ø4 · Ø6 · Ø8

Coil lengths for branch lines where there is no heat and no abrasion.

### Copper hose assemblies

Made to length

Short flexible links between a fixed distributor and a moving point.

### Copper tube cutter

Ratchet type

Square cut without swarf inside the tube — a burr is the most common cause of a blocked point.

### Nylon tube cutter

Shear type

Clean square cut on Ø4 to Ø8 nylon tube.

### High pressure hose sets

Assorted lengths

Rated for progressive circuits; supplied with couplers, elbows and extensions.

Section D

# Fittings & hose

Brass fittings, copper and nylon tube, and high pressure hose rated for progressive circuits.


### PA / PB / PT — Ø6

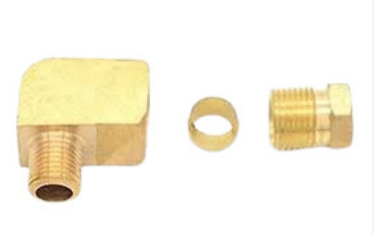
PA6 · PB6 · PT6

Straight, banjo and tee branch fittings for Ø6 tube.

### PA / PB / PT — Ø4

PA4 · PB4 · PT4

The same family for Ø4 branch lines.



### PL elbow fittings

PL series

90° take-off where the tube cannot be bent to the point.

### PN fittings

PN series

Nozzle-end fittings for open points and grease nipples.

### Hose connectors

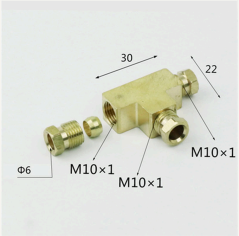
6 mm

Tube-to-hose transition, brass body, M10×1.

### Sleeves, nuts and bushes

Assorted

Compression parts to match every tube size in this catalogue.




### 3T manifold fitting

3T-10-10

Three-way brass block, M10×1 throughout, Ø6 tube.

### 4T manifold fitting

4T10-10

Four-way brass cross for splitting a main line.

### PD straight connector

PD series

In-line union, including the PD35612 / PD35812 adapters the 35 type block needs.

### Brass tee block

Assorted

Heavy brass tee for main-line branching at pressure.

### Union nuts

Assorted

Replacement nuts and ferrules for field re-termination.

### Tee fitting, large bore

Assorted

For Ø8 main lines on progressive circuits.

# 02 Ordering

Four things make a quote same-day: the model code, the machine it goes on, the quantity, and the NLGI grade of grease you are running. Send those on WhatsApp and you will get a price and a stock position back, not a form to fill in.

### WHAT TO SEND

Product: SD2 Progressive Block
Model: SD2-40JT × 6 blocks
Machine: 40 T crawler excavator
Quantity: 2 assemblies
Grease: NLGI 2#

### IF YOU DO NOT HAVE A MODEL CODE

Photograph the pump nameplate and the fitting at the point, and tell us how many points the machine has. That is enough for us to specify the circuit.

For a replacement, add the original part number cast or printed on the old unit — most imported lubrication parts have an equivalent held in stock.

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