DZGK Grease pump Instruction



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System Application







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System and Schematic Overview (PC200-6)



Boom Valve

How to order the system



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The DZGK Grease Pump

Principle of the DZGK Grease Pump

ADC motor (10) continually operates the eccentric cam (5) and pressure ring (6) This eccentricity effects the suction and pressure strokes of the delivery piston (7), whereby the integrated non-return valve (8) prevents the delivery media from being sucked back out of the main line. The stirrer (2) pushes the lubricant out of the supply container (1) through a screen (4), which reduces any air bubbles, to the suction area in the pump housing (3). A scraper on the stirrer (2) enables a visual check of the lubricant volume still present in the transparent supply container (1). The pressure relief valve (9) is pre-set to 250 bar.



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Installation dimensions of the DZGK Grease Pump



DZGK Motorized Grease with 2L



Reservoir	2L	4L	6L	8L
Length of oi∣ tank	160	308	408	508



Parameter

Power voltage	12V DC / 24V DC/220V AC/380V AC
Motor Power	50W
Revolutions	15 mm
Max. pressure	25MPa
Single outlet discharge	5.5ml/min
Number of outlet	1~3
Reservoir	2L (plastics)
Grease range	NLGI 000#~00#2
Protection	IP65
Current	when loaded 3A
Permissible operating temperature:	-35°C to +70°C
Stirrer direction	counterclockwise
Mounting position	Reservoir in vertical position
Delivery rates	depending on pump element

How to order:

Model	P.N.	Voltage(V)	Timer
DZGK-12	20701-XXX	DC 12V	Yes
DZGK-24	20702-XXX	DC 24V	Yes
DZGK-220	20702-XXX	AC 220V	Yes
DZGK-380	20703-XXX	AC380V	External controller

2070× -Number of outlet-reservoir (2L, 4L, 6L, 8L)-reservoir material/level switch(M: metal; equip level switch/0:plastic;without level switch/1:plastic;equip evel switch).

Note:

Optional outlet threads $M12 \times 1.5$ and Rp1/4 are available for your choice. Please specify the outlet and reservoir at time of order.

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Power connection of the DZGK Grease Pump

Timer Parameter

Output: 24VDC±10% Power: 60VA Working temperature: -10~50°C

- 1: +24V-----DC24V +
- 2: -----Ground
- 3: MOT+-----Motor +
- 4: MOT- -----Motor -
- BJ-----Level switch or pressure gauge
- SD----operate by hand



-	working Time							
A: Working time (Second)			B: W	orking ti	me (m	ins)		
Item	Time	Item	Time	Item	Time	Item	Time	
0	4	8	64	0	1	8	20	
1	8	9	72	1	2.5	9	22.5	
2	16	А	80	2	5	A	25	
3	24	В	88	3	7.5	В	27.5	
4	32	С	96	4	10	С	30	
5	40	D	104	5	12.5	D	32.5	
6	48	Е	112	6	15	Е	35	
7	56	F	120	7	17.5	F	37.5	

Key Position

Stop Time

C: Stop (min)			D: Stop (Hours)				
Item	Time	Item	Time	Item	Time	Item	Time
0	2	8	32	0	0.5	8	8
1	4	9	36	1	1	9	9
2	8	А	40	2	2	А	10
3	12	В	44	3	3	В	11
4	16	С	48	4	4	С	12
5	20	D	52	5	5	D	13
6	24	E	56	6	6	E	14
7	28	F	60	7	7	F	15

Note: 1.Factory setting: working on Second and stop on minute.

2. If you want to working on min. or stop on hour, you can adjust the key position

The DZGK Grease Pump elements maintenance

Delivery rate

-All pump elements are set to full stroke by the manufacturer -max. delivery rate 0.12 cm at full stroke -Reduction 0.013 cm per notch = 1/2 revolution

Attention:

While no discharge or no pressure, remove outlet assembly, Use screw driver to take apart 4,tweezersto take apart 9,3,8,2.Part 5,6,7 in turns. Clean 2,8 and seal cone surface at bottom of 1 with kerosene. Assemble them after cleaning. Problem is solved immediately.





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MONO Divider Blocks

The MONO series progressive distributor is designed for small-size progressive lubrication systems They are a cost efficient solution for supplying multiple lubrication points with relatively small volumes of oil and grease. The MONO series can be used with machine tools, processing machinery, presses, textile, printing and packaging machinery. The MONO is also suitable for mobile applications, including off-road equipment.

Technical data

Operating pressure max	30Mpa		
Discharge per outlet	0.1ml ³ /cyc		
Ambient temperature	-20°Cto +80°C		
	NLGI 000 # to 2#;		
Grease lubricants	Oil ISO VG 68 to 1500 at		
	operating		
	1.No rubber seals		
Advantage	2.Combining of outlets		
Auvaniage	3.Exact lubricant metering		
	4.High operating pressure		



How to Order

Symbol	06	08	10	12	14	16	18	20
Outlet Number	6	8	10	12	14	16	18	20

*The example:

Mono-06

Mono: The type;

06: The number of the outlet;

The Principles of MONO Divider block

At the heart of every Haoli System is the metering valve or progressive distributor block, designed to positively meter the input of lubricant (oil up to NLGI #2 greases) out to the connected number of lubrication points irrespective of distance and back pressure. The inlet passageway is connected to all piston chambers at all times with only one piston free to move at any one time.

1. With all pistons at the far right, lubricant from the inlet flows against the right end of piston A (fig. 1).

2.Lubricant flow shifts piston A from right to left, dispensing piston A output through connecting passages to outlet 2. Piston A shift directs flow against right side of piston B (fig. 2).

3.Lubricant flow shifts piston B from right to left, dispensing piston B output through valve ports of piston A and through outlet 7 (fig. 3).

4.Lubricant flow shifts piston C from right to left dispensing piston C output through valve ports of piston B and through outlet 5.

5.Piston C shift directs lubricant flow against right side of piston D (not illus.)

6.Lubricant flow shifts piston D from right to left, dispensing piston D output through valve ports of piston C and through outlet 3.

7.Piston D shift directs lubricant through connecting passage to the left side of piston A (fig. 4).

8.Lubricant flow against left side of piston A begins the second half cycle which shifts pistons from left to right, dispensing lubricant through outlets 1, 8, 6 and 4 of the divider valve.







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Outlet fitting with check valve of MONO

Installing a closure plug in one or more outlets may combine outputs from adjacent outlets. Lubricant from a plugged outlet is redirected to the next adjacent outlet in descending numerical order. Outlets 1 and 2 must not be plugged since they have no cross-port passage to the next adjacent outlet. In figure 5 outlets 5 and 3 are cross-ported and directed through outlet 1.





In this example, outlet 1 will dispense three times as much lubricant as outlet 7. The tube ferrules in outlets 1 and 7 block the cross-port passage so that lubricant flow is directed through the outlets.

The order code: CV-1 (for 4mm pipe) CV-2 (for 6mm pipe)

SCQ Grease filler

Parameter: Delivery pressure: 1.5MPa Discharge: 50ml/cyc Lubricant viscosity: NLGI 000#~2# Dimensions:150×30×500mm Weight:0.7kg



The installation of the system

Mounting Divider Valves

See Figure for example and diagram of this general system configuration





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Installing Tubing, pipes, and Hoses

The basic rule to remember and follow is to keep all lines as short as possible with a minimum number of bends that are consistent with ease of installation and removal. Adhering to this strategy reduces the cumulative pressure drop in any type of system and results in reduced stress upon all of the system components.





System Start-up

The following checklist has been developed as an aid in verifying proper installation and operation of the Haoli Onboard Grease System. By completing the steps outlined below, the operational readiness of the system and resulting extension of the component life of all points connected to the system will be insured.

★ Apply grease gun (manual or pneumatic) to the grease fitting located on the Primary valve and each secondary valve inlet. While pumping grease through the system, cycle the indicator pin on the primary metering valve a minimum of 15 times.

NOTE: Grease gun nozzle and grease fitting should be thoroughly cleaned before lubricating to prevent flow of contaminants into the lube system.

- ★ nspect primary valve supply and outlets for grease discharge. If leakage is detected, tighten the fittings.
- ★ Continue to cycle the system until fresh grease appears at each lube point
- ★ Inspect each lube point fitting for leaks. Correct any leaks by firmly pushing tube into the fitting until seating occurs or tighten the threaded fittings for components connected with hose.
- ★ Operate the equipment through ts complete range of motion, inspecting for unrestricted movement of tube and hose. Correct any problems of rubbing, chaffing or kinking.
- ★ Inspect all hose and tube that is not covered with some type of protective wrap. Wrap any tube or hose that would be susceptible to damage from rubbing or chaffing.
- ★ Inspect all hose and tube connected to moving components. Insure that adequate hose or tube is provided to allow unrestricted movement to these moving lube points.
- ★ Verify proper pump operation and verify time setting by activating pump with the green activation button located on the face of the pump control panel. Activate the pump at least three times to insure proper operation.
- ★ After the Baler is in operation for a period of time (approx. 80 hours), you may find you need to adjust timing to a shorter or longer period based or the operating conditions.
- ★ Fill the reservoir with selected grease by filling at the grease fitting located on the face of the pump reservoir.

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Trouble Shooting Guide

Symptom	Probable cause	Solution
		Check fuses, timer and electrical supply.
Pump will not	Not receiving voltage	Check the electrical supply to the pump.
operate		If the pump receives mo current, trace to the electrical source
		and repair.
	Blocked pump cam	Replace the pump motor if no blockage is identified.
		Disconnect the main delivery hose from the pump outlet.
		Run the pump until solid grease (no bubbles) flows from the
	Air pocket at pump	outlet, if solid grease does not discharge after 20 minutes of
	element inlet.	operation, the pump inlet is blocked with a contaminant.
The pump motor		Note: Depending on operating temperatures and types of grease,
is running but		it may require 10 minutes to achieve full volume at the outlet.
there is ro		Remove the pump element from the pump body and inspect the
grease being		suction inlet port for foreign particles. Remove any particles
discharged	Blocked Pump inlet	found.
		Reassemble the pump and element and cycle the pump, f the
		pump element does not discharge grease, replace the pump
		element.
		Fill the reservoir to the "max" level and press the manual reset
Pump was		button.
operated with an	No grease	Disconnect the main delivery hose from the pump and watch
empty reservoir		grease flow until solid grease (no air bubbles) is discharged.
		Reconnect the main delivery hose to the pump outlet.
		Switch the pump on and loosen each outlet in the primary valve
		one at a time. The blocked outlet will start discharging grease
		and the indicator pin will index.
	Blockage in the	Retighten all of the outlets on the primary valve.
Grease is	metering valves, hose	Irace the hose that discharged grease to its secondary valve.
discharged at	tube or connected	Repeat the process of loosening each outlet one at a time until
the relief valve	component	the blocked feed line is detected.
		Retignten all outlets.
		Repair the component blockage in found.
	Hose or tubing is suit	vaive.
Lube noint not	or has chaffed	
	through	If tube is broken, cut tube at break and renair using tube union
receiving grease	unough	If hose is broken, cut ends at the hreak

The accessories of the system

Sleeve of tube

Figure	Description	Material	P.N.	I.D.
		DD	330001	9
	Spiral sleeve of tube	FT	330002	11
		PA	330003	9
			330004	11
		PE	330005	9
			330006	11
	Weaving Sieeve of tube	PA	330007	9
			330008	11

Polyurethane fiber tubes

Figure	Descriptior	P.N.	O.D.
	hose working pressure 300bar-grease filled but working pressure 60bar when used with copper coupling	320000	6
	hose working pressure 300bar-empty but working pressure 60bar when used with copper coupling	320001	6
	hose working pressure 300bar-grease filled	320002	9
	hose working pressure 300bar-empty	320003	9
	hose working pressure 300bar-grease filled	320004	11
	hose working pressure 300bar-empty	320005	11

Reusable hose tail for hose

Figure	Description	P.N.	Stud Φ
10 mm	Hose end sleeve	3210001	9mm
	Hose end sleeve	3210005	11mm
Contraction of the local division of the	Straight Hose end stud	3210002	9mm
	Straight Hose end stud	3210006	11mm
	90 elbow hose end stud	3210003	9mm
	90 elbow hose end stud	3210007	11mm
	45 hose end stud	3210004	9mm
	45 hose end stud	3210008	11mm

Tube clamp with rubber lining

Figure	Description	P.N.	I.D. mm
	Tube clamp with rubber lining	330000	6-1
		330001	9-1
		330002	10-1
		330003	12-1
		330004	15-1
		330005	20-1
	Tube clamp with plastic	330010	12-1
		330011	15-1
		330012	20-1

6mm compression Fittings for 9mm hose end

Figure	Description	P.N.	TubeΦ	d
65 S 📭	90 elbow 6mm tube to M6×1	322001	Φ6	M6×1
	90 elbow 6mm tube to M8×1	322002	Φ6	M8×1
	90 elbow 6mm tube to M10×1	322003	Φ6	M10×1
	Straight 6mm tube to M6×1	322004	Φ6	M6×1
	Straight 6mm tube to M8×1	322005	Φ6	M8×1
	Straight 6mm tube to M10×1	322006	Φ6	M10×1

8mm compression Fittings for 11mm hose end

Figure	Description	P.N.	TubeΦ	d
	90 elbow 11mm tube to M6×1	322007	Φ8	M6×1
	90 elbow 11mm tube to M8×1	322008	Φ8	M8×1
	90 elbow 11mm tube to M10×1	322009	Φ8	M10×1
	Straight 11mm tube to M6×1	322010	Ф8	M6×1
	Straight 11mm tube to M8×1	322011	Φ8	M8×1
	Straight 11mm tube to M10×1	322012	Ф8	M10×1