 Superfos Hydraulic a/s	TECHNICAL DESCRIPTION	NO.: 993E570	ISSUE
	HYDRAULIC CYLINDERS Type KC	ENCL.:	SHEET: 1 / 2
		PERF. DATE: 830902	BY: IJ/IP
SUBJECT	DESCRIPTION	REMARKS	
CONSTRUCTION	<p>This double-acting cylinder has been designed to operate in a 2-line system. Opening-/closing direction is depending upon the choice of on which side of the piston the hydraulic pressure is placed.</p> <p>In the cylinder head an indicator shaft is placed. This shaft turns when the piston moves up and down, by which the true position of the valve is shown. Between valve and cylinder a packing bush furnished with rubber sealings is placed. Between the sealing rings a small hole out to the open has been drilled in order to prevent a mixing of the liquids. Superfos Hydraulic has plugged the hole.</p>		
FUNCTION	<p>This cylinder type has been constructed for mounting on cone valves and opens/closes by means of hydraulic pressure.</p>		
HYDRAULIC OPERATION	<p><u>Opening of the valve:</u></p> <p>Turn the corresponding pilot valve to position "open". The hydraulic pressure will then be conducted from pump station/power unit through the respective pipes to the opening side of the piston. The closing side of the piston is simultaneously connected with the oil tank of the power unit.</p> <p>The oil pressure lifts the spindle - opening the valve.</p> <p>As long as the pilot valve is in position "open" the valve will stay open.</p> <p><u>Closing of the valve:</u></p> <p>The corresponding pilot valve is turned to position "closed" and the oil pressure is conducted to the closing side of the piston. From the opening side the oil is led to the tank and the valve closes.</p>		
EMERGENCY OPERATION	<p>In order to be able to operate a cone valve with a KC-cylinder freely in an emergency situation, it is necessary for the KC-cylinder to be pressureless. Emergency operation takes place by means of a hand pump, and becomes e.g. actual in case of pressure fall out of the hydraulic system.</p>		



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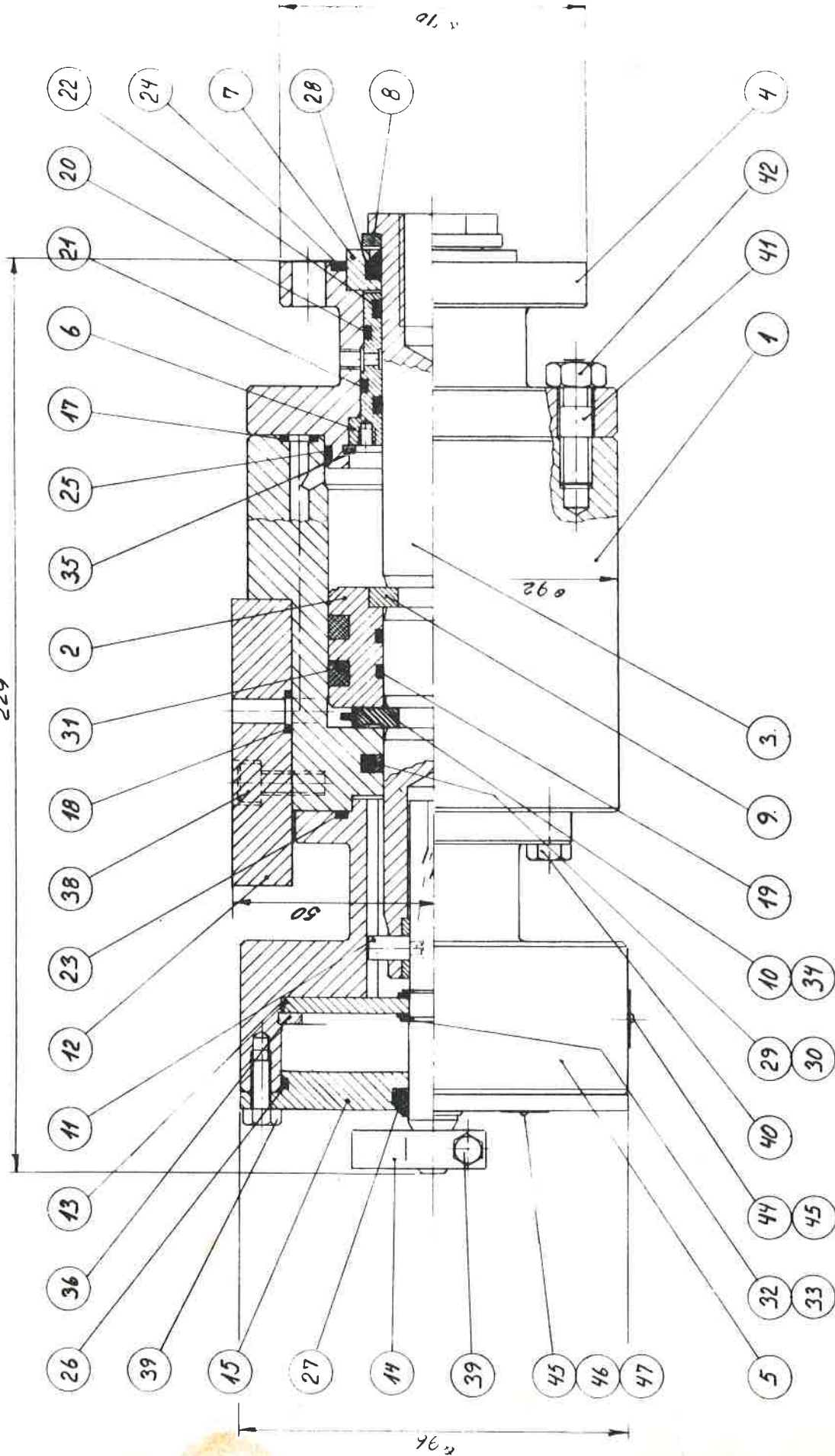
Because the KC-cylinder is not ir-reversible, it will always be neces-sary to lock the oil on the closing side of the piston in case of pres-sure failure. This is done by means of the double-non-return valve, pilot operated valve, normally mounted directly on the cylinder.

Opening/closing of valve by hand pump:

The hoses of the hand pump is connected by means of quick connections to the re-spective joints of the cylinder. The change over valve is to be placed in the position required, open/closed, and it is necessary to pump until the valve reaches the right position. Hereafter the change-over valve is placed in position neutral, locking the oil on both sides of the piston, and the valve is kept in position.

Alternatively a handpump can be mounted on the unit, see operation manual 993E568.

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ID-NR	MATR BEMÆKNELSE/DIM	ANTAL	ENHED	ANDR	DATO	SIGN	UDG
					82.12.21	PLW	
MATR KVALITET:	FORBILLEDE:	OVERFL. BEH. VAGT	SKALA				
			1:1				
FOR FLADER UDEN RUHEDSTEGH } R _a =	ERSTATTER:	ERSTATET AF					
FOR MÅL UDEN TOLERANCE	GANGE TIL ORDRE NR						
NOMINEL MÅL	K.C. - 12 - 22						
OVER-T.O.M.	BEMÆKNELSE						
0.5 - 6	0.1						
6 - 30	0.2						
30 - 120	0.3						
120 - 315	0.5						
315 - 1000	0.8						
BLAD							NR
							0 37 D 471

831.103.511.160

Superfos Hydraulic a/s

Sup...s Hydraulic as		PARTS LIS		ID-NO. 0 3 7 4 7 3 1	
REFERENCE:	TYPE: KC 22	DESCRIPTION		NUMBER	UNIT
DRAWING NO. ITEM NO.	ID-NO.				
037D4711 20	200-0150	O-Ring 29.6*2.4		1	pc.
	21	O-Ring 31.6*2.4		1	-
	22	O-Ring 24.5*3.0		2	-
	23	O-Ring 41.6*2.4		1	-
	24	O-Ring 41.5*3.0		1	-
	25	O-Ring 49.6*2.4		1	-
	26	O-Ring 69.6*2.4		1	-
	27	Scraper ring 12*20-7/4		1	-
	28	Scraper ring 25*33-7/4		1	-
	29	Sealing ring 25*36.0*4.2		1	-
	30	O-Ring 29.75*3.53		1	-
	31	X-Ring 40.64/51.30*5.53		2	-
	32	Guiding Disc nd12*nd18*1.2		2	-
	33	Locking Ring nd12		2	-
	34	Locking Ring nd40		1	-
	35	Locking Ring nd42		1	-
	36	Locking Ring nd75		1	-
	38	Screw M6*16 C-I6K		4	-
	39	Screw M5*12 6K, SS		4	-
	40	Screw M6*16 6K, SS		3	-
	41	Stud bolt M8*31 12/12		4	-
	42	Nut M8 SS		4	-
	44	Name plate 55*13*0.5		1	-
	45	Pin nd1.9*5		6	-
	46	Name plate "Closed"		1	-
	47	Name plate "Open"		1	-

NOT IN APPROVAL

Sup...s Hydraulic as		PARTS LIST		ID-NO. 3 7 4 7 3 1	
REFERENCE:	TYPE: KC 22	DESCRIPTION		NUMBER	UNIT
DRAWING NO. ITEM NO.	ID-NO.				
037D4711 00	219-0200	Packing Set KC 12-22		1	-
	01	Cylinder		1	-
	02	Piston		1	-
	03	Spindle complete		1	-
	04	Base		1	-
	05	Indicator House		1	-
	06	Bushing		1	-
	07	Stop Bushing		1	-
	08	Disc		1	-
	09	Locking ring		1	-
	10	Locking ring		1	-
	11	Guiding pin		1	-
	12	Connection plate		1	-
	13	Cover		1	-
	14	Indicator BRC		1	-
	15	Top Cover		1	-
	16	Indicator Shaft		1	-
	17	O-Ring 6.1*1.6		1	-
	18	O-Ring 7.1*1.6		2	-
	19	O-Ring 24.6*2.4		2	-

Superfos Hydraulic as

TYPE: KC 22

CODE FOR ORDERING SPARE PARTS:
DRAWING NO./ITEM NO./ID-NO.

ILLUSTRATION:
037D4711 / 01 / 037C4771

DRAWING LIST

DRAWING NO.	DESCRIPTION	REV.	DATE	SIGN.	EDIT
037D4711	Assembly Drawing				

840302 ISI