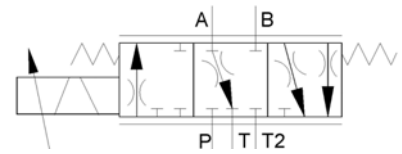


Electro Hydraulic Servo Valve

Single Stage



Hydraulic Symbol

Introduction:

The HVM 068 is a single stage servo valve in spool and sleeve construction. It is designed special for low pressure applications with spring returned cylinder. The torque motor moves with the input current the valve spool in both directions for pressure raise up and pressure raise down. With an external closed loop controller an exact positioning system for turbine controls are possible. The HVM 068 has two return edges for the low pressure drop in pressure down direction.

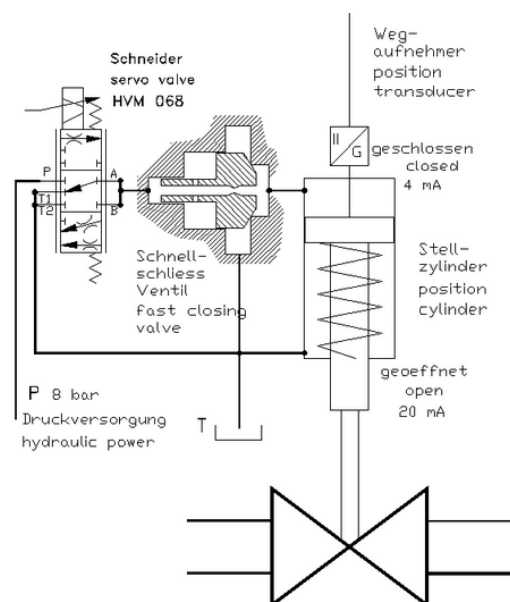
Special Features

- High reliability
- Easy service
- Highest quality standard
- Robust construction
- High dynamic response
- Relatively insensitive to contamination
- No jet pipes or nozzles
- Only variable nozzles
- Easy hydraulic zero adjustment

General Description

Type:	Electrical input stage Symmetrical torque motor Direct actuated main spool Spool and sleeve package 5/3 way operation
Mounting style:	CETOP 05
Mounting position:	unrestricted
Weight:	4,7 kg
Vibration	30g, 3 axes

Typical Application Drawing



Technical Data

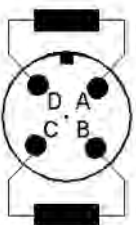
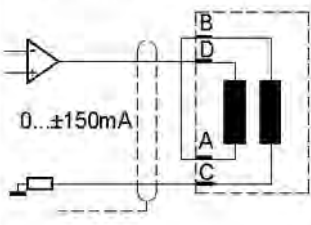
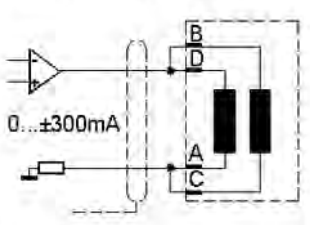
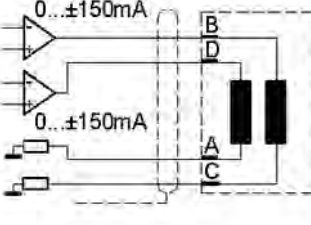
1. Hydraulic

. 1 Rated Pressure	P_N	=	10 bar
. 2 Operating Pressure	P_{bmax}	=	40 bar
. 2.1 Return Line Pressure	P_{Rmax}	=	10 bar
. 3 Max Pressure (static test pressure)	P_{max}	=	100 bar
. 4 Rated Flow at pressure drop = 30 bar	Q_N	=	10 / 20 / 50 / 65 l/min
. 5 Quiescent Flow max with P_N	Q_L	<	2 %
. 6 Hysteresis	H	<	5 % of I_N (without Dither) 3 % of I_N (with Dither)
. 7 Threshold Sensitivity	E	<	0,5 % of I_N (without Dither) 0,2 % of I_N (with Dither)
. 8 Threshold Span	S	<	2 % of I_N (without Dither) 1 % of I_N (with Dither)
. 9 Linearity Deviation		<	10 % of I_N
.10 Overlapping (standard)	h	=	-1% ... +3%
.11 Operating Temperature Range	T	=	253...353 °K (= -4 ...+176 °F)
.12 Null Shift with $\Delta T = 50K$		<	1 %
.13 Viscosity Range of the fluid		=	10 ... 1000 mm ² /s (approximate value) Standard: ISO VG10 ... ISOVG 46
.14 Cleanliness class (recommended)		<=	ISO 4406 class 15/14/11
.15 Filtration (normal operation)	β_{10}	>=	75 (10 μ m absolute)
(highest requirements)	β_5	>=	75 (5 μ m absolute)
.16 fluid type		=	HLP-hydraulic oil as per DIN 51524-2 Turbine lubrication oil ASTM D4304

2. Electrical

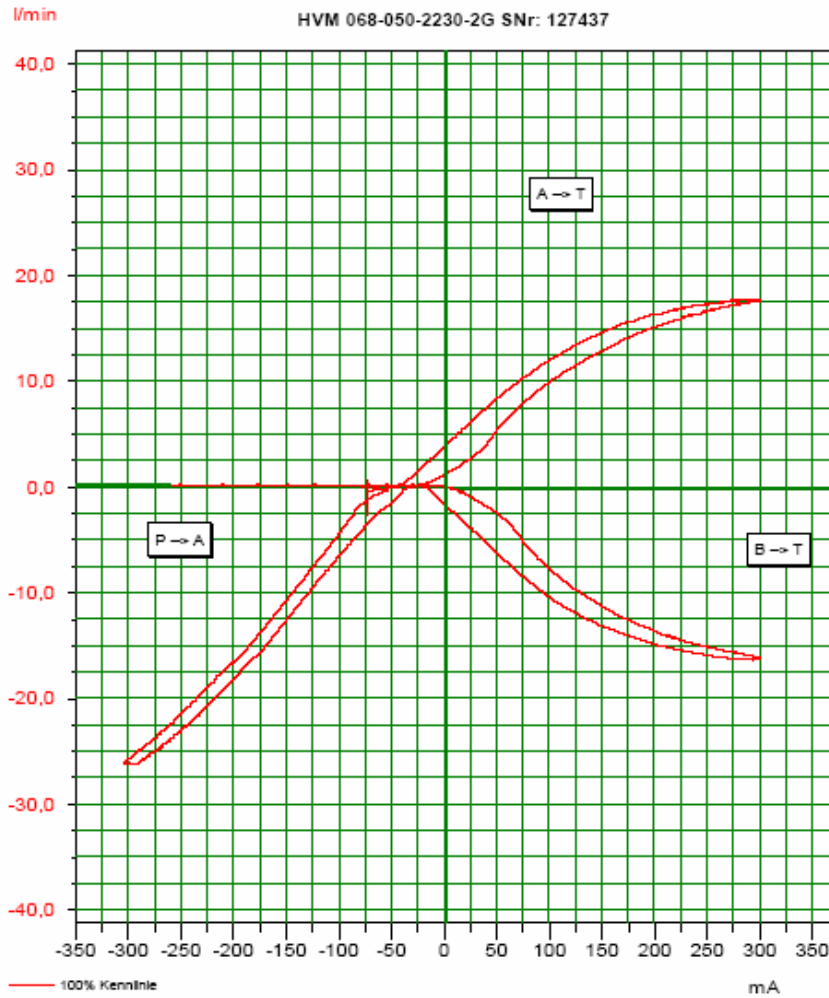
The servo valve has two coils connected to a 4 pin male plug type CA02-COM-E-14S-2P

.1 coil type 1 = 12 Ohm (not supplied)	
.2 coil type 2 = 60 Ohm (standard)	
.2.1 resistance	R = 60 Ohm
.2.2 Inductance	L = 80 mH
.2.3 Current	I_N = 150 mA
.2.3 with parallel connection	I_N = 300 mA
	U_N = 9 V
.2.4 with serial connection	I_N = 150 mA
	U_N = 18 V
.3 Degree of Protection	EN 60529 IP 65
.4 Factory zero setting:	10 ... 15 % flow A to T (with current zero)

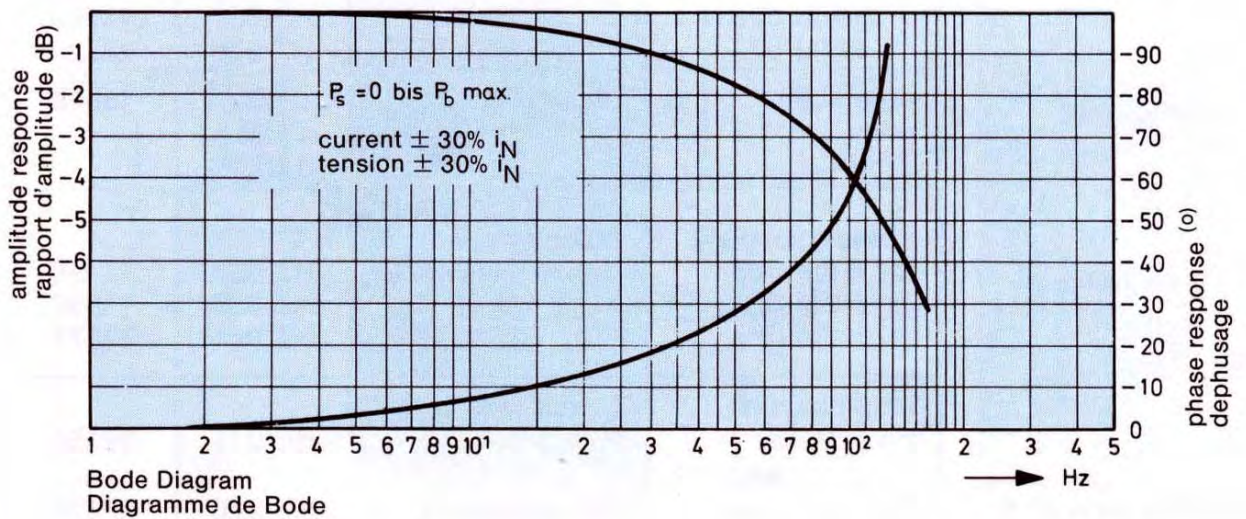
Connector	Serial connection	Parallel connection	each coil separate conn.
			
	Pin D +V and Pin C 0V Pin A connect to B oil flow P to A	Pin B,D +V and Pin A,C 0V oil flow P to A	Pin B +V and Pin C 0V Pin D +V and Pin A 0V oil flow P to A

Diagrams

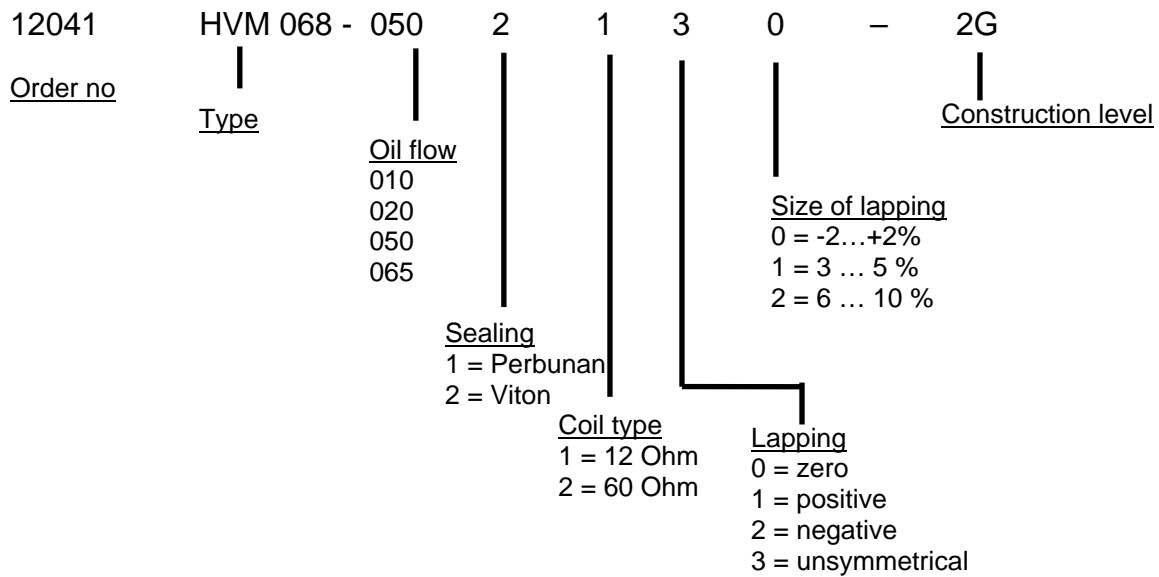
Typical flow diagram with pressure drop of 8 bar/edge



Dynamic diagram



Model Type And Order Information Code



Standard stock type: 12041 HVM 068-050-2230-2G

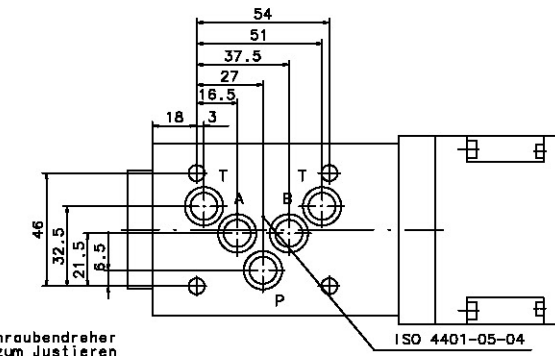
Additional Parts

Description	model	order no
Cable connector 4 pins soldering type	KE CA 06 COM E 14S 2S	13018
Connection cable 5 meter length with connector and for cable protection tube	KE CA08COM-PG-1-05mtr	24100
Connection plate CETOP 05	HZ 036	39276
Flashing plate CETOP05	HZ 061	39686
Flashing system CETOP05 with directional valve	HZ119	xxx
Linear box amplifier with 0...+/-10V input and +/-15V supply	BOE 002-001-0-0-2B	14068
Chopper box amplifier with 4...12...20mA input	BOE 300-025-2-5-1A	10698

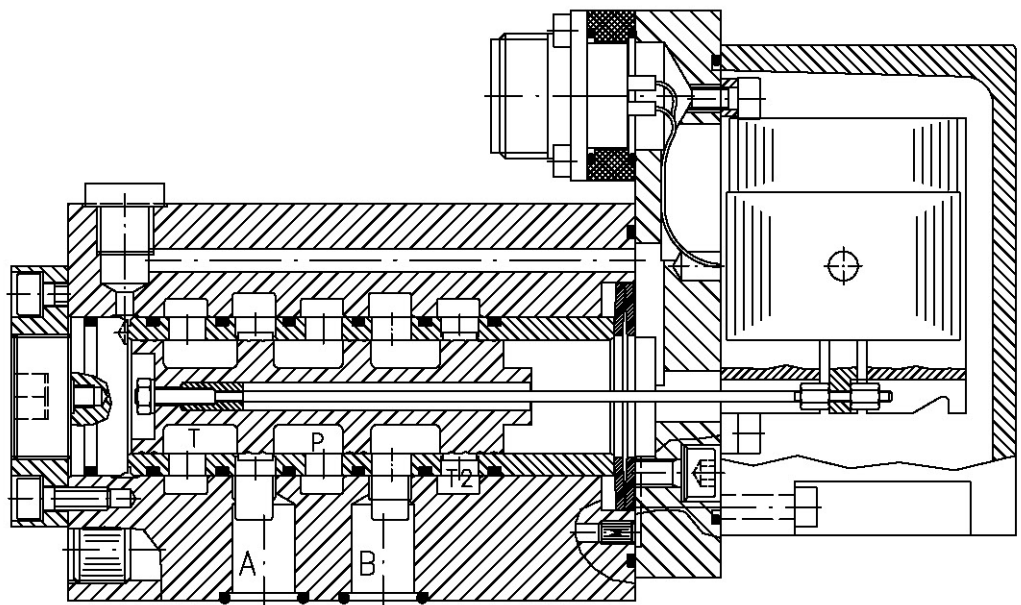
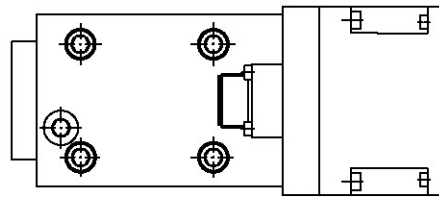
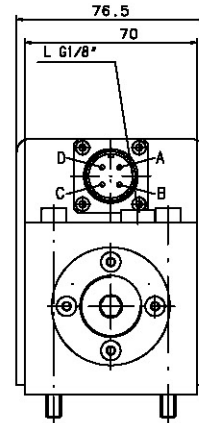
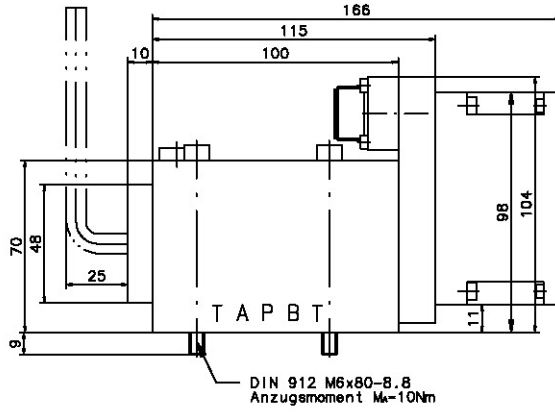
Outline Drawing And Cutting View

(Next page)

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Sechskantschraubendreher
DIN 911 s8 zum Justieren
des hydr. Nullpunkt
Justagebereich $\pm 45^\circ$



Angaben ohne Einheiten in mm
All dimensions without unit in mm

Nur zur Information / Only for information

Änderungsindex / Amendment index		
-		
Datum Date	Name Name	
dwg.	20.11.07	

Ventil
Valve
HVM 068-0XX-2230-2G

Id.-Nr.
-

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Germany

