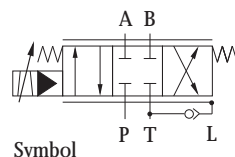


Elektrohydraulic Servovalves Typ HVM 058


Special features:

- high reliability
- easy service
- robust construction
- high dynamic response
- relatively insensitive to contamination
- variable metering orifices only
- $Q_{max} = 20\text{l/min}$ at $\Delta p = 70\text{bar}$
- $p_{max} = 315\text{ bar}$

General description:

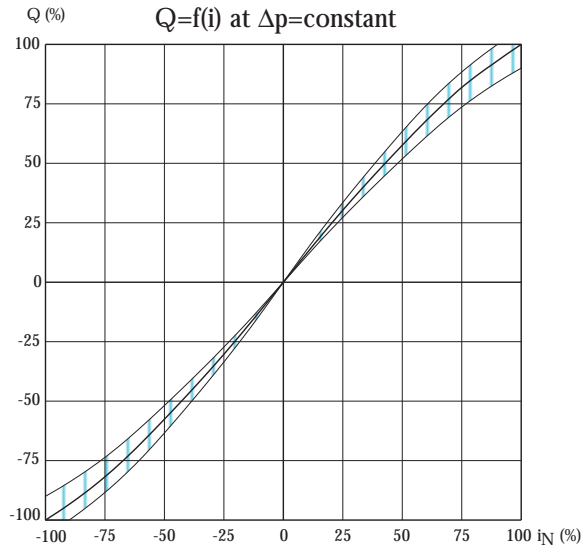
Type	:	electrical input stage, torque motor, sliding spool system
Control	:	torque motor actuated pilot spool
main spool	:	located in 4-way sliding and correlated to the same
Style of mounting	:	subplate / Cetop 03
Mounting position	:	unrestricted
Weight	:	1,15kg

Technical Data
1. Hydraulic Data (definition according to DIN 24311)

.1	rated pressure	p_N	=	210	[bar]	
.2	operating pressure	$p_{b \text{ min}}$	=	10	[bar]	
		$p_{b \text{ max}}$	=	315	[bar]	
.2.1	return line pressure	$p_r \text{ max}$	=	35 % p_b *		*in case of internal connection from L to T max.static pressure
.2.2	in case of separate leakage line	$p_L \text{ max}$	=	10	[bar]	10 bar continuously
.3	max. pressure (static test pressure)	p_{max}	=	450	[bar]	
.4	rated flow at $\Delta p = 70\text{ bar}$	Q_N	=	8/12/20	[l/min]	
.5	quiescent flow, max. at p_N	Q_{01+02}	<	10% Q_N		
.6	internal max. leakage at $p_N = 210\text{ bar}$	Q_L	<	50	[cm ³ /min]	
.7	hysteresis	H	<	4,5% i_N 2% i_N	(without Dither) (with Dither)	
.8	threshold sensitivity	E	<	0,4% i_N 0,1% i_N	(without Dither) (with Dither)	
.9	threshold span	S	<	1,5% i_N 1% i_N	(without Dither) (with Dither)	
.10	linearity deviation		<	8% i_N		
.11	flow symmetry - Q_N zu + Q_N		<	10% i_N		
.12	pressure gain (see diagram)	V_N	>	0,2 P_b / 1% i_N		
.13	overlap, standard	h	=	-1...+3% i_N		
.14	operating temperature range	δ_M	=	253...353	[K]	
.14.1	temperature drift		≤	2% i_N / 50K		
.15	viscosity range of fluid	γ_{min}	=	10...1000 mm ² /s approximate value normal: ISO VG 10...ISO VG 46		
.16	filtration of fluid		<	class 4-5 class 15/14/11	to NAS 1638 or to ISO 4406	
.17	fluid standard		=	HLP-hydraulic oils as per DIN 51524 Teil 2 (Special equipments possible)		

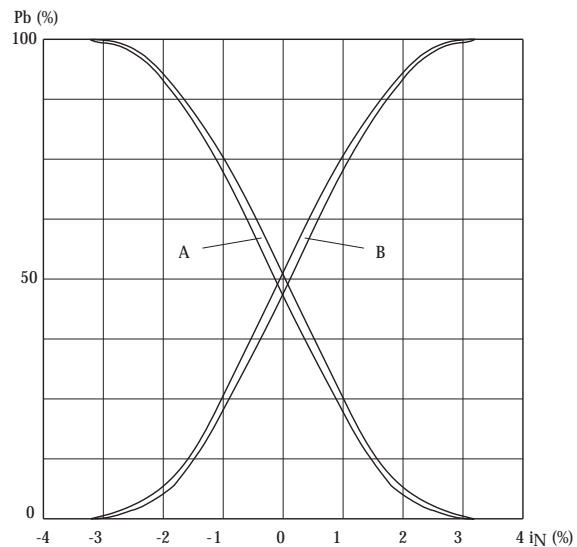
2. Diagrams HVM 062

Flow rate-signal function



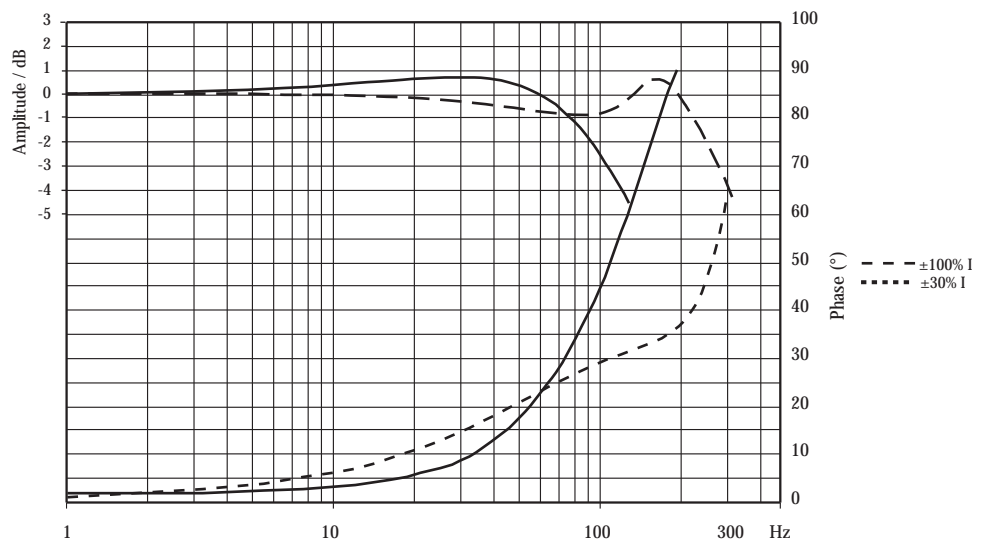
Pressure gain

$$V_p = \tan \alpha = \frac{\Delta p}{\Delta I}$$



Frequency Response

P_V : 210bar
 — $\pm 100\% I$
 - - $\pm 30\% I$

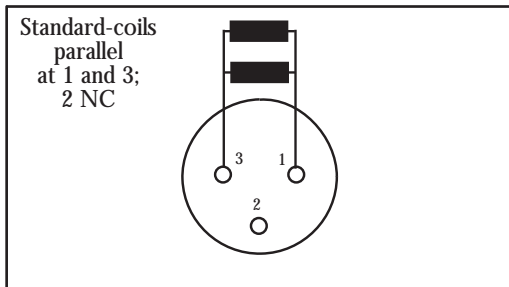


3. Electrical Data

3.1 Electrical Data without Electronic

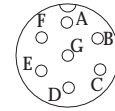


connector
(M8x1)

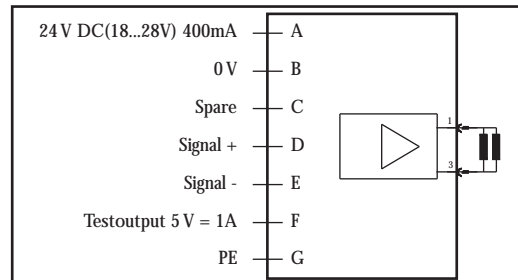


coil type		inductance	rated current	resistance	power
1	1 coil	160 mH	± 100 mA	65Ω	0,65 W
	2 coil parallel	110 mH	± 200 mA	32Ω	1,3 W

3.2 Electrical Data with Electronic



connector 7 pol.
DIN 43563



Input	E1	E2	E3	E4	Flow
Signal D>E	+ 10 V	4 mA	20 mA	+20 mA	P>A
	0 V	12 mA	12 mA	0 mA	0
	- 10 V	20 mA	4 mA	-20 mA	P>B

Order Information

HVM 058 - 020 - 1200 - XX - E1

<u>Model</u>	
058	
<u>Rated flow</u>	
QN at $\Delta p = 70$ bar	
008 l/min	
012 l/min	
020 l/min	
<u>Seal material</u>	
1 Perbunan	
2 Viton	
3 Butyl	
4 Vulkollan	
5 Ethylen-Propylen	
<u>Resistance / coil [R20]</u>	
1 65 Ω (1coil)	
2 32,5 Ω (2x65 Ω parallel)	
3 130 Ω (2x65 Ω seriell)	
<u>Overlap</u>	
0 Zero overlap	
1 Positiv overlap	
2 Negativ overlap	
<u>Ammount of overlap</u>	
positiv oder negative	
1..9	
<u>Design letter</u>	
assigned by manufacturer	
<u>Elektronic</u>	
E1 Voltage input $\pm 10V$	
E2 Current input 4...20mA P > A	
E3 Current input 4...20mA P > B	

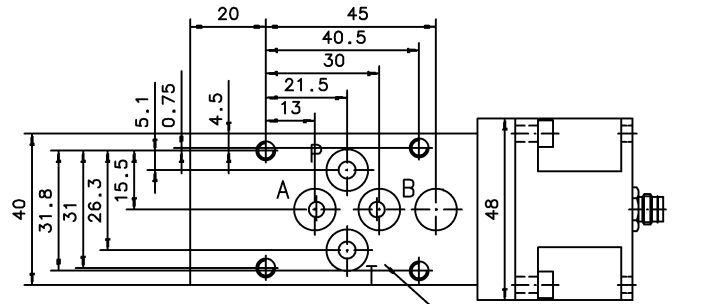
5. Accessories:

Describtion			Ordert.-Nr
Connector	3pol.	KE 79-3406-52-03	10249
Connector 90°	3pol.	KE 79-3408-52-03	10250
Connector	7pol.	KE CA 06 COM 14S 7S	21855
Sub plate	NG 6	HZ 050	39276
scavenger plate	NG 6	HZ 062	39686
Box-Amplifier		BOE XXX-025-0-5-0A	46965

Important remarks:

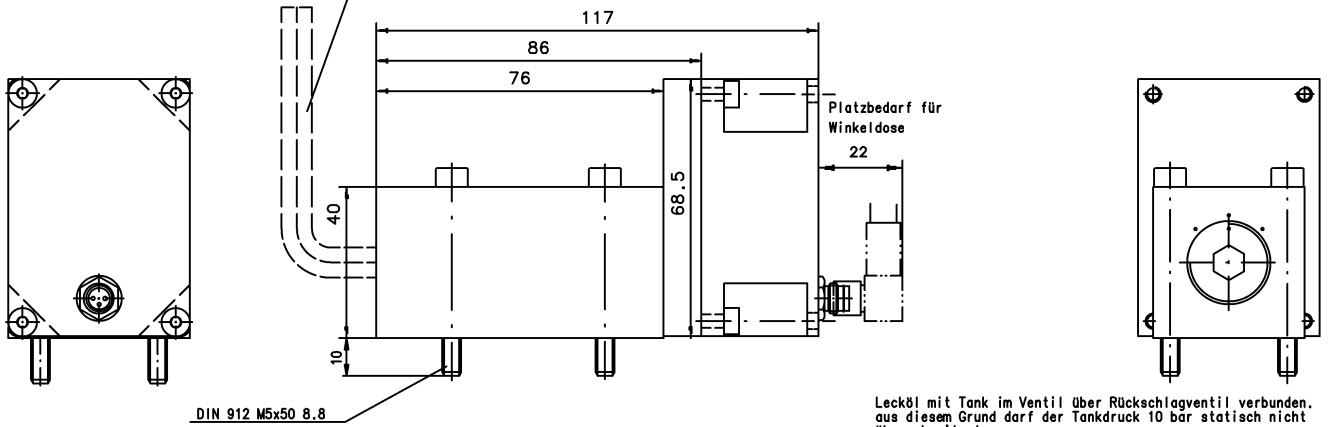
Valve mounting surface must be flat within 0,02mm and smoothness not to exceed 6 μ m. Easy hydraulic Zero adjustment by means of Allen key S8 DIN 911. Max. permissible drain line pressure 10 bar. Valves with modified characteristics available. Modifications, which serve technical progress, remain reserving.

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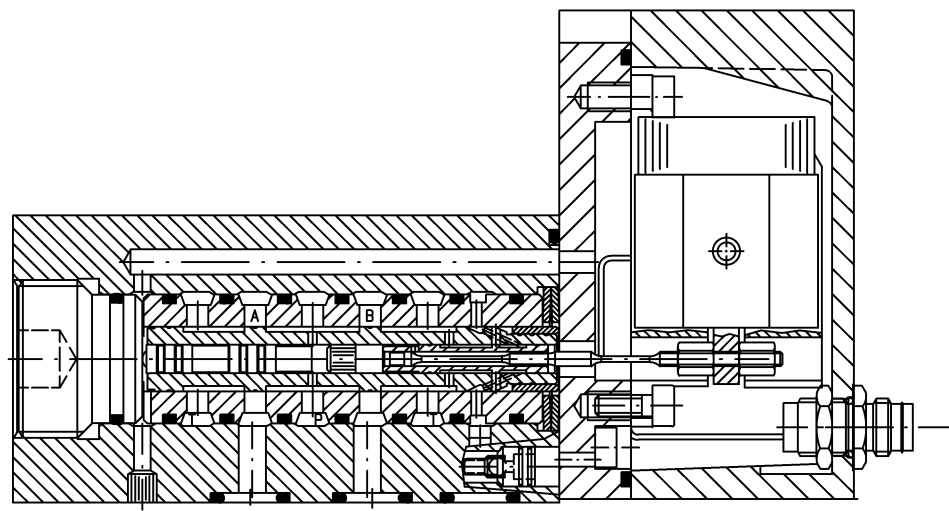
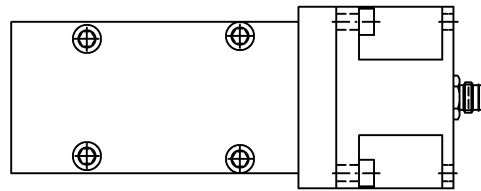
Sechskantschraubendreher
DIN 911 s8 zum Justieren
des hydr. Nullpunkt
Justagebereich $\pm 45^\circ$

Anschlußbild ISO 4401-03-02



DIN 912 M5x50 8.8

Lecköl mit Tank im Ventil über Rückschlagventil verbunden.
aus diesem Grund darf der Tankdruck 10 bar statisch nicht
überschreiten!

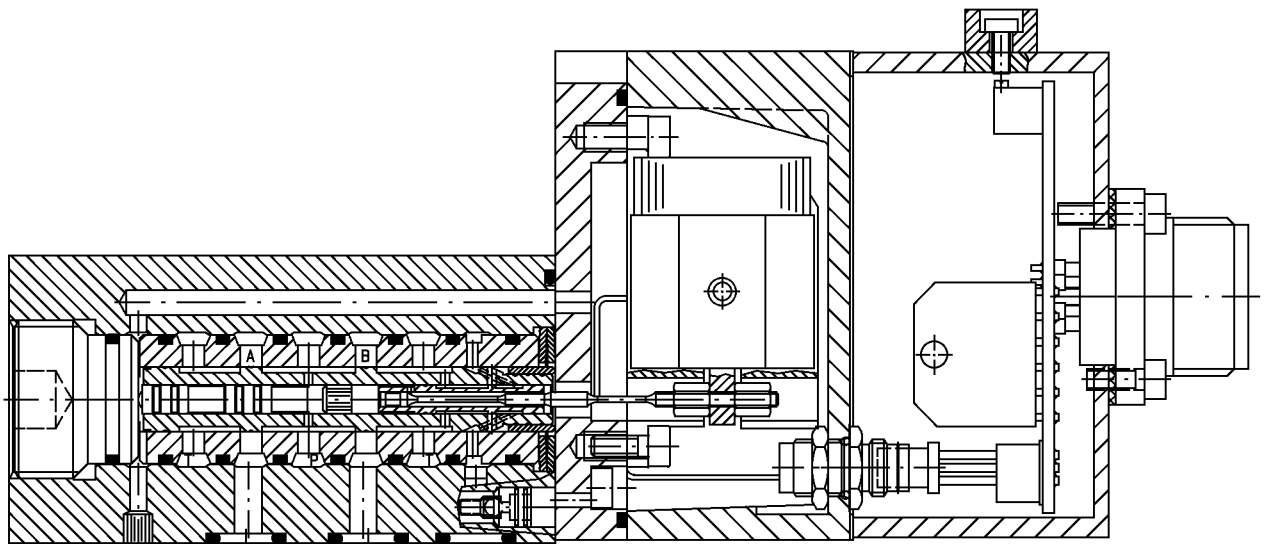
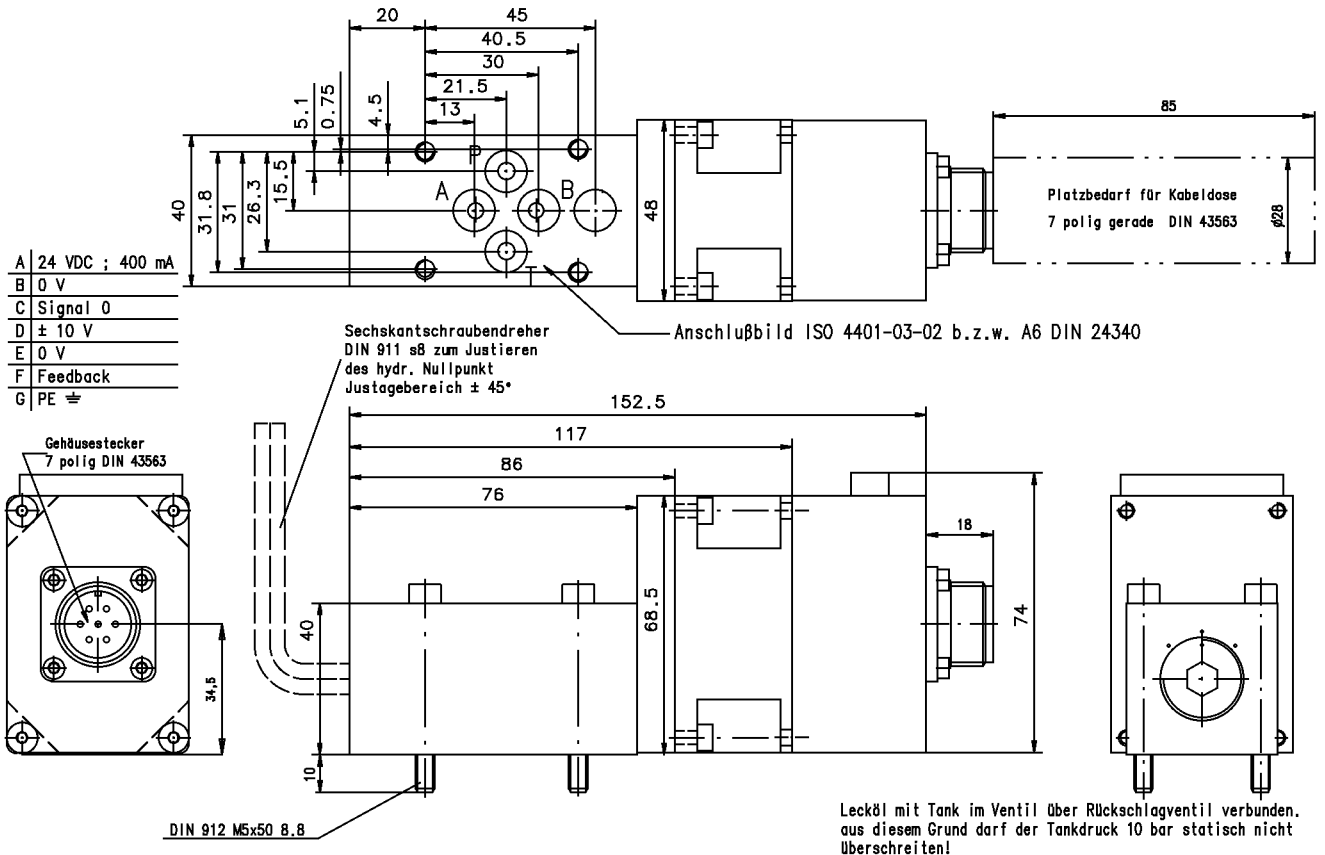


Angaben ohne Einheiten in mm.
All dimensions without unit in mm

Nur zur Information / Only for information

Änderungsindex / Amendment index		Ventil Valve	HVM 058-XXX-XXXX-XX-XX	Id.- Nr. -
-	-			
Datum Date	Name Name			
dwg.	28.08.01 Dindorf			
		Jos. Schneider Optische Werke GmbH Ringstr. 132 55543 Bad Kreuznach Germany		

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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.		28.08.01	Dindorf

Ventil
Valve

HVM 058-XXX-XXXX-XX-EX

Id.-Nr.
-

Jos. Schneider Optische Werke GmbH
 Ringstr. 132 55543 Bad Kreuznach
 Germany

