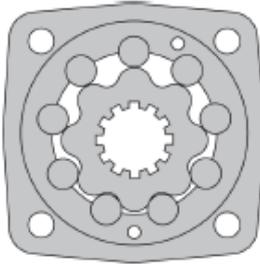


## HYDRAULIKMOTOREN



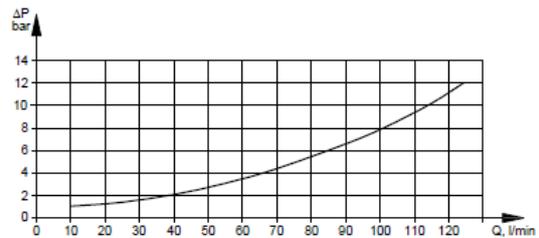
### OIL FLOW IN DRAIN LINE

Pressure drop (bar)	Viscosity (mm <sup>2</sup> /s)	Oil flow in drain line (l/min)
140	20	1,5
	35	1
210	20	3
	35	2

### GENERAL

Displacement, (cm <sup>3</sup> /rev)	161,1 ÷ 725
Max. Speed, (RPM)	625 ÷ 175
Max. Torque, (daNm)	47 ÷ 125
Max. Output, (kW)	20,2 ÷ 33,5
Max. Pressure Drop, (bar)	200 ÷ 115
Max. Oil Flow, (l/min)	100 ÷ 125
Min. speed, (RPM)	10 ÷ 5
Permissible Shaft Loads, (daN)	P <sub>rad</sub> = 1700; P <sub>s</sub> =1000
Pressure fluid	Mineral based- HLP(DIN 51524) or HM(ISO 6743/4)
Temperature range, (°C)	- 30 ÷ 90
Optimal Viscosity range, (mm <sup>2</sup> /s)	20 ÷ 75
Filtration	ISO code 20/16 (Min. recommended fluid filtration of 25 micron)

### PRESSURE LOSSES

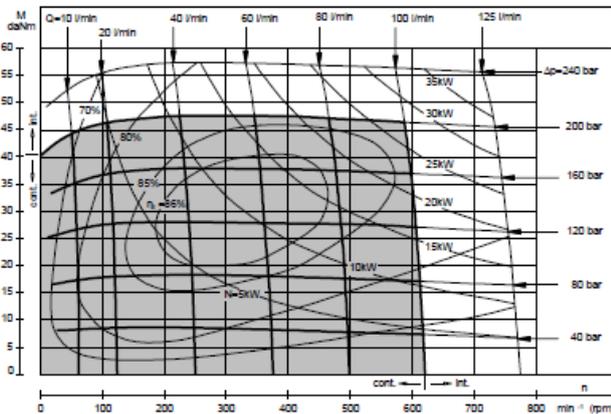


### SPECIFICATION DATA

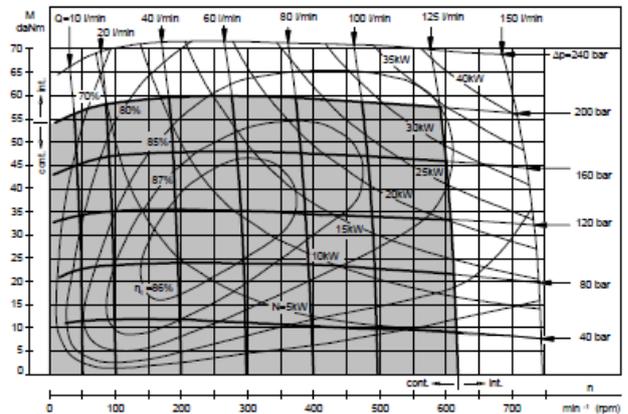
Type	OT									
	160	200	250	315	400	500	630	725		
Displacement [cm <sup>3</sup> /rev.]	161,1	201,4	251,8	326,3	410,9	523,6	612,3	725		
Max. Speed, [RPM]	cont.	625	625	500	380	305	240	206	172	
	int.	780	750	600	460	365	285	247	205	
Max. Torque [daNm]	cont.	47	59	73	95	108	122	123	125	
	int.	56	71	88	114	126	137	138	140	
	peak	66	82	102	133	144	160	161	165	
Max. Output [kW]	cont.	26,5	33,5	33,5	33,5	30	26,5	24,3	20,2	
	int.	32	40	40	40	35	30	27,5	26,8	
Max. Pressure Drop [bar]	cont.	200	200	200	200	180	160	140	115	
	int.	240	240	240	240	210	180	160	130	
	peak	280	280	280	280	240	210	190	160	
Max. Oil Flow [l/min]	cont.	100	125	125	125	125	125	125	125	
	int.	125	150	150	150	150	150	151,4	151,4	
Max. Inlet Pressure, [bar]	cont.	210	210	210	210	210	210	210	210	
	int.	250	250	250	250	250	250	250	250	
	peak	300	300	300	300	300	300	300	300	
Max. Return Pressure w/o Drain Line or Max. Pressure in Drain Line, [bar]	cont.	0-100	RPM	75	75	75	75	75	75	
	cont.	100-300	RPM	40	40	40	40	40	40	
	cont.	>300	RPM	20	20	20	20	-	-	
	int.	0-max.	RPM	75	75	75	75	75	75	
Max. Return Pressure with Drain Line [bar]	cont.	140	140	140	140	140	140	140	140	
	int.	175	175	175	175	175	175	175	175	
	peak	210	210	210	210	210	210	210	210	
Max. Starting Pressure with Unloaded Shift, [bar]		10	10	10	10	10	10	10	10	
Min. Starting Torque [daNm]	at max press.	drop cont.	34	43	53	74	84	95	95	95
	at max press.	drop int.	41	52	63	89	97	106	108	110
Min. Speed, [RPM]		10	9	8	7	6	5	5	5	
Weight, [kg]	OT	20	20,5	21	22	23	24	25	26	
	OTW	22	22,5	23	24	25	26	27	28	
	OTS	15	15,5	16	17	18	19	20	21	

## FUNCTION DIAGRAMS

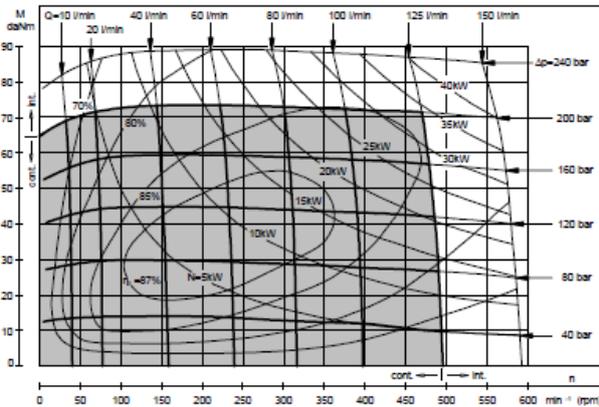
**OT 160**



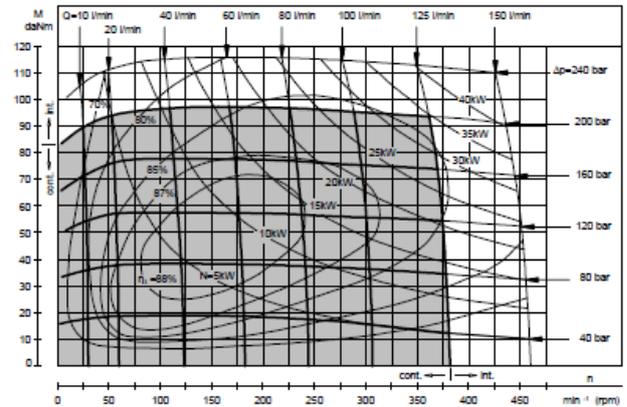
**OT 200**



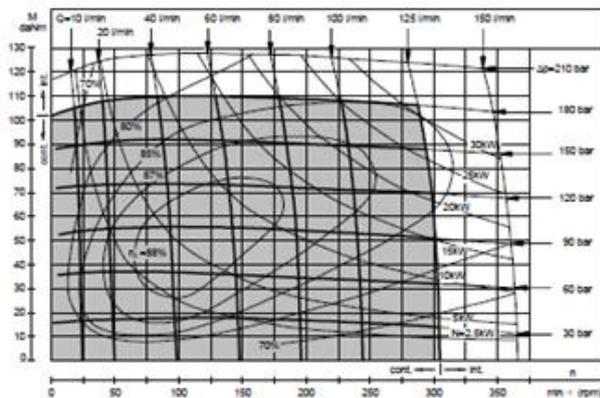
**OT 250**



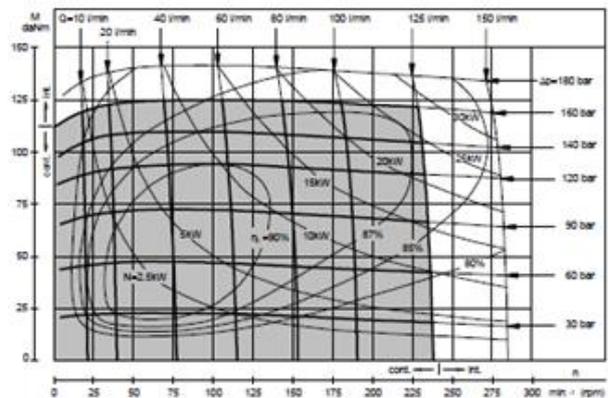
**OT 315**



**OT 400**

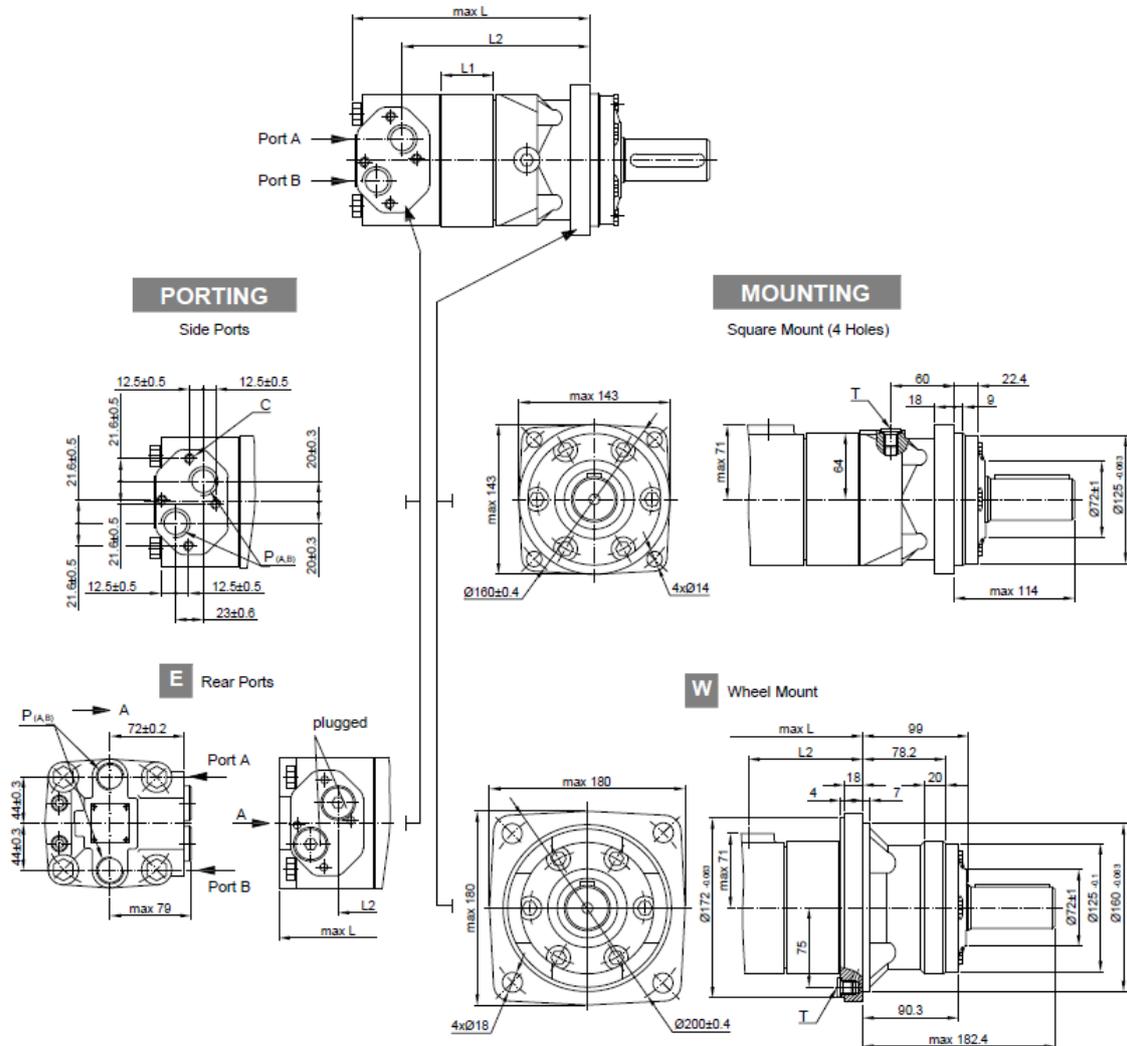


**OT 500**



The function diagrams data was collected at back pressure 5 + 10 bar and oil with viscosity of 32 mm<sup>2</sup>/s at 50° C.

## DIMENSIONS AND MOUNTING DATA



**Standard Rotation**  
Viewed from Shaft End  
Port A Pressurized - CW  
Port B Pressurized - CCW

**Reverse Rotation**  
Viewed from Shaft End  
Port A Pressurized - CCW  
Port B Pressurized - CW

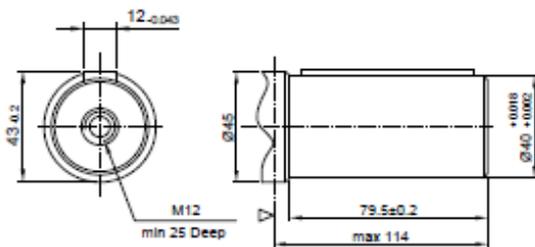
C : 4xM10 - 10 mm depth  
P<sub>(A,B)</sub> : 2xG3/4 or 2xM27x2 - 17 mm depth  
T : G1/4 or M14x1,5 - 12 mm depth (plugged)

Type	L, mm	L2, mm	Type	L, mm	Type	L, mm	L2, mm	Type	L, mm	L1, mm
OT 160	210	150	OTE 160	220	OTW 160	127	67	OTWE 160	137	12
OT 200	215	155	OTE 200	225	OTW 200	132	72	OTWE 200	142	16,5
OT 250	220	160	OTE 250	230	OTW 250	138	78	OTWE 250	148	22
OT 315	227	167	OTE 315	237	OTW 315	145	85	OTWE 315	155	29
OT 400	236	176	OTE 400	246	OTW 400	154	94	OTWE 400	164	38
OT 500	255	195	OTE 500	265	OTW 500	172	112	OTWE 500	182	56,5
OT 630	261	201	OTE 630	271	OTW 630	162,5	115	OTWE 630	172,5	61
OT 725	272	216	OTE 725	282	OTW 725	180	130	OTWE 725	180	70

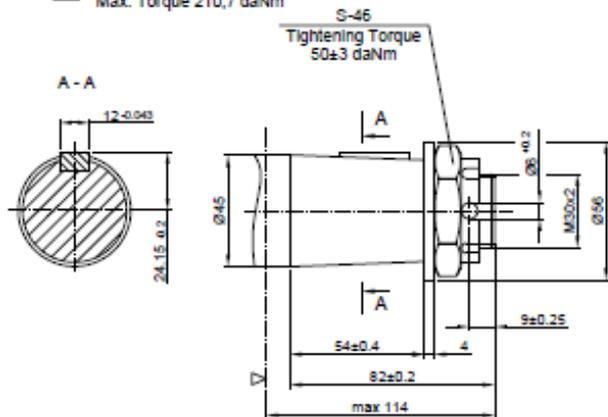
The width of the geroler is 3 mm greater than L1.

## SHAFT EXTENSIONS

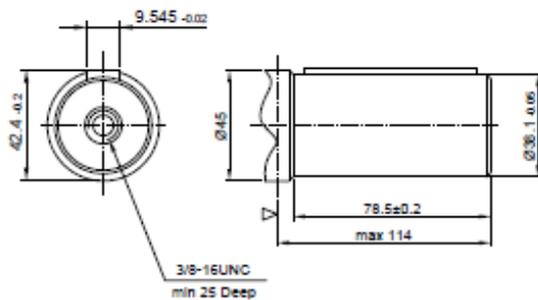
**C** Ø40 straight, Parallel key A12x6x70 DIN 6885  
Max. Torque 132,8 daNm



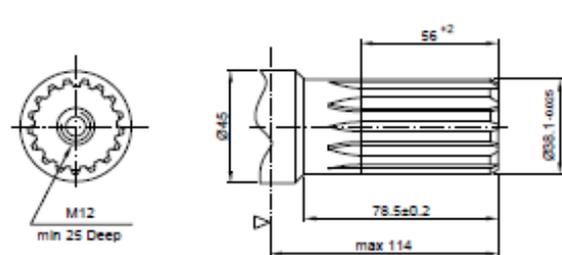
**K** tapered 1:10, Parallel key B12x8x28 DIN 6885  
Max. Torque 210,7 daNm



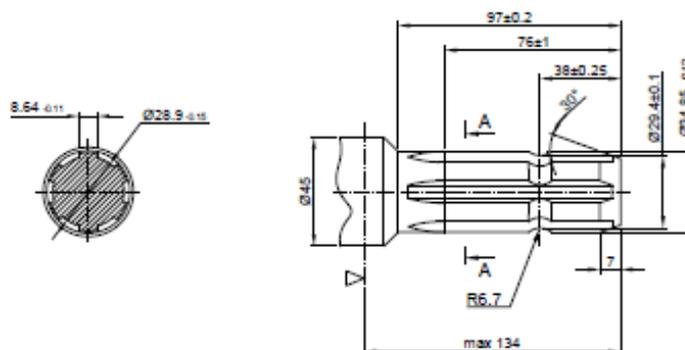
**CO** Ø1 1/2" straight, Parallel key 3/8"x3/8"x2 1/4" BS46  
Max. Torque 132,8 daNm



**SH** Ø1 1/2" splined 17T, DP12/24 ANSI B92.1-1976  
Max. Torque 132,8 daNm

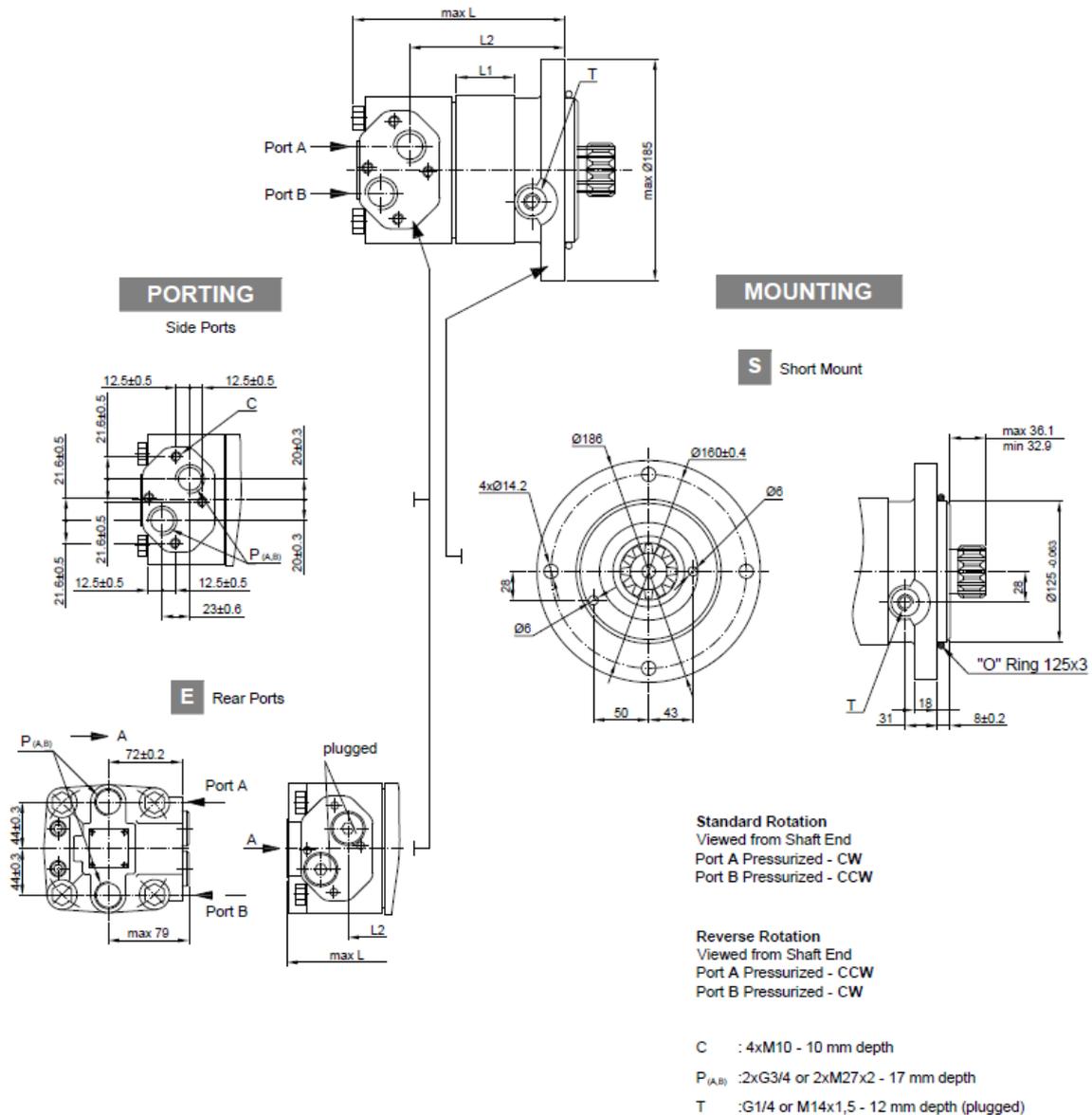


**SL** Ø34.85 p.t.o. DIN 9611 Form 1  
Max. Torque 77 daNm



▽ Motor Mounting Surface

## DIMENSIONS AND MOUNTING DATA

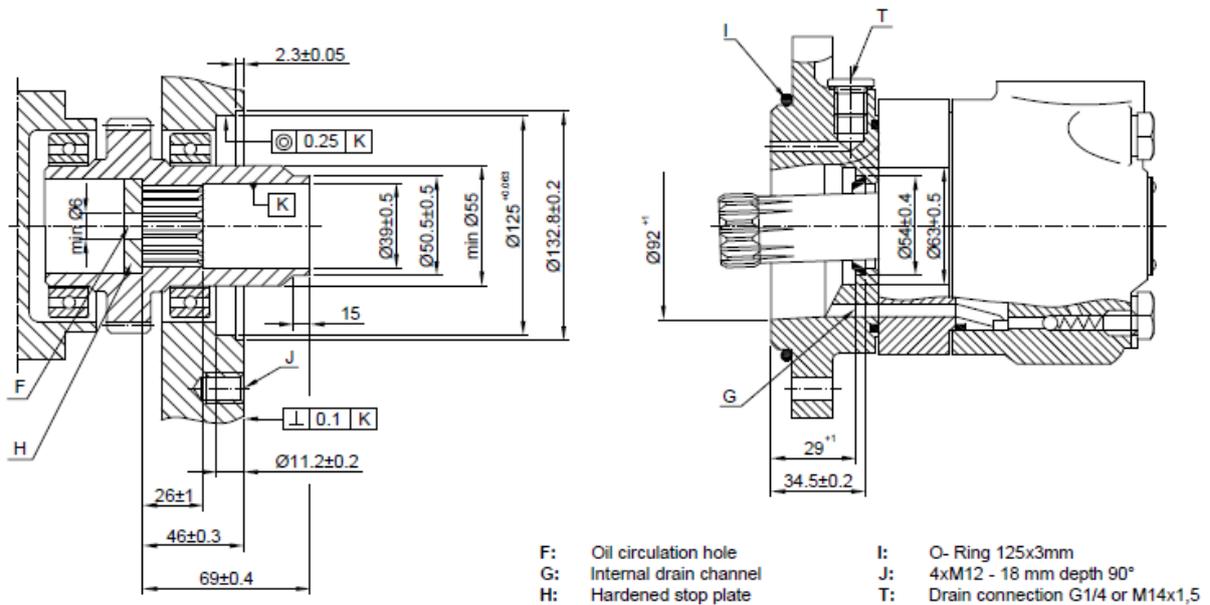


Type	L , mm	L2 , mm	Type	L , mm	L1 , mm
OTS 160	144	94	OTSE 160	154	12
OTS 200	149	99	OTSE 200	159	16,5
OTS 250	154	104	OTSE 250	164	22
OTS 315	161	111	OTSE 315	171	29
OTS 400	170	120	OTSE 400	180	38
OTS 500	189	139	OTSE 500	199	56,3
OTS 630	198,5	146,5	OTSE 630	208,5	72,5
OTS 725	216	167	OTSE 725	226	86,5

The width of the geroler is 3,5 mm greater than L1.

## DIMENSIONS OF THE ATTACHED COMPONENT

### OTS



## DRAIN CONNECTION

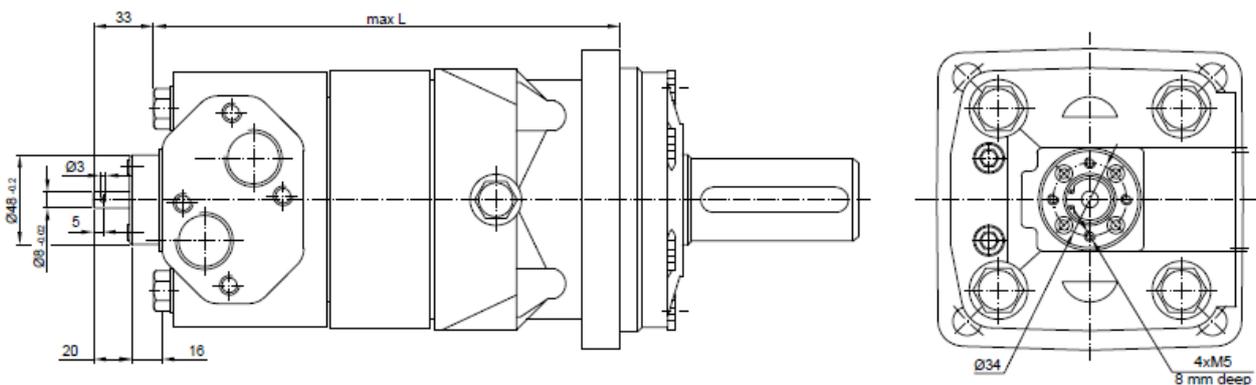
A drain line ought to be used when pressure in the return line can exceed the permissible pressure. It can be connected:

- For OTS at the drain port of the motor;

- For OTV at the drain connection of the attached component. The maximum pressure in the drain line is limited by the attached component and its shaft seal.

The drain line must be possible for oil to flow freely between motor and attached component and must be led to the tank. The maximum pressure in the drain line is limited by the attached component and its seal.

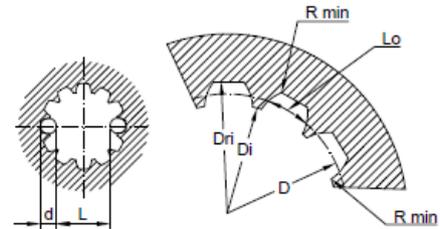
## MOTORS WITH TACHO CONNECTION - Option "T"



## INTERNAL SPLINE DATA FOR THE ATTACHED COMPONENT

Standard ANSI B92.1-1976, class 5  
[ $m=2.1166$ ; corrected  $x.m=+1,0$ ]

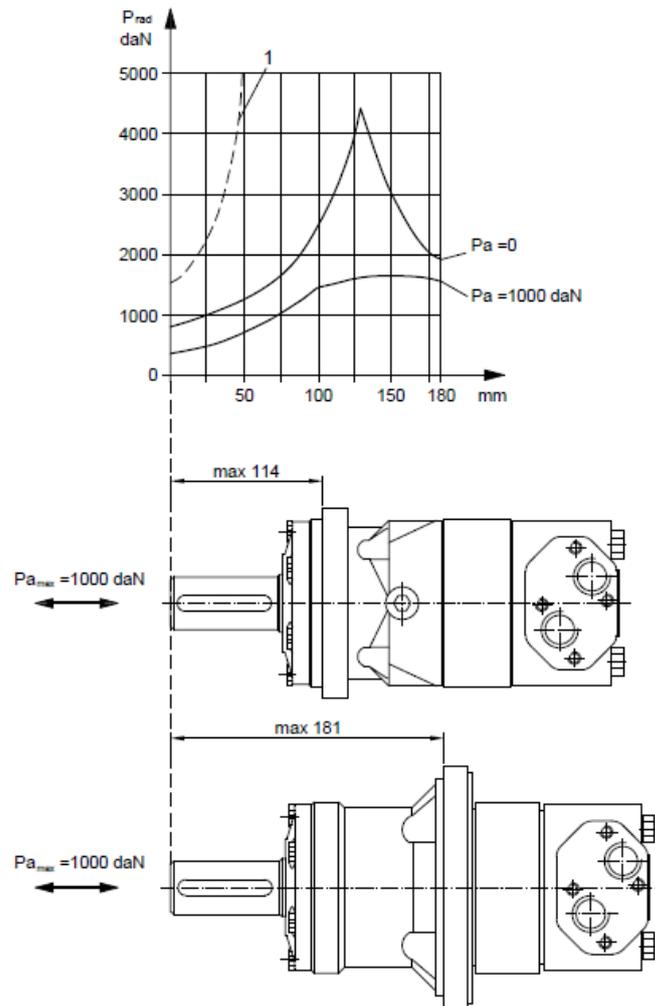
Fillet Root Side Fit		mm
Number of Teeth	z	16
Diametral Pitch	DP	12 / 24
Pressure Angle		30°
Pitch Dia.	D	33,8656
Major Dia.	Dri	38,4 <sup>+0,4</sup>
Minor Dia.	Di	32,15 <sup>+0,04</sup>
Space Width [Circular]	Lo	4,516±0,037
Fillet Radius	Rmin	0,5
Max. Measurement between Pin	L	26,9 <sup>+0,10</sup>
Pin Dia.	d	4,835±0,001



Hardening Specification:  
HRC 60±2  
HRC 52  
0,7±0,2 mm effective case depth  
Material 20 MoCr4 DIN 17210 or better

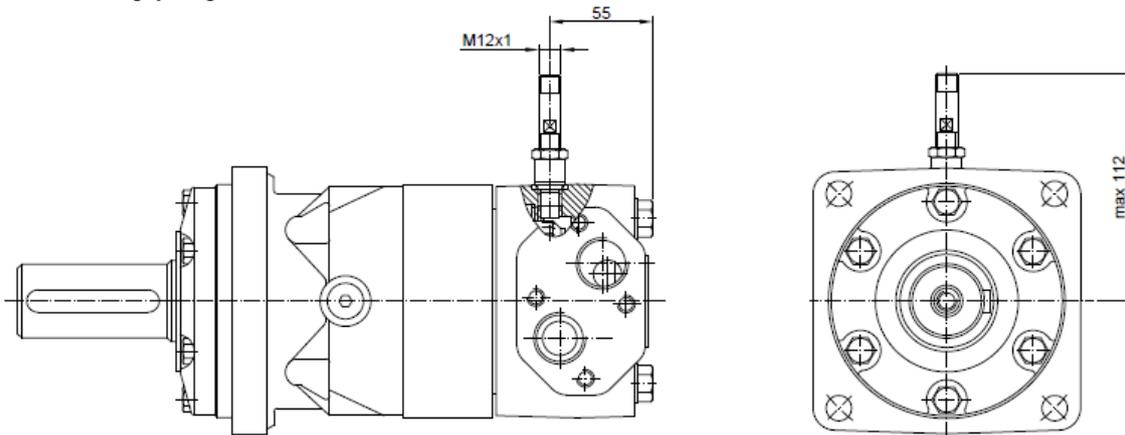
## PERMISSIBLE SHAFT LOADS

The output shaft runs in tapered bearings that permit high axial and radial forces. Curve " 1 " shows max. radial shaft load. Any shaft load exceeding the values quoted in the curve will seriously reduce motor life. The two other curves apply to a B10 bearing life of 3000 hours at 200 RPM.



## HYDRAULIC MOTORS WITH SPEED SENSOR TYPE OT...RS

Meta Hydraulic is introducing hydraulic motor with a new generation of speed sensor. The electric output signal is a standard voltage signal that can be used for regulating the speed of a motor. The speed is measured by a sensor in accordance with the Hall principle. Signal processing and amplification are performed in the sensor housing. Connection is provided in the housing by a Plug connector M12 Series.



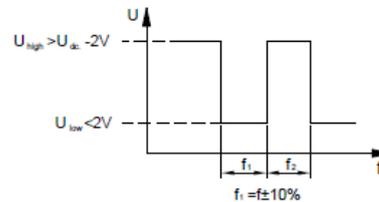
This performance is applicable for all motors of OT series. The main technical features correspond to the standard motors series OT.

## DIFFERENTIAL HALL SENSOR

### TECHNICAL DATA

Frequency range	3...20 000 Hz
Output	PNP
Power supply	10...36 VDC
Current input	20 mA (@24 VDC)
Current load	500 mA (@24 VDC;24°C)
Ambient Temperature	minus 40... plus 125°C
Protection	IP 67
Plug connector	M12-Series
Mounting principle	ISO 6149
Pulses per revolution	84

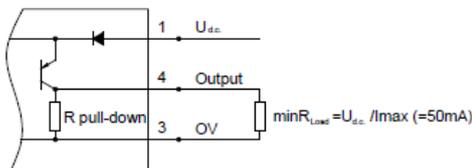
### OUTPUT SIGNAL



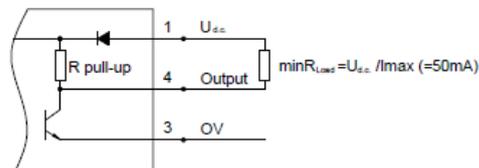
Load max.:  $I_{high} = I_{low} < 50\text{mA}$   
No load current, max: 20 mA

## WIRING DIAGRAM

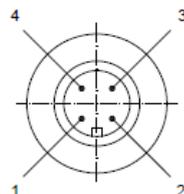
### PNP



### NPN



## STIK TYPE



Terminal No.	Connection
1	Ud.c.
2	No connection
3	0V
4	Output signal