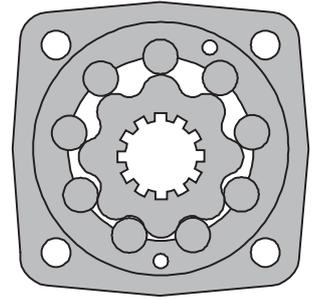


# HYDRAULIC MOTORS OT



## APPLICATION

- » Conveyors;
- » Metal working machines;
- » Machines for agriculture;
- » Road building machines;
- » Mining machinery;
- » Food industries;
- » Special vehicles;
- » Plastic and rubber machinery etc.



## CONTENTS

Specification data .....	OT-02
Function diagrams .....	OT-03+05
Dimensions and mounting .....	OT-06
Shaft extensions .....	OT-07
Dimensions and mounting- OTS, V .....	OT-08+09
Internal Spline data .....	OT-10
Permissible shaft loads .....	OT-10
Tacho connection .....	OT-13
Order code .....	OT-13

## OPTIONS

- » Model: Disc valve, roll-gerotor
- » Flange with wheel mount;
- » Short motor;
- » Tacho and speed sensor connection;
- » Side and rear ports;
- » Shafts: straight, splined and tapered;
- » Metric and BSPP ports;
- » Other special features.

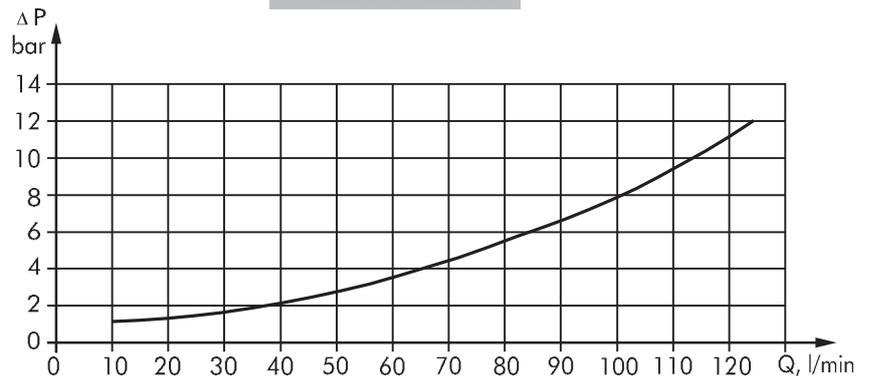
## GENERAL

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

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

Pressure Losses



## SPECIFICATION DATA

Type		OT 160	OT 200	OT 250	OT 315	OT 400	OT 500	OT 630	OT 725
<b>Displacement [cm<sup>3</sup>/rev.]</b>		161,1	201,4	251,8	326,3	410,9	523,6	612,3	725
<b>Max. Speed, [RPM]</b>	cont.	625	625	500	380	305	240	206	172
	Int.*	780	750	600	460	365	285	247	205
<b>Max. Torque [daNm]</b>	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
<b>Max. Output [kW]</b>	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
<b>Max. Pressure Drop [bar]</b>	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
<b>Max. Oil Flow [l/min]</b>	cont.	100	125	125	125	125	125	125	125
	Int.*	125	150	150	150	150	150	151,4	151,4
<b>Max. Inlet Pressure [bar]</b>	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
<b>Max. Return Pressure without Drain Line or Max. Pressure in Drain Line, [bar]</b>	cont. 0-100 RPM	75	75	75	75	75	75	75	75
	cont. 100-300 RPM	40	40	40	40	40	40	40	40
	cont. > 300 RPM	20	20	20	20	20	-	-	-
	Int.* 0-max. RPM	75	75	75	75	75	75	75	75
<b>Max. Return Pressure with Drain Line [bar]</b>	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
<b>Max. Starting Pressure with Unloaded Shaft, [bar]</b>		10	10	10	10	10	10	10	10
<b>Min. Starting Torque [daNm]</b>	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
<b>Min. Speed***, [RPM]</b>		10	9	8	7	6	5	5	5
<b>Weight, [kg]</b>	<b>OT</b>	20	20,5	21	22	23	24	25	26
	<b>OTW</b>	22	22,5	23	24	25	26	27	28
	<b>OTS</b>	15	15,5	16	17	18	19	20	21
	<b>OTV</b>	11	11,5	12	13	14	15	16	17

\* Intermittent operation: the permissible values may occur for max. 10% of every minute.

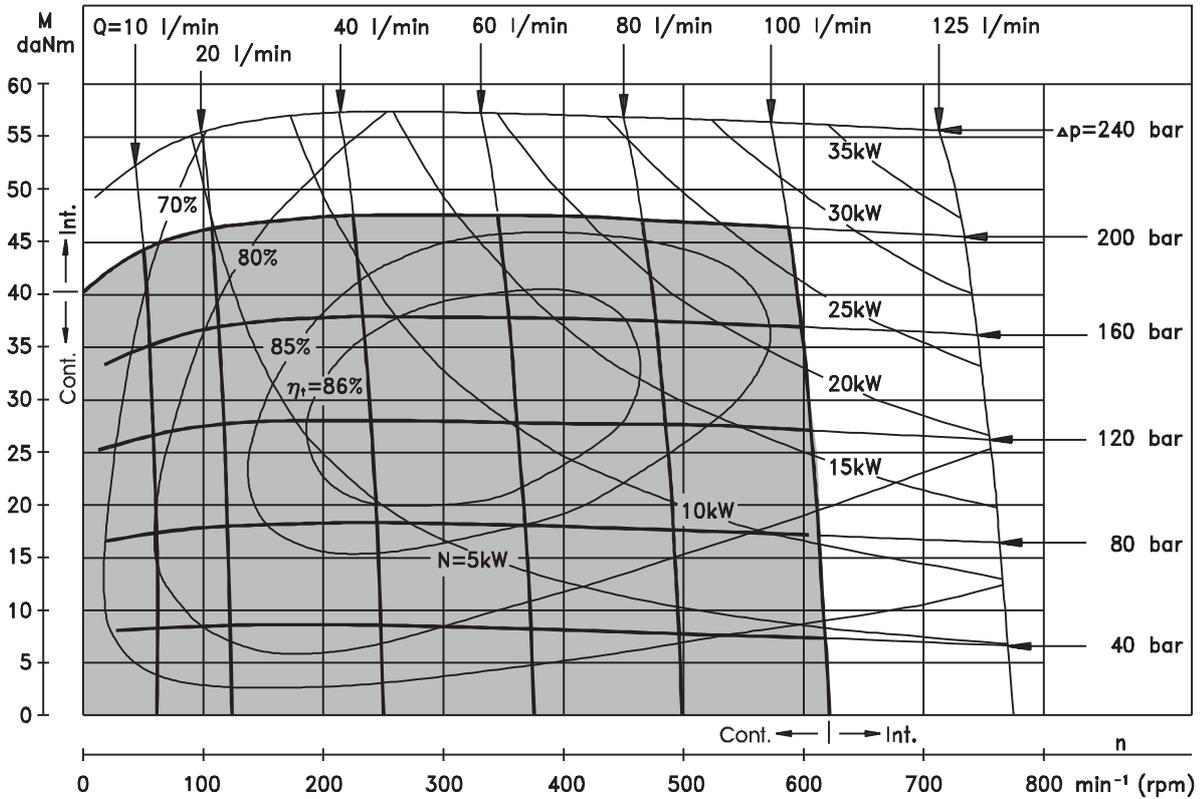
\*\* Peak load: the permissible values may occur for max. 1% of every minute.

\*\*\* For speeds of 5 RPM lower than given, consult factory or your regional manager.

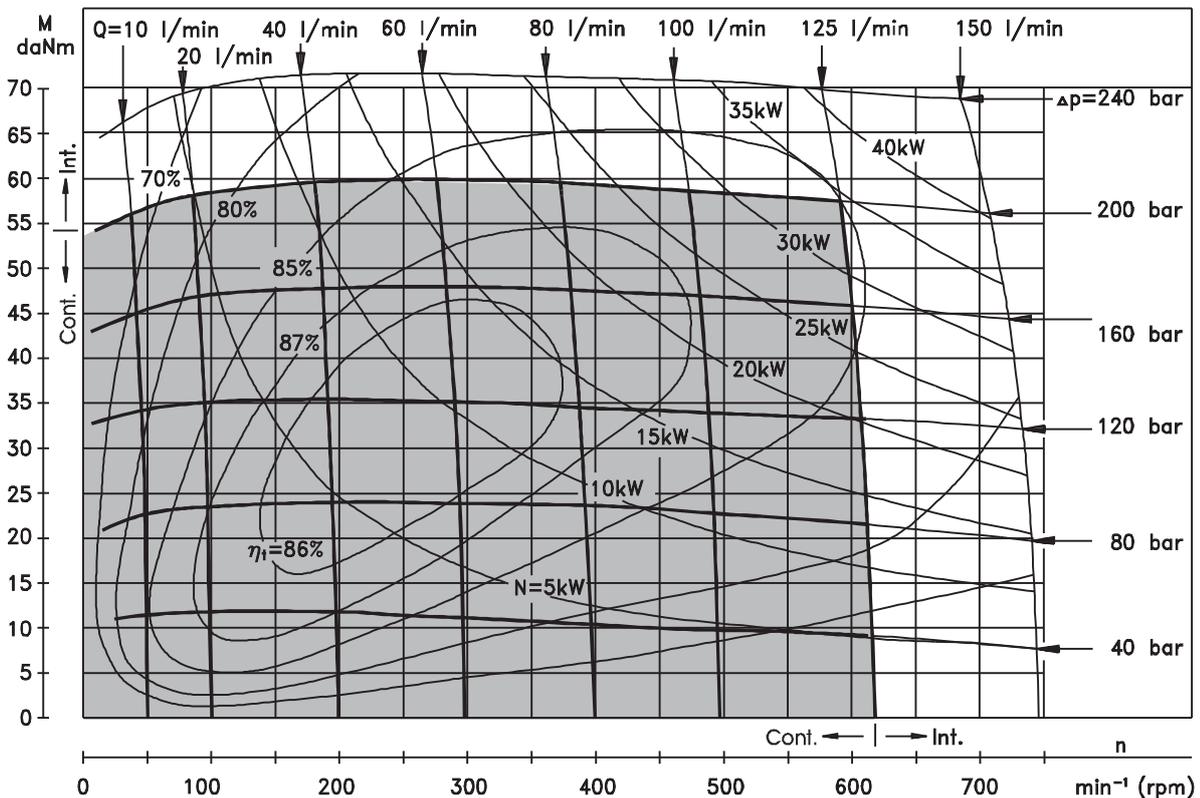
- 1) Intermittent speed and intermittent pressure must not occur simultaneously.
- 2) Recommended filtration is per ISO cleanliness code 20/16. A nominal filtration of 25 micron or better.
- 3) Recommend using a premium quality, anti-wear type mineral based hydraulic oil, HLP(DIN51524) or HM(ISO6743/4).  
If using synthetic fluids consult the factory for alternative seal materials.
- 4) Recommended minimum oil viscosity 13 mm<sup>2</sup>/s at 50°C.
- 5) Recommended maximum system operating temperature is 82°C.
- 6) To assure optimum motor life fill with fluid prior to loading and run at moderate load and speed for 10-15 minutes.

## FUNCTION DIAGRAMS

### OT 160



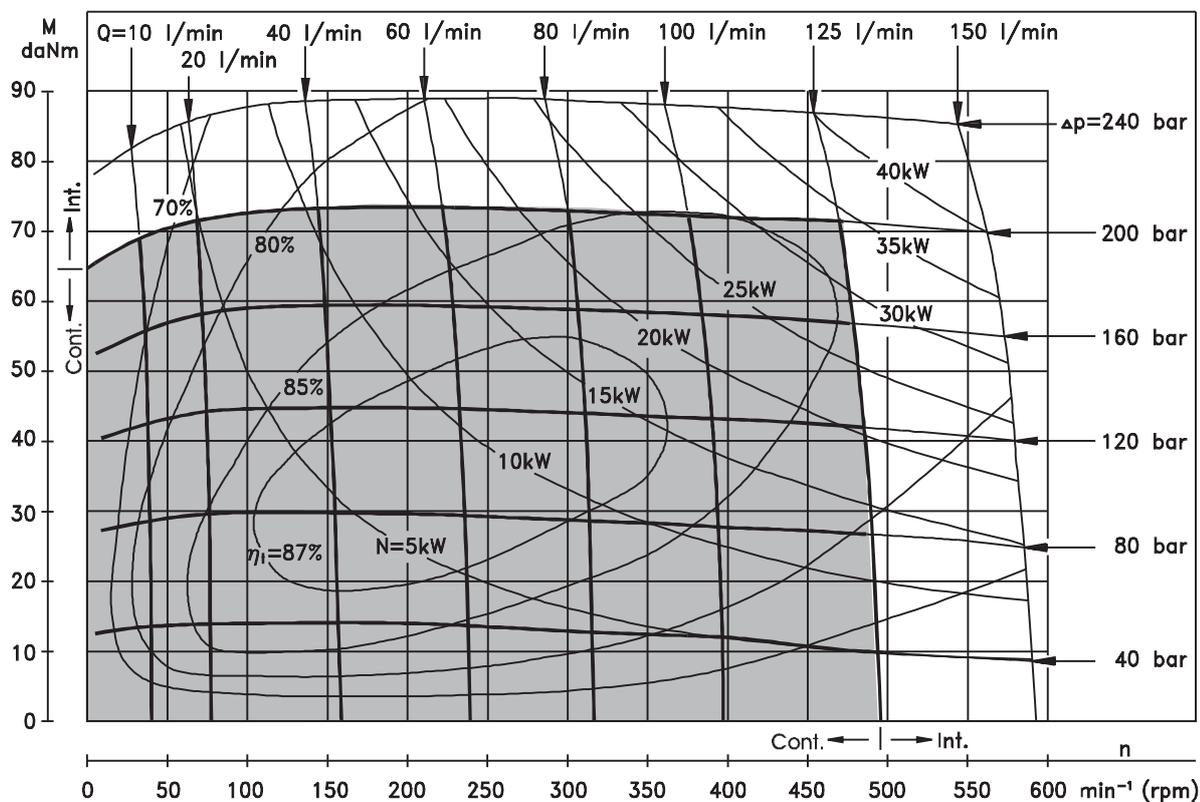
### OT 200



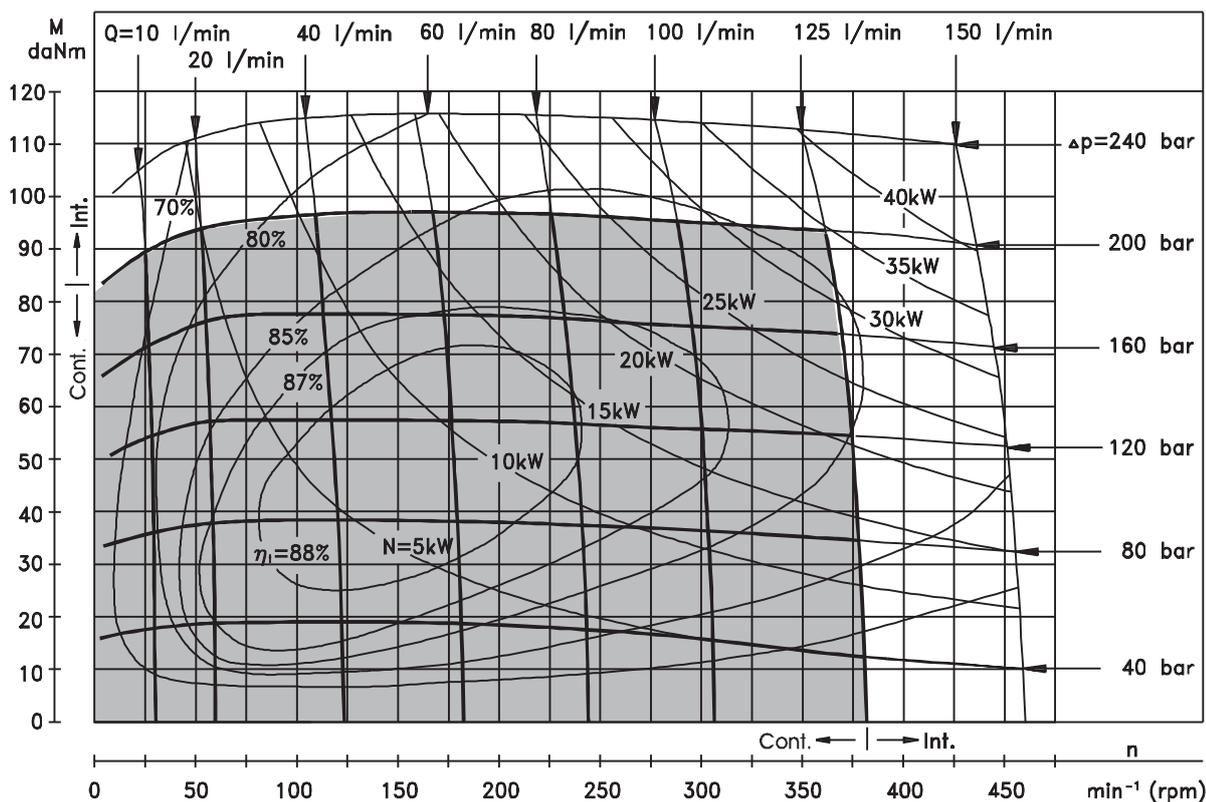
The function diagrams data was collected at back pressure  $5 \pm 10$  bar and oil with viscosity of  $32 \text{ mm}^2/\text{s}$  at  $50^\circ \text{C}$ .

## FUNCTION DIAGRAMS

### OT 250

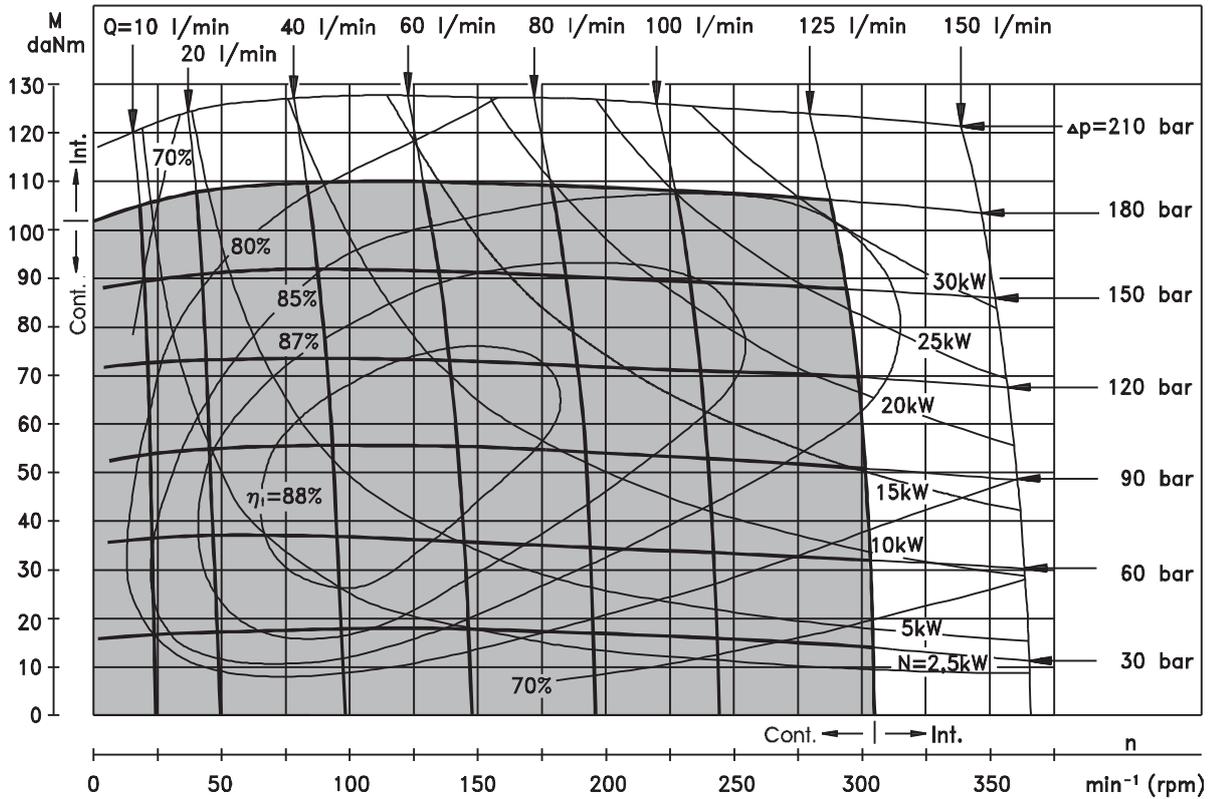


### OT 315

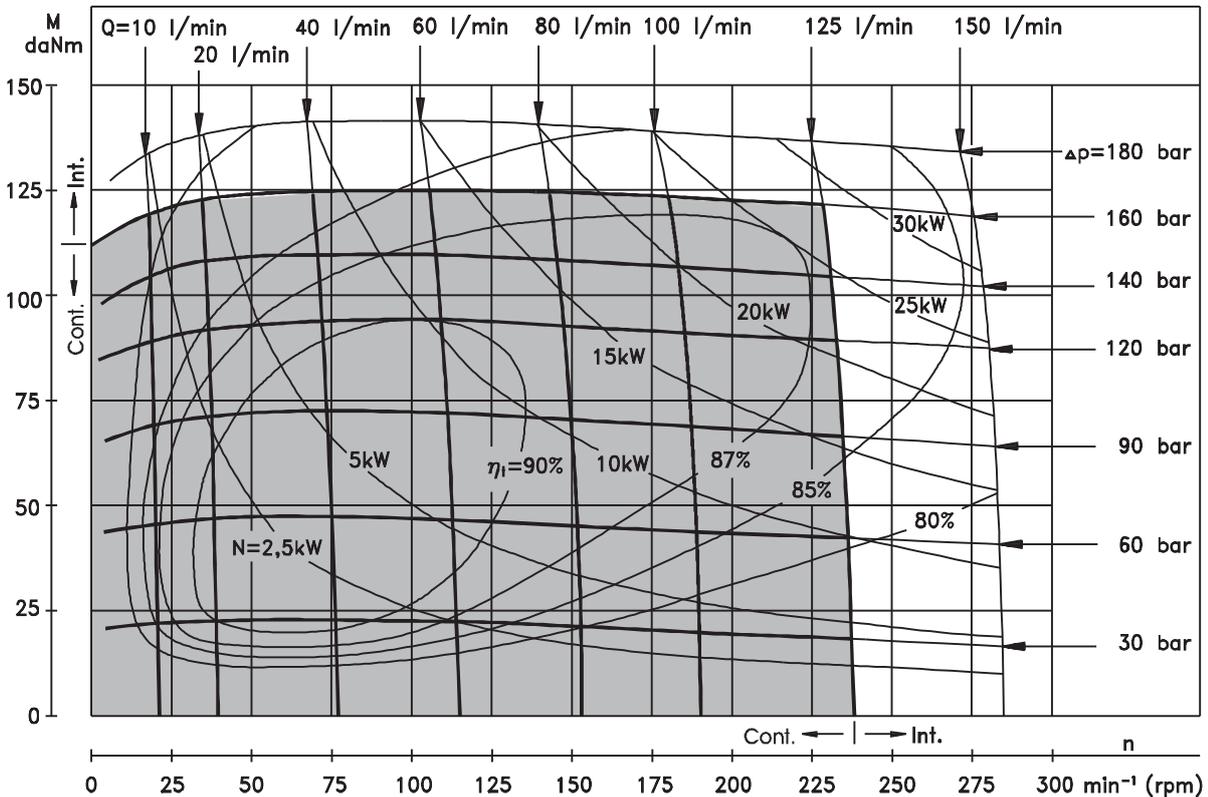


## FUNCTION DIAGRAMS

### OT 400

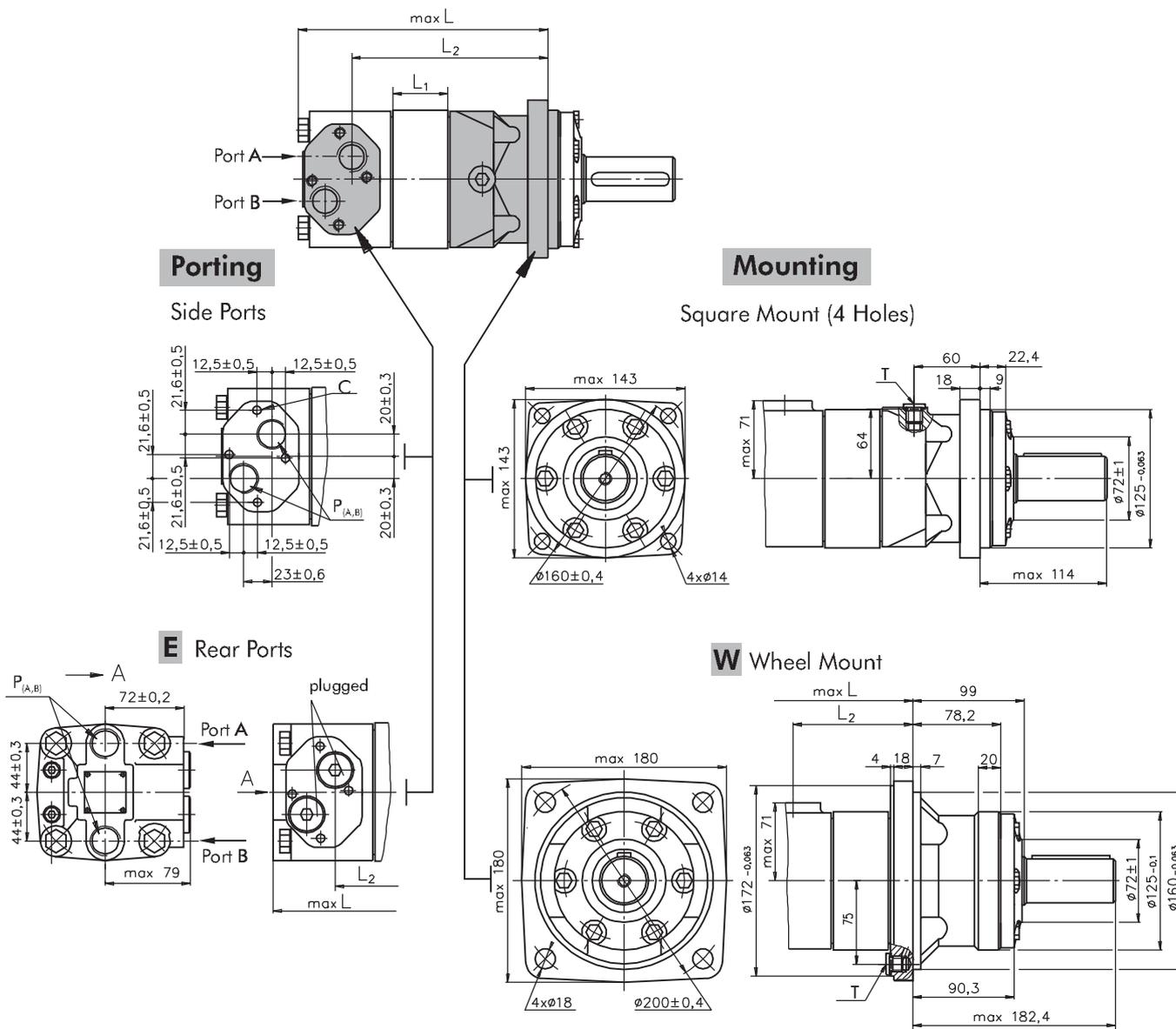


### OT 500



The function diagrams data was collected at back pressure  $5 \div 10$  bar and oil with viscosity of  $32 \text{ mm}^2/\text{s}$  at  $50^\circ \text{C}$ .

## 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

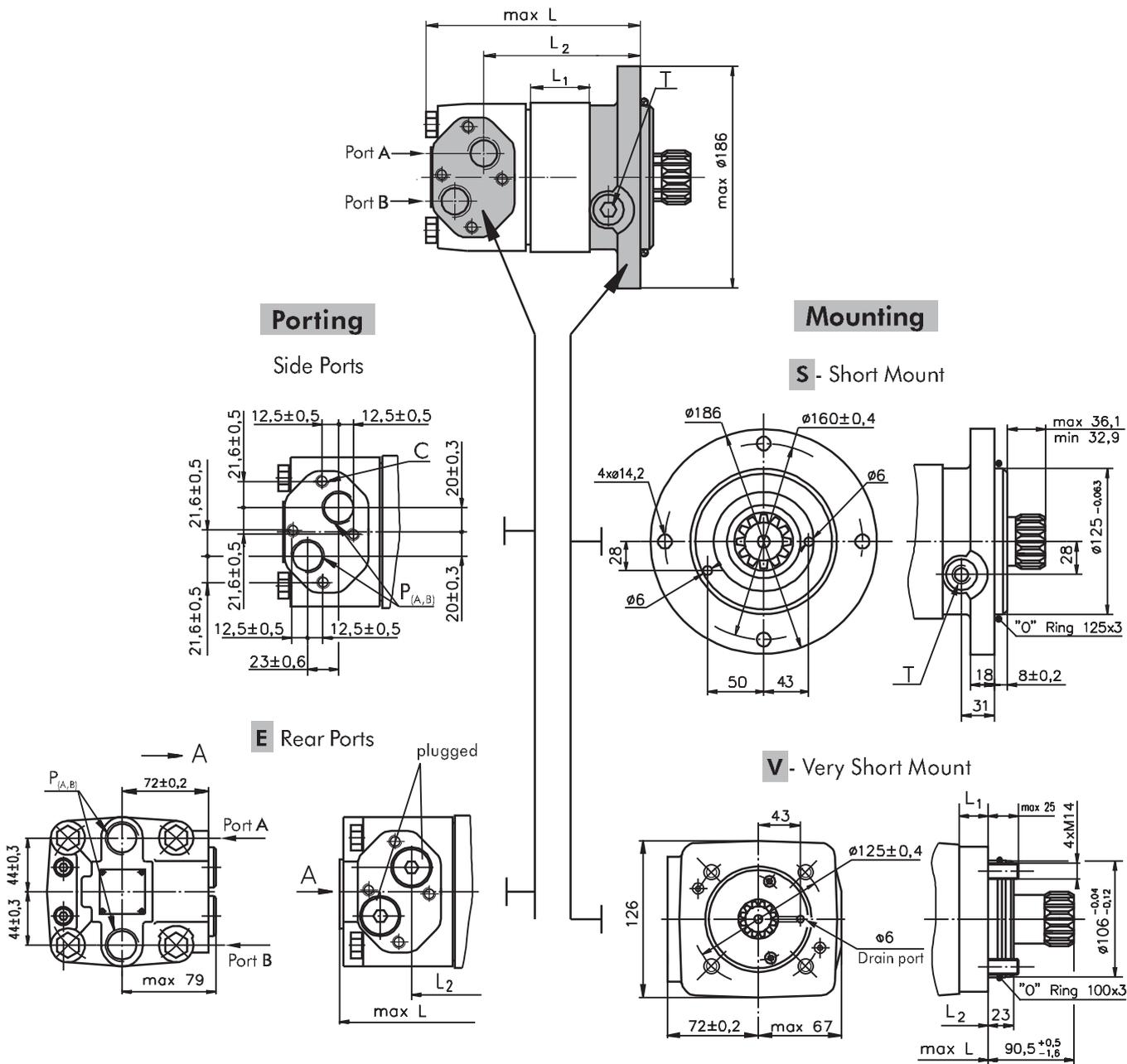
**C:** 4xM10-10 mm depth  
**P<sub>(A,B)</sub>:** 2xG3/4 or 2xM27x2-17 mm depth  
**T:** G 1/4 or M14x1,5 - 12 mm depth (plugged)

Type	L, mm	Type	L, mm	L <sub>2</sub> , mm	Type	L, mm	Type	L, mm	L <sub>2</sub> , mm	*L, mm
OT 160	190	OTE 160	200	140	OTW 160	123	OTWE 160	133	73	16,5
OT 200	195	OTE 200	205	145	OTW 200	128	OTWE 200	138	78	21,5
OT 250	201	OTE 250	211	151	OTW 250	134	OTWE 250	144	84	27,8
OT 315	211	OTE 315	221	161	OTW 315	144	OTWE 315	154	94	37,0
OT 400	221	OTE 400	231	171	OTW 400	154	OTWE 400	164	104	47,5
OT 500	235	OTE 500	245	185	OTW 500	168	OTWE 500	178	118	61,5
OT 630	242,5	OTE 630	252,5	192,5	OTW 630	175,5	OTWE 630	185,5	125,5	72,5
OT 725	260	OTE 725	270	210	OTW 725	193	OTWE 725	193	143	86,5

\* The width of the geroler is 3,5 mm greater than L<sub>1</sub>.



## DIMENSIONS AND MOUNTING DATA - OTS and OTV



**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**

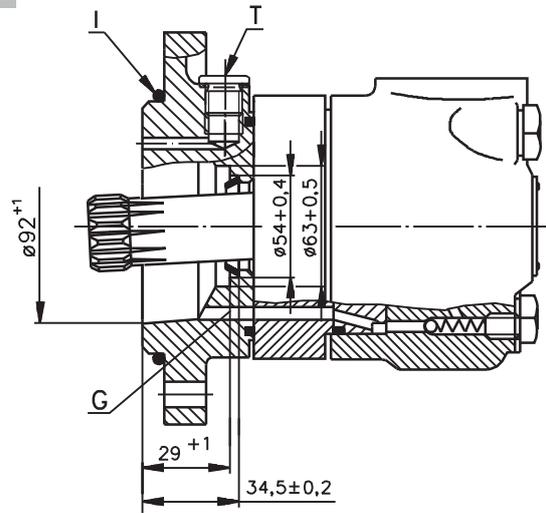
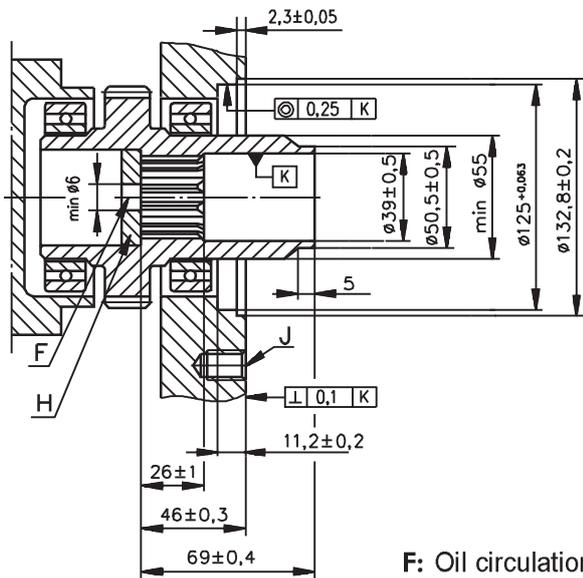
**C:** 4xM10-10 mm depth  
**P<sub>(A,B)</sub>:** 2xG3/4 or 2xM27x2-17 mm depth  
**T:** G 1/4 or M14x1,5 - 12 mm depth (plugged)

Type	L, mm	Type	L, mm	L <sub>2</sub> , mm	Type	L, mm	Type	L, mm	L <sub>2</sub> , mm	*L <sub>1</sub> , mm
OTS 160	146	OTSE 160	156	96	OTV 160	101	OTVE 160	111	51,5	16,5
OTS 200	151	OTSE 200	161	101	OTV 200	106	OTVE 200	116	56,5	21,5
OTS 250	157	OTSE 250	167	107	OTV 250	112	OTVE 250	122	62,8	27,8
OTS 315	166	OTSE 315	176	116	OTV 315	121	OTVE 315	131	72	37,0
OTS 400	177	OTSE 400	187	127	OTV 400	132	OTVE 400	142	82,5	47,5
OTS 500	191	OTSE 500	201	142	OTV 500	146	OTVE 500	156	96,5	61,5
OTS 630	198,5	OTSE 630	208,5	146,5	OTV 630	153,5	OTVE 630	163,5	104	72,5
OTS 725	216	OTSE 725	226	167	OTV 725	171	OTVE 725	181	121,5	86,5

\* The width of the gerolor is 3,5 mm greater than L<sub>1</sub>.

## DIMENSIONS OF THE ATTACHED COMPONENT

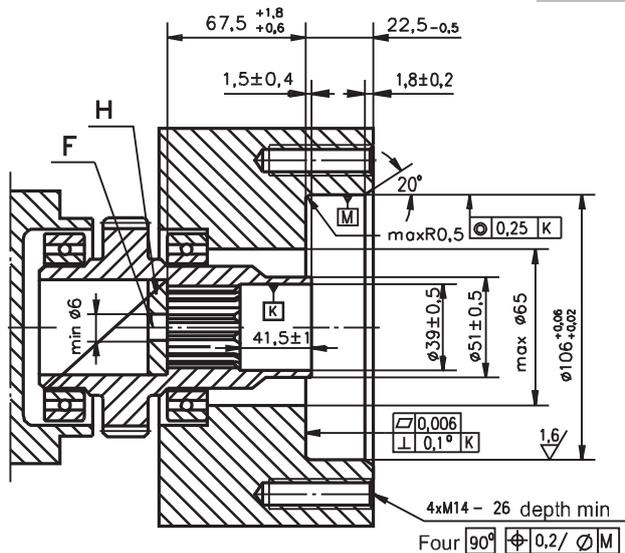
### OTS



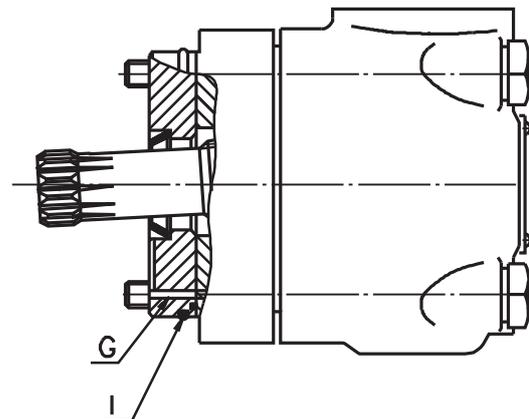
**F:** Oil circulation hole  
**G:** Internal drain channel  
**H:** Hardened stop plate

**I:** O-Ring 125x3mm  
**J:** 4xM12-18 mm depth, 90°  
**T:** Drain connection G1/4 or M14x1,5

### OTV



**F:** Oil circulation hole  
**G:** Internal drain channel



**H:** Hardened stop plate  
**I:** O-Ring 100x3mm

## DRAIN CONNECTION

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

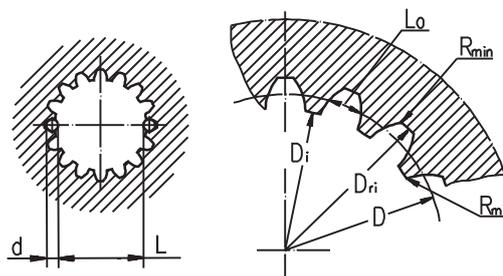
- For OTS at the drain port of the motor;
- For OTV at the drain connection of the attached component. The maximum pressure in the drain line is limited by the attached component and its shaft seal.

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.

## 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		$30^{\circ}$
Pitch Dia.	D	33,8656
Major Dia.	D <sub>ri</sub>	$38,4^{+0,4}$
Minor Dia.	D <sub>i</sub>	$32,15^{+0,04}$
Space Width [Circular]	L <sub>o</sub>	$4,516 \pm 0,037$
Fillet Radius	R <sub>min</sub>	0,5
Max. Measurement between Pin	L	$26,9^{+0,10}$
Pin Dia.	d	$4,835 \pm 0,001$



### Hardening Specification:

HRC 60±2

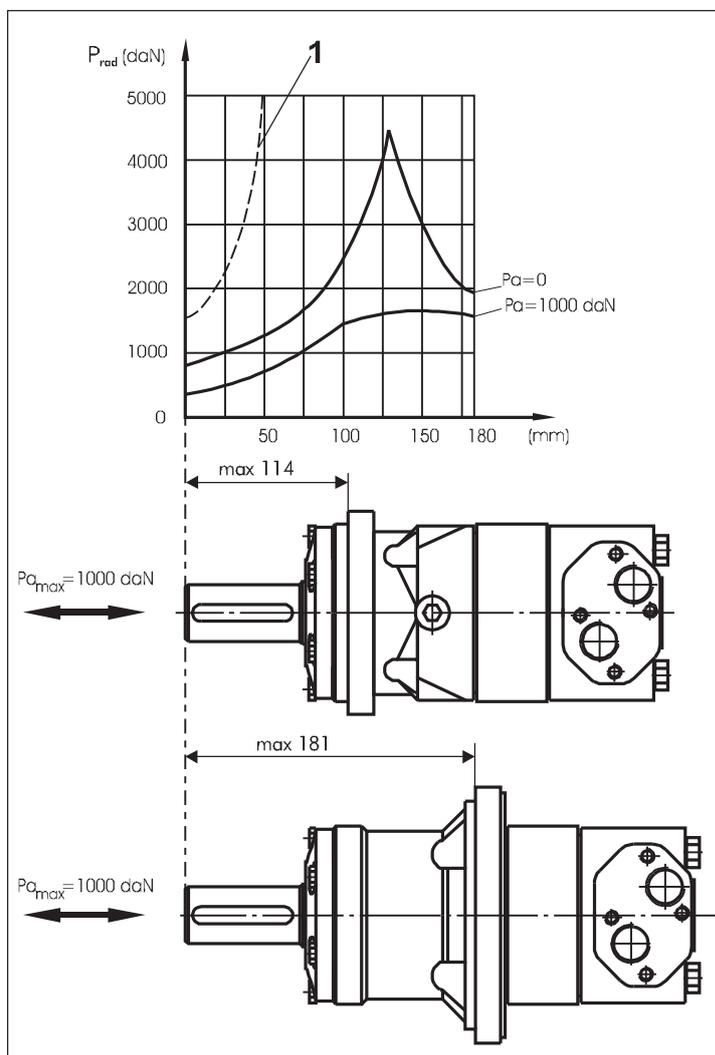
HRC 52

0,7±0,2 mm effective case depth

Material 20 MoCr4 DIN 17210 or better

## PERMISSIBLE SHAFT LOADS

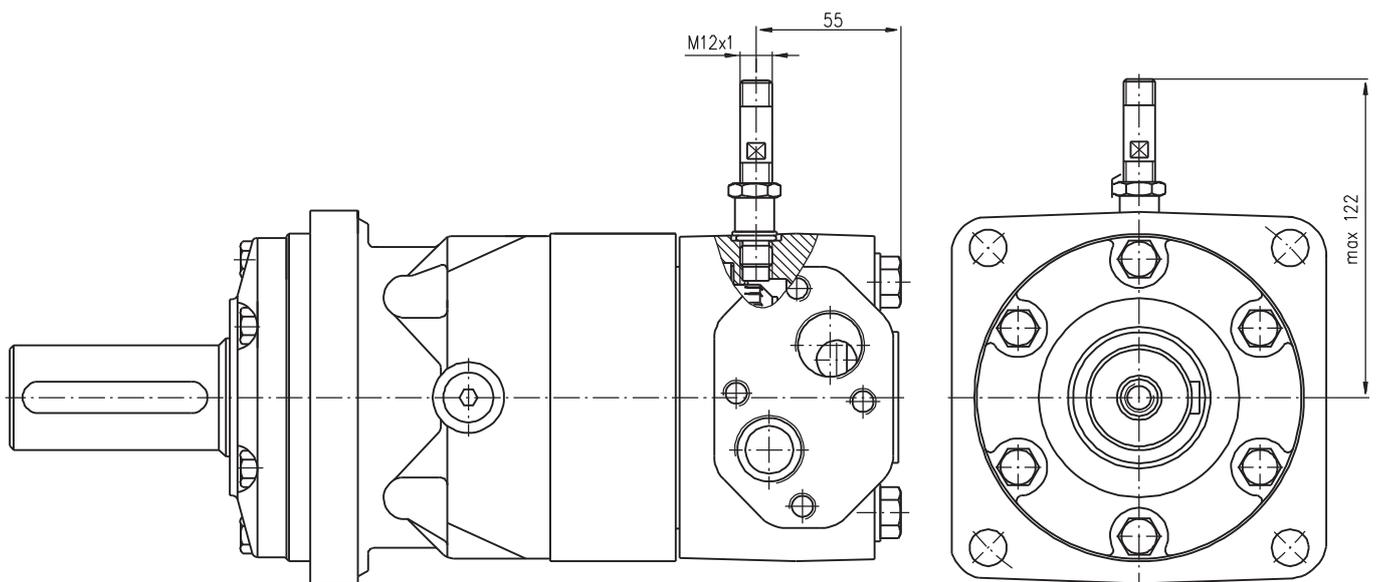
The output shaft runs in tapered bearings that permit high axial and radial forces. Curve "1" shows max. radial shaft load. Any shaft load exceeding the values quoted in the curve will seriously reduce motor life. The two other curves apply to a B10 bearing life of 3000 hours at 200 RPM.



## Hydraulic motors with speed sensor type OT...RS

Meta Hydraulic is introducing a 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. A connection is provided in the housing by a Plug connector M12 Series.



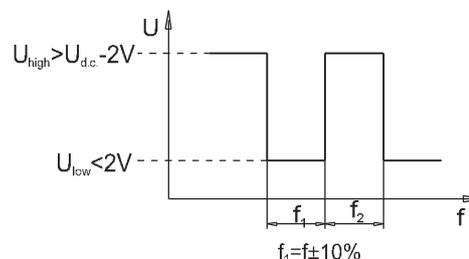
This performance is applicable for all motors of OT series. The main technical features correspond to the standard motors series OT.

## 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

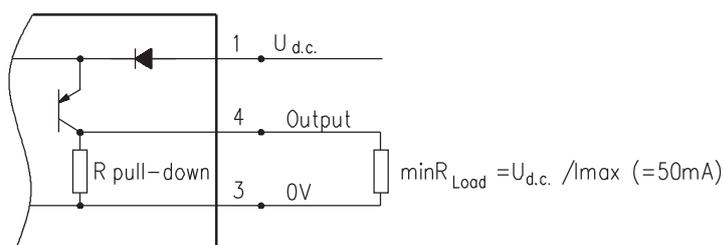


Load max.:  $I_{high} = I_{low} < 50\text{mA}$

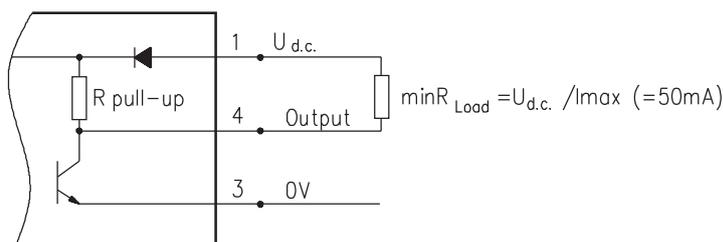
No load current, max: 20 mA

### Wiring diagram

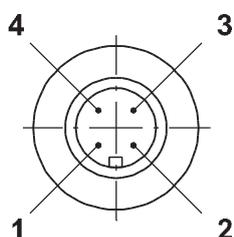
#### PNP



#### NPN

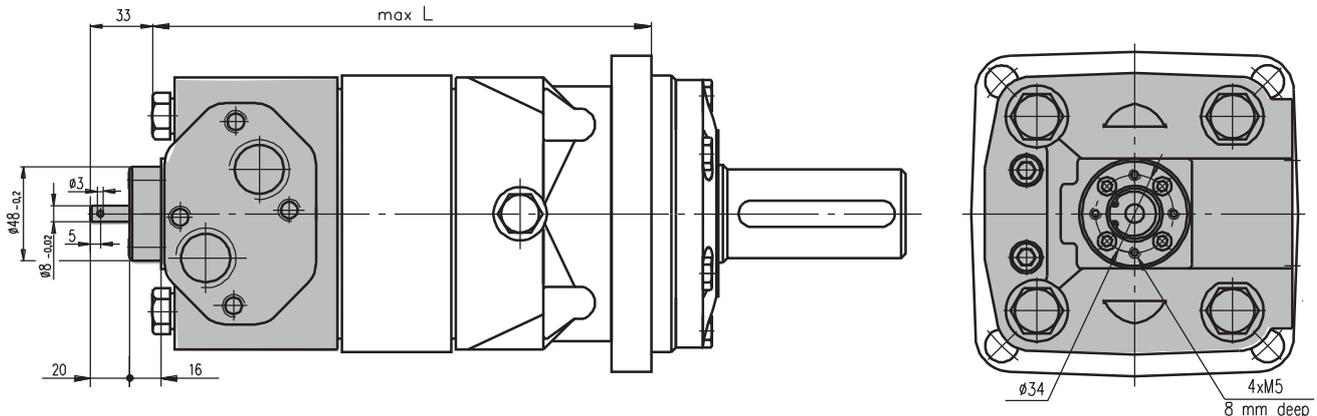


#### Stik type



Terminal No.	Connection
<b>1</b>	$U_{\text{d.c.}}$
<b>2</b>	No connection
<b>3</b>	0V
<b>4</b>	Output signal

## MOTORS WITH TACHO CONNECTION - Option "T"



### ORDER CODE

	1	2	3	4	5	6	7	8	9	10
<b>OT</b>										

#### Pos. 1 - Mounting Flange

omit - Square mount, four holes

**S** - Short mount

**V** - Veryshort mount

**W** - Wheel mount

#### Pos. 2 - Port type

omit - Side ports

**E** - Rear ports

#### Pos. 3 - Displacement code

**160** - 161,1[cm<sup>3</sup>/rev]

**200** - 201,4[cm<sup>3</sup>/rev]

**250** - 251,8[cm<sup>3</sup>/rev]

**315** - 326,3[cm<sup>3</sup>/rev]

**400** - 410,9[cm<sup>3</sup>/rev]

**500** - 523,6[cm<sup>3</sup>/rev]

**630** - 612,3[cm<sup>3</sup>/rev] (without Function diagram)

**725** - 725,0[cm<sup>3</sup>/rev] (without Function diagram)

#### Pos. 4 - Shaft Extensions\*

**C** -  $\varnothing 40$  straight, Parallel key A12x8x70 DIN6885

**CO** -  $\varnothing 1\frac{1}{2}$ " straight, Parallel key  $\frac{3}{8}$ "x $\frac{3}{8}$ "x $2\frac{1}{4}$ " BS46

**K** -  $\varnothing 45$  tapered 1:10, Parallel key B12x8x28 DIN6885

**SL** -  $\varnothing 34,85$  p.t.o. DIN 9611 Form 1

**SH** -  $\varnothing 1\frac{1}{2}$ " splined 17T ANSI B92.1-1976

#### Pos. 5 - Ports

omit - BSPP (ISO 228)

**M** - Metric (ISO 262)

#### Pos. 6 - Speed Monitoring

omit - none

**T** - with tacho connection (only for side ports)

**RS-P** - with speed sensor (PNP pull-down resistor)

**RS-N** - with speed sensor (NPN pull-up resistor)

#### Pos. 7 - Special Features

omit - none

**LL** - Low Leakage

**LSV** - Low Speed Valve

#### Pos. 8 - Rotation

omit - Standard Rotation

**R** - Reverse Rotation

#### Pos. 9 - Option (Paint)\*\*

omit - no Paint

**P** - Painted

**PC** - Corrosion Protected Paint

#### Pos. 10 - Design Series

omit - Factory specified

### NOTES:

\* The permissible output torque for shafts must be not exceeded!

\*\* Color at customer's request.

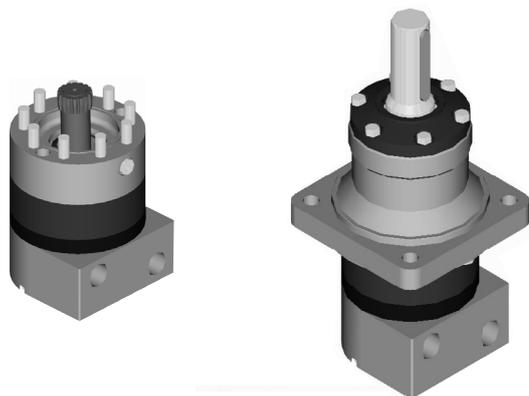
The hydraulic motors are mangano-phosphatized as standard.

# LOW SPEED HIGH TORQUE MOTORS OTM

## INTRODUCTION

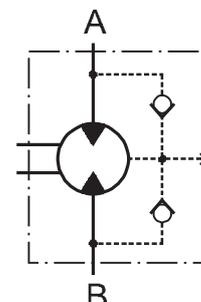
Meta Hydraulic is now able to offer the new hydraulic motor type OTM, which is based on the well-known OT motor.

This motor is developed for transmission systems with larger pressure drop and higher torque. It's design is remarkable with strengthened inner element and new geroller set.



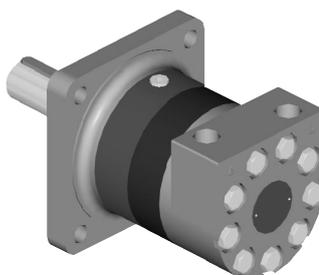
## APPLICATION

- » Skid Steer Loaders
- » Metal working machines
- » Trenchers
- » Augers
- » Machines for agriculture
- » Road building machines
- » Special vehicles
- » Mine machines
- » Woodworking and sawmill machinery
- » Conveyors etc.



## OPTIONS

- » Model- Disc valve, roll-gerotor
- » Flange with wheel mount
- » Short motor
- » Side ports
- » Shafts- straight, splined and tapered
- » BSPP ports;
- » Other special features.



## EXCELLENCE

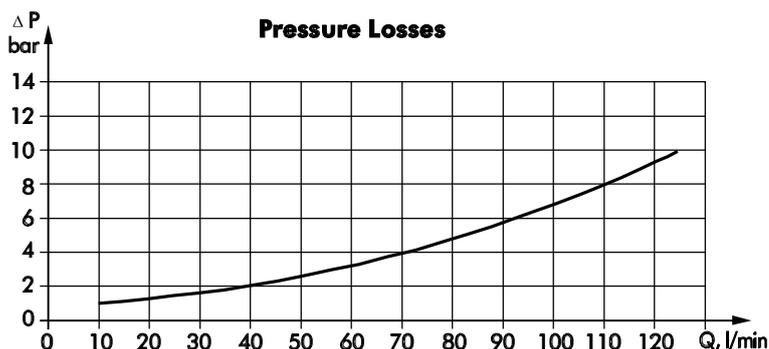
- » High torque and pressure drop
- » High inlet pressure
- » High starting torque
- » Improved efficiency at high pressure drop
- » Smooth operation at low speed

## GENERAL

Displacement,	[cm <sup>3</sup> /rev.]	201,4+523,6
Max. Speed,	[RPM]	625+240
Max. Torque,	[daNm]	72+172
Max. Output,	[kW]	29+37,5
Max. Pressure Drop,	[bar]	230+185
Max. Oil Flow,	[l/min]	125
Min. Speed,	[RPM]	5
Permissible Shaft Loads,	[daN]	P <sub>a</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)

### 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



## SPECIFICATION DATA

Type		OTM 200	OTM 250	OTM 315	OTM 400	OTM 470	OTM 500
Displacement [cm <sup>3</sup> /rev.]		201,4	251,8	326,3	410,9	475	523,6
Max. Speed, [RPM]	cont.	625	500	380	305	260	240
	Int.*	750	600	460	365	315	285
Max. Torque [daNm]	cont.	72	90	116	147	171	172
	Int.*	102	128	163	206	215	215
	peak**	115	144	186	235	240	240
Max. Output [kW]	cont.	41	41	41	41	41	37,5
	int.*	65	70	70	75	55	51
Max. Pressure Drop [bar]	cont.	250	250	250	250	250	230
	Int.*	350	350	350	350	315	280
	peak**	400	400	400	400	350	320
Max. Oil Flow [l/min]	cont.	125	125	125	125	125	125
	Int.*	150	150	150	150	150	150
Max. Inlet Pressure [bar]	cont.	270	270	270	270	270	270
	Int.*	370	370	370	370	370	370
	peak**	420	420	420	420	420	420
Max. Return Pressure without 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	20	-
	Int.* 0-max. RPM	75	75	75	75	75	75
Max. Return Pressure with Drain Line [bar]	cont.	270	270	270	270	270	270
	Int.*	370	370	370	370	370	370
	Peak**	420	420	420	420	420	420
Max. Starting Pressure with Unloaded Shaft, [bar]		6	6	6	6	6	6
Min. Starting Torque [daNm]		60	75	97	122	142	143
Min. Speed***, [RPM]		5	5	5	5	5	5
Weight, [kg]	MTM	26,9	27,3	28,1	29	29,7	30,2
	MTMW	27,4	27,8	28,6	29,5	30,2	30,7
	MTMV	15,7	16,1	16,9	17,8	18,5	19

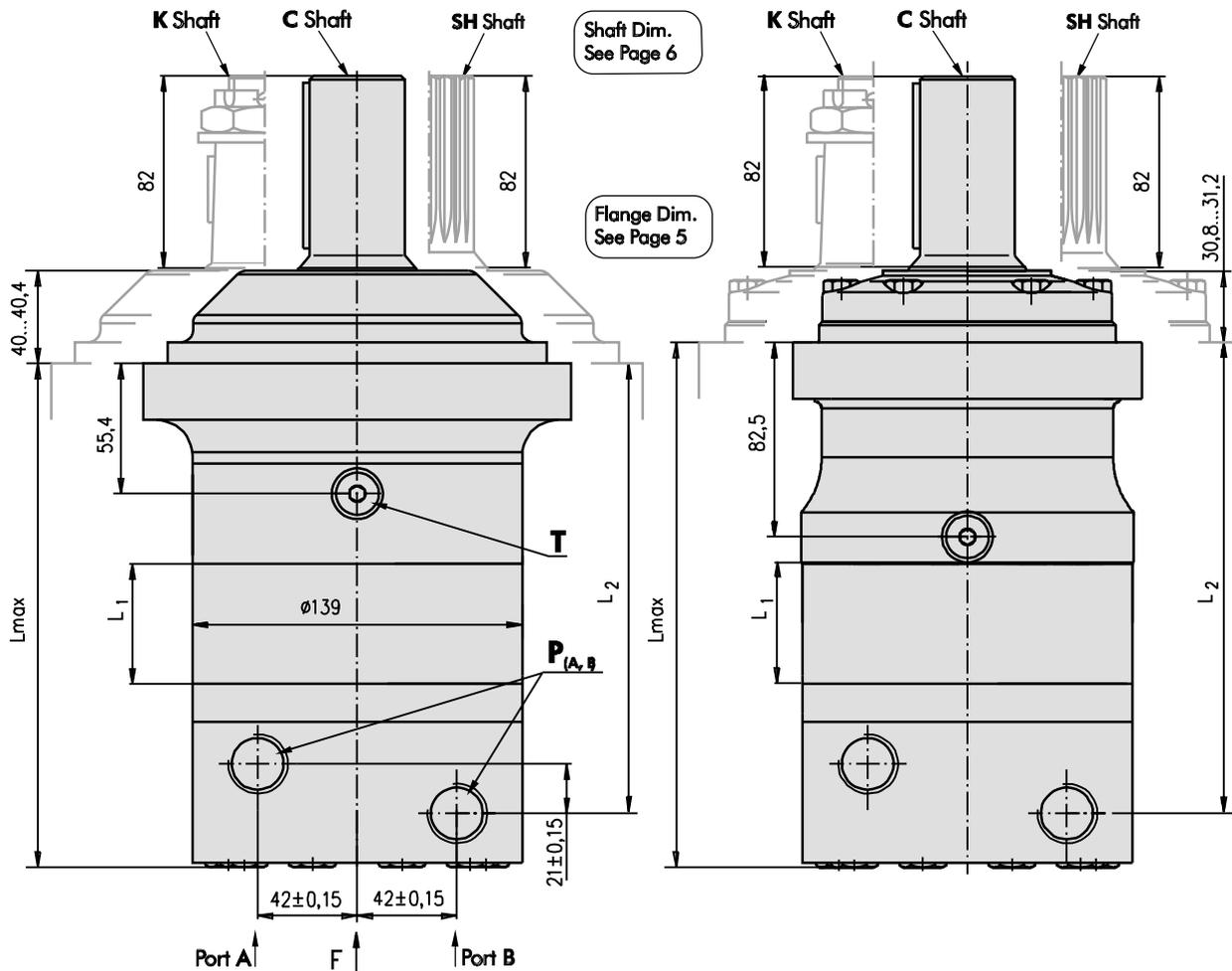
\* Intermittent operation: the permissible values may occur for max. 10% of every minute.

\*\* Peak load: the permissible values may occur for max. 1% of every minute.

\*\*\* For speeds of 5 RPM lower than given, consult factory or your regional manager.

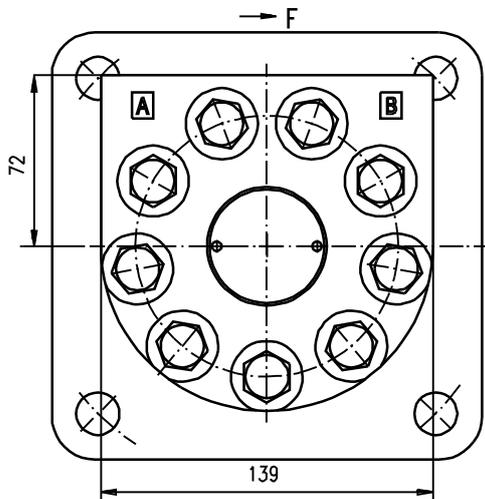
- 1) Intermittent speed and intermittent pressure must not occur simultaneously.
- 2) Recommended filtration is per ISO cleanliness code 20/16. A nominal filtration of 25 micron or better.
- 3) Recommend using a premium quality, anti-wear type mineral based hydraulic oil, HLP(DIN51524) or HM(ISO6743/4).  
If using synthetic fluids consult the factory for alternative seal materials.
- 4) Recommended minimum oil viscosity 13 mm<sup>2</sup>/s at 50°C.
- 5) Recommended maximum system operating temperature is 82°C.
- 6) To assure optimum motor life fill with fluid prior to loading and run at moderate load and speed for 10-15 minutes.

## DIMENSIONS - OTM AND OTMC



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

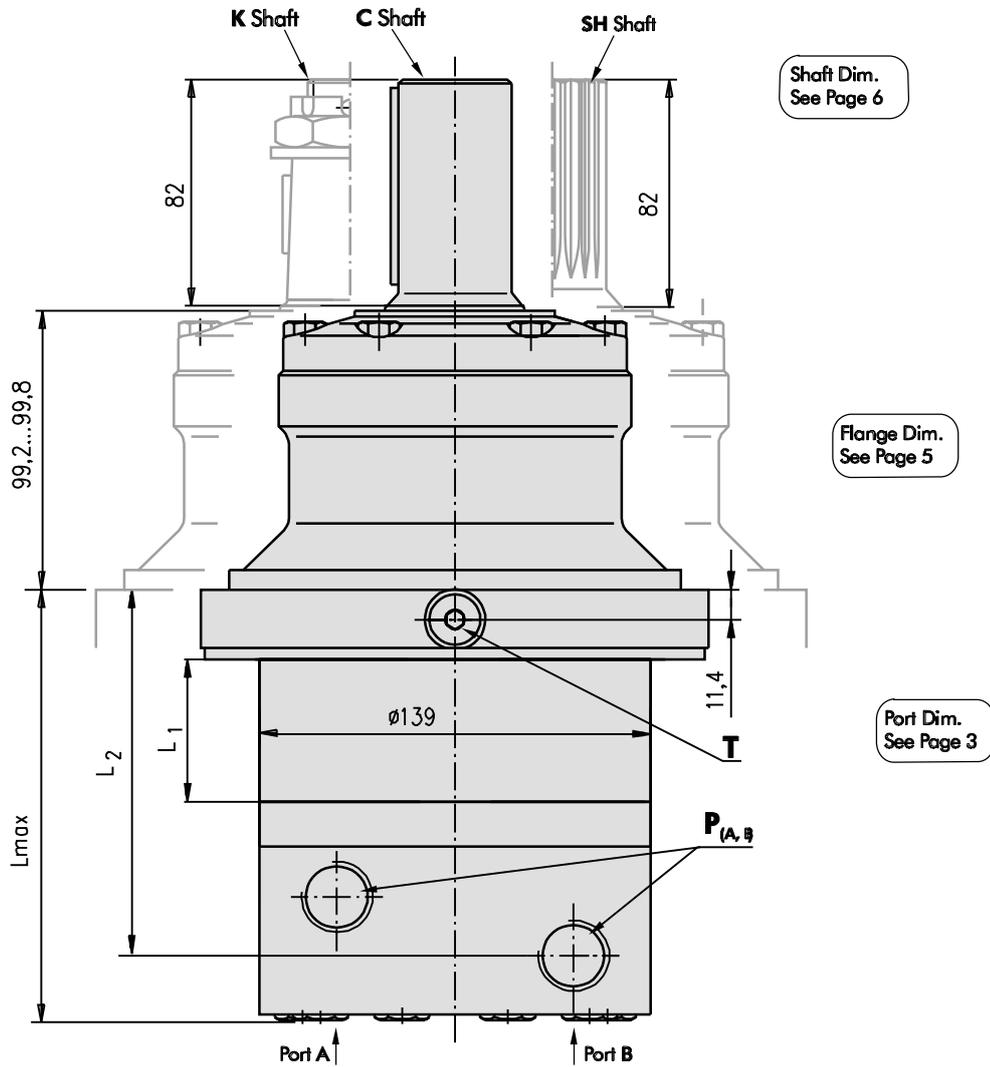
**Reverse Rotation**  
Viewed from Shaft End  
Port A Pressurized - CCW  
Port B Pressurized - CW



**P<sub>(A,B)</sub>**: 2xG3/4 - 17 mm depth  
**T** : G1/4 - 12 mm depth (plugged)

Type	L <sub>max</sub> ,mm	L <sub>2</sub> , mm	Type	L <sub>max</sub> ,mm	L <sub>2</sub> , mm	L <sub>1</sub> , mm
OTM 200	188	163,3	OTMC 200	197	174	25
OTM 250	194	169,6	OTMC 250	203	180,3	31,3
OTM 315	203	178,5	OTMC 315	212,2	189,5	40,5
OTM 400	214	189,3	OTMC 400	223	200	51
OTM 470	222	197,3	OTMC 470	231	208	59
OTM 500	228	203,3	OTMC 500	237	214	65

## DIMENSIONS - OTMW



**P<sub>(A, B)</sub>**: 2xG3/4 - 17 mm depth  
**T** : G1/4 - 12 mm depth (plugged)

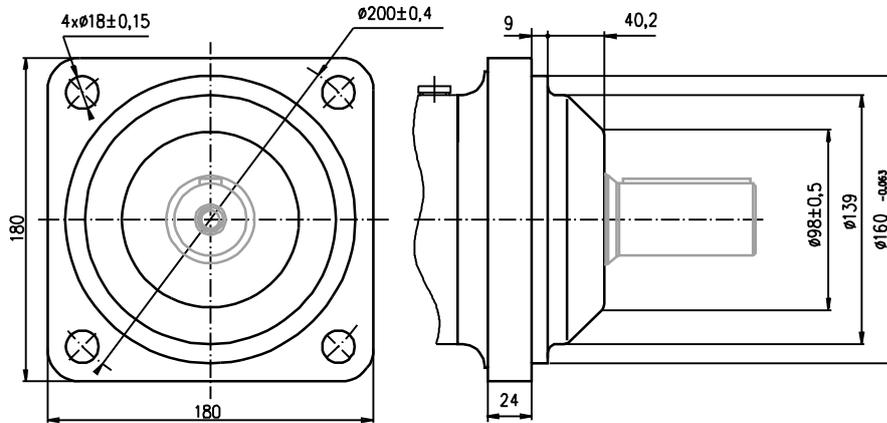
**Standard Rotation**  
 Viewed from Shaft End  
 Port A Pressurized - CW  
 Port B Pressurized - CCW

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

Type	L <sub>max</sub> , mm	L <sub>2</sub> , mm	L <sub>1</sub> , mm
OTMW 200	129	104,8	25
OTMW 250	135	112,1	31,3
OTMW 315	144	120,3	40,5
OTMW 400	155	130,8	51
OTMW 470	163	138,8	59
OTMW 500	169	144,8	65

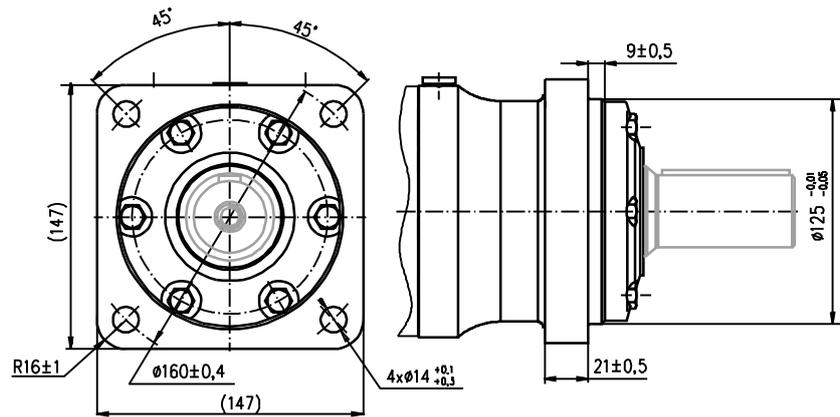
### DIMENSIONS OF MOUNTING FOR OTM

4-Bolt flange  
spigot diameter  $\varnothing 160$  mm - BC  $\varnothing 200$  mm



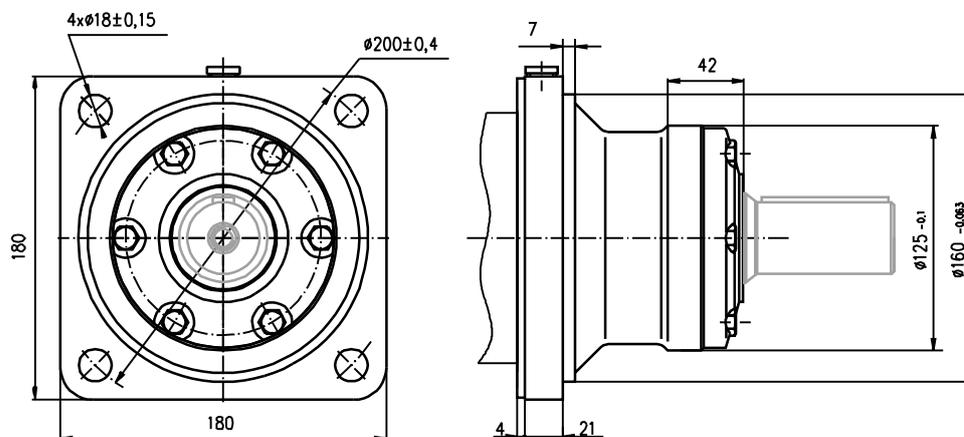
### DIMENSIONS OF MOUNTING FOR OTM C

spigot diameter  $\varnothing 125$  mm - BC  $\varnothing 160$  mm 4-Bolt flange



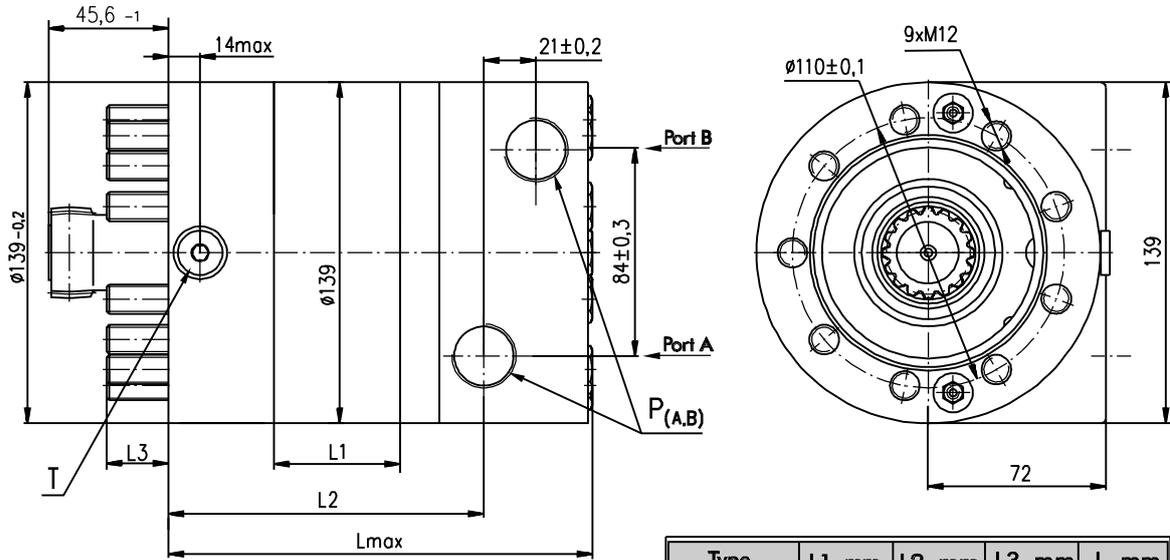
4-Bolt flange, Wheel Motor spigot diameter  $\varnothing 160$  mm - BC  $\varnothing 200$  mm

### DIMENSIONS OF MOUNTING FOR OTM W





### OUTLINE DIMENSIONS REFERENCE FOR OTMV

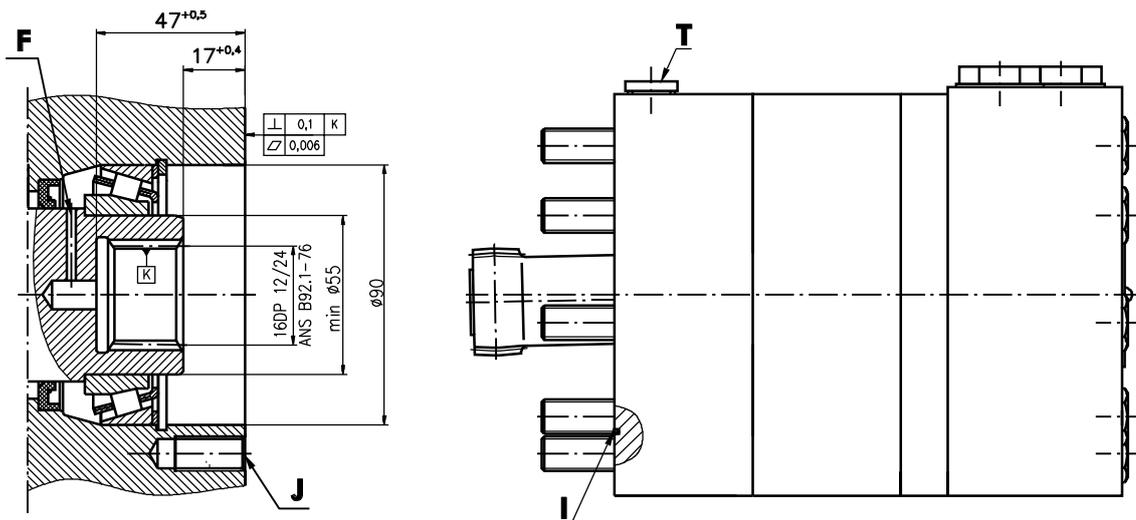


$P_{(A,B)}$ : 2xG3/4 - 17 mm depth  
**T** : G1/4 12 mm depth (plugged)

<b>Standard Rotation</b> Viewed from Shaft End Port A Pressurized - CW Port B Pressurized - CCW	<b>Reverse Rotation</b> Viewed from Shaft End Port A Pressurized - CCW Port B Pressurized - CW
--	---

Type	L1, mm	L2, mm	L3, mm	L, mm
OTMV 200	25	106,5	27,8	151
OTMV 350	31,3	112,8	26,5	157
OTMV 315	40,5	122	22,3	167
OTMV 400	51	132,5	21,8	177
OTMV 470	59	140,5	23,8	185
OTMV 500	65	146,5	27,8	191

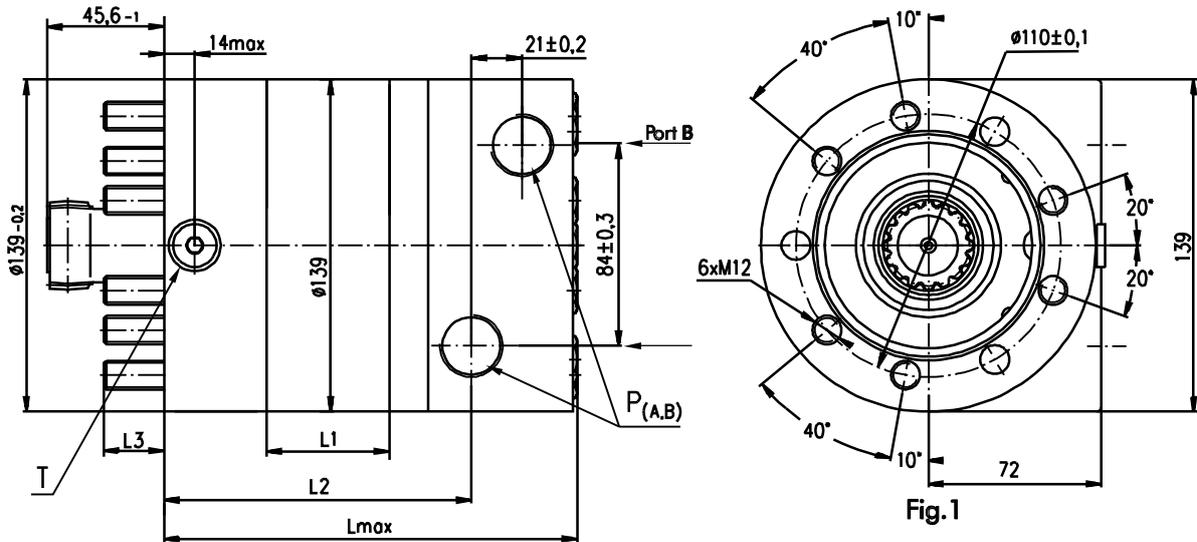
### DIMENSIONS OF THE ATTACHED COMPONENT FOR OTMV



**F**: Oil circulation hole  
**J**: 9xM12-30 mm depth, 40°, ø110±0,1

**I**: O- Ring 93x1,5mm  
**T**: Drain connection G1/4

## OUTLINE DIMENSIONS REFERENCE FOR OTM6V

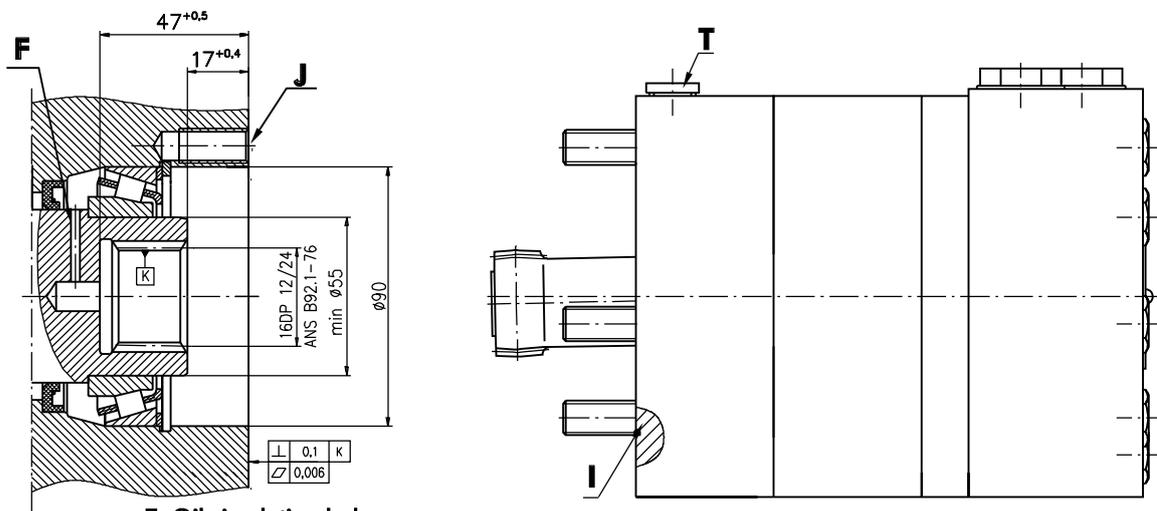


$P_{(A,B)}$ : 2xG3/4 - 17 mm depth  
**T** : G1/4 12 mm depth (plugged)

<b>Standard Rotation</b> Viewed from Shaft End Port A Pressurized - CW Port B Pressurized - CCW	<b>Reverse Rotation</b> Viewed from Shaft End Port A Pressurized - CCW Port B Pressurized - CW
--	---

Type	L1, mm	L2, mm	L3, mm	L, mm
OTM6V 200	25	106,5	27,8	151
OTM6V 350	31,3	112,8	26,5	157
OTM6V 315	40,5	122	22,3	167
OTM6V 400	51	132,5	21,8	177
OTM6V 470	59	140,5	23,8	185
OTM6V 500	65	146,5	27,8	191

## DIMENSIONS OF THE ATTACHED COMPONENT FOR OTM6V



**F**: Oil circulation hole  
**J**: 9xM12-30 mm depth, 40°,  $\phi 110 \pm 0,1$   
 or 6xM12-30 mm depth, situated in accordance with the bolts M12, shown on Fig.1,  $\phi 110 \pm 0,1$

**I**: O- Ring 93x1,5mm  
**T**: Drain connection G1/4

## DRAIN CONNECTION

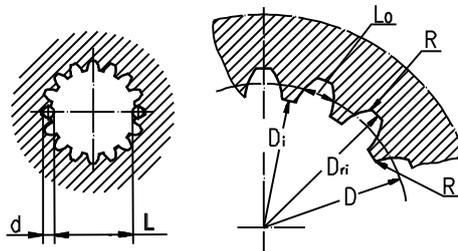
A drain line ought to be used when pressure in the return line can exceed the permissible pressure. It can be connected at the drain connection of the attached component. The maximum pressure in the drain line is limited by the attached component and its shaft seal.

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.

## INTERNAL SPLINE DATA FOR THE ATTACHED COMPONENT

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

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



**Hardening Specification:**  
on the surface HV=750±50  
0,7±0,2 mm under the surface HV=560  
Material 20 MoCr4 DIN 17210 or better

### ORDER CODE

	1	2	3	4	5	6	7	8
<b>OTM</b>								

#### Pos.1 - Mounting Flange

- omit - 4-Bolt flange, spigot dia. ø160, BC ø200
- C** - 4-Bolt flange, spigot dia. ø125, BC ø160
- W** - Wheel motor
- V** - Veryshort mount, 9xM12 mounting bolts
- 6V** - Veryshort mount, 6xM12 mounting bolts

#### Pos.2 - Displacement code

- 200** - 201,4[cm<sup>3</sup>/rev]
- 250** - 251,8[cm<sup>3</sup>/rev]
- 315** - 326,3[cm<sup>3</sup>/rev]
- 400** - 410,9[cm<sup>3</sup>/rev]
- 470** - 475,0[cm<sup>3</sup>/rev]
- 500** - 523,6[cm<sup>3</sup>/rev]

#### Pos.3 - Shaft Extensions\*

- C** - ø40 straight, Parallel key A12x8x70 DIN6885
- K** - ø45 tapered 1:10, Parallel key B12x8x28 DIN6885
- SH** - ø1½" splined 17T ANSI B92.1-1976

#### Pos. 4 - Ports

- omit - BSPP (ISO 228)

#### Pos. 5 - Special Features

- omit - none
- LL** - Low Leakage
- LSV** - Low Speed Valve

#### Pos. 6 - Rotation

- omit - Standard Rotation
- R** - Reverse Rotation

#### Pos. 7 - Option (Paint)\*\*

- omit - no Paint
- P** - Painted
- PC** - Corrosion Protected Paint

#### Pos. 8 - Design Series

- omit - Factory specified

#### NOTES:

\* The permissible output torque for shafts must be not exceeded!

\*\* Color at customer's request.

The hydraulic motors are mangano-phosphatized as standard.