

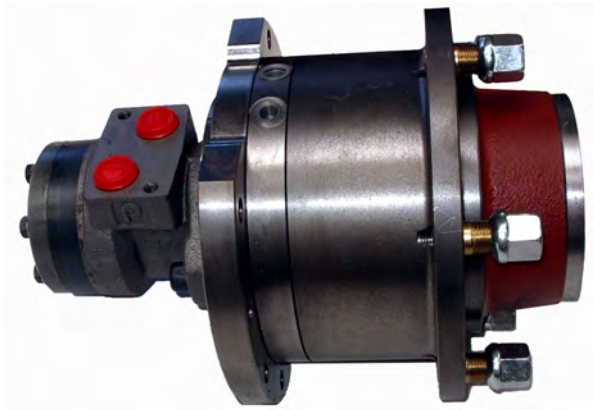


**HY-TRANS**

THE PRODUCTION LINE OF HANSA-TMP

**MOTOR GEARBOX WHEEL DRIVE UNIT**  
*MOTORIDUTTORE PER COMANDO RUOTA*

**SERIE S 050**



The S 050 wheel drive unit is a single reduction stage planetary gearbox with orbit or radial piston motor.  
 Output cont. torque are 1500 Nm.  
 Output peak torque are 2500 Nm.  
 Max. static radial load 50.000 N.  
 (depending to the load position, see diagram)  
 The units can be either with or without static brake (spring loaded - pressure released brake, min. 15 bar)  
 The wheel standard fixing holes are according the ISO norm 4107 (6 holes - 160 mm spigot diam.)  
 The lubrication of the drive unit in standard configuration is separate from the hydraulic circuit.  
 The gearbox has its own breather and inspection hole.  
 We recommend to use SAE 80W/90 oil with API GL5 properties. (250 cm<sup>3</sup> with brake, 500 cm<sup>3</sup> without brake)  
 In some application it is not uncommon to lubricate the gearbox with hydraulic oil coming from the motor drain.  
 Main applications of these units are on heavy duty mobile machines such as: agricultural machinery, earth-moving equipment, construction machines, off-road vehicles, airport equipment, track drives and others.

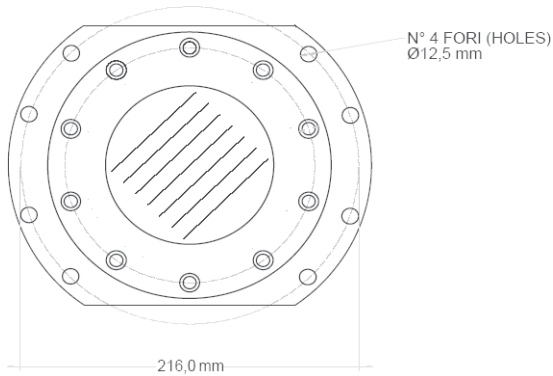
Il motoriduttore ruota S 050 è un riduttore planetario a singolo stadio con motore orbitale oppure a pistoncini radiali.  
 Coppia continua in uscita: 1500 Nm.  
 Coppia di picco in uscita: 2500 Nm.  
 Carico radiale max. 50.000 N.  
 (in funzione della posizione del carico, vedi diagramma)  
 I gruppi possono essere forniti con o senza freno statico negativo (azionamento a molla, sbloccaggio con pressione idraulica, min 15 bar)  
 Le forature di fissaggio ruota corrispondono alla norma ISO 4107 (centraggio diam.160 - 6 fori interasse 205 mm.)  
 La lubrificazione del riduttore è generalmente ottenuta ad olio separato ed indipendente dal circuito oleodinamico.  
 Il riduttore è dotato di foro di alimentazione e sfiato.  
 Si raccomanda l'utilizzo di olio SAE 80W/90 con proprietà API GL5 (250 cm<sup>3</sup> con freno, 500 cm<sup>3</sup> senza freno)  
 In talune applicazioni è possibile ottenere la lubrificazione del gruppo riduttore tramite l'olio del circuito idraulico con l'utilizzo del drenaggio del motore  
 Le principali applicazioni di queste unità sono:  
 macchine agricole, macchine movimento terra, macchine da cantiere, veicoli fuori strada, cingolati, attrezzature per aeroporti etc...

## SPECIFICATIONS

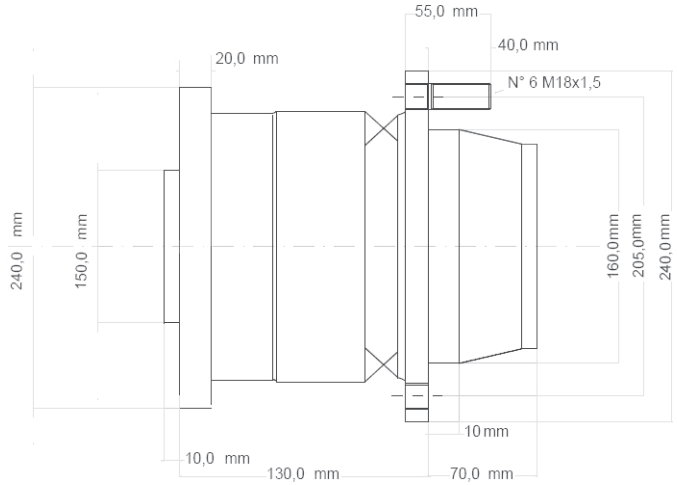
## DATI TECNICI

Model Modello	S 050 with brake - con freno		S 050 without brake - senza freno
Reduction Ratio Rapporto di riduzione			1: 3,75
Continuous torque rating Coppia continua	Nm	1500	
Peak torque rating Coppia di picco	Nm	2500	
Static Braking torque Coppia di frenatura statica	Nm	1500	
Max. Radial Load Carico radiale max.	N	50.000	
Motor flange Flangia per Motore	type tipo	ORB GM05	= Orbit Motor = Radial Piston Motor
Weight ( with motor ) Peso ( con motore )	kg	35	33
Gearbox oil capacity Quantità olio lubrificante	cm <sup>3</sup>	250	500
Max output speed Velocità massima in uscita	n/min.	120 - 140	
Max power Potenza massima	kW	33	
Brake pilot pressure Pressione di pilotaggio freno	bar	min. 15	max. 40

**INSTALLATION DRAWING  
(without Motor Flange)**

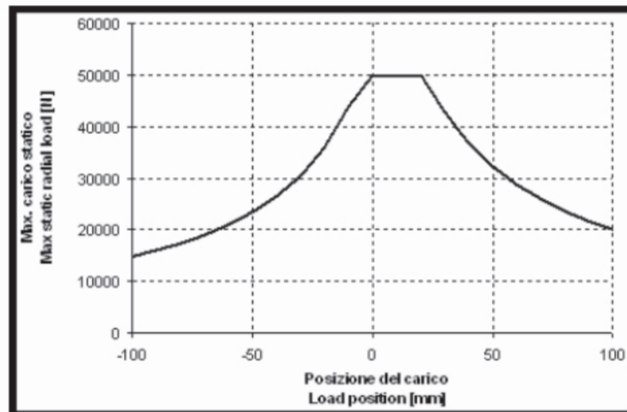


**DISEGNO DI INSTALLAZIONE  
(senza Flangia Motore)**



**RADIAL LOAD**

**CARICO RADIALE**



La posizione "0" coincide con la flangia ruota  
Position "0" is coincident with wheel mounting

**ORDER CODE**

**CODICE DI ORDINAZIONE**

**S050 / B - - /GM05 /**  
**ORB /**

**Wheel drive unit**  
*Riduttore tipo*

**Braking system**  
*Freno tipo*

**Motor mounting flange**  
*Flangia motore*

**GM05**  
**ORB**

00 without brake / senza freno  
01 static brake / con Freno statico negativo

## HY-TRANS

THE PRODUCTION LINE OF HANSA-TMP

HT 58 / A / 951 / 0408 / IE / V

## RADIAL PISTON MOTOR WHEEL DRIVE UNITS *RIDUTTORI RUOTA CON MOTORE A PISTONI RADIALI*

# SERIE S 070



The S 070 wheel drive units are a single reduction stage planetary gearbox suitable for radial pistons motor.  
 Output cont. torque are 2500 Nm.  
 Output peak torque are 3500 Nm.  
 Max. static radial load 50.000 N.  
 (depending to the load position, see diagram)  
 The units can be either without brake or with static brake (spring loaded - pressure released brake, min. 12 bar)  
 The wheel standard fixing holes are according the ISO norm 4107 (6 holes - 160 mm spigot diam.)  
 The lubrication of the drive unit in standard configuration is separate from the hydraulic circuit.  
 The gearbox has its own breather and inspection hole.  
 We recommend to use SAE 80W/90 oil with API GL5 properties (250 cm<sup>3</sup> with brake, 500 cm<sup>3</sup> without brake).  
 In some application it is not uncommon to lubricate the gearbox with hydraulic oil coming from the motor drain.  
 Main applications of these units are on heavy duty mobile machines such as: agricultural machinery, earth-moving equipment, construction machines, off-road vehicles, airport equipment, track drives and others.

Il motoriduttore ruota S 070 è un riduttore planetario a singolo stadio predisposto per l'installazione di motori a pistoni radiali.  
 Coppia continua in uscita: 2500 Nm.  
 Coppia di picco in uscita: 3500 Nm.  
 Carico radiale max. 50.000 N.  
 (in funzione della posizione del carico, vedi diagramma).  
 I gruppi possono essere forniti con o senza freno statico negativo (azionamento a molla, sbloccaggio con pressione idraulica, min 12 bar).  
 Le forature di fissaggio ruota corrispondono alla norma ISO 4107 (centraggio diam. 160 - 6 fori interasse 205 mm).  
 La lubrificazione del riduttore è generalmente ottenuta ad olio separato ed indipendente dal circuito oleodinamico.  
 Il riduttore è dotato di foro di alimentazione e sfiato.  
 Si raccomanda l'utilizzo di olio SAE 80W/90 con proprietà API GL5 (250 cm<sup>3</sup> con freno, 500 cm<sup>3</sup> senza freno)  
 In talune applicazioni è possibile ottenere la lubrificazione del gruppo riduttore tramite l'olio del circuito idraulico con l'utilizzo del drenaggio del motore  
 Le principali applicazioni di queste unità sono: macchine agricole, macchine movimento terra, macchine da cantiere, veicoli fuori strada, cingolati, attrezzature per aeroporti etc.

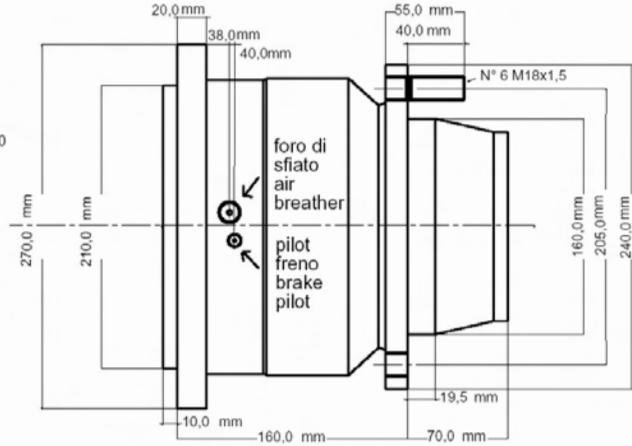
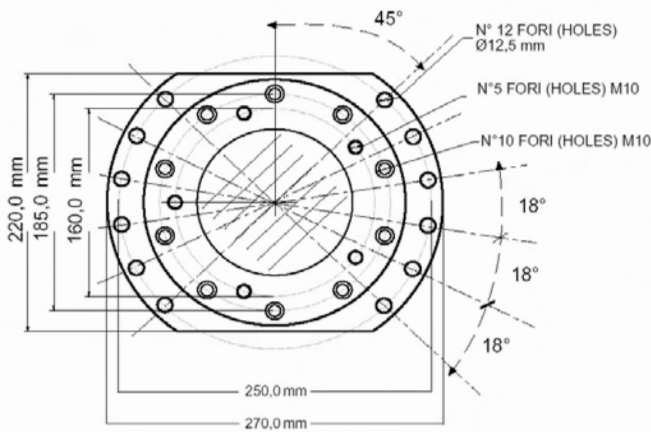
## SPECIFICATIONS

## DATI TECNICI

Model Modello		S 070 with brake - con freno			S 070 without brake - senza freno		
Reduction Ratio Rapporto di riduzione		1: 4,75					
Continuous torque rating Coppia continua	Nm	2500					
Peak torque rating Coppia di picco	Nm	3500					
Static Braking torque Coppia di frenatura statica	Nm	2500					
Max. Radial Load Carico radiale max.	N	50.000					
Radial Motor flange Flangia per Motore a pistoni Radiali	type tipo	S 05 - S 1 - I 3			S 05 - S 1 - I 3		
Weight ( with motor ) Peso ( con motore )	kg	47	57	50	42	52	50
Gearbox case oil capacity Quantità olio lubrificante	cm <sup>3</sup>	250			500		
Max output speed Velocità massima in entrata	n/min.	120 - 140					
Max input power Potenza massima	kW	33					
Brake pilot pressure Pressione di pilotaggio freno	bar	min. 12			max. 50		

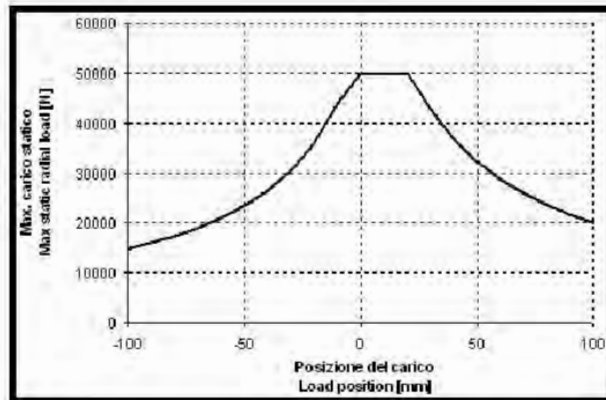
**INSTALLATION DRAWING**

**DISEGNO DI INSTALLAZIONE**



**RADIAL LOAD**

**CARICO RADIALE**



La posizione "0" coincide con la flangia ruota  
Position "0" is coincident with wheel mounting

**ORDER CODE**

**CODICE DI ORDINAZIONE**

S070 / B - - /GM1 /

Wheel drive unit  
*Riduttore tipo*

Motor mounting flange  
*Flangia motore*

Braking system  
*Freno tipo*

GM 05  
GM1  
BD1

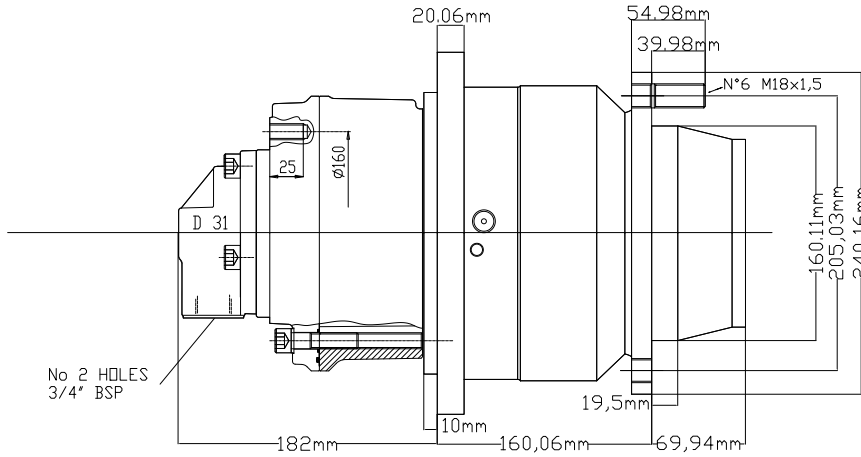
00 without brake / *senza freno*  
01 static brake / *con Freno statico negativo*

**INSTALLATION DRAWING**

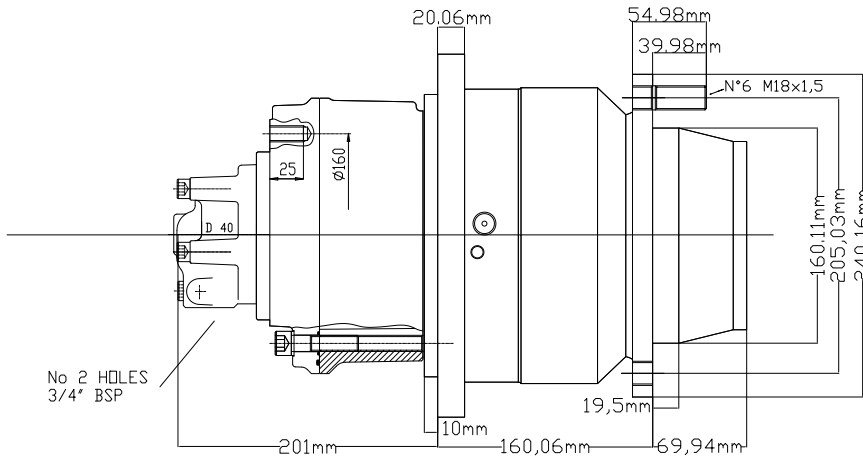
For Frontal view see foregoing page

**DISEGNO DI INSTALLAZIONE**

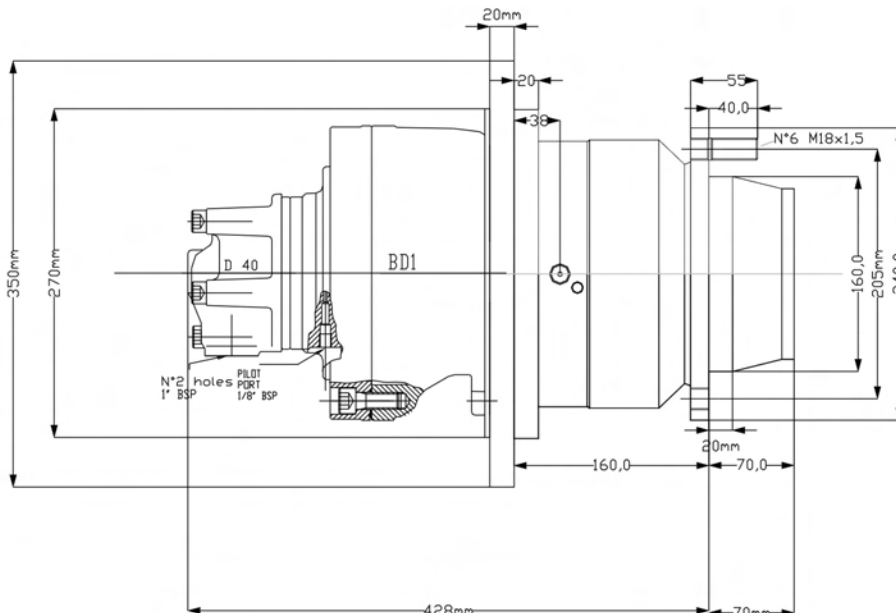
Per la vista frontale vedere pag. precedente



**S 070 + GM 05 - D 31**  
Standard



**S 070 + GM 05 - D 40**  
On request  
*A richiesta*



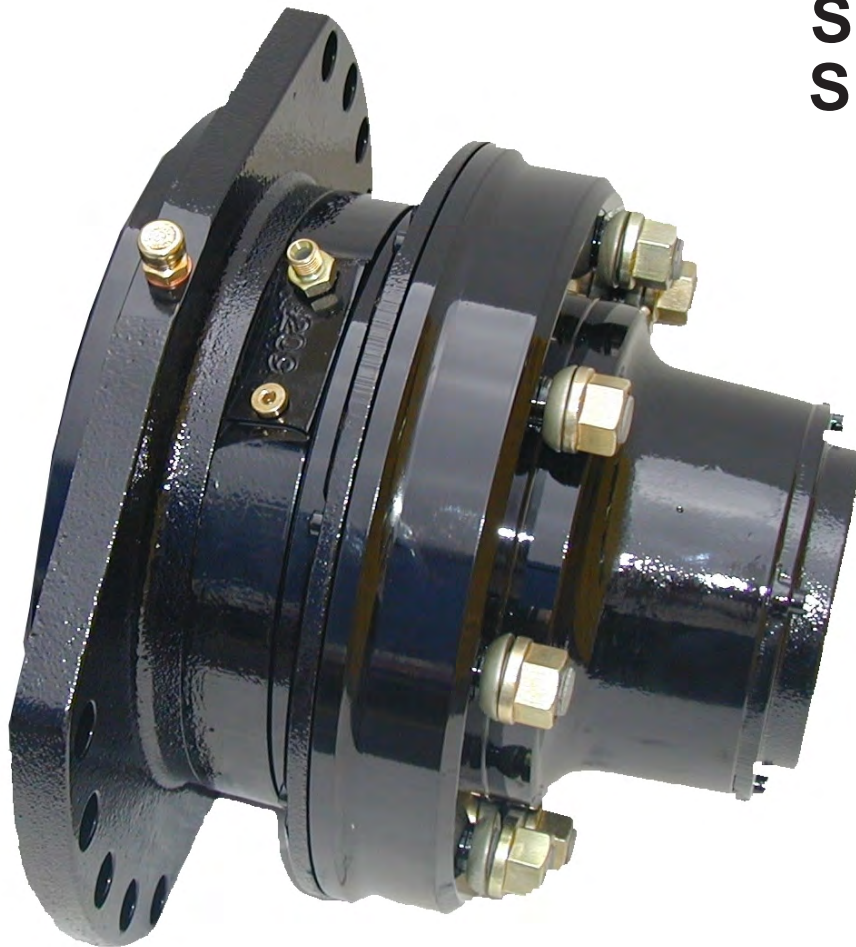
**S 070 + BD 1 - D 40**

**HY-TRANS**  
THE PRODUCTION LINE OF HANSA-TMP

**HT 58 / A / 704 / 0804 / E**

# WHEEL DRIVE UNITS S SERIES

**S 120**  
**S 220**





**GENERAL INFORMATIONS**

In this issue we present three sizes of wheel drive units as combinations of high-torque radial piston motor with a single reduction stage planetary gearbox; continuous output torques are 6500 and 9650 Nm.

The units can be either without brake, or with a static brake (spring-loaded pressure released brake), or also with dynamic monodisc pressure applied brake.

**DIMENSIONS SHOWN IN THIS CATALOGUE ARE REFERRED TO THE MODELS WITH THE STATIC BRAKE.**

Brake pilot pressure is 12 bar.

**LUBRICATION:** In the standard models lubrication of the gearbox is separate from the hydraulic circuit and the gearbox has its filler breather.

Lubrication should be with SAE 80W/90 oil with API GL5 properties.

See tables for quantity of oil required for filling.

In other applications it is possible to use the drain oil of the hydraulic motor for lubrication and the gearbox is without filler-breather.

Main applications of these units are on heavy duty mobile machines such as: agricultural machinery, earth-moving equipment, construction machines off- road vehicles, airport equipment, track drives and others.

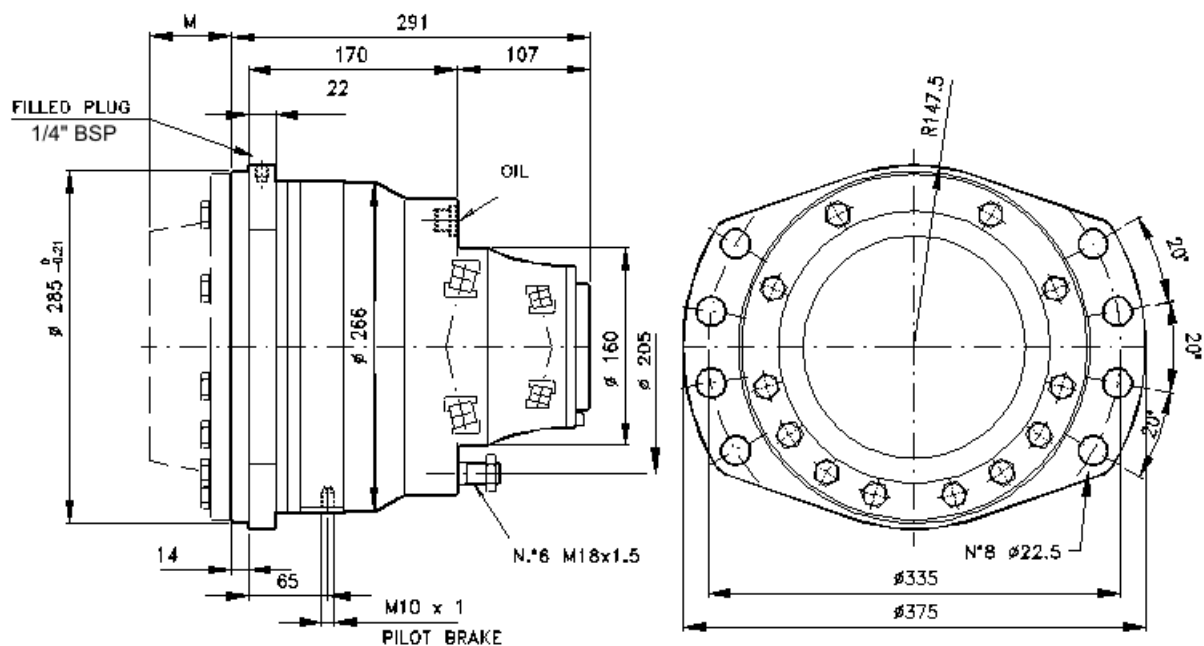
**MAIN TECHNICAL DETAILS**

WHEEL DRIVE UNIT		S 120	S 220
Reduction ratio		4,8 : 1	6,60 : 1
Output Continuous torque	Nm	6.500	9.650
Output Peak torque	Nm	10.000	14.300
Braking torque	Nm	7.000	10.000
Max. Radial Load *	daN	16.800	18.000
Weight (gearbox+brake only)	kg	75	90
Gearbox case oil capacity	lit.	2,00	3,00
Max input speed	n / min	1.000	1.000
Brake pilot pressure	bar	12 (min)	60 (max) ( all model )

\* See specific diagram on Technical Data sheet

# S 120 WHEEL DRIVE UNIT

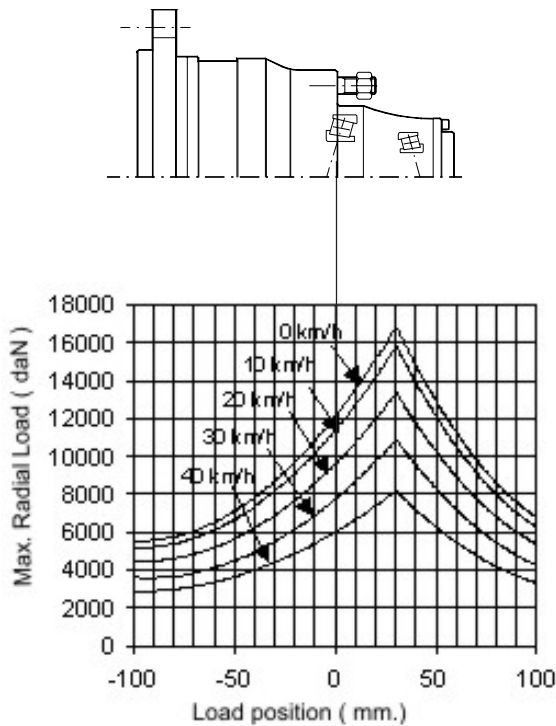
## GENERAL DIMENSIONS



Motor Code	Motor Type	Motor flange tickness
		M
GM05	SAI GM05 - female 35x2x16 DIN 5480	25
GM1	SAI GM1 - female 35x2x16 DIN 5480	25
ODT	DANFOSS OMT - male 12/24 z17 B92.1 1970	53

# S 120 WHEEL DRIVE UNIT

## MAIN TECHNICAL DETAILS



Allowable radial load

Reduction ratio	4.8 : 1
Output Continuous torque	6.500 Nm
Output Peak torque	10.000 Nm
Static braking torque	7.000 Nm
Weight (gearbox+brake only)	75 kg
Gearbox case oil capacity	2 lit.
Capacità olio lubrificante	
Max input speed	1.000 n / min.
Brake pilot pressure	12 bar (min) 60 bar (max)

### ORDER CODE S120 / B - - / - - - - /

Wheel drive unit

Motor mounting flange

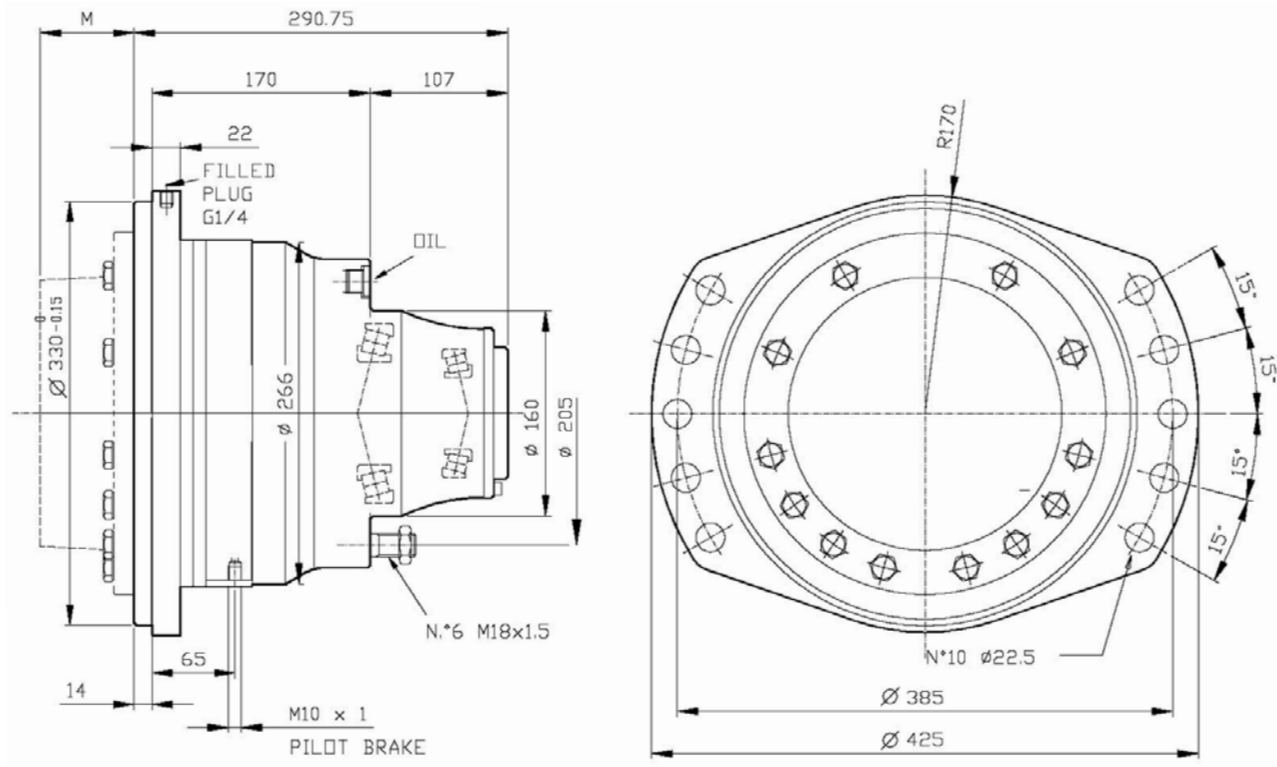
Braking system

GM05  
GM1  
ODT

00 without brake  
01 static brake

# S 120...GM2 WHEEL DRIVE UNIT

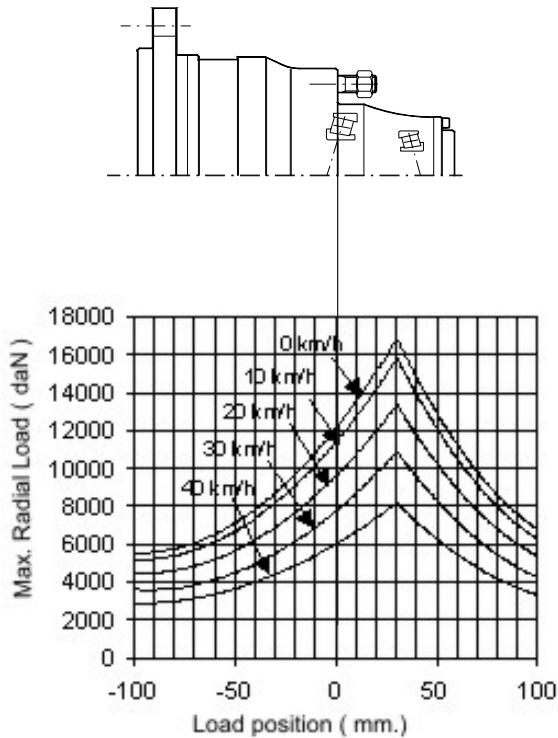
## GENERAL DIMENSIONS



Motor Code	Motor Type	Motor flange tickness
		M
GM2	SAI GM2 -female 40x3x12 DIN 5480	25

# S 120...GM2 WHEEL DRIVE UNIT

## MAIN TECHNICAL DETAILS



Allowable radial load

Reduction ratio	4.8 : 1
Output Continuous torque	6.500 Nm
Output Peak torque	10.000 Nm
Static braking torque	7.000 Nm
Weight (gearbox+brake only)	75 kg
Gearbox case oil capacity	2 lit.
Max input speed	1.000 n / min.
Brake pilot pressure	12 bar (min) 60 bar (max)

### ORDER CODE S120 / B - - /GM2 /

Wheel drive unit

Motor mounting flange

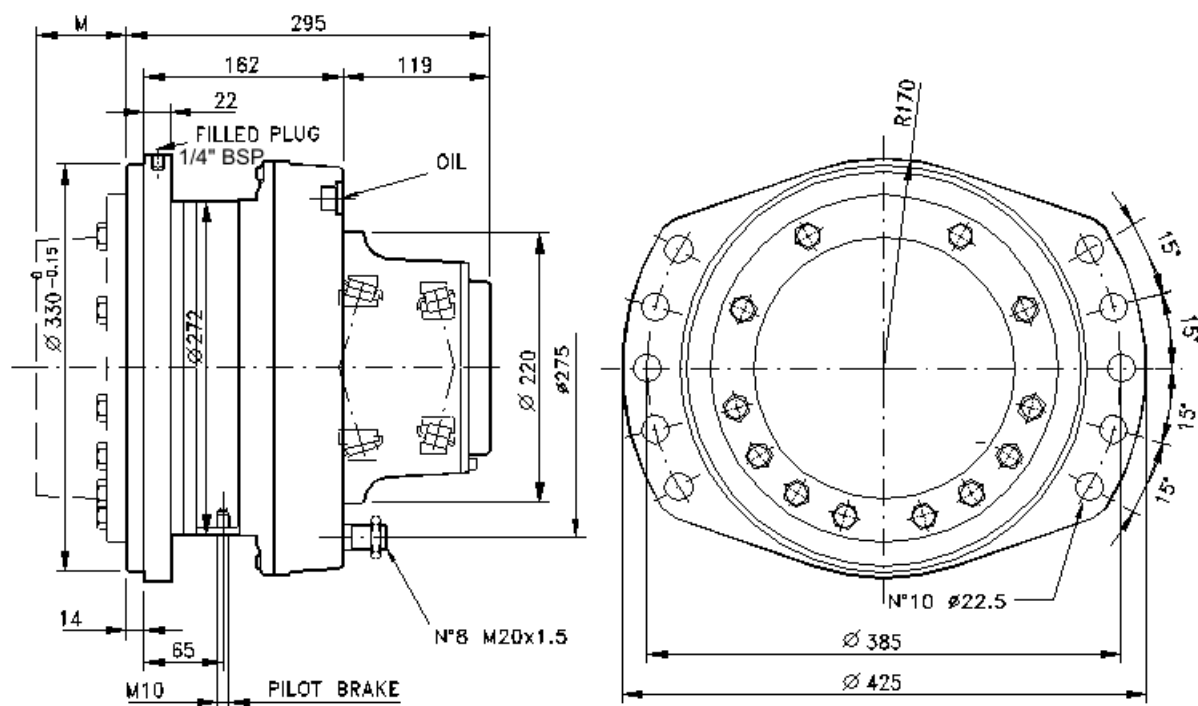
Braking system

GM2

00 without brake  
01 static brake

# S 220 WHEEL DRIVE UNIT

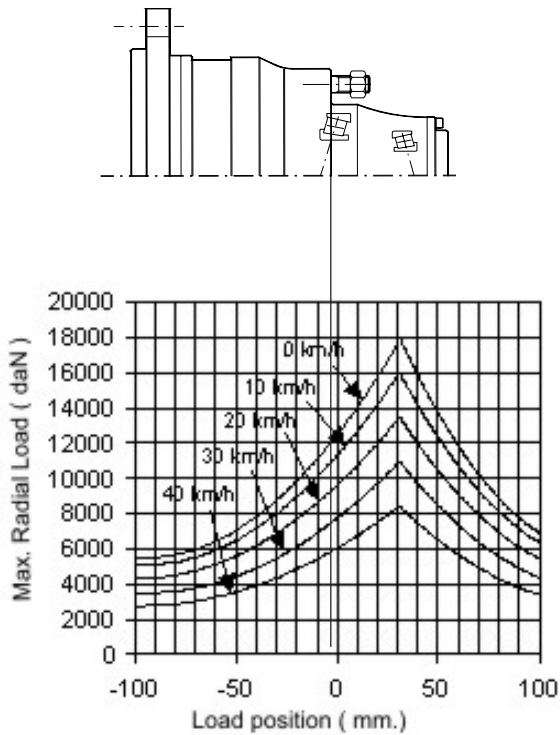
## GENERAL DIMENSIONS



Motor Code	Motor Type	Motor flange tickness	M
GM05	SAI GM05 - female	35x2x16 DIN 5480	25
GM1	SAI GM1 - female	35x2x16 DIN 5480	25
GM2	SAI GM2 - female	40x3x12 DIN 5480	25
ODV	DANFOSS OMV - male	8/16 z16 B92.1 '70	53

# S 220 WHEEL DRIVE UNIT

## MAIN TECHNICAL DETAILS



Reduction ratio **6,60 : 1**

Output Continuous torque **9.650 Nm**

Output Peak torque **14.300 Nm**

Static braking torque **10.000 Nm**

Weight (gearbox+brake only) **90 kg**

Gearbox case oil capacity **3 lit.**

Max input speed **1.000 n / min.**

Brake pilot pressure **12 bar (min)  
60 bar (max)**

**Allowable radial load**

### ORDER CODE S220 / B - - / - - - - /

Wheel drive unit

Motor mounting flange

Braking system

00 without brake

01 static brake

GM05

GM1

GM2

ODV



HYDRAULIC COMPONENTS  
HYDROSTATIC TRANSMISSIONS  
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**HY-TRANS**

THE PRODUCTION LINE OF HANSA-TMP

HT 58 / A / 404 / 0804 / E

# WHEEL DRIVE UNITS WITH MOTOR SM SERIES



**S 120 M**  
**S 220 M**



## GENERAL INFORMATIONS

In this issue we present three sizes of wheel drive units as combinations of high-torque radial piston motor with a single reduction stage planetary gearbox; continuous output torques are 6500 and 9650 Nm.

The units can be either without brake, or with a static brake (spring-loaded pressure released brake), or also with dynamic monodisc pressure applied brake.

**DIMENSIONS SHOWN IN THIS CATALOGUE ARE REFERRED TO THE MODELS WITH THE STATIC BRAKE.**

Brake pilot pressure is 12 bar.

**LUBRICATION:** In the standard models lubrication of the gear box is separate from the hydraulic circuit and the gearbox has its filler breather.

Lubrication should be with SAE 80W/90 oil with API GL5 properties.

See tables for quantity of oil required for filling.

In other applications it is possible to use the drain oil of the hydraulic motor for lubrication and the gearbox is without filler-breather.

Main applications of these units are on heavy duty mobile machines such as: agricultural machinery, earth-moving equipment, construction machines off- road vehicles, airport equipment, track drives and others.

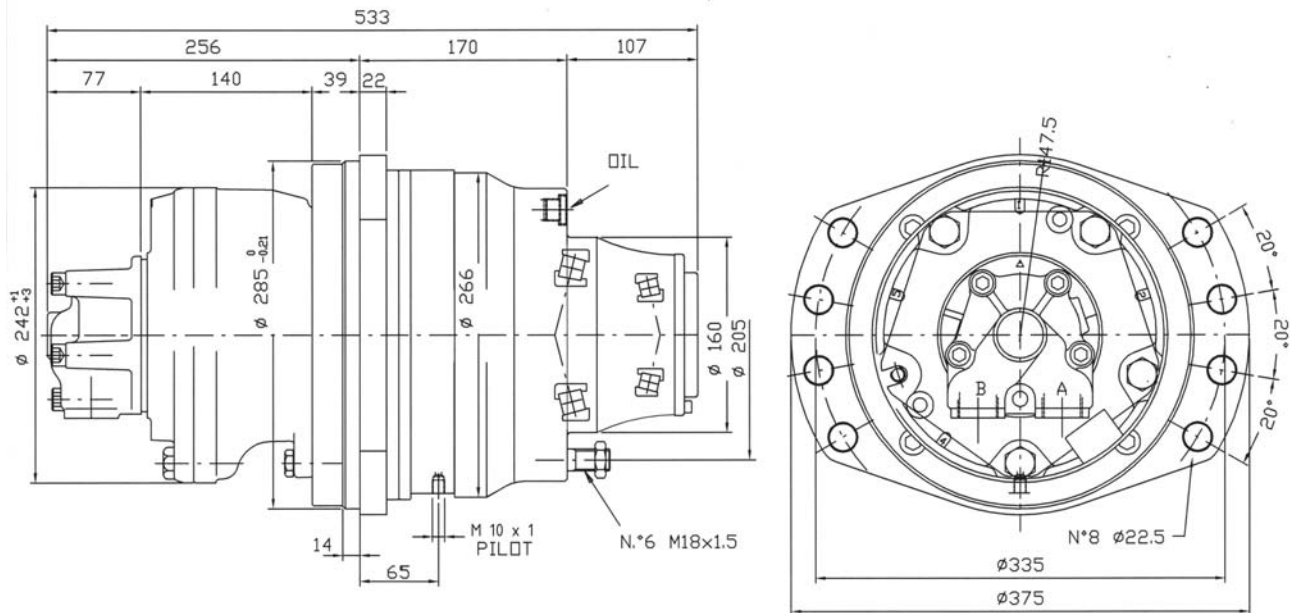
### MAIN TECHNICAL DETAILS

WHEEL DRIVE UNIT	S 066 M		S 120 M	S 220 M
Reduction ratio	4.31 : 1		4,8 : 1	6,60 :1
Output Continuous torque	Nm	2'400	6.500	9.650
Output Peak torque	Nm	3'000	10.000	14.300
Braking torque	Nm	2.250	7.000	10.000
Max. Radial Load *	daN	2.400	16.800	18.000
Weight (gearbox+brake only)	kg	40	75	90
Gearbox case oil capacity	lit.	0,75	2,00	3,00
Max input speed	n / min.	1.100	1.000	1.000
Brake pilot pressure	bar	12 (min)	60 (max)	( all model )

\* See specific diagram on Technical Data sheet

# S120 M WHEEL DRIVE UNIT

## GENERAL DIMENSIONS



## MAIN TECHNICAL DETAILS

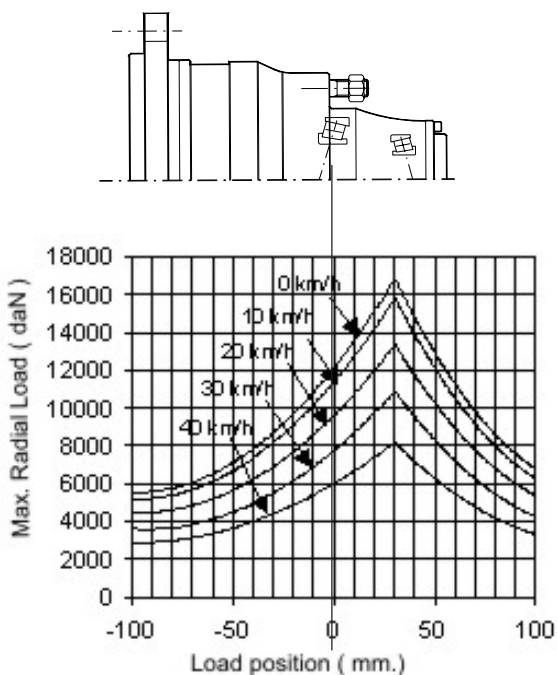
<b>Reduction ratio</b>	<b>4.8 : 1</b>
<b>Output Continuous torque</b>	<b>6.500 Nm</b>
<b>Output Peak torque</b>	<b>10.000 Nm</b>
<b>Static braking torque</b>	<b>7.000 Nm</b>
<b>Weight (gearbox+brake only)</b>	<b>75 kg</b>
<b>Gearbox case oil capacity</b>	<b>2 lit.</b>
<b>Max input speed</b>	<b>1.000 n / min.</b>
<b>Brake pilot pressure</b>	<b>12 bar (min) 60 bar (max)</b>

S120 M WHEEL DRIVE UNIT

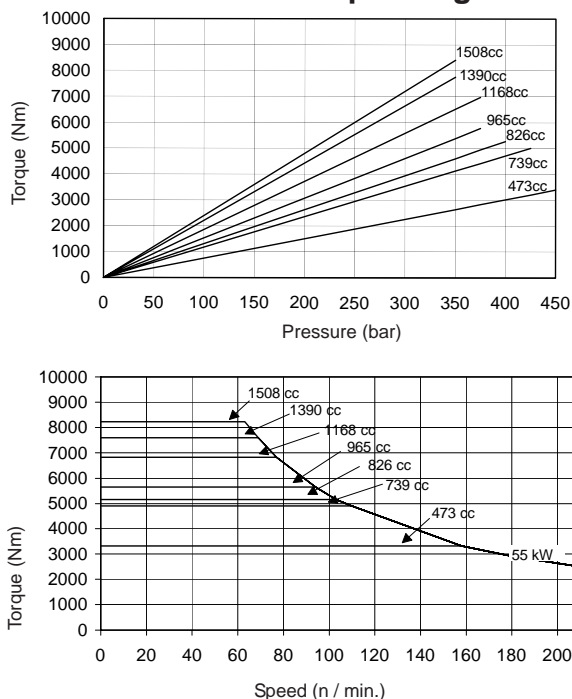
TECHNICAL DATA

Nominal Displacement	Specific torque	Peak pressure	Peak torque	Max speed	Peak power
cc	Nm/bar	bar	Nm	rpm	kW
473	7.38	450	3321	210	55
739	11.5	425	4901	210	55
826	12.9	400	5155	210	55
965	15.1	375	5648	210	55
1168	18.2	375	6834	210	55
1390	21.7	350	7591	210	55
1508	23.5	350	8236	210	55

Allowable radial load



Pressure / Torque range



Operating range (peak values)

ORDER CODE

S120 M / B - - / GM 1- - - / - - - /

Wheel drive unit

Braking system

00 without brake

01 static brake

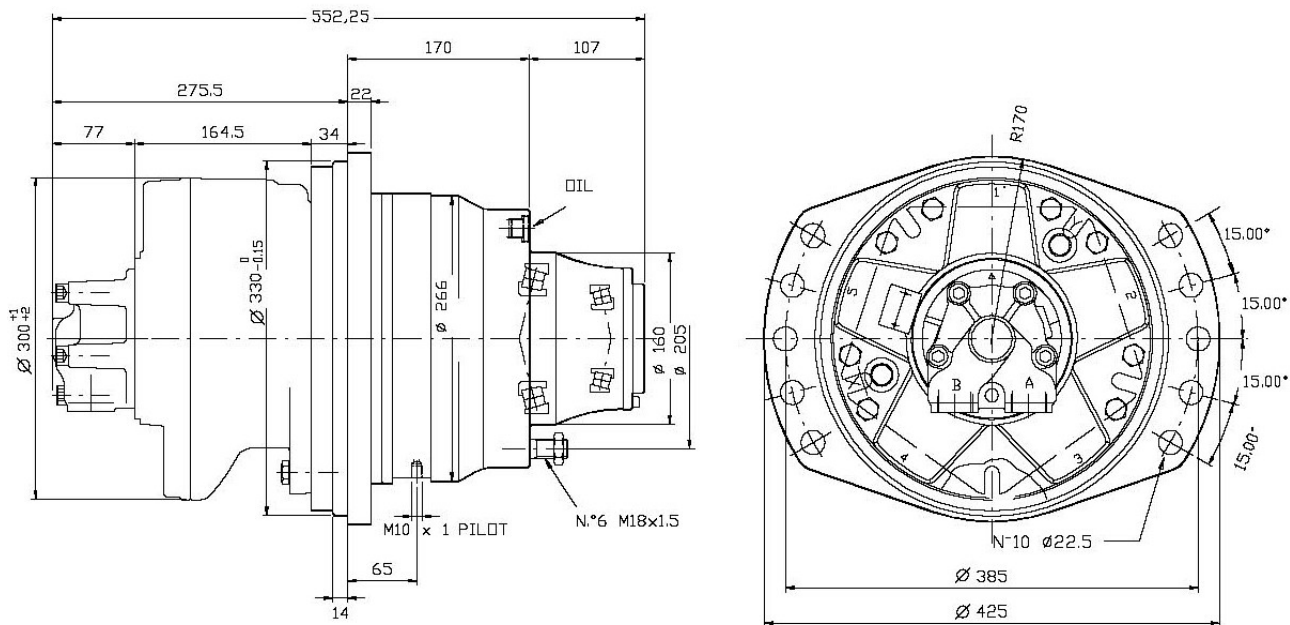
02 monodisc dynamic brake

Nominal Displacement

- Motor type 99-----473 cc
- 154-----739 cc
- 172-----826 cc
- 201-----965 cc
- 243-----1168 cc
- 290-----1390 cc
- 314-----1508 cc

# S120 M...GM2 WHEEL DRIVE UNIT

## GENERAL DIMENSIONS



## MAIN TECHNICAL DETAILS

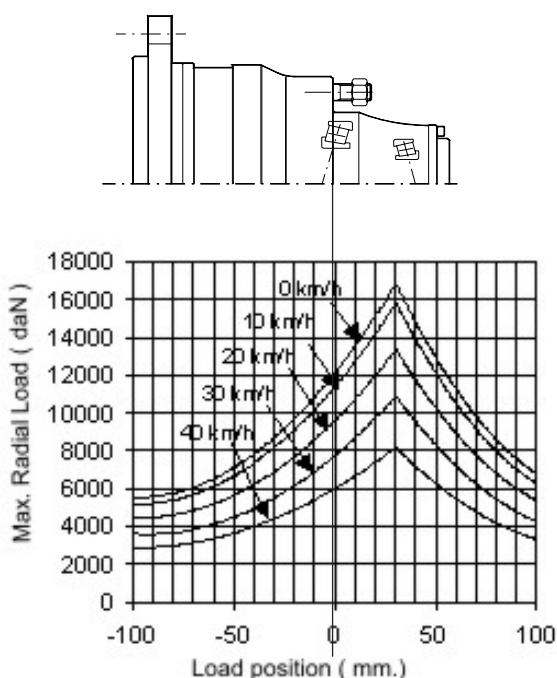
<b>Reduction ratio</b>	<b>4.8 : 1</b>
<b>Output Continuous torque</b>	<b>6.500 Nm</b>
<b>Output Peak torque</b>	<b>10.000 Nm</b>
<b>Static braking torque</b>	<b>7.000 Nm</b>
<b>Weight (gearbox+brake only)</b>	<b>75 kg</b>
<b>Gearbox case oil capacity</b>	<b>2 lit.</b>
<b>Max input speed</b>	<b>1.000 n / min.</b>
<b>Brake pilot pressure</b>	<b>12 bar (min) 60 bar (max)</b>

S120 M...GM2 WHEEL DRIVE UNIT

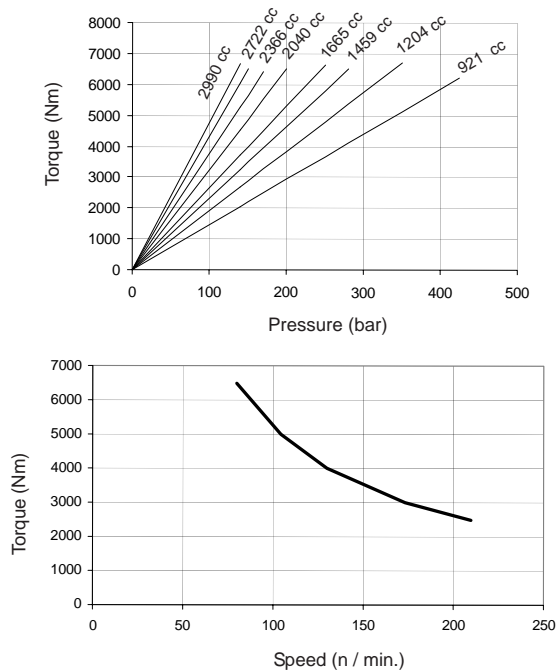
TECHNICAL DATA

Nominal Displacement	Specific torque	Peak pressure	Peak torque	Max speed	Peak power
cc	Nm/bar	bar	Nm	rpm	kW
921	14,66	425	6500	210	55
1204	19,17	350	6500	210	55
1459	23,23	280	6500	210	55
1665	26,51	250	6500	210	55
2040	32,48	200	6500	210	55
2366	37,67	170	6500	210	55
2722	43,34	150	6500	210	55
2990	47,61	140	6500	210	55

Allowable radial load



Pressure / Torque range



Operating range (peak values)

ORDER CODE

S120 M / B - - / GM 2 - - - / - - - /

Wheel drive unit

Nominal Displacement

Motor type

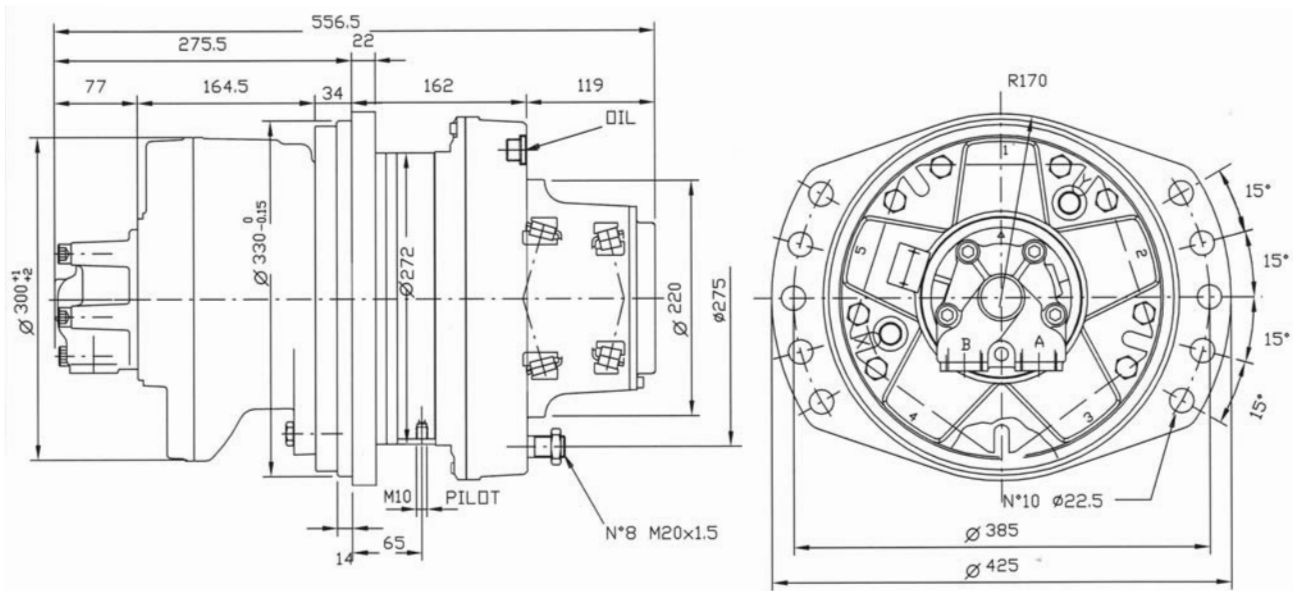
Braking system

- 00 without brake
- 01 static brake
- 02 monodisc dynamic brake

- 191-----921 cc
- 251-----1204 cc
- 304-----1459 cc
- 347-----1665 cc
- 425-----2040 cc
- 493-----2366 cc
- 565-----2722 cc
- 623-----2990 cc

# S220 M WHEEL DRIVE UNIT

## GENERAL DIMENSIONS



## MAIN TECHNICAL DETAILS

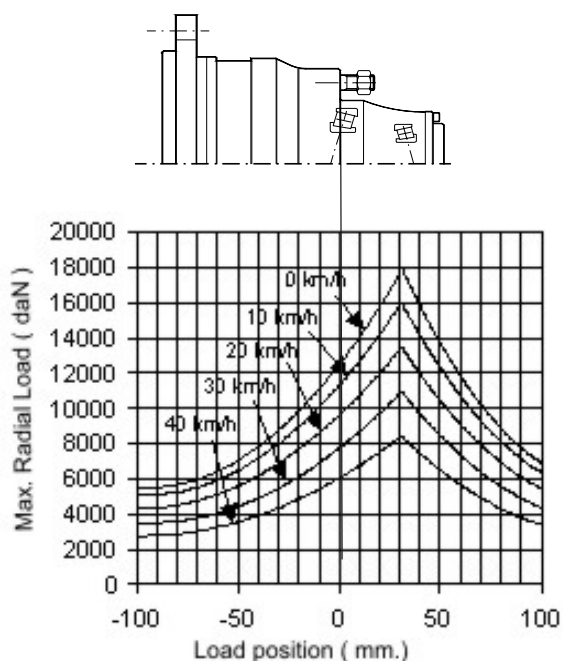
Reduction ratio	6,60 : 1
Output Continuous torque	9.650 Nm
Output Peak torque	14.300 Nm
Static braking torque	10.000 Nm
Weight (gearbox+brake only)	90 kg
Gearbox case oil capacity	3 lit.
Max input speed	1.000 n / min.
Brake pilot pressure	12 bar (min) 60 bar (max)

S220 M WHEEL DRIVE UNIT

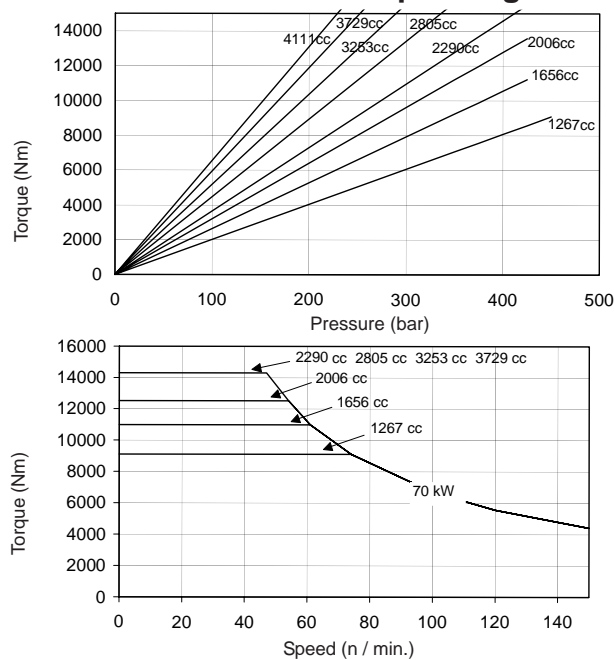
TECHNICAL DATA

Nominal Displacement cc	Specific torque Nm/bar	Peak pressure bar	Peak torque Nm	Max speed rpm	Peak power kW
1267	19,80	450	9108	150	70
1656	25,87	425	10983	150	70
2006	31,35	400	12522	136	70
2290	35,77	400	14295	136	70
2805	43,76	327	14300	129	70
3253	50,75	282	14300	129	70
3729	58,28	246	14300	121	70
4111	64,22	223	14300	113	70

Allowable radial load



Pressure / Torque range



Operating range (peak values)

ORDER CODE

S 220 / B - - / GM 2 - - - / - - - /

Wheel drive unit

Braking system

00 without brake

01 static brake

02 monodisc dynamic brake

Motor type

- 191-----1267 cc
- 251-----1656 cc
- 304-----2006 cc
- 347-----2290 cc
- 425-----2805 cc
- 493-----3253 cc
- 565-----3729 cc
- 623-----4111 cc

Nominal Displacement

As HANSA-TMP has a very extensive range of products and some products have a variety of applications, the information supplied may often only apply to specific situations. If the catalogue does not supply all the information required, please contact HANSA-TMP.

In order to provide a comprehensive reply to queries we may require specific data regarding the proposed application.

Whilst every reasonable endeavour has been made to ensure accuracy this publication cannot be considered to represent part of any contract, whether expressed or implied.

HANSA-TMP reserves the right to amend specifications at their discretion.



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