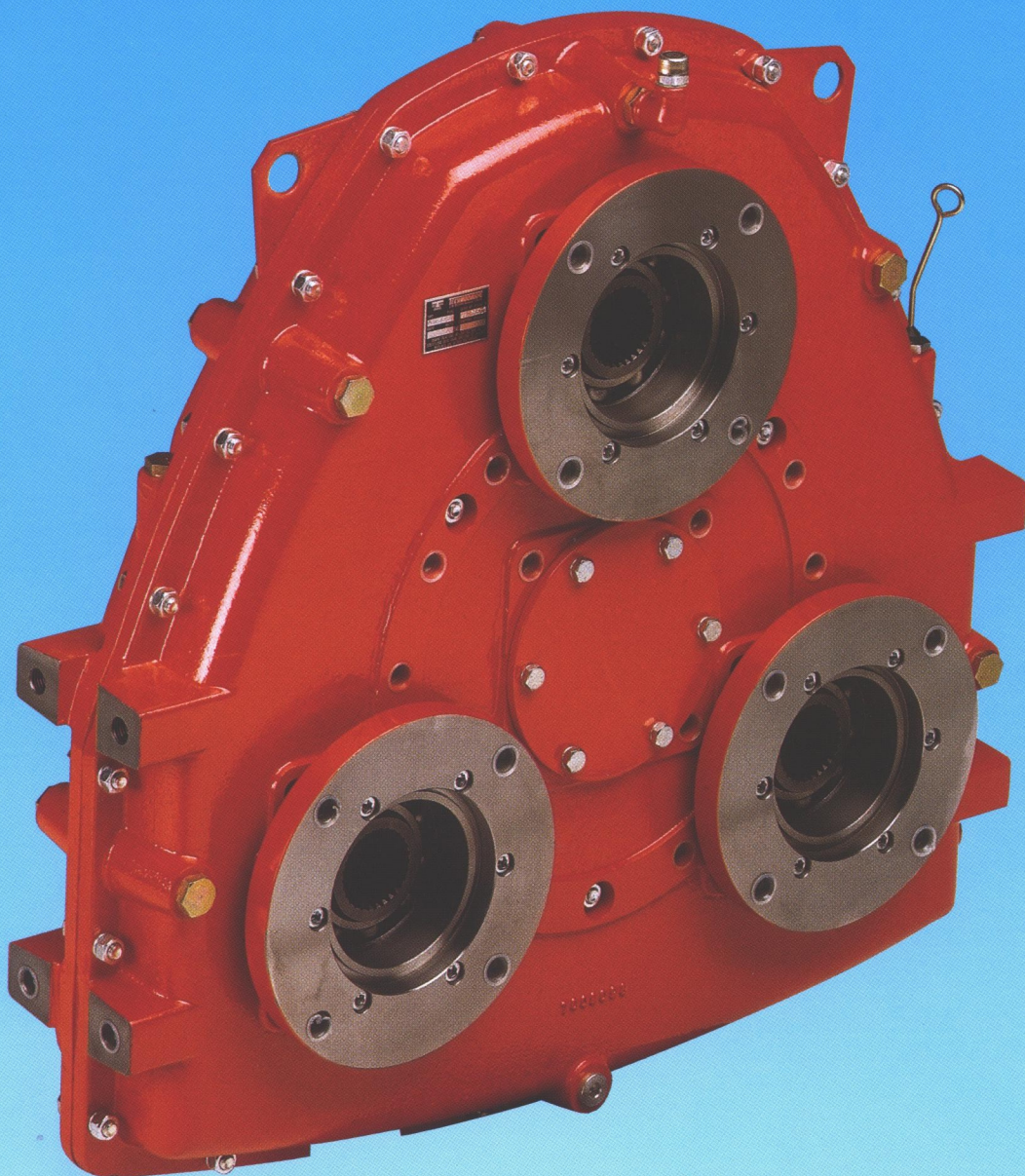




PUMP DRIVES

PUMP DRIVES

CHARACTERISTICS

- The pump drives allow the contemporary running of two or more hydraulic pumps from a single prime mover.

All models can be prepared for various applications:

- basic (B) for independent mounting;
- with a overcenter industrial clutch (BD) (BDS);
- with housing and coupling connection for diesel engines.

Constructively the pump drives consist of:

- cast iron casing;
 - straight-tooth gears, case hardened - hardened grinded (shaved in series AM 216 - AM 320);
 - ball bearings;
 - shafts in casehardening steel - case hardened - hardened.
 - Viton seals on input shaft.
 - The kinematic diagram is identical for the various models: the primary gear, which transmits, the drive to the secondary gears on whose axles the pumps are applied, is splined to the input shaft. The direction of rotation in output is the opposite to the rotation direction in input.
- The transmission ratio is identical on all the outputs (AM 640 may have different ratios on outputs).

TECHNICAL DATA

— Ratio

It represents the ratio between the input speed (speed of the prime mover) and the output speed (speed of the pumps). Ratios lower than 1 indicate a pump drive unit performing as speed increaser, higher than 1 as speed reducer.

— Max input torque M_1 (Nm)

It is the maximum torque which may be transmitted on input, corresponding to a theoretically unlimited gear life and to a bearing life (L10) of 10.000 hours at least.

For clutch coupled units, or when a RBD coupling is mounted, the max input torque may be limited by the clutch or the RBD torque capacity.

— Each output max torque M_2 (Nm)

It represents the maximum torque which may be transmitted on each output.

— Max speed n_1 (RPM)

It is the maximum rotation speed at the input shaft.

In case of clutch coupled unit, test that working speed is not more than the maximum permitted for the clutch.

— Moment of inertia J (Kgm²)

It is referred to the input shaft and it is calculated in accordance with ISO standards.

SELECTION

The fundamental elements on which the choice of pump drive is based are:

- 1) number and type of hydraulic pumps to be applied;
- 2) max torque absorbed by the pump (or by the group of pumps) on each output of the pump drive;
- 3) max power entering the pump drive.

- 1) Depending on the overall dimensions of the pumps, complete with pipes and pipe fittings, it is possible to establish the minimum distance between the pumps themselves. Comparing these values with the values foreseen in the catalogue for the out-put shafts, it is possible to make a choice of type.
- 2) Verify that the torque value of each output is kept below the max value shown in the catalogue for the chosen pump drive. In cases of use in important industrial systems or in marine applications, it is necessary to bear in mind relevant safety factors.
Also verify that the rotation speed of input shaft isn't more than the max indicated in the catalogue.
In the case of pump drives with clutch BD or BDS verify that the max input torque is at least 20% below the max transmittable from the clutch.
- 3) Figure 1 shows the max input power advisable according to the pump drive model.

COOLING

Oil working temperature must not exceed 105°C.

Depending on the input power and on duty, a cooling system may be necessary.

It is advisable to check the oil temperature during the first hours of work, making sure that the oil doesn't exceed 105°C.

All pump drives, except for AM 216 and AM 320, can be equipped on request with a cooling system consisting of an oil circulating pump mounted on the input shaft, pumps side, an oil/water cooler and relevant pipe fittings.

DIESEL ENGINE CONNECTION

In cases of application to diesel engines, the pump drives can be supplied with housing and coupling suitable for engines with flywheel and flywheel housing dimensions according to SAE standards.

An example sketch of the dimensions to be checked is given in fig. 2.

The same dimensions are valid for connections with clutches.

The clutch pilot bearing (to assemble between the flywheel and the clutch shaft) is not included in the supply.

INSTALLATION

The working position of the pump drive is usually the one shown in the catalogue.

If other positions are requested it is necessary to confer with the technicians at Technodrive.

Special care must be taken over the fixing of the pump drive (see catalogue page 7).

LUBRICATION

Use gear lube oils with EP additive and minimum viscosity index of 95.

The oil choice may be made taking account of the ambient temperature, as per tab. 3.

The pump drives are supplied without oil.

Before use fill to the maximum level mark on dipstick. The oil quantity indicated in the catalogue is approximate.

Oil must be replaced after the first 50 working hours. Subsequent oil changes should be made every 1.000 hours or every 12 months, whichever is the sooner.

Check regularly the oil level.

Oil working temperature must not exceed the 105°C.

**POTENZA MASSIMA IN ENTRATA
MAX INPUT POWER
PUISSANCE MAXI À L'ENTRÉE**



**ACCOPPIATORI A DUE USCITE
DOUBLE HYDRAULIC PUMP DRIVES
BOITES DEUX SORTIES**

AM 216	140 KW
AM 220	240 KW
AM 230	300 KW
AM 232	400 KW

**ACCOPPIATORI A TRE USCITE
TRIPLE HYDRAULIC PUMP DRIVES
BOITES TROIS SORTIES**

AM 320	140 KW
AM 330	240 KW
AM 345	300 KW
AM 365	600 KW

**ACCOPPIATORI A QUATTRO USCITE
PUMP DRIVES FOR FOUR HYDRAULIC PUMPS
BOITES QUATRE SORTIES**

AM 450	500 KW
AM 480	800 KW

**ACCOPPIATORI A SEI USCITE
PUMP DRIVES FOR SIX HYDRAULIC PUMPS
BOITES SIX SORTIES**

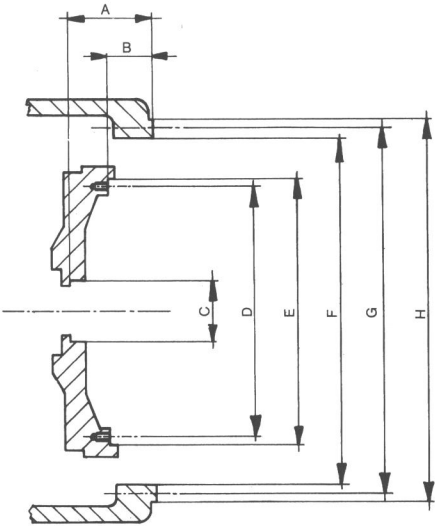
AM 640	500 KW
---------------	---------------

DIMENSIONI VOLANO/COPRIVOLANO - SAE J620D/SAE J617C
FLYWHEEL/FLYWHEEL HOUSING DIMENSIONS - SAE J620D/SAE J617C
DIMENSIONS VOLANT/COUVRE VOLANT - SAE J620D/SAE J617C

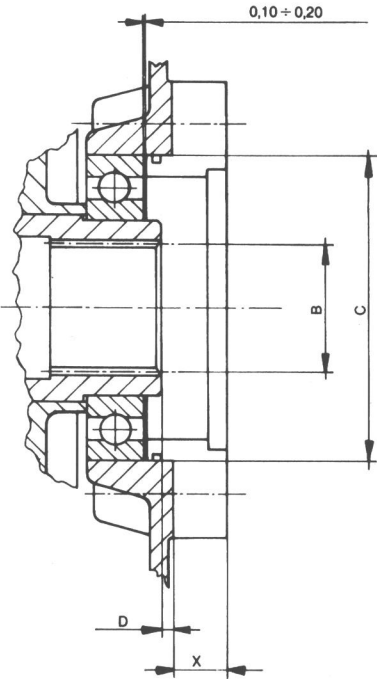
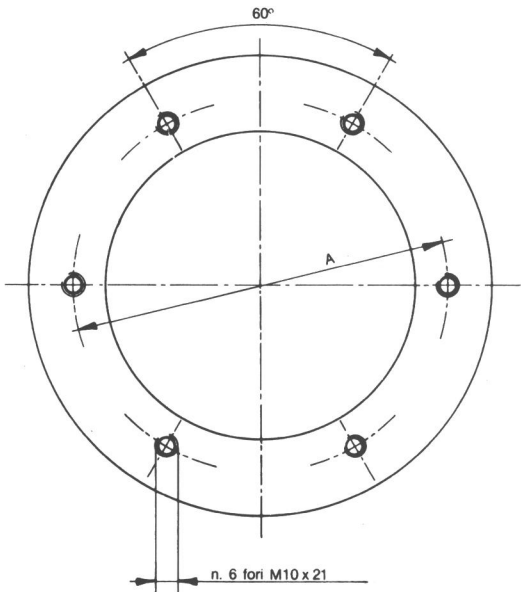
Frizione N. Clutch size Embrayage	A	B	C	D	E
6½	71.4	30,2	52	200	215.9
8	100.1	62,0	62	244.48	263.52
10	100.1	53,8	72	295.27	314.32
11½	100.1	39,6	72	333.37	352.42
14	100.1	25,4	80	438.15	466.72

Sae N.	F	G	H
1	511.17	530.22	552.4
2	447.67	466.72	489
3	409.57	428.62	450.8
4	361.95	381	403.2
5	314.32	333.38	356

TAB. 2



DIMENSIONI PRESE POMPE - PUMP ADAPTORS DIMENSION - DIMENSIONS
PREDISPOSITIONS



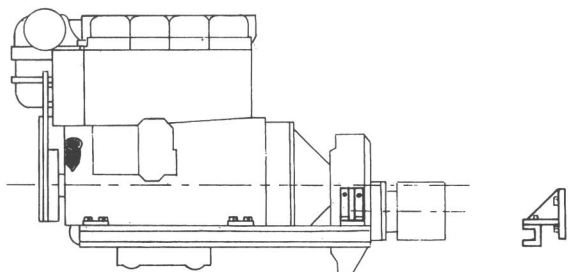
AM: 216, 320, 220, 330			
A	B	C	D
150	A48-44 DIN 5482	125	8

TIPO POMPA - PUMP TYPE	X
Gr. 1P	
Gr. 2P	18
Gr. 3P	18
Gr. 3.5P	15
Gr. 4P	15
SAE A	10
SAE B	20
SAE C	20
SAE D	80

AM: 230, 345, 232, 450			
A	B	C	D
170	A62-57 DIN 5482	140	5

TIPO POMPA - PUMP TYPE	X
Gr. 1P	
Gr. 2P	19
Gr. 3P	19
Gr. 3.5P	19
Gr. 4P	19
SAE A	19
SAE B	20
SAE C	28
SAE D	37

ESEMPI DI INSTALLAZIONE APPLICATION EXAMPLES EXEMPLE D'INSTALLATION

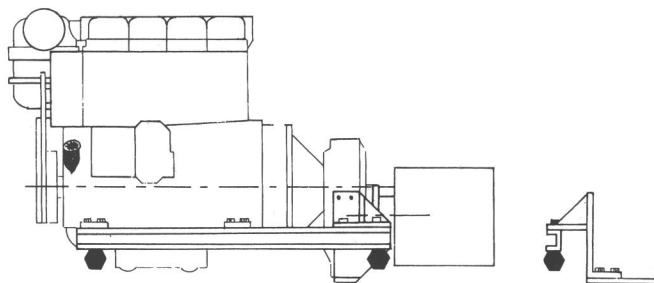


1

Applicazione AM con pompe di peso complessivo inferiore a 100 kg. Staffatura normale.

AM with pumps weight less than 100 kg. Normal stirrups.

Application AM avec pompes de poids total inférieur à 100 kg. Fixation normales.

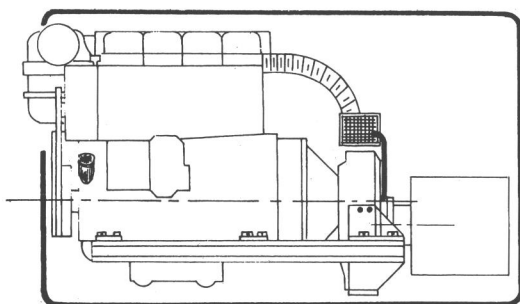


2

Applicazione AM con pompe di peso complessivo superiore a 100 kg. Le staffe devono essere il più vicino possibile al baricentro accoppiatore/pompe.

AM with pumps of total weight more than 100 kg. The stirrups must be closed to pump drive/pumps center of gravity.

Application AM avec pompes de poids total supérieur à 100 kg. Les fixations doivent être le plus pres possible du centre de gravité AM + pompes.

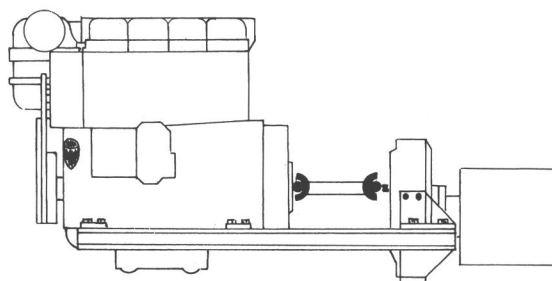


3

Applicazione AM in ambienti chiusi con scarsa aerazione. L'accoppiatore necessita di un impianto di raffreddamento.

AM in closed surrounding without ventilation. A cooling system is needed.

Application AM dans groupe insonorisé ou pièces close sans aération. Il est nécessaire de prévoir un échangeur de température.



4

AM azionato da giunto cardanico. Le staffe devono essere applicate il più vicino possibile al baricentro accoppiatore/pompe.

AM driven by cardan joint. The stirrups must be closed to pump drive/pumps center of gravity.

Application AM avec entraînement cardan. Les fixations doivent être le plus pres possible du centre de gravité AM + pompes.

N.B. - Per applicazioni particolari interpellare il nostro servizio tecnico. *For particular applications call our technical dept.* Pour applications particulières consulter notre bureau technique.

OLIO - OIL - HUILE

Temperatura ambiente Ambient temperature Temperature ambiante		-15°C/+25°C	+ 5°C/+ 40°C	-25°C/+80°C
Viscosità Viscosity Viscosité	ISO 3448	VG 100	VG 150	VG 220
	IV min	95	95	165
AGIP		BLASIA 100	BLASIA 150	BLASIA S 220
BP MACH		GR XP 100	GR XP 150	SG XP 220
CASTROL		ALPHA SP100	ALPHA SP150	ALPHA PG 220
ELF		REDUCTELF SP100	REDUCTELF SP150	SYNTHERMA P 270
ESSO		SPARTAN EP100	SPARTAN EP150	GLYCOLUBE 220
I.P.		MELLANA 100	MELLANA 150	TELEMA 220
SHELL		OMALA OIL 100	OMALA OIL 150	
TOTAL		CARTER EP100N	CARTER EP150	

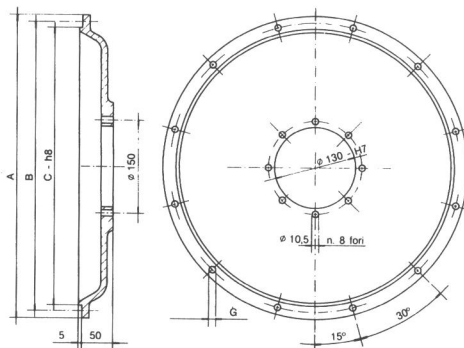
Componenti Accoppiamento Motore ÷ Accoppiatore
Components for Engine ÷ Pump Drive connection
Composants accouplement Moteur ÷ Boîte de répartition

AM216-220

AM320-330

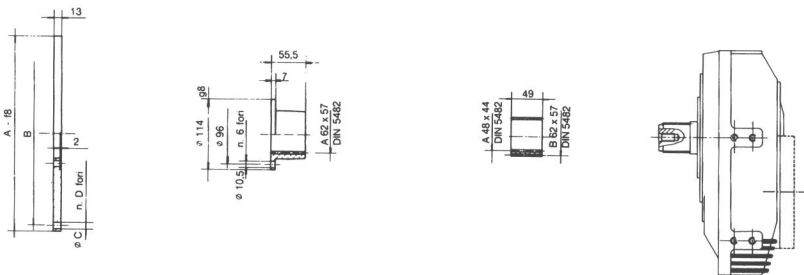


Campane SAE - SAE Housings - Cloches SAE



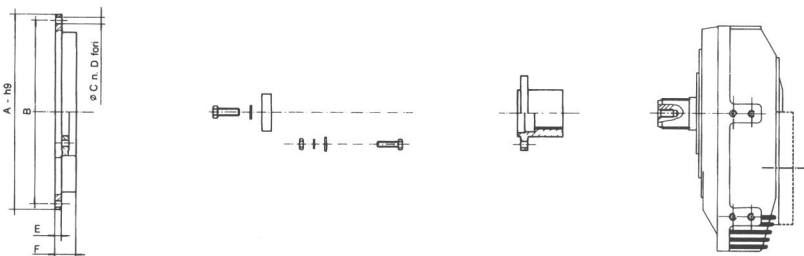
Tipo SAE	DIMENSIONI - DIMENSIONS - DIMENSIONS			
	A	B	C	G
1	552	530,22	511,17	n. 12 fori ø 12
2	489	466,72	447,67	n. 12 fori ø 11
3	451	428,62	409,57	n. 12 fori ø 11
4	403,22	381	361,95	n. 12 fori ø 11

Giunti d'accoppiamento rigidi - Rigid couplings - Accouplements rigides



	VOLANO - FLYWHEEL - VOLANT		
	8"	10"	11½"
A	263,52	314,32	352,42
B	244,47	295,27	333,37
C	10,5	10,5	10,5
D	6	8	8

Giunti d'accoppiamento RBD - RBD couplings - Accouplements RBD



VOLANO FLYWHEEL VOLANT	A	B	C	D	E	F	* COPPIA MAX MAX TORQUE Nm COUPLE MAX	
							Cont.	Int.
8"	263,52	244,47	10,3	6	9	34	170	220
10"	314,32	295,27	10,3	8	10	34	310	400
11" ½	352,42	333,37	10,3	8	10	38	480	620
14"	466,72	438,15	13,5	8	41	41	940	1210

* I valori di coppia possono essere incrementati sino all'80% con utilizzo di blocchetti speciali, disponibili a richiesta.

* Torque capacity may increase up to 80% by using heavy blocks, available under request.

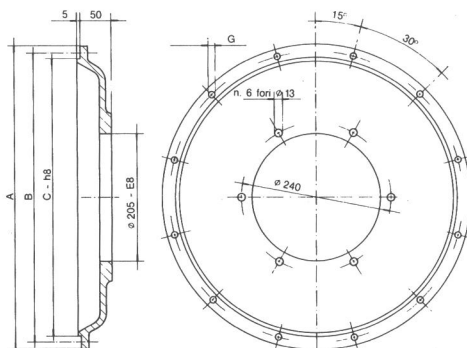
* Le couple peut-être augmenté de l'80% par l'utilisation de blocs de caoutchouc spécial, sur l'accouplement.

Componenti Accoppiamento Motore + Accoppiatore
Components for Engine + Pump Drive connection
Composants accouplement Moteur + Boîte de répartition

AM230-232 AM345-450

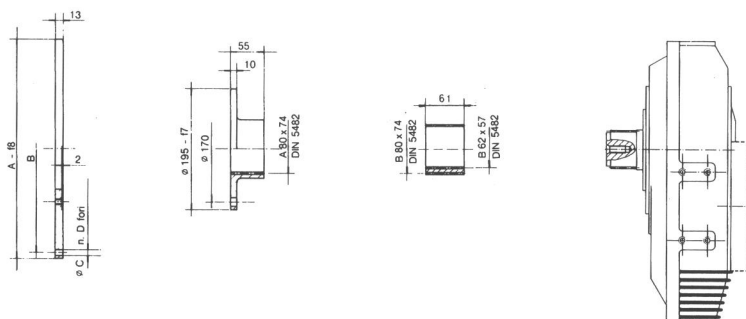


Campane SAE - SAE Housings - Cloches SAE



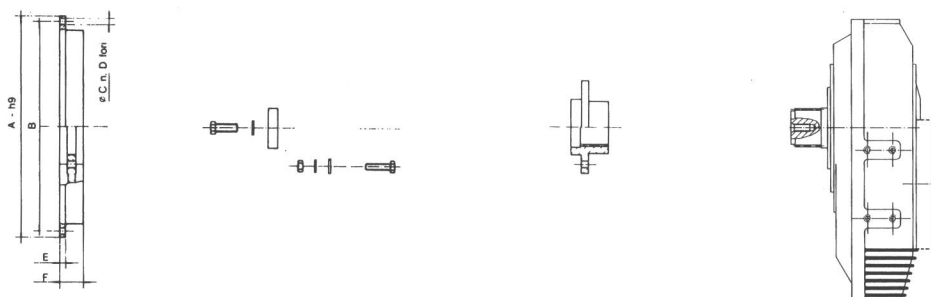
Tipo SAE	DIMENSIONI - DIMENSIONS - DIMENSIONS			
	A	B	C	G
1	552	530,22	511,17	n. 12 fori ø 12
2	489	466,72	447,67	n. 12 fori ø 11
3	451	428,62	409,57	n. 12 fori ø 11
4	403,22	381	361,95	n. 12 fori ø 11

Giunti d'accoppiamento rigidi - Rigid couplings - Accouplements rigides



	VOLANO - FLYWHEEL - VOLANT		
	10"	11 1/2"	14"
A	314,32	352,42	466,72
B	295,27	333,37	438,15
C	0,5	10,5	13
D	8	8	8

Giunti d'accoppiamento RBD - RBD couplings - Accouplements RBD

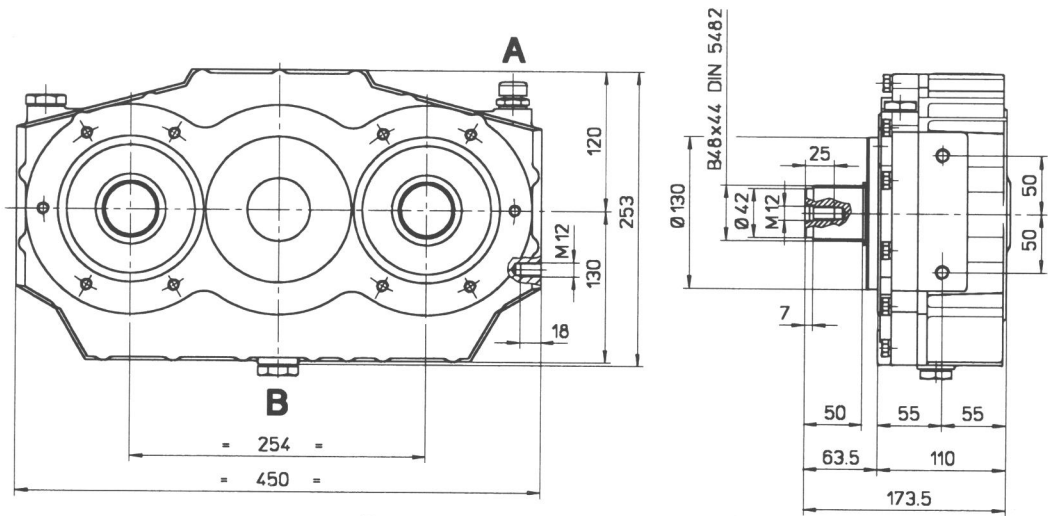


VOLANO FLYWHEEL VOLANT	A	B	C	D	E	F	* COPPIA MAX MAX TORQUE Nm COUPLE MAX	
							Cont.	Int.
10"	314,32	295,27	10,3	8	10	34	310	400
11 1/2"	352,42	333,37	10,3	8	10	38	480	620
14"	466,72	438,15	13,5	8	41	41	940	1210

* I valori di coppia possono essere incrementati sino all'80% con utilizzo di bloccetti speciali, disponibili a richiesta.

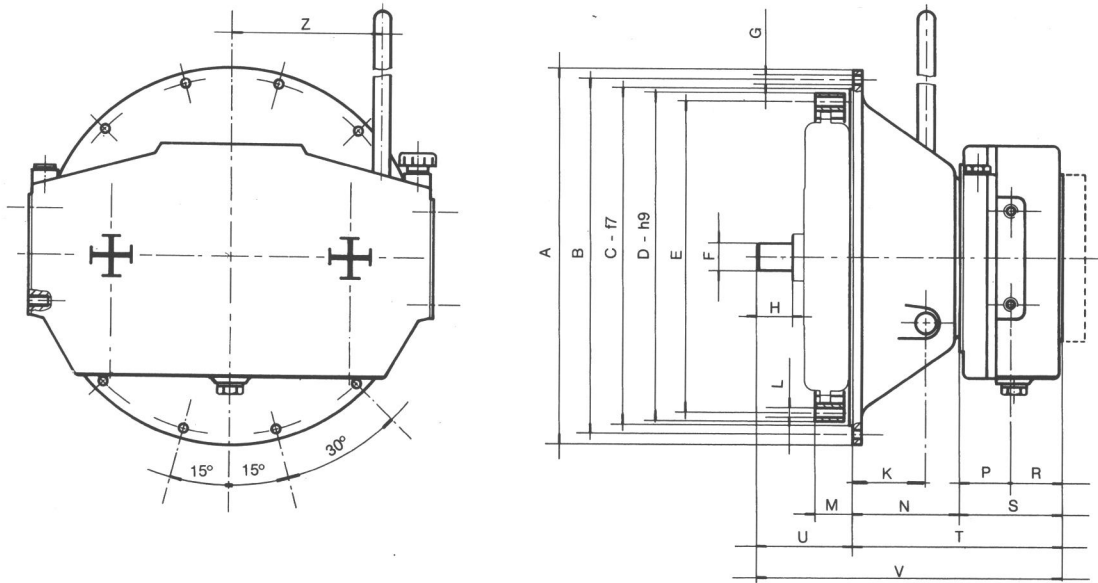
* Torque capacity may increase up to 80% by using heavy blocks, available under request.

* Le couple peut-être augmenté de l'80% par l'utilisation de blocs de caoutchouc spécial, sur l'accouplement.

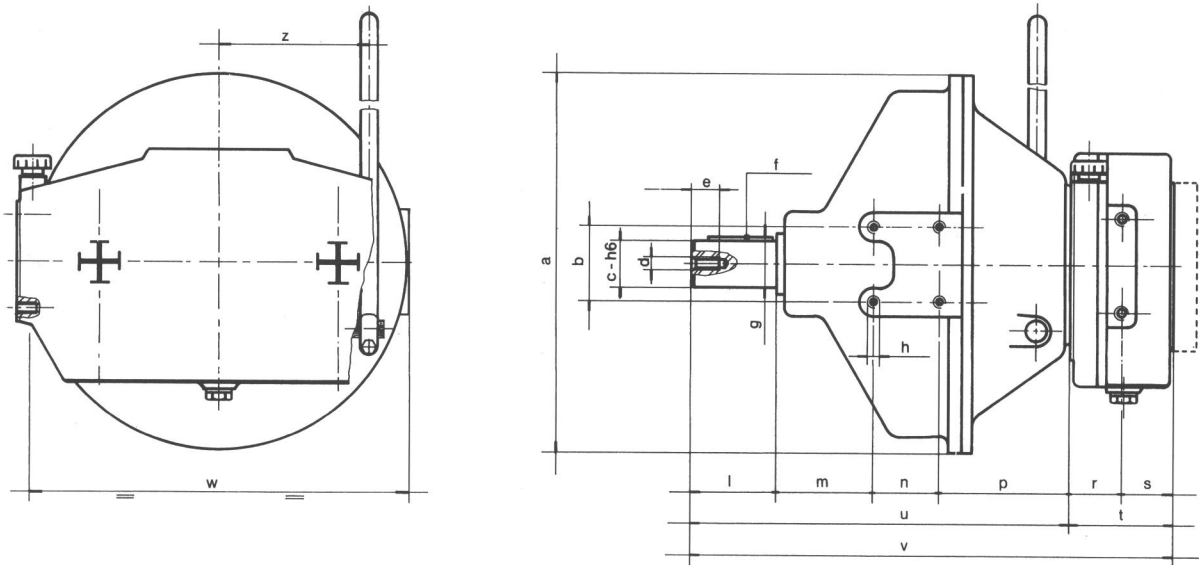


A - Tappo di carico, livello e sfiato olio – Oil breather and level plug – Bouchon de remplissage et niveau
B - Tappo di scarico olio – Oil drain plug – Bouchon de vidange

AM 216 BD 130 - AM 216 BD 145



AM 216 BDS 130 - AM 216 BDS 145



AM 216 B-BD-BDS



DATI TECNICI / TECHNICAL DATAS / CARACTERISTIQUES TECHNIQUES

Rapporto Ratio Rapport	Coppia max entrata Max input torque Couple maxi à l'entrée M ₁ (Nm)	Coppia max uscita Each output max torque Couple maxi à la sortie M ₂ (Nm)	Velocità max Max speed Vitesse maxi n ₁ (RPM)	Quantità olio Oil quantity Quantité huile l	Frizione tipo Clutch type Embrayage type	tipo SAE type SAE type SAE	Coppia max entrata Max input torque Couple max à l'entrée Nm	Velocità max Max. Speed Vitesse maxi RPM	Potenza Power Puissance Kw
0,50	800	200	2400	1,9	BD 130	3-4	330	3100	70
0,68	735	250	2650	2,0					
0,79	700	275	2850	2,0	BD 145	3-4	450	3100	80
1,00	630	315	3200	1,7					
1,27	550	350	3600	1,5	BDS 130	-	330	3100	70
1,47	500	365	3950	1,3					
					BDS 145	-	450	3100	80

Rapporto Ratio Rapport	Momento d'inerzia Moment of inertia Moment d'inertie J (Kgm²)						Tipo Type Type	Peso Weight Kg. Poids
	B	BD130	BD145	BDS 130	BDS 145			
0,50							AM 216 B	36
0,68	0,0278	0,1653	0,2903	0,2778	0,4653		AM 216 BD 130	76
0,79	0,0248	0,1622	0,2873	0,2748	0,4623		AM 216 BD 145	80
1,00	0,0205	0,1580	0,2830	0,2705	0,4580		AM 216 BDS 130	107
1,27	0,0167	0,1542	0,2792	0,2667	0,4542		AM 216 BDS 145	111
1,47	0,0151	0,1526	0,2776	0,2651	0,4526			

DIMENSIONI / DIMENSIONS / DIMENSIONS

AM 216 BD

Frizione tipo Clutch type Embrayage type	D	E	F	H	L	M	N	P	R	S	T	U	V	Z	K
BD 130	314,32	295,27	30	37	n. 8 fori ø 10.5	54	114	55	55	110	224	100	324	160	78
BD 145	352,42	333,37	30	37	n. 8 fori ø 10.5	39,7	114	55	55	110	224	100	324	160	78

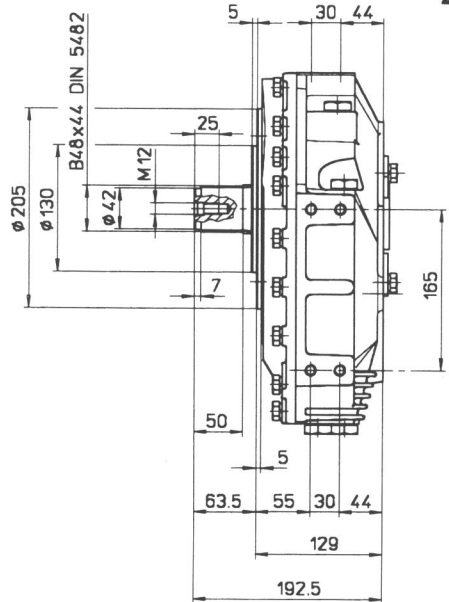
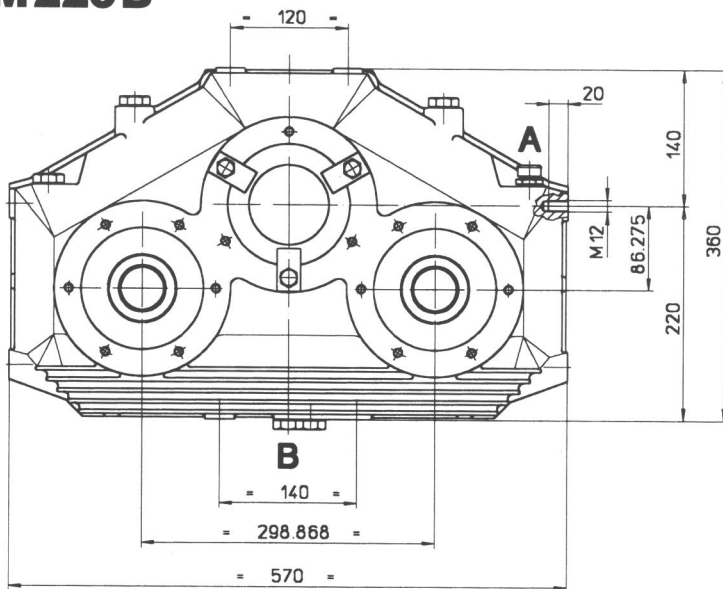
SAE	DIMENSIONI / DIMENSIONS / DIMENSIONS			
	A	B	C	G
3	451	428,62	409,57	n. 12 fori ø 11
4	403,22	381	361,95	n. 12 fori ø 11

DIMENSIONI / DIMENSIONS / DIMENSIONS

AM 216 BDS

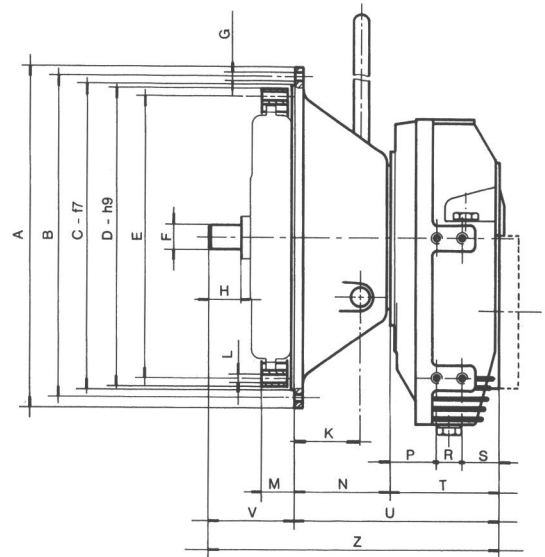
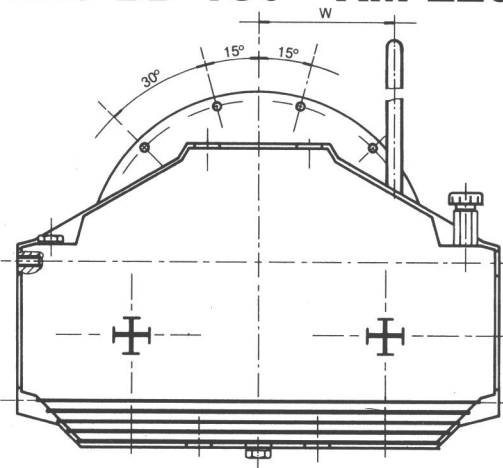
Frizione tipo Clutch type Embrayage type	a	b	c	d	e	f	g	h	i	m	n	p	r	s	t	u	v	z	w
BDS 130	403	80	50	M14	30	14X9X70	54	M10	90	104	70	139	55	55	110	403	513	160	404
BDS 145	403	80	50	M14	30	14X9X70	54	M10	90	104	70	139	55	55	110	403	513	160	404

AM 220 B

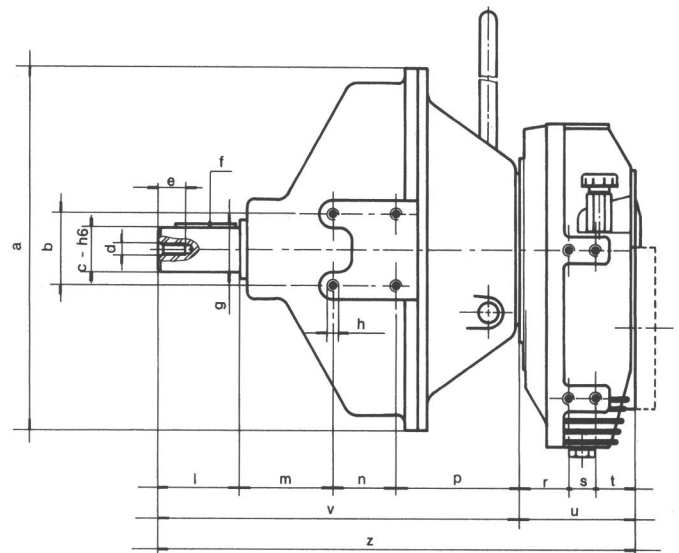
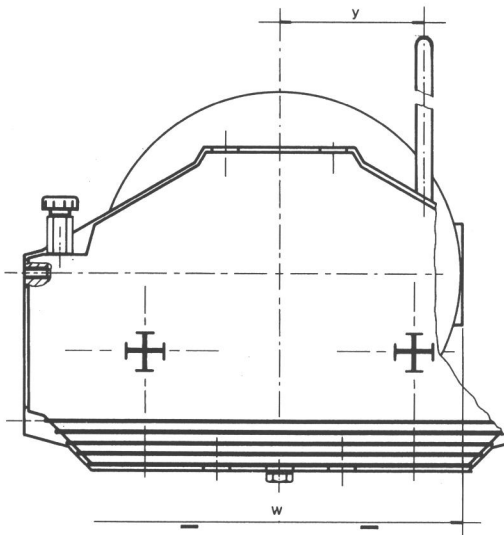


A - Tappo di carico, livello e sfiato olio - Oil breather and level plug - Bouchon de remplissage et niveau
B - Tappo di scarico olio - Oil drain plug - Bouchon de vidange

AM 220 BD 130 - AM 220 BD 145 - AM 220 BD 290



AM 220 BDS 130 - AM 220 BDS 145 - AM 220 BDS 290



AM 220 B-BD-BDS



DATI TECNICI / TECHNICAL DATAS / CARACTERISTIQUES TECHNIQUES

Rapporto Ratio Rapport	Coppia max entrata Max input torque Couple maxi à l'entrée M ₁ (Nm)	Coppia max uscita Each output max torque Couple maxi à la sortie M ₂ (Nm)	Velocità max Max speed Vitesse maxi n ₁ (RPM)	Quantità olio Oil quantity Quantite huile l	Frizione tipo Clutch type Embrayage type	tipo SAE type SAE type SAE	Coppia max entrata Max input torque Couple maxi à l'entrée Nm	Velocità max Max. Speed Vitesse maxi RPM	Potenza Power Puissance Kw
0,49	1470	360	2400	2,5	BD 130	3-4	330	3100	70
0,58	1410	410	2500	2,0	BD 145	3-4	450	3100	80
0,67	1350	450	2650	1,8	BD 290	1-2-3	880	2900	150
0,77	1270	490	2850	1,8	BDS 130	-	330	3100	70
1,00	1080	540	3200	1,4	BDS 145	-	450	3100	80
1,30	980	640	3600	1,4	BDS 290	-	880	2900	150
1,50	900	675	3950	1,2					

Rapporto Ratio Rapport	Momento d'inerzia Moment of inertia Moment d'inertie J (Kgm²)							Tipo Type Type	Peso Weight Kg. Poids
	B	BD 130	BD 145	BD 290	BDS 130	BDS 145	BDS 290		
0,49								AM 220 B	70
0,58								AM 220 BD 130	110
0,67	0,0952	0,2327	0,3577	0,5452	0,3452	0,5327	0,7702	AM 220 BD 145	114
0,77	0,0839	0,2214	0,3464	0,5339	0,3339	0,5214	0,7589	AM 220 BD 290	136
1,00	0,0561	0,1936	0,3185	0,5060	0,3060	0,4935	0,7310	AM 220 BDS 130	141
1,30	0,0503	0,1878	0,3128	0,5003	0,3003	0,4878	0,7253	AM 220 BDS 145	145
1,50	0,0476	0,1851	0,3101	0,4975	0,2976	0,4851	0,7226	AM 220 BDS 290	163

DIMENSIONI / DIMENSIONS / DIMENSIONS

AM 220 BD

Frizione tipo Clutch type Embrayage type	D	E	F	H	L	M	N	P	R	S	T	U	V	Z	K	W
BD 130	314,32	295,27	30	37	n. 8 fori ø 10,5	54	114	55,5	30	43,5	129	243	100	343	78	160
BD 145	352,42	333,37	30	37	n. 8 fori ø 10,5	39,7	114	55,5	30	43,5	129	243	100	343	78	160
BD 290	352,42	333,37	30	37	n. 8 fori ø 10,5	39,7	147	55,5	30	43,5	129	276	100	376	111	205

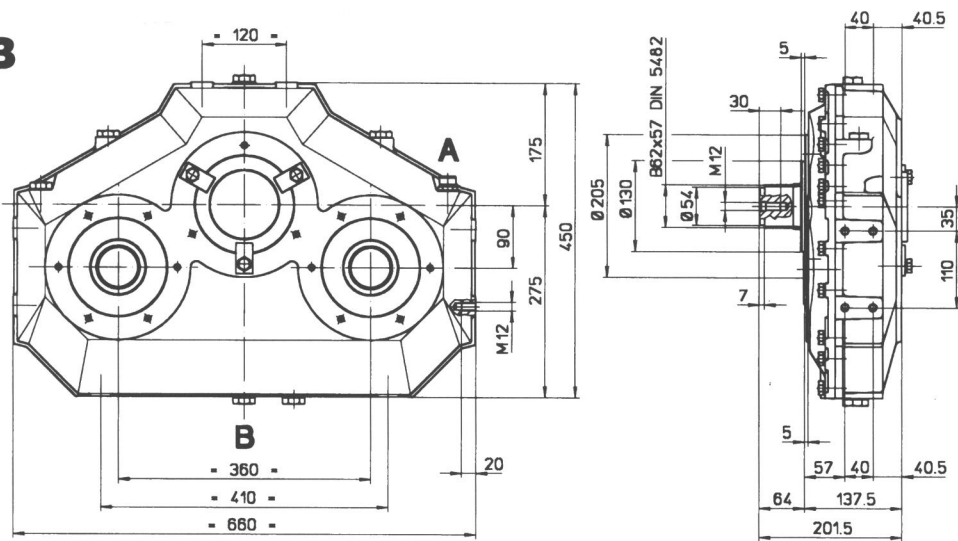
SAE	DIMENSIONI / DIMENSIONS / DIMENSIONS			
	A	B	C	G
1	552	530,22	511,17	n. 12 fori ø 12
2	489	466,72	447,67	n. 12 fori ø 11
3	451	428,62	409,57	n. 12 fori ø 11
4	403,22	381	361,95	n. 12 fori ø 11

DIMENSIONI / DIMENSIONS / DIMENSIONS

AM 220 BDS

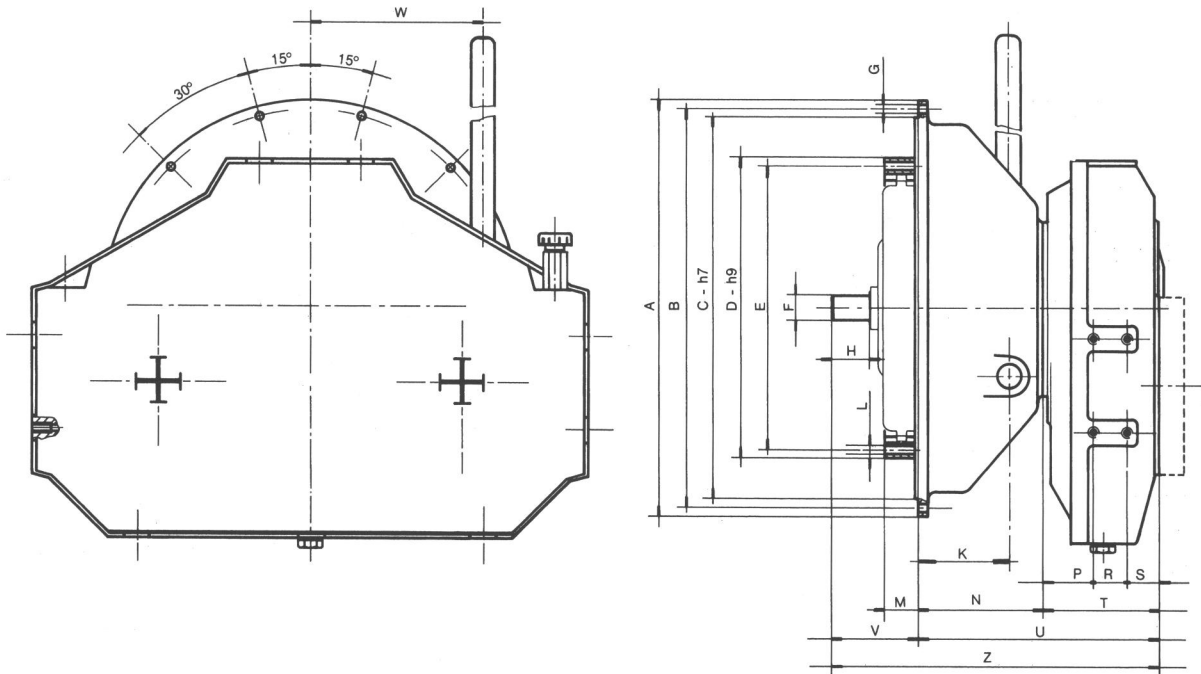
Frizione tipo Clutch type Embrayage type	a	b	c	d	e	f	g	h	i	m	n	p	r	s	t	u	v	z	w	y
BDS 130	403	80	50	M14	30	14X9X70	54	M10	90	104	70	139	55,5	30	43,5	129	403	532	404	160
BDS 145	403	80	50	M14	30	14X9X70	54	M10	90	104	70	139	55,5	30	43,5	129	403	532	404	160
BDS 290	403	80	50	M14	30	14X9X70	54	M10	90	104	70	172	55,5	30	43,5	129	436	565	404	160

AM230B

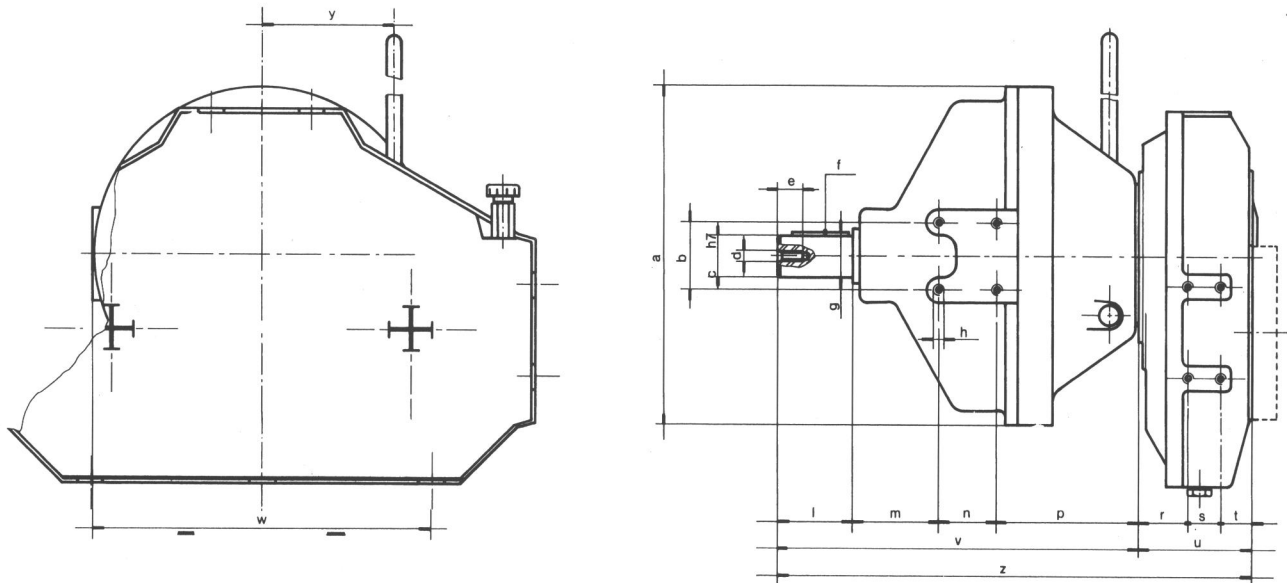


A - Tappo di carico, livello e sfiato olio - Oil breather and level plug - Bouchon de remplissage et niveau
B - Tappo di scarico olio - Oil drain plug - Bouchon de vidange

AM 230 BD 290 - AM 230 BD 2200 - AM 230 BD 3300



AM 230 BDS 145 - AM 230 BDS 290 - AM 230 BDS 2200



AM 230 B-BD-BDS



DATI TECNICI / TECHNICAL DATAS / CARACTERISTIQUES TECHNIQUES

Rapporto Ratio Rapport	Coppia max entrata Max input torque Couple maxi à l'entrée M ₁ (Nm)	Coppia max uscita Each output max torque Couple maxi à la sortie M ₂ (Nm)	Velocità max Max speed Vitesse maxi n ₁ (RPM)	Quantità olio Oil quantity Quantité huile l	Frizione tipo Clutch type Embrayage type	tipo SAE type SAE type SAE	Coppia max entrata Max input torque Couple maxi à l'entrée Nm	Velocità max Max. Speed Vitesse maxi RPM	Potenza Power Puissance Kw
0,51	2080	530	1950	5,5	BD 290	1-2-3	880	2900	150
0,58	2010	580	2050	5,0	BD 2200	1	1960	2400	230
0,67	1910	640	2200	4,5	BD 3300	1	2940	2400	320
0,76	1840	700	2300	4,0	BDS 290	-	880	2900	150
1,00	1620	810	2600	3,7	BDS 2200	-	1960	2400	230
1,31	1390	910	3000	3,2					
1,48	1270	940	3200	3,0					

Rapporto Ratio Rapport	Momento d'inerzia Moment of inertia Moment d'inertie J (Kgm ²)						Tipo Type Type	Peso Weight Kg. Poids
	B	BD 290	BD 2200	BD 3300	BDS 290	BDS 2200		
0,51							AM 230 B	94
0,58							AM 230 BD 290	160
0,67	0,2099	0,6599	2,0349	2,7599	0,8849	3,2099	AM 230 BD 2200	227
0,76	0,1840	0,6338	2,0090	2,7340	0,8590	3,1840	AM 230 BD 3300	270
1,00	0,1191	0,5691	1,9441	2,6691	0,7941	3,1191	AM 230 BDS 290	187
1,31	0,1082	0,5582	1,9332	2,6582	0,7832	3,1082	AM 230 BDS 2200	337
1,48	0,1036	0,5536	1,9286	2,6536	0,7786	3,1036		

DIMENSIONI / DIMENSIONS / DIMENSIONS

AM 230 BD

Frizione tipo Clutch type Embrayage type	D	E	F	H	L	M	N	P	R	S	T	U	V	Z	K	W
BD 290	352,42	333,37	30	37	n. 8 fori ø 10,5	39,7	147	57	40	40	137	284	100	384	78	160
BD 2200	466,72	438,15	35	37	n. 8 fori ø 10,5	25,4	236	52	40	40	132	368	100	468	179	215
BD 3300	466,72	438,15	35	37	n. 8 fori ø 10,5	25,4	264	52	40	40	132	396	100	496	207	215

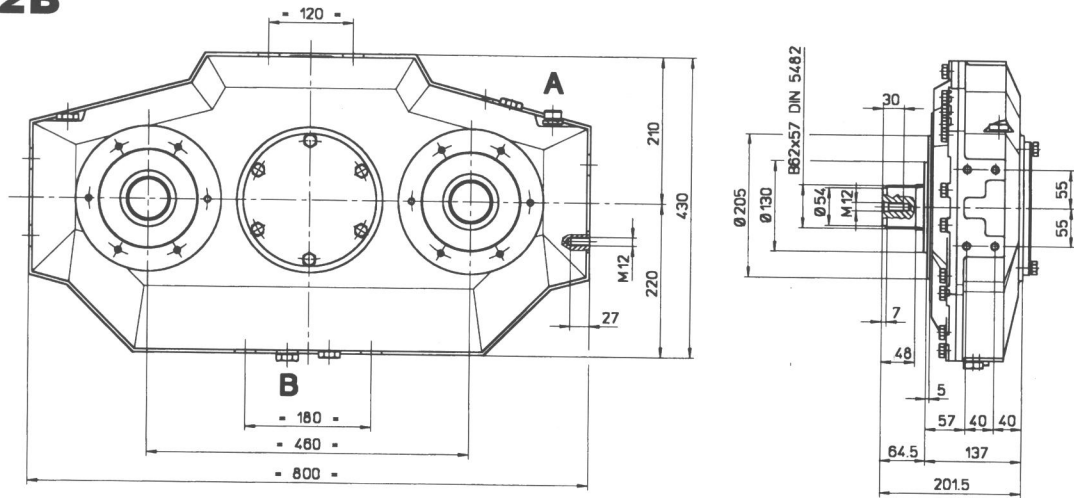
SAE	DIMENSIONI / DIMENSIONS / DIMENSIONS			
	A	B	C	G
1	552	530,22	511,17	n. 12 fori ø 12
2	489	466,72	447,67	n. 12 fori ø 11
3	451	428,62	409,57	n. 12 fori ø 11
4	403,22	381	361,95	n. 12 fori ø 11

DIMENSIONI / DIMENSIONS / DIMENSIONS

AM 230 BDS

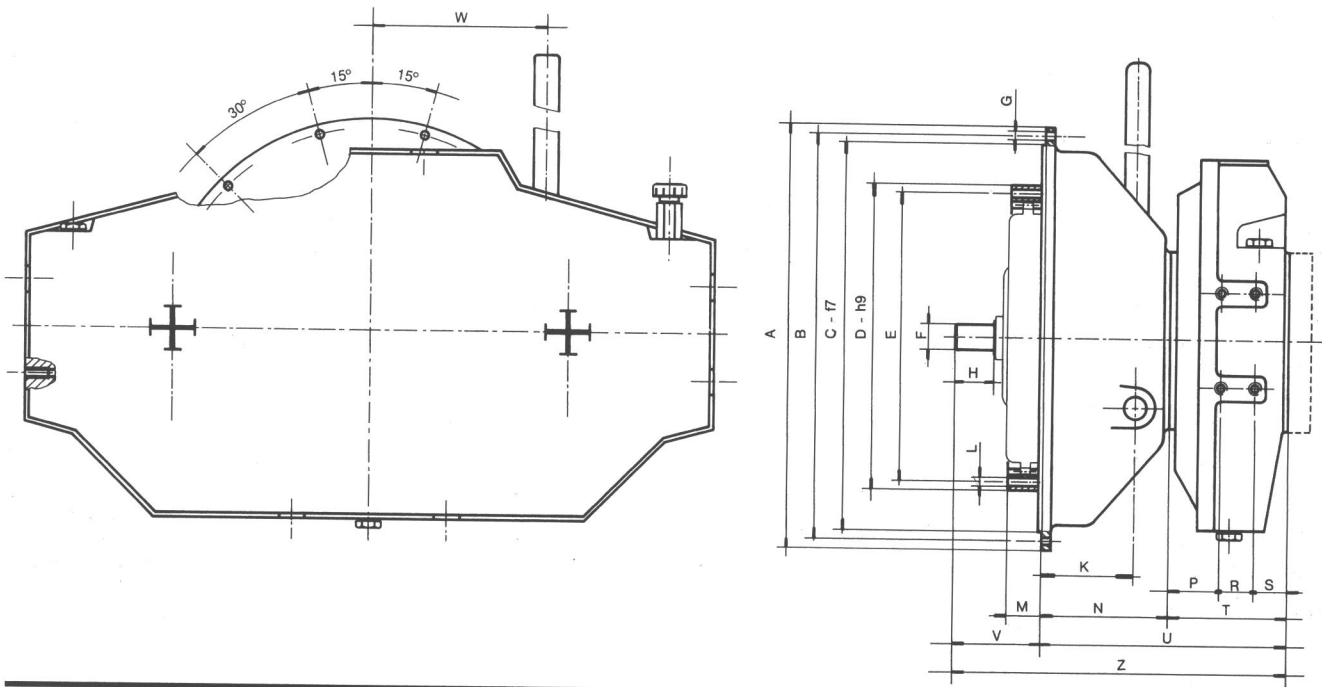
Frizione tipo Clutch type Embrayage type	a	b	c	d	e	f	g	h	i	m	n	p	r	s	t	u	v	z	w	y
BDS 290	403	80	50	M14	30	14X9X70	54	M10	90	104	70	172	57	40	40	137	436	573	404	160
BDS 2200	552	-	80	M20	45	24X14X120	87	-	135	-	-	-	52	40	40	132	634	766	-	215

AM232B

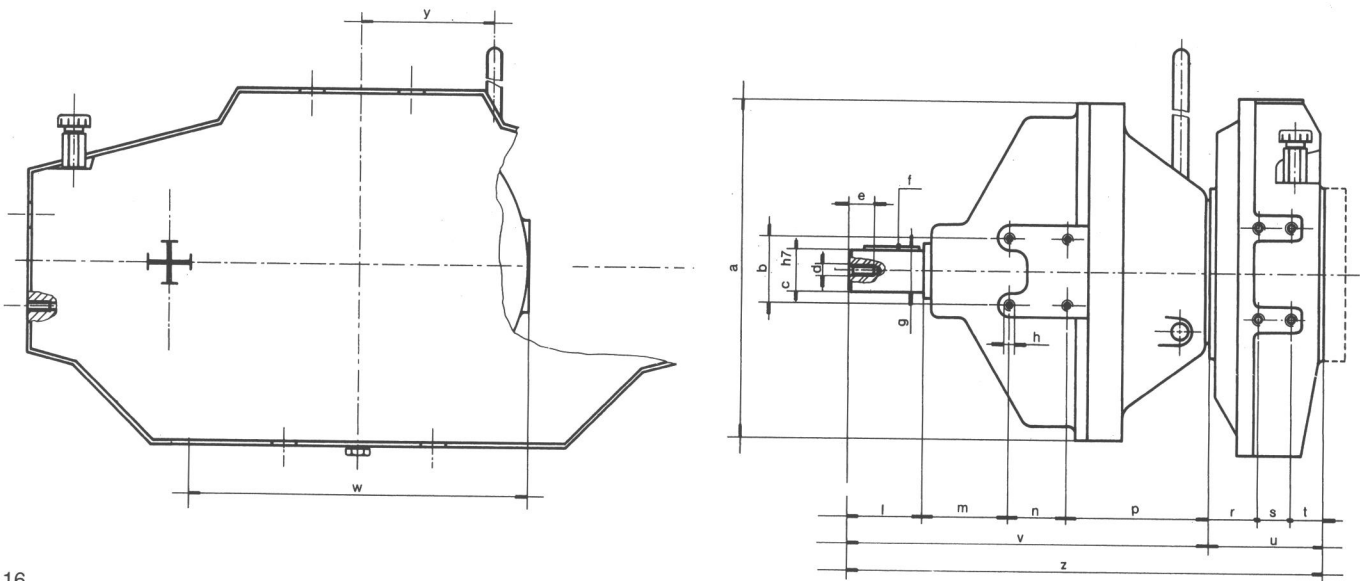


A - Tappo di carico e livello olio - Oil breather and level plug - Bouchon de remplissage et niveau
B - Tappo di scarico olio - Oil drain plug - Bouchon de vidange

AM 232 BD 290 - AM 232 BD 2200 - AM 232 BD 3300



AM 232 BDS 290 - AM 232 BDS 2200



AM 232 B-BD-BDS



DATI TECNICI / TECHNICAL DATAS / CARACTERISTIQUES TECHNIQUES

Rapporto Ratio Rapport	Coppia max entrata Max input torque Couple maxi à l'entrée M₁ (Nm)	Coppia max uscita Each output max torque Couple maxi à la sortie M₂ (Nm)	Velocità max Max speed Vitesse maxi n₁ (RPM)	Quantità olio Oil quantity Quantité huile l	Frizione tipo Clutch type Embrayage type	tipo SAE type SAE type SAE	Coppia max entrata Max input torque Couple max à l'entrée Nm	Velocità max Max. Speed Vitesse maxi RPM	Potenza Power Puissance Kw
0,49	3250	800	1750	-	BD 290	1-2-3	880	2900	150
0,77	2700	1050	2100	5	BD 2200	1	1960	2400	230
1,00	2300	1150	2400	4,5	BD 3300	1	2980	2400	320
					BDS 290	-	880	2900	150
					BDS 2200	-	1960	2400	230

Rapporto Ratio Rapport	Momento d'inerzia Moment of inertia Moment d'inertie J (Kgm²)							Tipo Type Type	Peso Weight Kg. Poids
	B	BD 290	BD 2200	BD 3300	BDS 290	BDS 2200			
0,49	0,3184	0,7684	2,1434	2,8684	0,9934	3,3184		AM 232 B	126
0,77	0,2292	0,6792	2,0542	2,7936	0,9042	3,2292		AM 232 BD 290	192
1,00	0,2026	0,6526	2,0276	2,7526	0,8776	3,2026		AM 232 BD 2200	259
								AM 232 BD 3300	302
								AM 232 BDS 290	219
								AM 232 BDS 2200	369

DIMENSIONI / DIMENSIONS / DIMENSIONS

AM 232 BD

Frizione tipo Clutch type Embrayage type	D	E	F	H	L	M	N	P	R	S	T	U	V	Z	K	W
BD 290	352,42	333,37	30	37	n. 8 fori ø 10,5	39,7	147	57	40	40	137	284	100	384	78	160
BD 2200	466,72	438,15	35	37	n. 8 fori ø 10,5	25,4	236	52	40	40	132	368	100	468	179	215
BD 3300	466,72	438,15	35	37	n. 8 fori ø 10,5	25,4	264	52	40	40	132	396	100	496	207	215

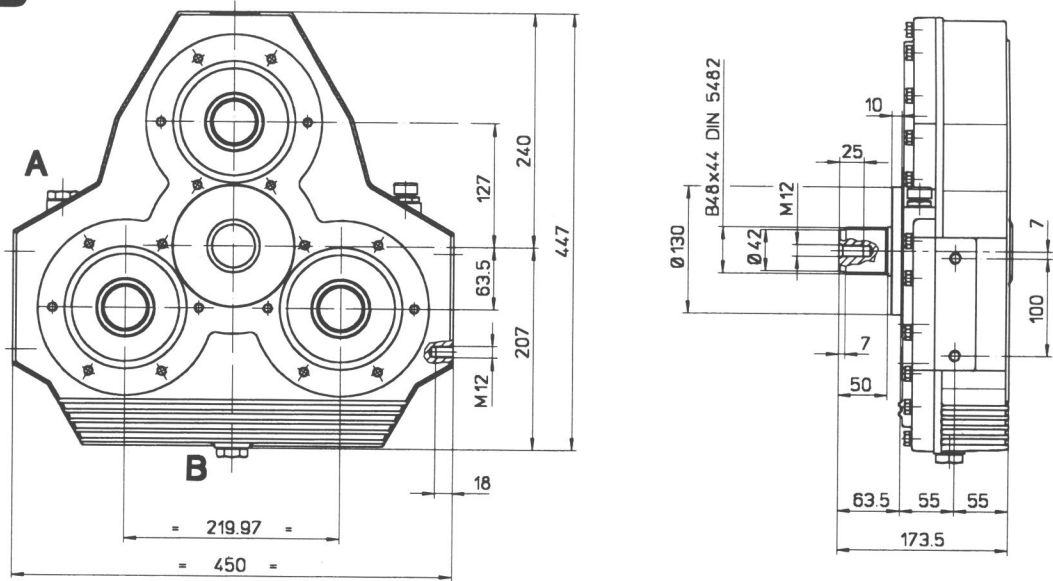
SAE	DIMENSIONI / DIMENSIONS / DIMENSIONS															
	A				B				C				G			
1	552				530,22				511,17				n. 12 fori ø 12			
2	489				466,72				447,67				n. 12 fori ø 11			
3	451				428,62				409,57				n. 12 fori ø 11			
4	403,22				381				361,95				n. 12 fori ø 11			

DIMENSIONI / DIMENSIONS / DIMENSIONS

AM 232 BDS

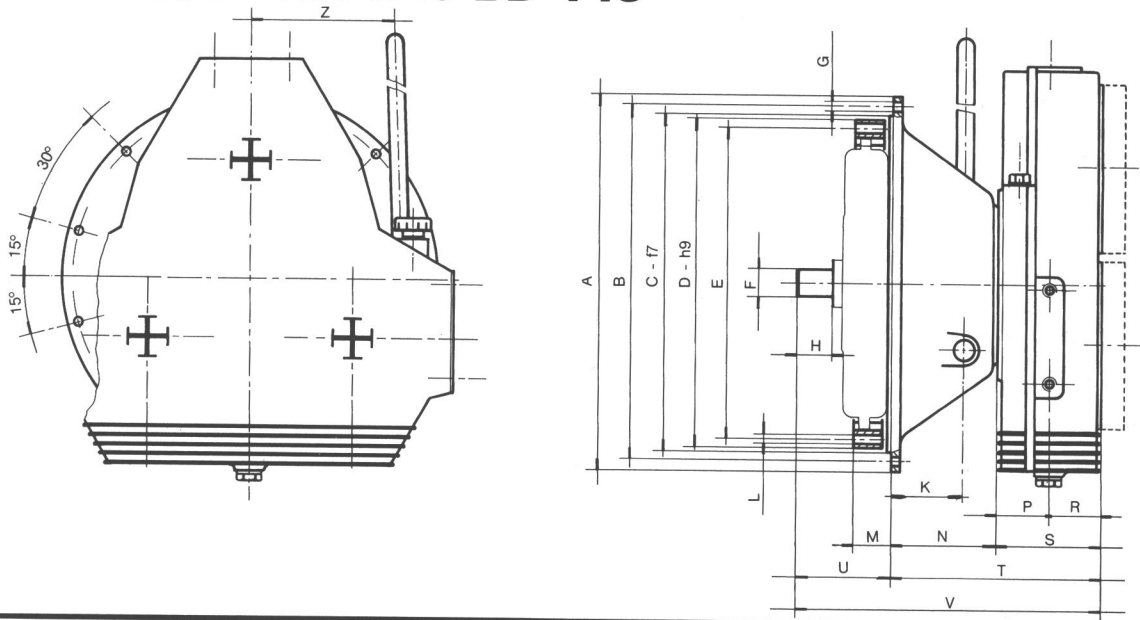
Frizione tipo Clutch type Embrayage type	a	b	c	d	e	f	g	h	i	m	n	p	r	s	t	u	v	z	w	y
BDS 290	403	80	50	M14	30	14X9X70	54	M10	90	104	70	172	57	40	40	137	436	573	404	160
BDS 2200	552	-	80	M20	45	24X14X120	87	-	135	-	-	-	52	40	40	132	634	766	-	215

AM320B

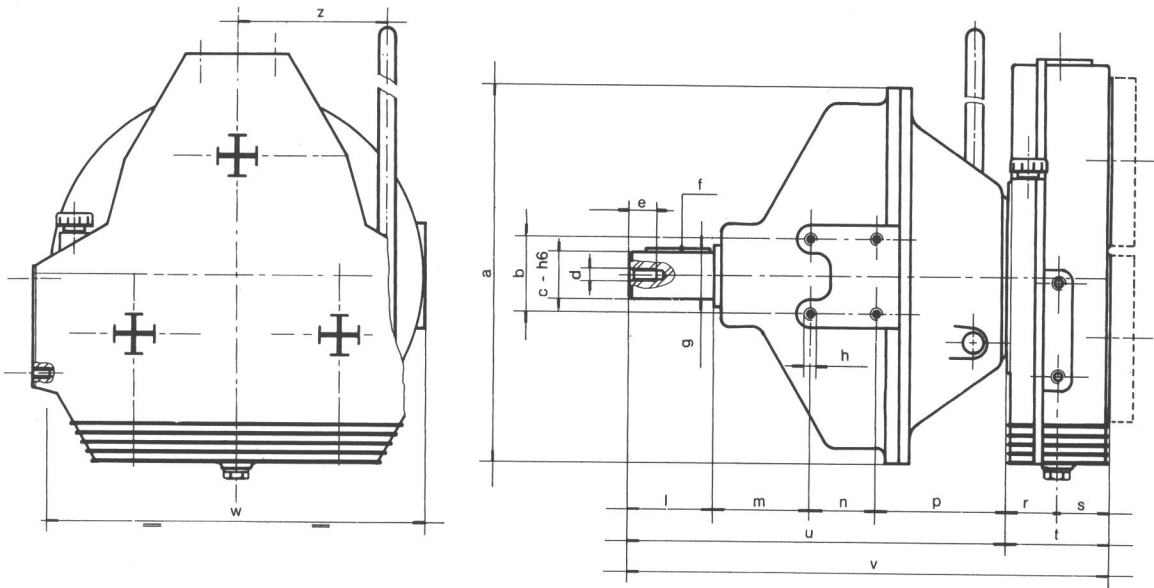


A - Tappo di carico, livello e sfiato olio - Oil breather and level plug - Bouchon de remplissage et niveau
B - Tappo di scarico olio - Oil drain plug - Bouchon de vidange

AM 320 BD 130 - AM 320 BD 145



AM 320 BDS 130 - AM 320 BDS 145



AM 320 B-BD-BDS



DATI TECNICI / TECHNICAL DATAS / CARACTERISTIQUES TECHNIQUES

Rapporto Ratio Rapport	Coppia max entrata Max input torque Couple maxi à l'entrée M ₁ (Nm)	Coppia max uscita Each output max torque Couple maxi à la sortie M ₂ (Nm)	Velocità max Max speed Vitesse maxi n ₁ (RPM)	Quantità olio Oil quantity Quantité huile l	Frizione tipo Clutch type Embrayage type	tipo SAE type SAE type SAE	Coppia max entrata Max input torque Couple max à l'entrée Nm	Velocità max Max. Speed Vitesse maxi RPM	Potenza Power Puissance Kw
0,68	1105	250	2650	3,1	BD 130	3-4	330	3100	70
0,79	1045	275	2850	2,4	BD 145	3-4	450	3100	80
1,00	945	315	3200	2,2	BDS 130	-	330	3100	70
1,27	825	350	3600	2,0	BDS 145	-	450	3100	80
1,47	745	365	3950	1,8					

Rapporto Ratio Rapport	Momento d'inerzia Moment of inertia Moment d'inertie J (Kgm ²)						Tipo Type Type	Peso Weight Kg. Poids
	B	BD130	BD145	BDS 130	BDS 145			
0,68	0,0344	0,1719	0,2969	0,2844	0,4719		AM 320B	42
0,79	0,0312	0,1688	0,2937	0,2812	0,4688		AM 320 BD 130	82
1,00	0,0271	0,1646	0,2896	0,2771	0,4646		AM 320 BD 145	86
1,27	0,0226	0,1601	0,2851	0,2726	0,4601		AM 320 BDS 130	113
1,47	0,0206	0,1581	0,2832	0,2707	0,4582		AM 320 BDS 145	117

DIMENSIONI / DIMENSIONS / DIMENSIONS

AM 320 BD

Frizione tipo Clutch type Embrayage type	D	E	F	H	L	M	N	P	R	S	T	U	V	Z	K
BD 130	314,32	295,27	30	37	n. 8 fori ø 10,5	54	114	55	55	110	224	100	324	160	78
BD 145	352,42	333,37	30	37	n. 8 fori ø 10,5	39,7	114	55	55	110	224	100	324	160	78

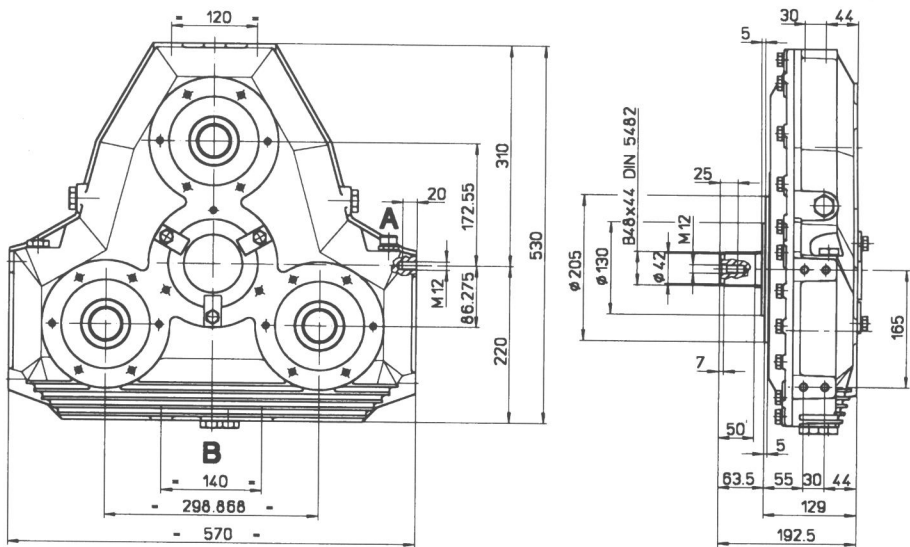
SAE	DIMENSIONI / DIMENSIONS / DIMENSIONS			
	A	B	C	G
3	451	428,62	409,57	n. 12 fori ø 11
4	403,22	381	361,95	n. 12 fori ø 11

DIMENSIONI / DIMENSIONS / DIMENSIONS

AM 320 BDS

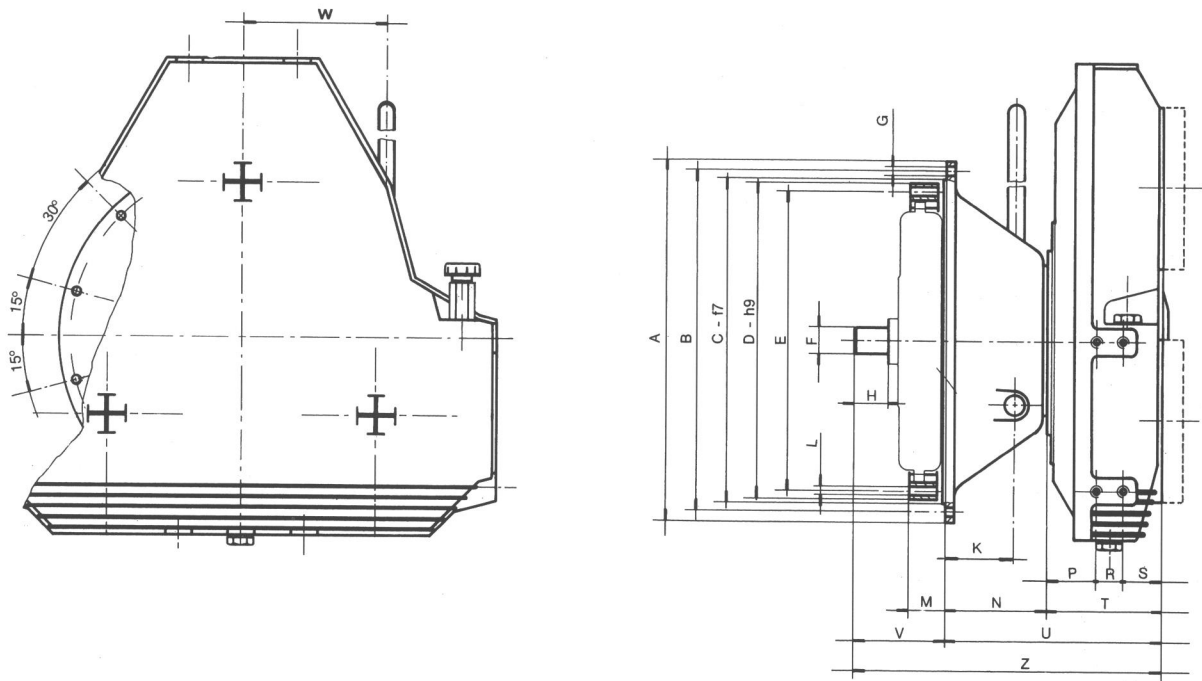
Frizione tipo Clutch type Embrayage type	a	b	c	d	e	f	g	h	i	m	n	p	r	s	t	u	v	z	w
BDS 130	403	80	50	M14	30	14X9X70	54	M10	90	104	70	139	55	55	110	403	513	160	404
BDS 145	403	80	50	M14	30	14X9X70	54	M10	90	104	70	139	55	55	110	403	513	160	404

AM330B

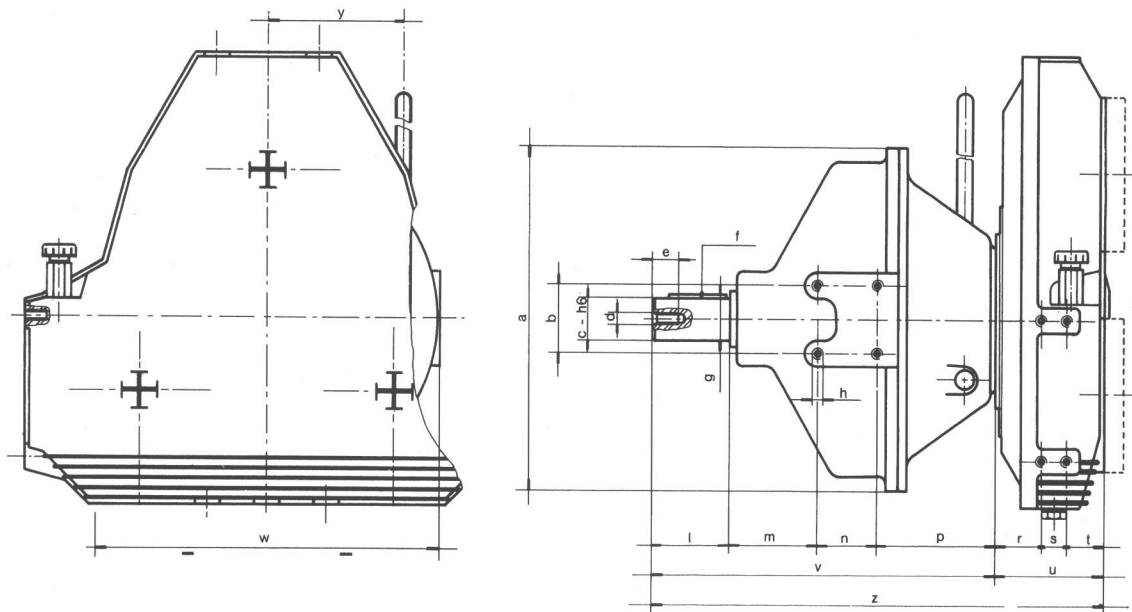


A - Tappo di carico, livello e sfiato olio - Oil breather and level plug - Bouchon de remplissage et niveau
B - Tappo di scarico olio - Oil drain plug - Bouchon de vidange

AM 330 BD 130 - AM 330 BD 145 - AM 330 BD 290



AM 330 BDS 130 - AM 330 BDS 145 - AM 330 BDS 290



AM 330 B-BD-BDS



DATI TECNICI / TECHNICAL DATAS / CARACTERISTIQUES TECHNIQUES

Rapporto Ratio Rapport	Coppia max entrata Max input torque Couple maxi à l'entrée M ₁ (Nm)	Coppia max uscita Each output max torque Couple maxi à la sortie M ₂ (Nm)	Velocità max Max speed Vitesse maxi n ₁ (RPM)	Quantità olio Oil quantity Quantité huile l	Frizione tipo Clutch type Embrayage type	tipo SAE type SAE type SAE	Coppia max entrata Max input torque Couple max à l'entrée Nm	Velocità max Max. Speed Vitesse maxi RPM	Potenza Power Puissance Kw
0,49	2200	360	2400	2,5	BD 130	3-4	330	3100	70
0,58	2120	410	2500	2,0	BD 145	3-4	450	3100	80
0,67	2025	450	2650	1,8	BD 290	1-2-3	880	2900	150
0,77	1910	490	2850	1,8	BDS 130	-	330	3100	70
1,00	1620	540	3200	1,4	BDS 145	-	450	3100	80
1,30	1480	640	3600	1,4	BDS 290	-	880	2900	150
1,50	1350	675	3950	1,2					

Rapporto Ratio Rapport	Momento d'inerzia Moment of inertia Moment d'inertie J (Kgm ²)							Tipo Type Type	Peso Weight Kg. Poids
	B	BD 130	BD 145	BD 290	BDS 130	BDS 145	BDS 290		
0,49								AM 330 B	122
0,58								AM 330 BD 130	143
0,67	0,1231	0,2606	0,3856	0,5731	0,3731	0,5606	0,7981	AM 330 BD 145	147
0,77	0,1114	0,2489	0,3739	0,5614	0,3614	0,5489	0,7864	AM 330 BD 290	169
1,00	0,0744	0,2119	0,3369	0,5244	0,3244	0,5119	0,7494	AM 330 BDS 130	174
1,30	0,0668	0,2043	0,3293	0,5168	0,3168	0,5043	0,7418	AM 330 BDS 145	178
1,50	0,0646	0,2022	0,3272	0,5146	0,3146	0,5021	0,7396	AM 330 BDS 290	196

DIMENSIONI / DIMENSIONS / DIMENSIONS

AM 330 BD

Frizione tipo Clutch type Embrayage type	D	E	F	H	L	M	N	P	R	S	T	U	V	Z	K	W
BD 130	314,32	295,27	30	37	n. 8 fori ø 10,5	54	114	55,5	30	43,5	129	243	100	343	78	160
BD 145	352,42	333,37	30	37	n. 8 fori ø 10,5	39,7	114	55,5	30	43,5	129	243	100	343	78	160
BD 290	352,42	333,37	30	37	n. 8 fori ø 10,5	39,7	147	55,5	30	43,5	129	276	100	376	111	205

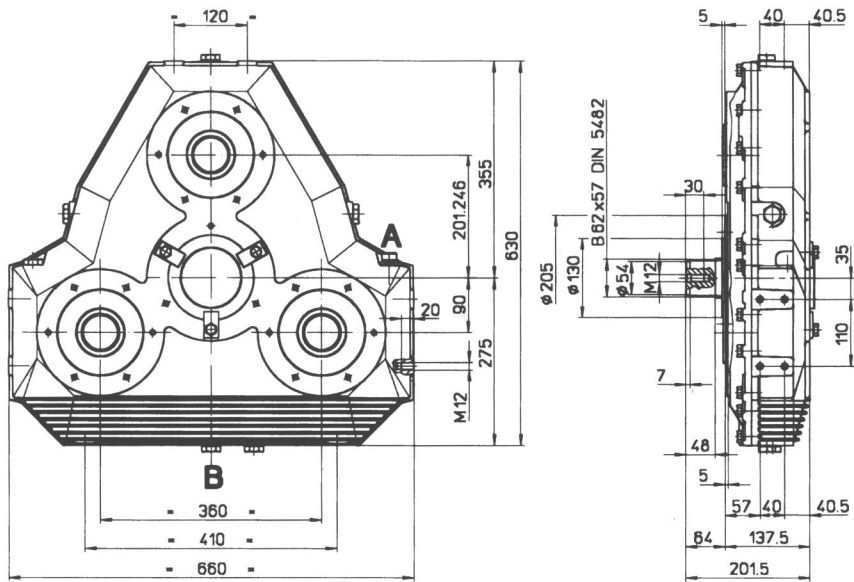
SAE	DIMENSIONI / DIMENSIONS / DIMENSIONS															
	A				B				C				G			
1	552				530,22				511,17				n. 12 fori ø 12			
2	489				466,72				447,67				n. 12 fori ø 11			
3	451				428,62				409,57				n. 12 fori ø 11			
4	403,22				381				361,95				n. 12 fori ø 11			

DIMENSIONI / DIMENSIONS / DIMENSIONS

AM 330 BDS

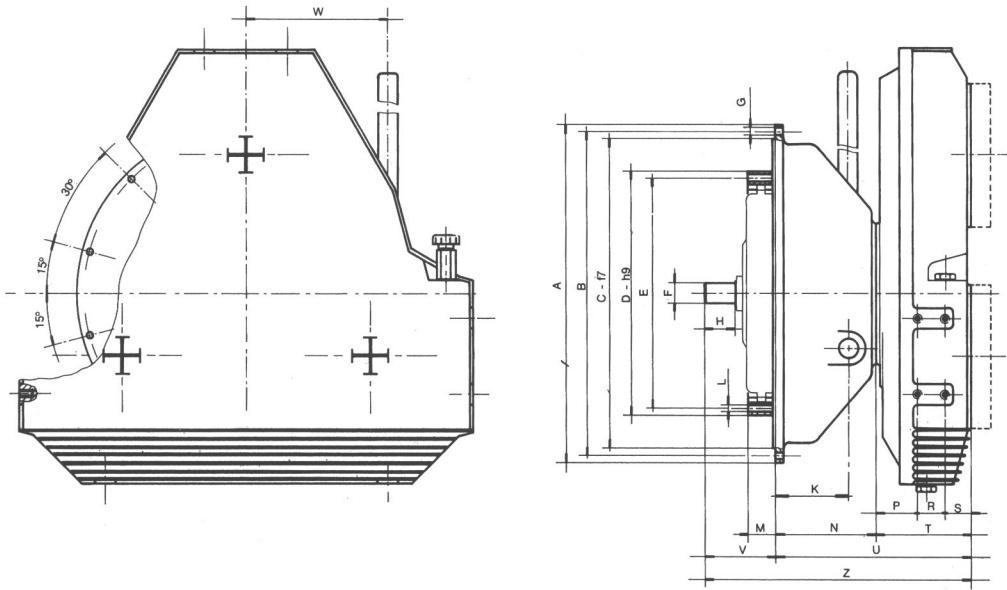
Frizione tipo Clutch type Embrayage type	a	b	c	d	e	f	g	h	i	m	n	p	r	s	t	u	v	z	w	y
BDS 130	403	80	50	M14	30	14X9X70	54	M10	90	104	70	139	55,5	30	43,5	129	403	532	404	160
BDS 145	403	80	50	M14	30	14X9X70	54	M10	90	104	70	139	55,5	30	43,5	129	403	532	404	160
BDS 290	403	80	50	M14	30	14X9X70	54	M10	90	104	70	172	55,5	30	43,5	129	436	565	404	160

AM345B

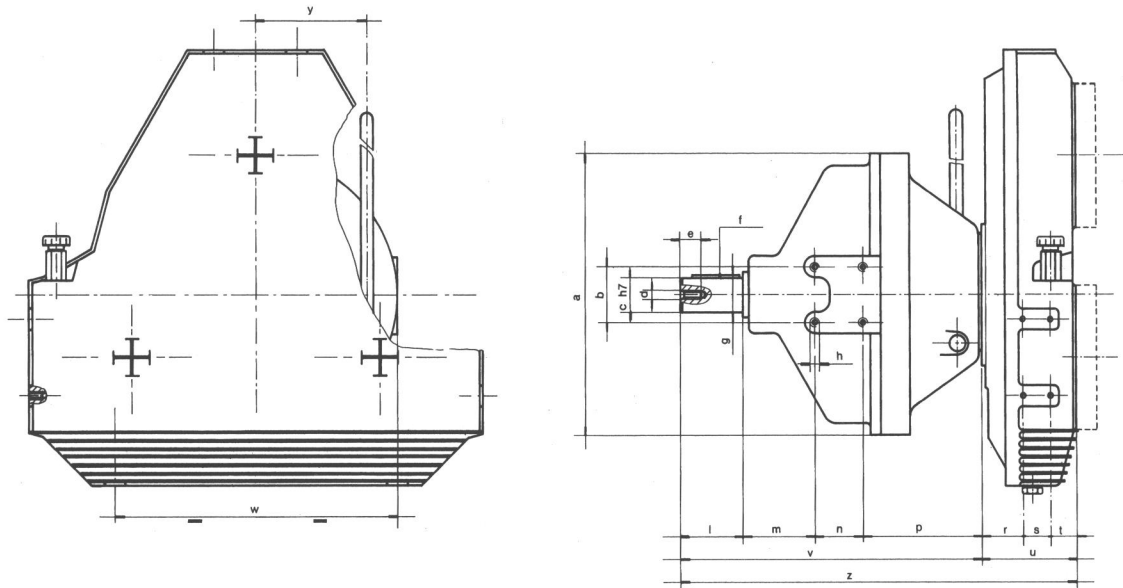


A - Tappo di carico, livello e sfiato olio - Oil breather and level plug - Bouchon de remplissage et niveau
B - Tappo di scarico olio - Oil drain plug - Bouchon de vidange

AM 345 BD 290 - AM 345 BD 2200 - AM 345 BD 3300



AM 345 BDS 290 - AM 345 BDS 2200



AM 345 B-BD-BDS



DATI TECNICI / TECHNICAL DATAS / CARACTERISTIQUES TECHNIQUES

Rapporto Ratio Rapport	Coppia max entrata Max input torque Couple maxi à l'entrée M ₁ (Nm)	Coppia max uscita Each output max torque Couple maxi à la sortie M ₂ (Nm)	Velocità max Max speed Vitesse maxi n ₁ (RPM)	Quantità olio Oil quantity Quantité huile l	Frizione tipo Clutch type Embrayage type	tipo SAE type SAE type SAE	Coppia max entrata Max input torque Couple max à l'entrée Nm	Velocità max Max. Speed Vitesse maxi RPM	Potenza Power Puissance Kw
0,51	3120	530	1950		BD 290	1-2-3	880	2900	150
0,58	3000	580	2050		BD 2200	1	1960	2400	230
0,67	2860	640	2200	4,4	BD 3300	1	2940	2400	320
0,76	2760	700	2300	4,0	BDS 290	-	880	2900	150
1,00	2430	810	2600	3,6	BDS 2200	-	1960	2400	230
1,31	2080	910	3000	3,0					
1,48	1900	940	3200	2,8					

Rapporto Ratio Rapport	Momento d'inerzia Moment of inertia Moment d'inertie J (Kgm ²)						Tipo Type Type	Peso Weight Kg. Poids
	B	BD 290	BD 2200	BD 3300	BDS 290	BDS 2200		
0,51							AM 345 B	154
0,58	0,2546						AM 345 BD 290	188
0,67	0,2723	0,7223	2,0973	2,8223	0,9473	3,2723	AM 345 BD 2200	255
0,76	0,2436	0,6936	2,0686	2,7936	0,9186	3,2436	AM 345 BD 3300	298
1,00	0,1580	0,6080	1,9830	2,7080	0,8330	3,1580	AM 345 BDS 290	215
1,31	0,1452	0,5952	1,9702	2,6952	0,8202	3,1452	AM 345 BDS 2200	365
1,48	0,1405	0,5904	1,9654	2,6904	0,8154	3,1404		

DIMENSIONI / DIMENSIONS / DIMENSIONS

AM 345 BD

Frizione tipo Clutch type Embrayage type	D	E	F	H	L	M	N	P	R	S	T	U	V	Z	K	W
BD 290	352,42	333,37	30	37	n. 8 fori ø 10,5	39,7	147	57	40	40	137	284	100	384	78	160
BD 2200	466,72	438,15	35	37	n. 8 fori ø 10,5	25,4	236	52	40	40	132	368	100	468	179	215
BD 3300	466,72	438,15	35	37	n. 8 fori ø 10,5	25,4	264	52	40	40	132	396	100	496	207	215

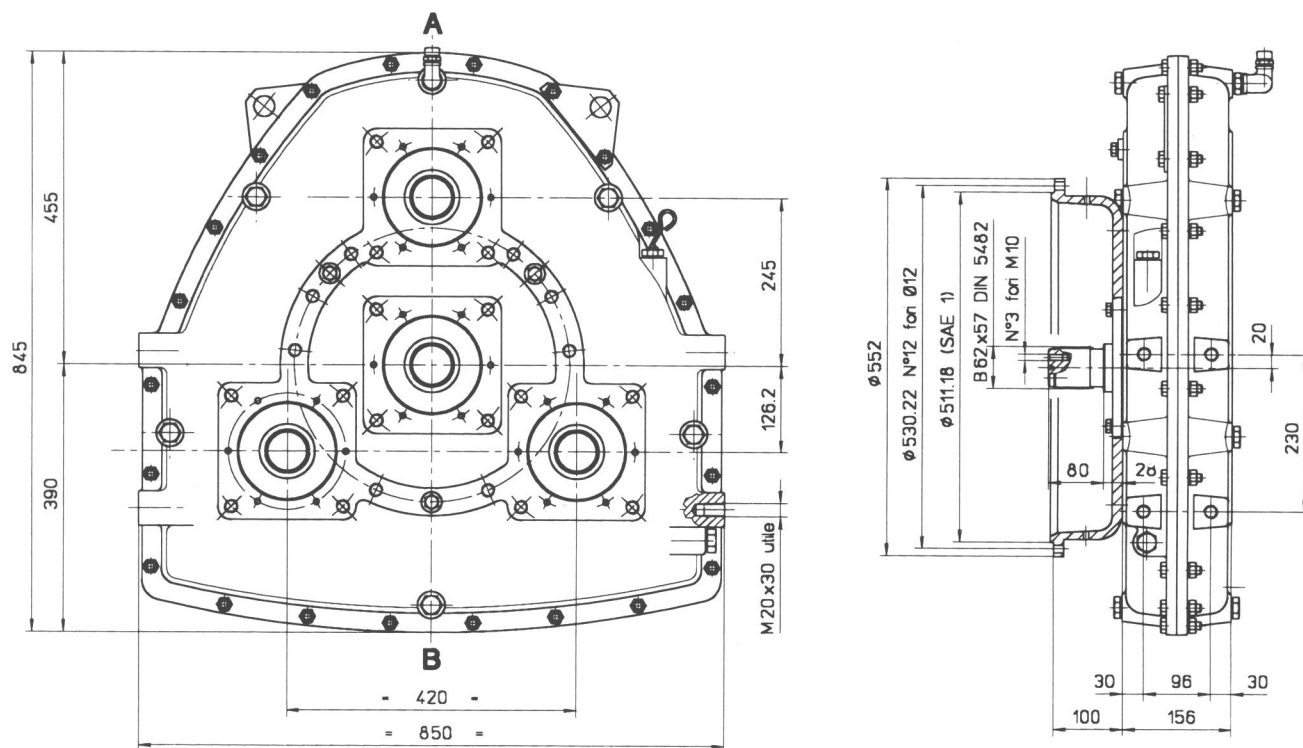
SAE	DIMENSIONI / DIMENSIONS / DIMENSIONS			
	A	B	C	G
1	552	530,22	511,17	n. 12 fori ø 12
2	489	466,72	447,67	n. 12 fori ø 11
3	451	428,62	409,57	n. 12 fori ø 11
4	403,22	381	361,95	n. 12 fori ø 11

DIMENSIONI / DIMENSIONS / DIMENSIONS

AM 345 BDS

Frizione tipo Clutch type Embrayage type	a	b	c	d	e	f	g	h	i	m	n	p	r	s	t	u	v	z	w	y
BDS 290	403	80	50	M14	30	14X9X70	54	M10	90	104	70	172	57	40	40	137	436	573	404	160
BDS 2200	552	-	80	M20	45	24X14X120	87	-	135	-	-	-	52	40	40	132	634	766	-	215

AM365



A - Tappo di carico e sfiato olio - Oil breather plug - Bouchon de remplissage

B - Tappo di scarico olio - Oil drain plug - Bouchon de vidange

DATI TECNICI / TECHNICAL DATAS / CARACTERISTIQUES TECHNIQUES

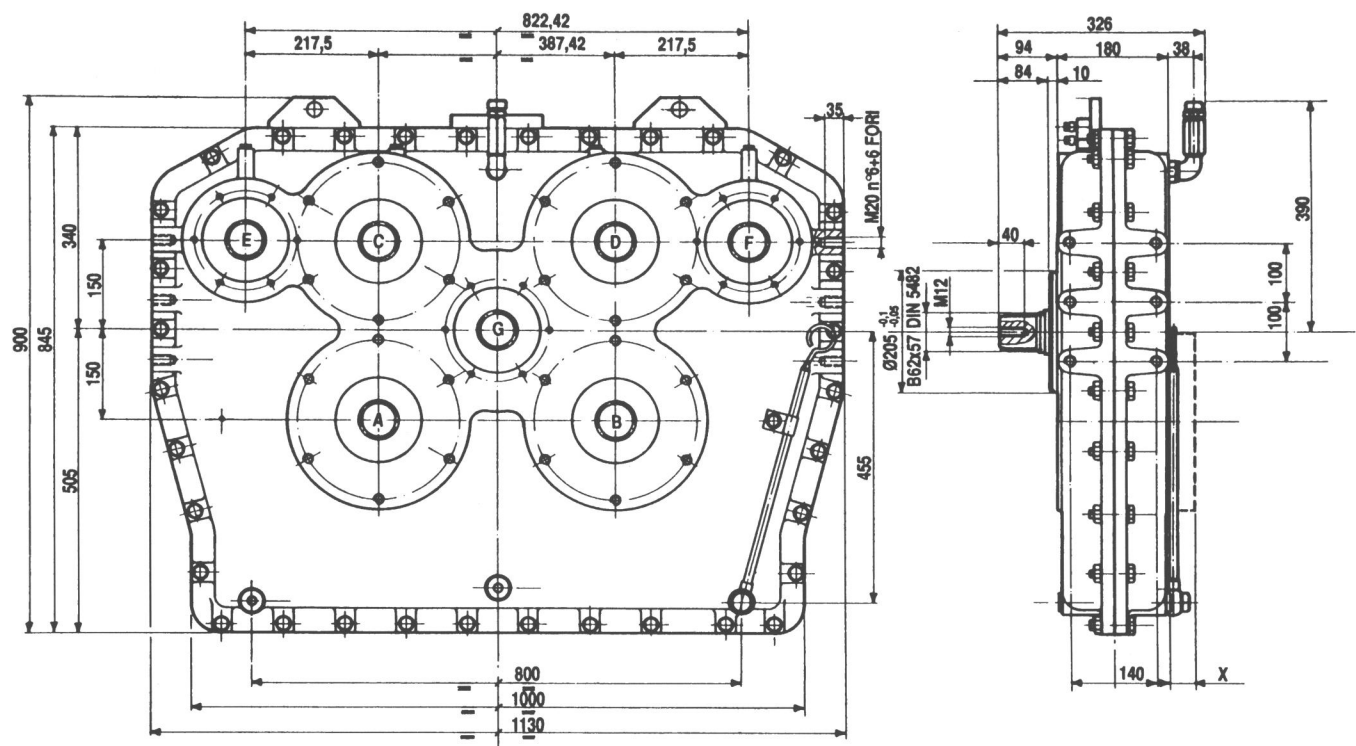
Rapporti Ratios Rapports	Coppia max entrata Max input torque Couple maxi à l'entrée M_i (Nm)	Coppia max uscita Each output max torque Couple maxi à la sortie M_e (Nm)	Momento d'inerzia Moment of inertia Moment d'inertie J (kg m ²)	Velocità max Max speed Vitesse maxi n_1 (RPM)	Quantità olio Oil quantity Quantité huile l	Peso Weight Poids Kg.
0,69	5220	1200	-	1800	14,5	215 ★
0,81	5185	1400	0,4255	2100		
1,00	4350	1450	0,3626	2200		
1,23	3900	1600	0,3428	2400		
1,45	3520	1700	0,2794	2500		

* **Peso con campana SAE1: 260 Kg.**

* **Weight with SAE1 housing: 260 Kg.**

* **Poids avec cloche SAE1 : 260 Kg.**

AM640

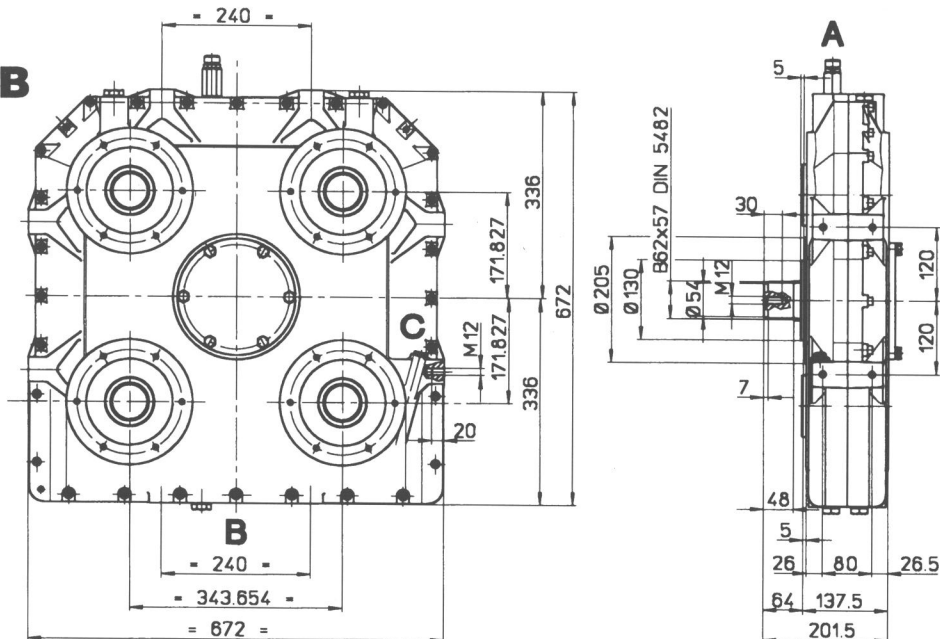


DATI TECNICI / TECHNICAL DATAS / CARACTERISTIQUES TECHNIQUES

Rapporto Ratio Rapport A, B, C, D	Coppia max entrata Max input torque Couple maxi à l'entrée M_i (Nm)	Coppia max ogni uscita Each output max torque Couple maxi à la sortie A, B, C + E, D + F (Nm)	Velocità max Max speed Vitesse maxi n_i (RPM)	Peso weight poids kg.
1,00	5600	1400	2100	400
0,81	5900	1200	2000	

- L'accoppiatore AM 640 è costruito in modo da poter consentire la realizzazione di rapporti differenziati sulle prese A, B, C, D. Consultare il servizio tecnico Technodrive per ogni specifica applicazione.
- AM 640 pump drive is built to carry out different ratios on outputs A, B, C, D. For particular fittings call our technical dept.
- La boîte AM 640 est structurée pour permettre la réalisation des rapports divers sur les prises A, B, C, D. Pour des applications particulières consulter le bureau technique Technodrive.

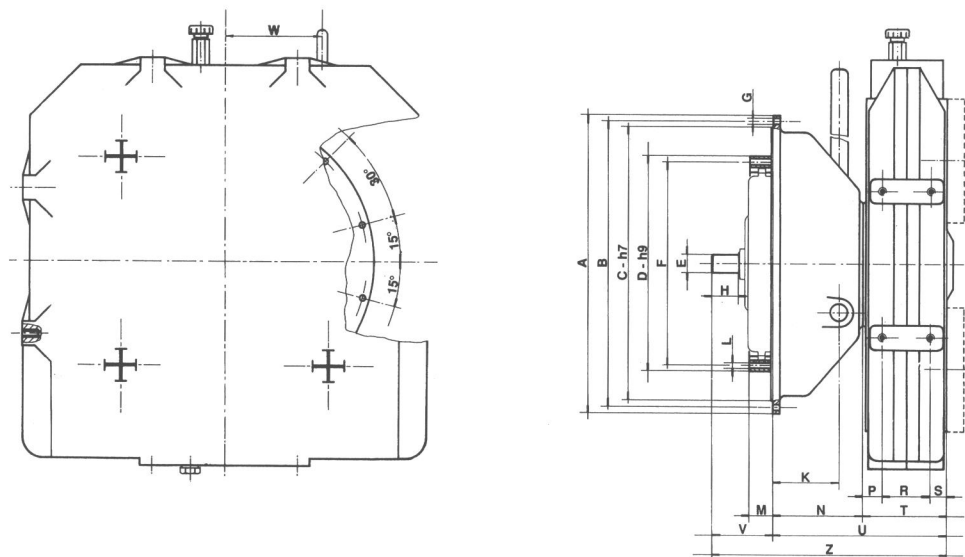
AM450B



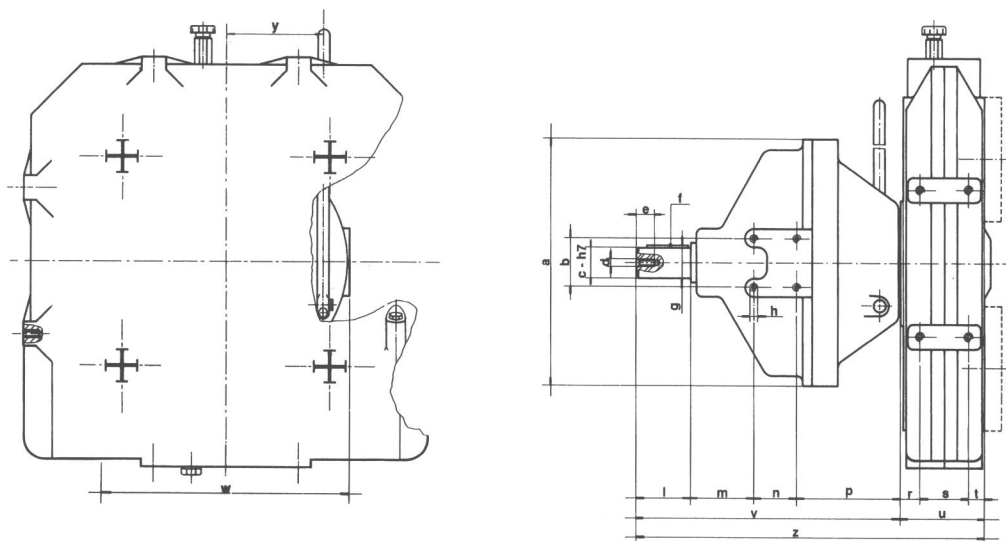
A - Tappo di carico e sfiato olio - Oil breather plug - Bouchon de remplissage
B - Tappo di scarico olio - Oil drain plug - Bouchon de vidange

C - Tappo livello olio - Oil level plug - Bouchon de niveau

AM 450 BD 290 - AM 450 BD 2200 - AM 450 BD 3300



AM 450 BDS 290 - AM 450 BDS 2200



AM 450 B-BD-BDS



DATI TECNICI / TECHNICAL DATAS / CARACTERISTIQUES TECHNIQUES

Rapporto Ratio Rapport	Coppia max entrata Max input torque Couple maxi à l'entrée M ₁ (Nm)	Coppia max uscita Each output max torque Couple maxi à la sortie M ₂ (Nm)	Velocità max Max speed Vitesse maxi n ₁ (RPM)	Quantità olio Oil quantity Quantité huile l	Frizione tipo Clutch type Embrayage type	tipo SAE type SAE type SAE	Coppia max entrata Max input torque Couple max à l'entrée Nm	Velocità max Max. Speed Vitesse maxi RPM	Potenza Power Puissance Kw
0,67	7450	1250	2000	2,5	BD 290	1-2-3	880	2900	150
0,77	5950	1150	2100	2,5	BD 2200	1	1960	2400	230
0,89	5150	1150	2250	2,3	BD 3300	1	2980	2400	320
1,00	5200	1300	2400	2,3	BDS 290	-	880	2900	150
					BDS 2200	-	1960	2400	230

Rapporto Ratio Rapport	Momento d'inerzia Moment of inertia Moment d'inertie J (Kg ^m ²)						Tipo Type Type	Peso Weight Kg. Poids
	B	BD 290	BD 2200	BD 3300	BDS 290	BDS 2200		
0,67							AM 450 B	205
0,77	0,5777	1,0452	2,4027	3,1277	1,2527	3,5777	AM 450 BD 290	271
0,89	0,4527	0,9202	2,2777	3,0027	1,1277	3,4527	AM 450 BD 2200	338
1,00	0,4445	0,8945	2,2695	2,9945	1,1195	3,4445	AM 450 BD 3300	381
							AM 450 BDS 290	298
							AM 450 BDS 2200	448

DIMENSIONI / DIMENSIONS / DIMENSIONS

AM 450 BD

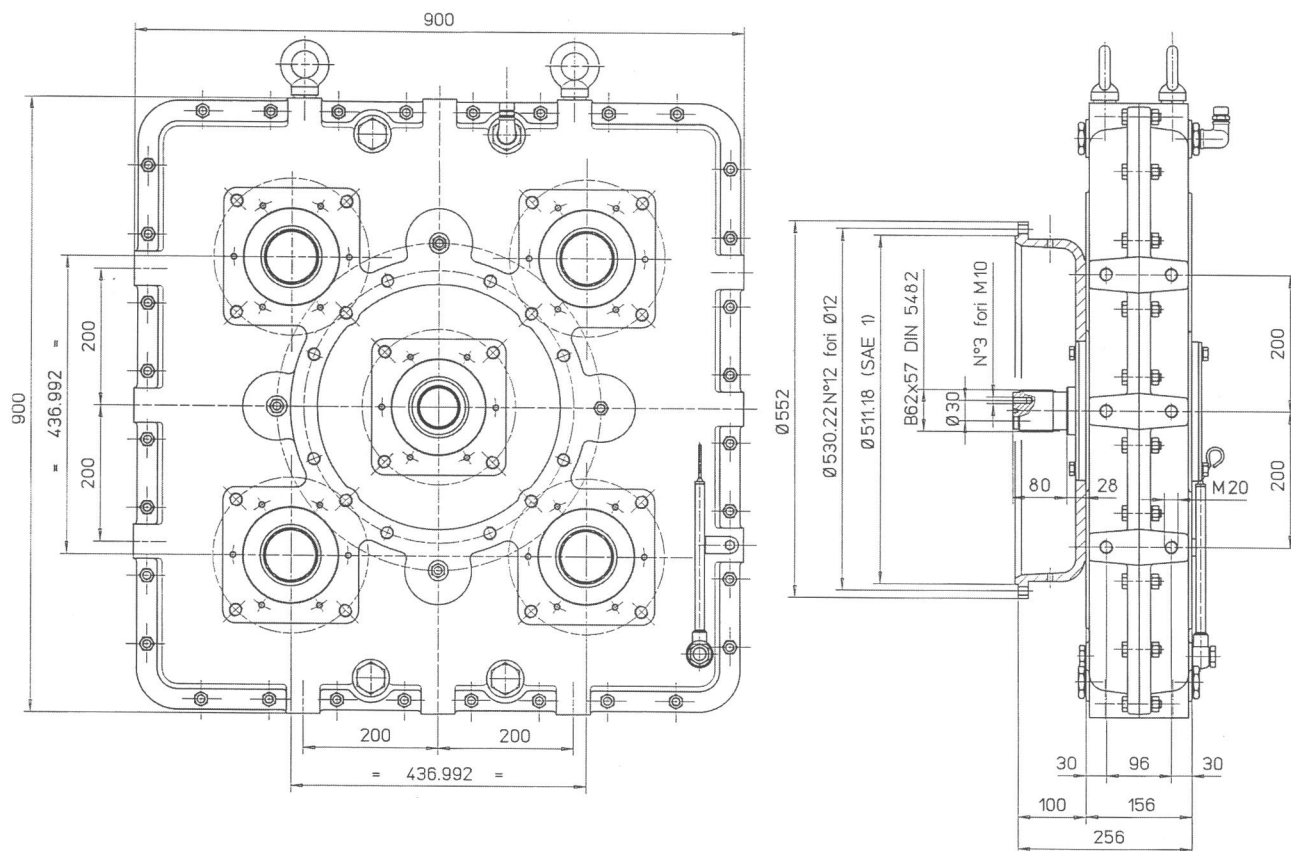
Frizione tipo Clutch type Embrayage type	D	E	F	H	L	M	N	P	R	S	T	U	V	Z	K	W
BD 290	352,42	333,37	30	37	n. 8 fori ø 10,5	39,7	147	31	80	26	137	284	100	384	78	160
BD 2200	466,72	438,15	35	37	n. 8 fori ø 10,5	25,4	236	26	80	26	132	368	100	468	179	215
BD 3300	466,72	438,15	35	37	n. 8 fori ø 10,5	25,4	264	26	80	26	132	396	100	496	207	215

SAE	DIMENSIONI / DIMENSIONS / DIMENSIONS			
	A	B	C	G
1	552	530,22	511,17	n. 12 fori ø 12
2	489	466,72	447,67	n. 12 fori ø 11
3	451	428,62	409,57	n. 12 fori ø 11
4	403,22	381	361,95	n. 12 fori ø 11

DIMENSIONI / DIMENSIONS / DIMENSIONS

AM 450 BDS

Frizione tipo Clutch type Embrayage type	a	b	c	d	e	f	g	h	i	m	n	p	r	s	t	u	v	z	w	y
BDS 290	403	80	50	M14	30	14X9X70	54	M10	90	104	70	172	31	80	26	137	436	573	404	160
BDS 2200	552	-	80	M20	45	24X14X120	87	-	135	-	-	-	26	80	26	132	634	766	-	215



DATI TECNICI / TECHNICAL DATAS / CARACTERISTIQUES TECHNIQUES

Rapporto Ratio Rapport	Coppia max entrata Max input torque Couple maxi a l'entrée M_1 (Nm)	Coppia Max uscita Each output max torque Couple maxi à la sortie M_2 (Nm)	Momento d'inerzia Moment of inertia Moment d'inerte J (kg.m ² .)	Velocità max Max speed Vitesse max n_1 (rpm)	Quantità olio Oil quantity Quantite huile I	Peso Weight Poids kg
0.717	8925	1600	1.4705	1500	7.3	350 *
0.873	8020	1750	1.3524	1650	7	
1	7600	1900	1.2394	1750	6.9	
1.146	7000	2000	1.1568	1900	6.7	

* **Peso con campana SAE1:** 395 kg

* **Weight with SAE1 housing:** 395 kg

* **Poids avec cloche SAE1 :** 395 kg