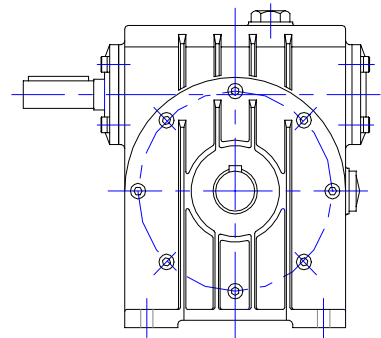
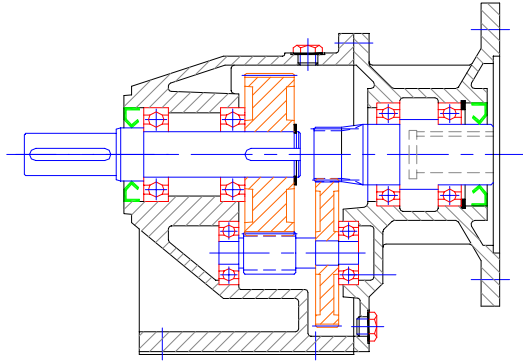


# **OLIMAR**

## **Construções Electromecanicas Domingos Francisco Ramilo , sa**



### ***Fabricante :***

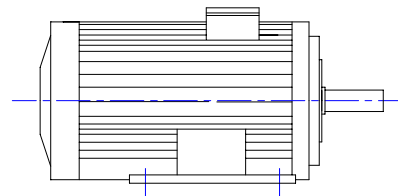
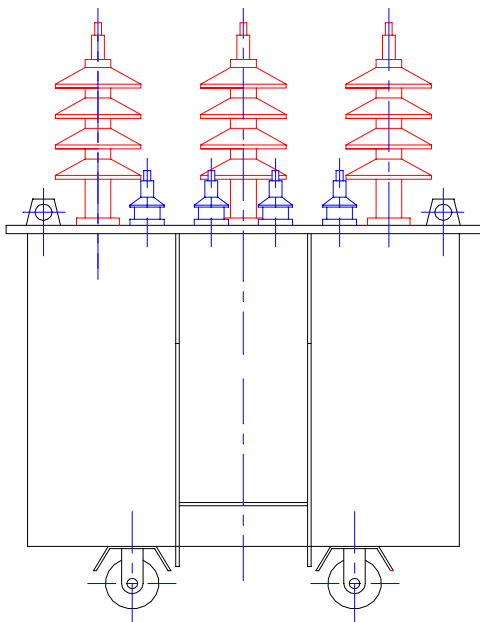
Redutores de engrenagens.

Redutores de roda de corôa, sem-fim.

Máquinas p/ industria mármore/granitos.

Máquinas p/ industria de cerâmica barro vermelho.

Equipamentos movimentação / elevação carga



### ***Importação :***

Motores Electricos.

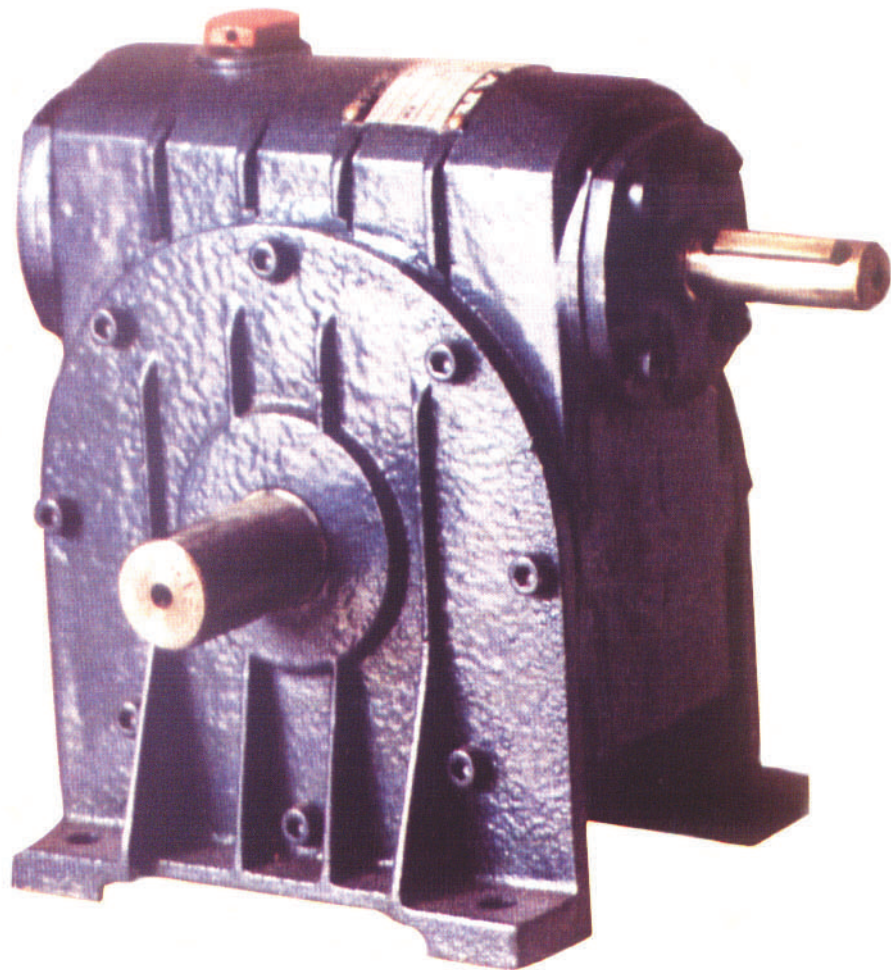
Transformadores de Potencia em banho de oleo.

Transformadores de Potencia Secos.

**Apartado 3 - S.Pedro - 2380 Alcanena  
Portugal**

**Telf. 249 891535 - Fax 249 882588**

REDUTORES/GEARBOXES  
TIPO V / TYPE V



# REDUTOR DE RODA CORÔA / SEM - FIM TIPO V

## ESPECIFICAÇÕES TÉCNICAS:

### CARTÉR:

- Em ferro fundido de grande qualidade.
- A sua fabricação precisa, garante um alinhamento exacto das engrenagens.
- Os pés são maciços e fortemente nervurados e dão um amplo suporte que assegura uma rigidez absoluta, devido à sua configuração existe um maior número de versões para aquando da montagem de redutores.

### ENGRENAGENS:

- O sem-fim é fabricado de uma só peça.
- Material usado para o sem-fim é aço ao carbono de grande resistência, temperado por indução ou em alguns casos um aço de liga com tratamento térmico antes de ser cortado.
- A corôa é fundida em bronze fosforoso.
- As engrenagens são rectificadas e largamente dimensionadas para transmitir continuamente a potência nominal.

### VEIOS E APOIOS:

- Todos os veios são rectificados e apoiados em rolamentos de rolos cónicos de grande capacidade de carga.
- Sem-fim e veio de saída com retentor para evitar perdas de óleo e entrada de poeiras.

### RENDIMENTO:

- O rendimento é muito elevado e atinge 96/98% sob plena carga.

### LUBRIFICAÇÃO:

- As engrenagens funcionam em banho de óleo c/nível controlado por visor de vidro.
- Entrada e saída de óleo por sistema de bujão roscado.
- Os rolamentos recebem lubrificação adequada mediante chapinhagem.

### REFRIGERAÇÃO:

- A sua capacidade de refrigeração do carter e da ventoinha de Arrefecimento é suficiente para temperaturas de óleo até 80°C.

### ENSAIO:

- Todos os componentes do redutor são examinados durante e depois da fabricação.
- Feito a montagem verifica-se o contacto e o alinhamento correcto das engrenagens.
- Segue um ensaio conforme ficha de inspecção e ensaio interna de forma a garantir a conformidade do equipamento para expedição.

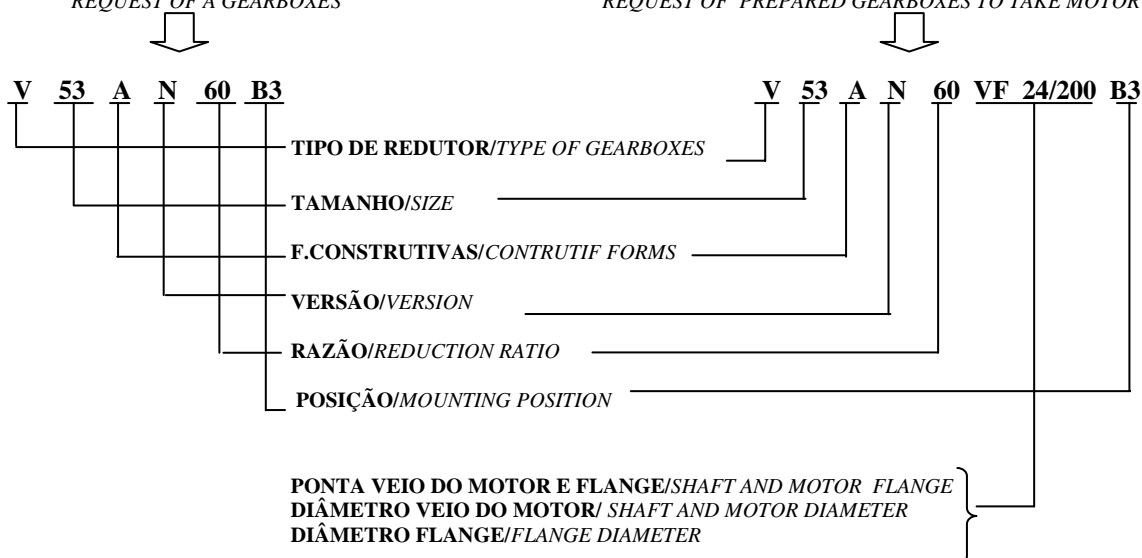
**IDENTIFICAÇÃO DE REDUTORES OLIMAR**  
*OLIMAR GEARBOXES IDENTIFICATION*

TIPO/TYPER	TAMANHO/SIZE		FORMAS Construtivas	VERSÃO VERSION	RAZÃO REDUCTION RATIO	POSIÇÃO DE MONTAGEM MOUNTING POSITION
	ANTIGO OLD	NOVO NEW	CONSTRUCTIVE FORMS			
<b>V</b> <b>REDUTOR STANDARD</b> <i>STANDARD GEARBOXES</i>	V2	V53	V...A	N, S, D	CONSULTAR TABELA DE POTÊNCIAS DE REDUTORES TIPO V...  <i>SEE TABLE OF POWER GEARBOXES TYPE V...</i>	<b>CONSULTAR TABELA POSIÇÕES MONTAGEM</b>  <i>SEE TABLE MOUNTING POSITION</i>
	V3	V70	V...V	N, S, D		
	V4	V87	V...F	N, S, D		
	V5	V99	V...F	N, S, D N1, S1,D1		
	V6	V113	V..B	N, S, D		
<b>V...O</b> <b>REDUTOR C/VEIO SAÍDA OCO</b> <i>HOLLOW PUT SHAFT GEARBOXES</i>	V2.O	V53.O	V... OA	N, S	CONSULTAR TABELA DE POTÊNCIAS DE REDUTORES TIPO V...  <i>SEE TABLE OF POWER GEARBOXES TYPE V...</i>	<b>CONSULTAR TABELA POSIÇÕES MONTAGEM</b>  <i>SEE TABLE MOUNTING POSITION</i>
	V3.O	V70.O	V...OF			
	V4.O	V87.O	V...OB			
	V5.O	V99.O	V...OV			
	V6.O	V113.O				

NOTA: Para outras versões consultar Deptº Técnico/Comercial

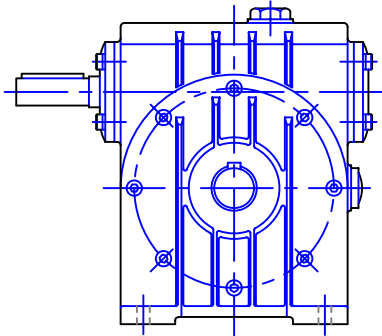
**EX: PEDIDO DE UM REDUTOR**  
*REQUEST OF A GEARBOXES*

**EX: PEDIDO DE UM REDUTOR PREPARADO P/LEVAR MOTOR**  
*REQUEST OF PREPARED GEARBOXES TO TAKE MOTOR*

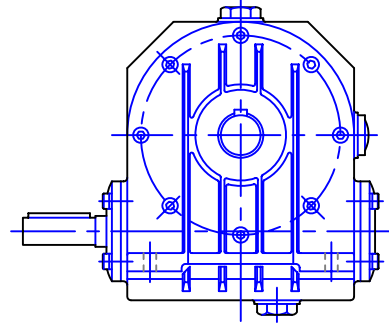


FORMAS CONSTRUTIVAS

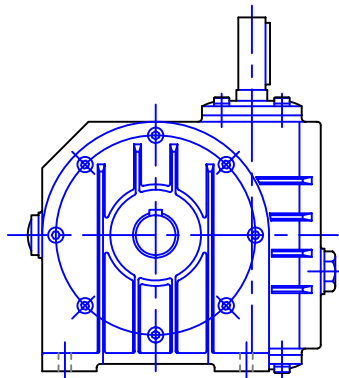
CONSTRUCTIVE FORMS



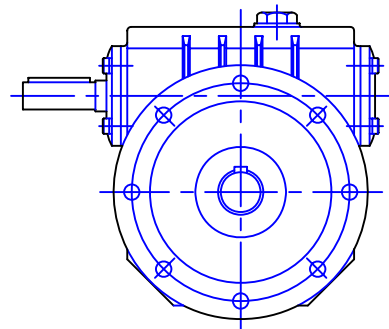
V...A



V...B



V...V



V...F

TABELAS\TRANSMISSOES\R-SEMIFIM\TAB0110

TIPO		NUMEROS DE FABRICO NORMALIZADOS														
ANTINGO OLD	NOVO NEW	STANDARDIZED NUMBERS														
V2	V53				3232.5				3322.5				4322			
V3	V70		3743			3733		4632.5						4722.5		
V4	V87	3444				4843			3224			4123.5				
V5	V99			4044				3025			3824					
V113	V113		2836				2826			3625					2417	2816
RAZAO	RATIO	1/8	1/9	1/10	1/11	1/12	1/14	1/15	1/16	1/18	1/19	1/20	1/21	1/23	1/24	1/28
V2	V53		3312.5						4312				6011.5			
V3	V70	6022				3713				4712.5			6012			
V4	V87	6022.5		3414				4113.5			4813		6012.5			
V5	V99	3015					4014					5613			7012.5	
V113	V113				3615					4714				6513		
RAZAO	RATIO	1/30	1/33	1/34	1/36	1/37	1/40	1/41	1/43	1/47	1/48	1/56	1/60	1/65	1/70	

### REDUTORES TIPO V...

### GEARBOXES TYPE V...

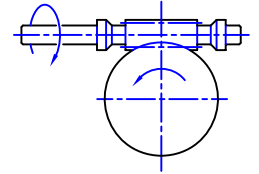
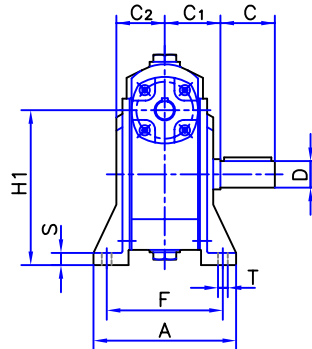
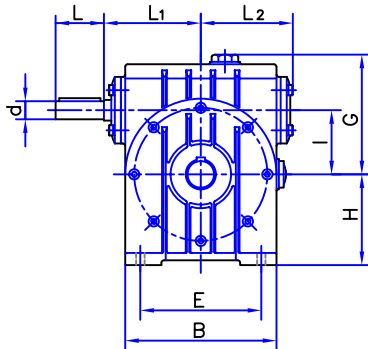
RAZAO RATIO i	VELOCIDADE DE ENTRADA <R.P.M.> INPUT SPEED									TIPO TYPE		N.FABRICO ORDER NUMBER
	750			1000			1500					
	POT. POWER CV	REND. EFFIC. %	MOM. TORQUE Nm	POT. POWER CV	REND. EFFIC. %	MOM. TORQUE Nm	POT. POWER CV	REND. EFFIC. %	MOM. TORQUE Nm			
70	1,20	67	530	1,44	69	490	1,68	72	400	V5	V99	7012,5
65	1,42	65	570	1,65	68	520	2,32	70	500	V6	V113	6513
60	0,28	64	102	0,31	65	857	0,40	72	80	V2	V53	6011,5
	0,65	68	250	0,78	71	240	0,90	74	190	V3	V70	6012
	1,10	67	415	1,36	70	400	1,60	75	330	V4	V87	6012,5
56	1,40	73	580	1,80	75	560	2,10	79	470	V5	V99	5613
48	1,30	73	460	1,64	76	440	2,00	82	380	V4	V87	4813
47	0,95	75	340	1,10	77	300	1,30	81	250	V3	V70	4712,5
	1,80	79	630	2,40	80	640	3,60	81	650	V6	V113	4714
43	0,42	74	110	0,49	76	100	0,60	80	850	V2	V53	4312
41	1,64	76	470	2,00	79	450	2,40	82	380	V4	V87	4113,5
40	2,00	79	610	2,50	81	580	3,00	84	480	V5	V99	4014
37	1,10	79	340	1,30	80	300	1,60	84	250	V3	V70	3713
36	2,30	79	620	3,00	81	620	4,60	83	650	V6	V113	3615
35	1,60	75	580	2,00	78	550	2,50	82	480	V5	V99	7022,5
34	2,00	80	470	2,40	81	440	3,00	85	370	V4	V87	3414
33	0,50	77	115	0,59	78	105	0,74	84	87	V2	V53	3312,5
30	0,56	77	120	0,67	79	110	0,80	84	90	V2	V53	6021,5
	1,30	83	310	1,60	84	290	2,00	86	240	V3	V70	6022
	1,80	81	460	2,20	82	430	2,80	86	360	V4	V87	6022,5
	2,50	77	590	3,00	79	550	3,80	84	470	V5	V99	3015
28	2,60	77	530	3,50	78	540	5,20	79	550	V6	V113	2816
27	2,30	82	580	2,80	83	550	3,60	86	470	V5	V99	5423
24	5,80	78	1030	7,80	78	1040	11,7	79	1050	V6	V113	2417
23,5	1,50	85	310	1,85	68	280	2,30	89	240	V3	V70	4722,5
23	2,25	81	440	2,84	84	420	3,56	87	350	V4	V87	4623
21,5	0,66	82	120	0,81	84	110	0,96	87	90	V2	V53	4322
20,5	2,60	83	420	3,30	84	400	4,00	88	340	V4	V87	4123,5
20	0,68	84	120	0,80	85	100	1,00	87	80	V2	V53	6031,5
	1,70	85	280	2,10	87	260	2,60	90	220	V3	V70	6032
	2,40	84	420	3,20	86	410	4,00	89	350	V4	V87	6032,5
19	3,00	88	560	4,00	90	510	5,00	91	430	V5	V99	3824
18	5,70	79	770	7,60	80	780	11,5	81	800	V6	V113	3625
17,5	1,80	85	290	2,20	86	270	2,70	88	230	V3	V70	3523
16,5	0,80	84	110	1,00	85	100	1,20	86	80	V2	V53	3322,5
16	2,70	85	430	3,50	87	400	4,50	89	340	V4	V87	3224
15,3	1,90	86	280	2,40	87	260	2,90	89	220	V3	V70	4632,5
15	0,90	86	110	1,10	88	100	1,30	89	80	V2	V53	6041,5
	2,10	87	270	2,50	88	250	3,10	90	210	V3	V70	6042
	3,00	87	400	3,70	89	360	4,80	91	320	V4	V87	6042,5
	3,60	85	490	4,20	87	440	5,80	89	390	V5	V99	3025
14,3	0,80	83	120	0,90	86	110	1,10	88	80	V2	V53	4332
14	7,10	79	750	9,40	80	750	14,2	81	770	V6	V113	2826
13,6	3,10	86	400	3,90	88	360	5,00	91	320	V4	V87	4133,5
13,3	3,90	85	490	4,60	87	440	6,10	91	390	V5	V99	4034
12,3	2,30	87	240	2,80	88	220	3,60	91	190	V3	V70	3733
12	3,50	91	370	4,20	92	340	5,20	93	290	V4	V87	4843
11,7	2,50	89	220	3,10	90	200	4,00	93	180	V3	V70	4742,5
11,3	3,70	90	360	4,50	91	320	5,50	94	270	V4	V87	3434
10,7	1,10	88	110	1,40	90	100	1,60	92	80	V2	V53	4342
10,6	1,30	87	110	1,60	89	100	2,00	91	80	V2	V53	3232,5
	4,90	90	460	5,40	91	420	7,10	92	360	V5	V99	3235
10,2	3,90	92	340	4,70	93	310	5,90	94	260	V4	V87	4143,5
10	5,40	91	440	6,00	92	400	7,50	93	340	V5	V99	4044
9,3	9,4	81	670	12,6	82	680	18,9	82	680	V6	V113	2836
9,2	2,70	90	210	3,40	92	190	4,50	94	170	V3	V70	3743
8,5	4,20	91	330	5,50	92	300	7,10	94	260	V4	V87	3444
8,2	1,40	89	100	1,70	91	80	2,10	93	70	V2	V53	3342,5
7,5	6,00	91	410	1,50	92	380	9,50	93	320	V5	V99	3045

REDUTORES SÓ FABRICADOS COMO ESPECIAIS

REDUTORES TIPO V...

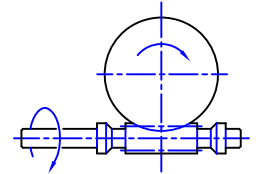
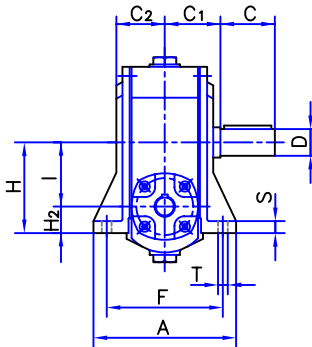
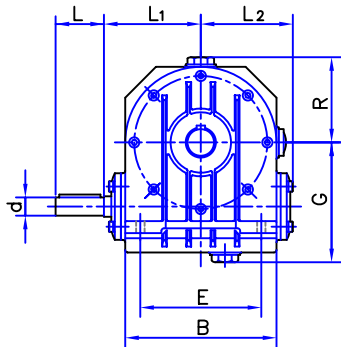
GEARBOXES TYPE V...

V...A



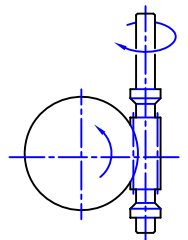
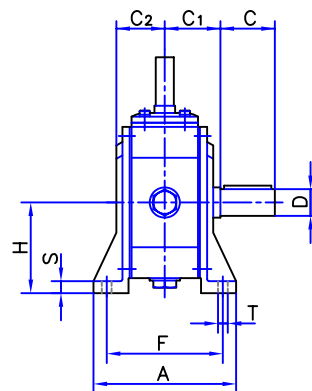
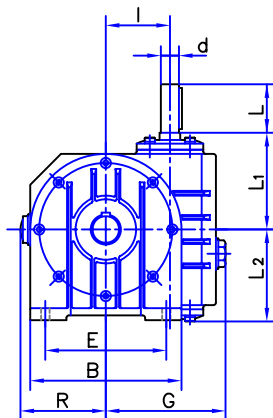
Helice direita  
Righth helice

V...B



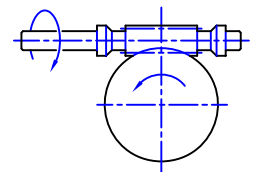
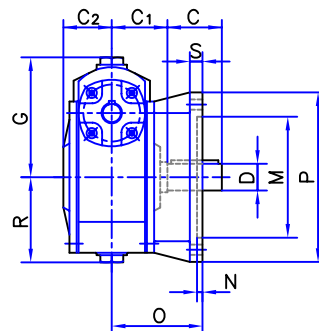
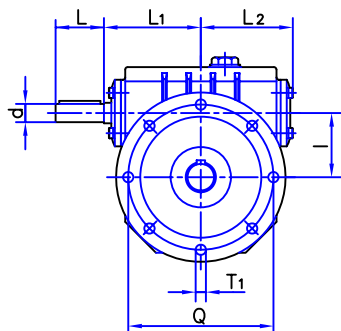
Helice direita  
Righth helice

V...V
















Helice direita  
Righth helice

V...F



Helice direita  
Righth helice

REDUTORES TIPO V...		GEARBOXES TYPE V...			
	V2 V53	V3 V70	V4 V87	V5 V99	V6 V113
A	118	140	170	195	260
B	125	160	205	224	254
C	40	50	60	70	80
C 1	43,5	52	67	76	101,5
C 2	42	50	63	72	94
d k6	15	18	22	28	32
D k6	22	28	32	38	45
E	100	130	170	190	210
F	96	115	140	156	220
G	99	121	149	171	189
H	75	95	122	130	150
H 1	128	165	209	229,2	263,3
H 2	22	25	35	30,8	36,7
I	53	70	87	99,2	113,3
L	40	50	60	70	80
L 1	77,5	97	119,5	130	147
L 2	76	96	121	131	146
M	100	130	145	185	185
N	4	5	5	5	6
O	69	87,5	112	125	150
P	140	175	215	258	268
Q	120	154	185	220	238
R	72	88	112	121	135
S	10	12	15	15	18
T	9	11	14	14	18
T 1	9	11	12	12	14
kg	7	11	20	32	50

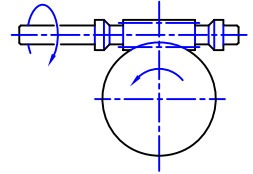
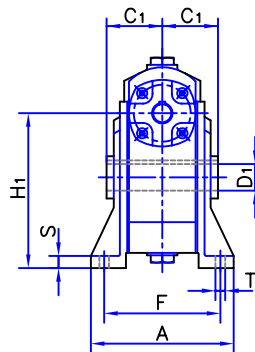
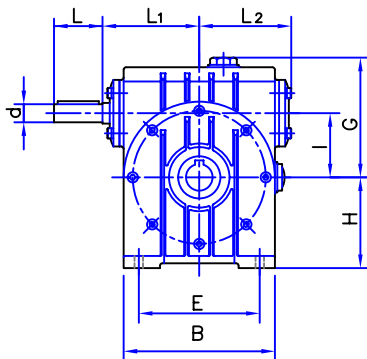
VERSAO			VERSION				
V...A	 N	 S	 D	V...B	 N	 S	 D
V...V	 N	 S	 D	V...F	 N1	 S1	 D1



REDUTORES TIPO V...0

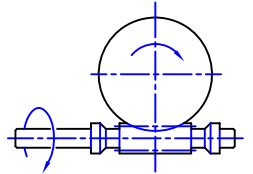
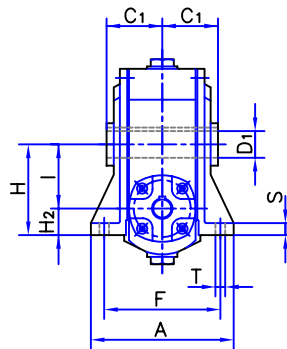
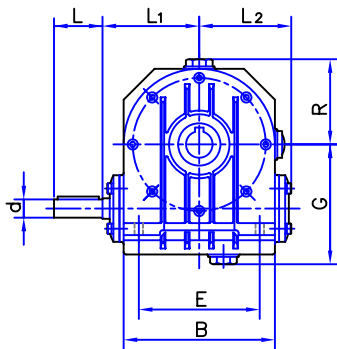
GEARBOXES TYPE V...0

V...0A



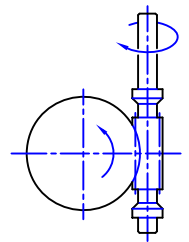
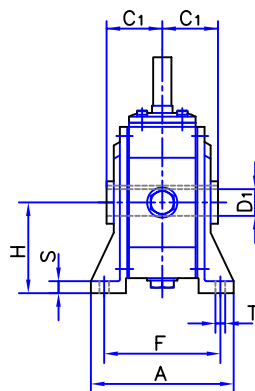
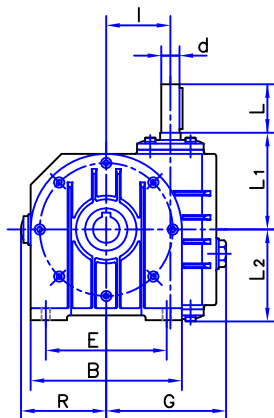
Helice direita  
Rigth helice

V...0B



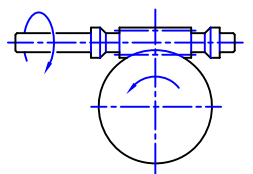
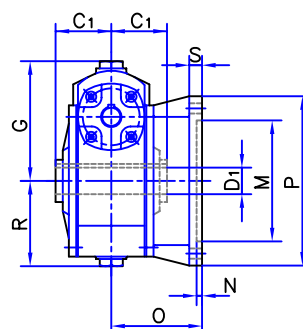
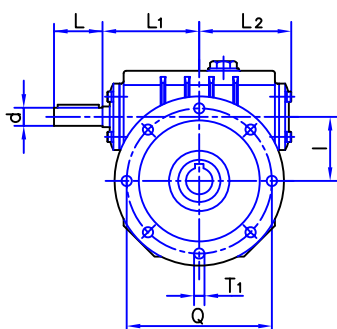
Helice direita  
Rigth helice

V...0V



Helice direita  
Rigth helice


V...0F



Helice direita  
Rigth helice

### REDUTORES TIPO V...0

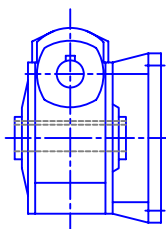
### GEARBOXES TYPE V...0

	V2 V53	V3 V70	V4 V87	V5 V99	V6 V113
A	118	140	170	195	260
B	125	160	205	224	254
C1	43,5	52	67	76	101,5
d k6	15	18	22	28	32
D1 H7	22	28	35	40	45
E	100	130	170	190	210
F	96	115	140	156	220
G	99	121	149	171	189
H	75	95	122	130	150
H1	128	165	209	229,2	263,3
H2	22	25	35	30,8	36,7
I	53	70	87	99,2	113,3
L	40	50	60	70	80
L1	77,5	97	119,5	130	147
L2	76	96	121	131	146
M	100	130	145	185	185
N	4	5	5	5	6
O	69	87,5	112	125	150
P	140	175	215	258	268
Q	120	154	185	220	238
R	72	88	112	121	135
S	10	12	15	15	18
T	9	11	14	14	18
T1	9	11	12	12	14
kg	7	11	20	32	50

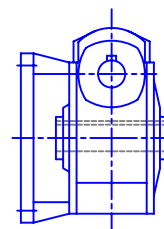
### VERSAO

### VERSION


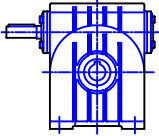
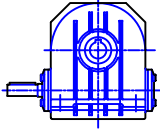
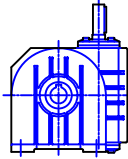
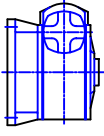
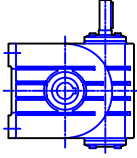
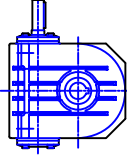
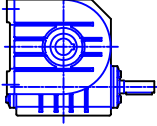
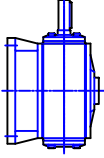
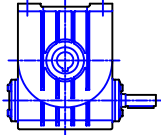
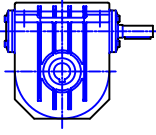
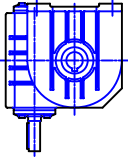
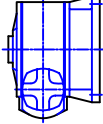
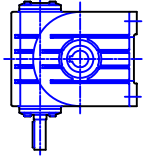
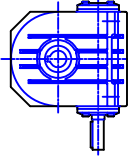
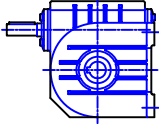
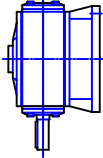
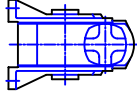
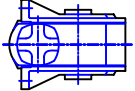
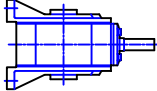
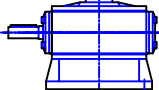
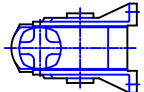
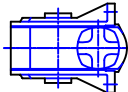
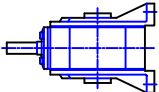
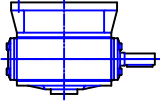
V...OF



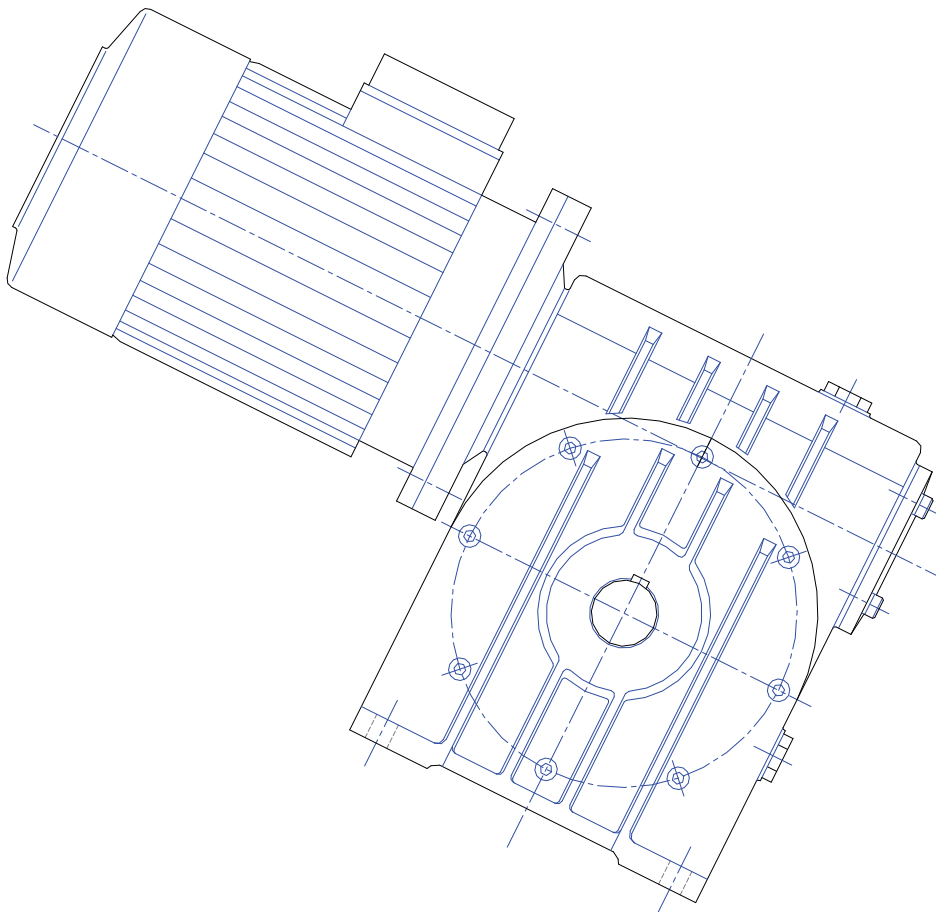
N



S

	V...A V...OA	V...B V...OB	V...V V...OV	V...F V...OF
B3				
V6				
B8				
V5				
B6				
B7				

**MOTO-REDUTORES  
MOTORIZED GEARBOXES  
TIPO V / TYPE V**



**IDENTIFICAÇÃO DE MOTO-REDUTORES OLIMAR**  
*OLIMAR MOTORIZED GEARBOXES IDENTIFICATION*

TIPO/TYPE	TAMANHO/SIZE		FORMAS Construtivas	VERSÃO VERSION	RAZÃO REDUCTION RATIO	POSIÇÃO MONTAGEM MOUNTING POSITION
	ANTIGO OLD	NOVO NEW	CONSTRUCTIVE FORMS			
<b>MV...</b> MOTO-REDUTOR STANDARD  <i>STANDARD MOTORIZED GEARBOXES</i>	MV2 MV3 MV4 MV5 MV6	MV53 MV70 MV87 MV99 MV113	MV...A MV...B MV...V MV...F	N,S,D N,S,D N,S,D N,S,D N1,S1,D1	<b>CONSULTAR TABELA DE POTÊNCIAS DE MOTO- REDUTORES TIPO MV.....</b>  <i>SEE TABLE OF POWER GEARBOXES TYPE MV....</i>	<b>CONSULTAR TABELA POSIÇÕES MONTAGEM</b>  <i>SEE TABLE MOUNTING POSITION</i>
<b>MV...O</b> MOTO-REDUTOR C/VEIO SAÍDA ÔCO  <i>HOLLOW PUT SHAFT GEARBOXES</i>	MV2.O MV3.O MV4.O MV5.O MV6.O	MV53.O MV70.O MV87.O MV99.O MV113.O	MV...OA MV...OB MV...OV MV...OF	N,S		
<b>MV...C</b> MOTO-REDUTOR C/SEM-FIM ÔCO  <i>WORM GEAR HOLLOW SHAFT</i>	MV2C MV3C MV4C MV5C MV6C	MV53C MV70C MV87C MV99C MV113C	MV...CA MV...CB MV...CV MV...CF  N1,S1,D1	N,S,D N,S,D N,S,D N,S,D		
<b>MV...CO</b> MOTO-REDUTOR C/SEM-FIM E VEIO DE SAÍDA OCO AND HOLLOW PUT SHAFT  <i>WORM GEAR HOLLOW SHAFT AND HOLLOW PUT SHAFT GEARBOXES</i>	MV2CO MV3CO MV4CO MV5CO MV6CO	MV53CO MV70CO MV87CO MV99CO MV113CO	MV...COA MV...COB MV...COV MV...COF	N,S		
<b>MV...COT</b> MOTO-REDUTOR C/VEIO SAÍDA OCO E FIXAÇÃO LATERAL  <i>HOLLOW PUT SHAFT GEARBOXES AND LATERAL FIXATION</i>	MV2COT MV3COT MV4COT MV5COT MV6COT	MV53COT MV70COT MV87COT MV99COT MV113COT	MV...COT MV...COT MV...COT MV...COT	A B C A1 B1 C1		

NOTA: r.p.m à saída tem uma variação de  $\pm 5\%$

NOTA: P/outras versões consultar Deptº Técnico/Comercial

**EX: PEDIDO DE UM MOTOREDUTOR**  
**EX: REQUEST OF A MOTORIZED GEARBOXES**

COMO IDENTIFICAR O MOTO-REDUTOR HOW TO IDENTIFY A MOTORIZED GEARBOXES	MV...O	MV4.O/90.4 MV87.O/90.4	A	F	48	B8	29	1,5	4813
TIPO/TYPE									
TAMANHO/SIZE									
FORMAS CONSTRUTIVAS/CONSTRUCTIVE FORMS									
VERSÃO/VERSION									
RAZÃO/REDUCTION RATIO									
POSIÇÃO MONTAGEM/MOUNTING POSITION									
VELOCIDADE DE SAÍDA (R.P.M)/OUTPUT									
POTÊNCIA (CV)/POWER									
Nº FABRICO/ORDER Nº									

### MOTO-REDUTORES TIPO MV...

### MOTORIZED GEARBOXES TYPE MV...

POTENCIA POWER		V.SAIDA OUTPUT	RAZAO RATIO	M2	F.S	TIPO TYPE	N.FABRICO ORDER NUMBER	POTENCIA POWER		V.SAIDA OUTPUT	RAZAO RATIO	M2	F.S	TIPO TYPE	N.FABRICO ORDER NUMBER				
CV	KW	r.p.m.	i	(Nm)				CV	KW	r.p.m.	i	(Nm)							
0,25	0,18	11	60	163	2,6	MV3/80.8 MV70/80.8	6012	0,50	0,37	37	37	97	3,2	MV3/71.4 MV70/71.4	3713				
		14	60	128	1,2	MV2/71.6 MV53/71.6	6011,5			42	33	85	1,4	MV2/71.4 MV53/71.4	3312,5				
		20	43	90	1,9	MV2/71.6 MV53/71.6	4312			46	30	78	1,4	MV2/71.4 MV53/71.4	6021,5				
		23	60	78	1,6	MV2/63.4 MV53/63.4	6011,5			64	21,5	56	1,9	MV2/71.4 MV53/71.4	4322				
		29	47	62	5,2	MV3/63.4 MV70/63.4	4712,5			83	16,5	43	2,4	MV2/71.4 MV53/71.4	3322,5				
		32	43	56	2,4	MV2/63.4 MV53/63.4	4312			<b>91</b>	<b>15</b>	<b>39</b>	<b>2,5</b>	<b>MV2/71.4 MV53/71.4</b>	<b>6041,5</b>				
		42	33	43	3,0	MV2/63.4 MV53/63.4	3312,5			130	10,6	28	4,0	MV2/71.4 MV53/71.4	3232,5				
		<b>46</b>	<b>30</b>	<b>39</b>	<b>2,8</b>	<b>MV2/63.4 MV53/63.4</b>	<b>6021,5</b>			11	60	489	1,4	MV4/90.8 MV87/90.8	6012,5				
		64	21,5	28	3,8	MV2/63.4 MV53/63.4	4322			14	60	384	1,0	MV3/80.6 MV70/80.6	6012				
		83	16,5	22	4,8	MV2/63.4 MV53/63.4	3322,5			20	47	268	1,4	MV3/80.6 MV70/80.6	4712,5				
		<b>91</b>	<b>15</b>	<b>20</b>	<b>4,8</b>	<b>MV2/63.4 MV53/63.4</b>	<b>6041,5</b>			23	60	233	1,2	MV3/80.4 MV70/80.4	6012				
		130	10,6	14	8,0	MV2/63.4 MV53/63.4	3232,5			29	47	185	1,7	MV3/80.4 MV70/80.4	4712,5				
		0,33	0,25	11	60	215	1,9			MV3/80.8 MV70/80.8	6012	0,75	0,55	37	37	145	2,1	MV3/80.4 MV70/80.4	3713
				14	60	169	2,3			MV3/71.6 MV70/71.6	6012			42	33	128	1,0	MV2/80.4 MV53/80.4	3312,5
20	43			118	1,4	MV2/71.6 MV53/71.6	4312	46	30	117	2,5			MV3/80.4 MV70/80.4	6022				
23	60			103	1,2	MV2/71.4 MV53/71.4	6011,5	64	21,5	84	1,2			MV2/80.4 MV53/80.4	4322				
29	47			81	3,9	MV3/71.4 MV70/71.4	4712,5	83	16,5	65	1,6			MV2/80.4 MV53/80.4	3322,5				
32	43			74	1,8	MV2/71.4 MV53/71.4	4312	<b>91</b>	<b>15</b>	<b>59</b>	<b>1,7</b>			<b>MV2/80.4 MV53/80.4</b>	<b>6041,5</b>				
42	33			56	2,2	MV2/71.4 MV53/71.4	3312,5	113	12,3	48	4,8			MV3/80.4 MV70/80.4	3733				
46	30			51	2,1	MV2/71.4 MV53/71.4	6021,5	130	10,6	41	2,6			MV2/80.4 MV53/80.4	3232,5				
64	21,5			37	2,8	MV2/71.4 MV53/71.4	4322	11	60	651	1,1			MV4/100.8 MV87/100.8	6012,5				
83	16,5			28	3,6	MV2/71.4 MV53/71.4	3322,5	14	60	511	1,3			MV4/90.6 MV87/90.6	6012,5				
<b>91</b>	<b>15</b>			<b>26</b>	<b>3,8</b>	<b>MV2/71.4 MV53/71.4</b>	<b>6041,5</b>	20	47	359	1,1			MV3/90.6 MV70/90.6	4712,5				
130	10,6			18	6,0	MV2/71.4 MV53/71.4	3232,5	23	60	311	1,6			MV4/80.4 MV87/80.4	6012,5				
0,50	0,37			11	60	325	1,3	MV3/90.8 MV70/90.8	6012	1	0,75			29	47	247	1,3	MV3/80.4 MV70/80.4	4712,5
				14	60	256	1,5	MV3/80.6 MV70/80.6	6012					37	37	194	1,6	MV3/80.4 MV70/80.4	3713
		20	47	179	2,2	MV3/80.6 MV70/80.6	4712,5	42	34			170	3,0	MV4/80.4 MV87/80.4	3414				
		23	60	156	1,8	MV3/71.4 MV70/71.4	6012	46	30			156	1,9	MV3/80.4 MV70/80.4	6022				
		29	47	123	2,6	MV3/71.4 MV70/71.4	4712,5	58	23,5			123	2,3	MV3/80.4 MV70/80.4	4722,5				
		32	43	112	1,2	MV2/71.4 MV53/71.4	4312	64	21,5			112	1,0	MV2/80.4 MV53/80.4	4322				

REDUTORES SÓ FABRICADOS COMO ESPECIAIS

### MOTO-REDUTORES TIPO MV...

### MOTORIZED GEARBOXES TYPE MV...

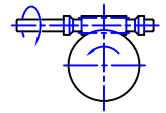
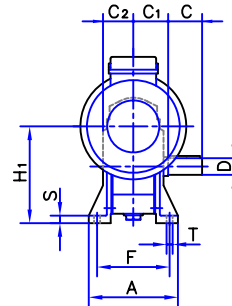
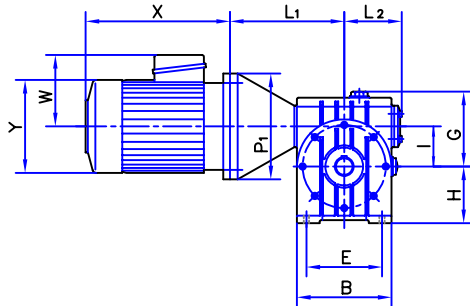
POTENCIA POWER		V.SAIDA OUTPUT	RAZAO RATIO	M2	F.S	TIPO TYPE	N.FABRICO ORDER NUMBER	POTENCIA POWER		V.SAIDA OUTPUT	RAZAO RATIO	M2	F.S	TIPO TYPE	N.FABRICO ORDER NUMBER	
CV	KW	r.p.m.	i	(Nm)				CV	KW	r.p.m.	i	(Nm)				
1	0,75	83	16,5	86	1,2	MV2/80.4 MV53/80.4	3322,5	3	2,2	30	47	716	1,2	MV6/100.4 MV113/100.4	4714	
		91	15	79	1,2	MV2/80.4 MV53/80.4	6041,5			42	34	511	1,0	MV4/100.4 MV87/100.4	3414	
		113	12,3	63	3,6	MV3/80.4 MV70/80.4	3733			46	30	467	1,2	MV5/100.4 MV99/100.4	3015	
		130	10,6	55	2,0	MV2/80.4 MV53/80.4	3232,5			69	20,5	311	1,3	MV4/100.4 MV87/100.4	4123,5	
1,5	1,1	11	65	976	1,0	MV6/100.8 MV113/100.8	6513	4	3	94	15	229	1,9	MV5/100.4 MV99/100.4	3025	
		16	56	671	1,2	MV5/90.6 MV99/90.6	5613			125	12	172	1,7	MV4/100.4 MV87/100.4	4843	
		20	70	537	1,1	MV5/90.4 MV99/90.4	7012,5			40	36	716	1,2	MV6/100.4 MV113/100.4	3615	
		23	60	467	1,1	MV4/90.4 MV87/90.4	6012,5			69	20,5	415	1,0	MV4/100.4 MV87/100.4	4123,5	
		29	48	370	1,3	MV4/90.4 MV87/90.4	4813	94	15	305	1,4	MV5/100.4 MV99/100.4	3025			
		34	41	316	1,6	MV4/90.4 MV87/90.4	4113,5	125	12	229	1,3	MV4/100.4 MV87/100.4	4843			
		37	37	290	1,1	MV3/90.4 MV70/90.4	3713	167	8,5	171	1,7	MV4/100.4 MV87/100.4	3444			
		42	34	256	2,0	MV4/90.4 MV87/90.4	3414	5,5	4	94	15	419	1,0	MV5/112.4 MV99/112.4	3025	
		46	30	233	1,2	MV3/90.4 MV70/90.4	6022			167	8,5	236	1,3	MV4/112.4 MV87/112.4	3444	
		58	23,5	185	1,5	MV3/90.4 MV70/90.4	4722,5									
		69	20,5	156	2,6	MV4/90.4 MV87/90.4	4123,5									
		91	15,3	118	1,9	MV3/90.4 MV70/90.4	4632,5									
		113	12,3	95	2,4	MV3/90.4 MV70/90.4	3733									
		2	1,5	150	9,2	72	2,6	MV3/90.4 MV70/90.4	3743							
21	65			682	1,5	MV6/90.4 MV113/90.4	6513									
25	56			573	1,1	MV5/90.4 MV99/90.4	5613									
29	48			494	1,0	MV4/90.4 MV87/90.4	4813									
34	41			421	1,2	MV4/90.4 MV87/90.4	4113,5									
42	34			341	1,5	MV4/90.4 MV87/90.4	3414									
46	30			311	1,4	MV4/90.4 MV87/90.4	6022,5									
58	23,5			247	1,1	MV3/90.4 MV70/90.4	4722,5									
69	20,5			208	2,0	MV4/90.4 MV87/90.4	4123,5									
91	15,3			157	1,4	MV3/90.4 MV70/90.4	4632,5									
113	12,3	127	1,8	MV3/90.4 MV70/90.4	3733											
150	9,2	95	2,0	MV3/90.4 MV70/90.4	3743											

REDUTORES SÓ FABRICADOS COMO ESPECIAIS

MOTO-REDUTORES TIPO MV...

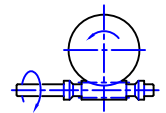
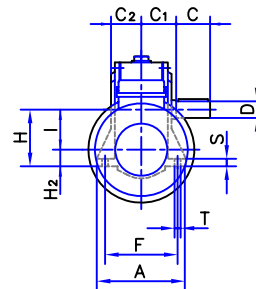
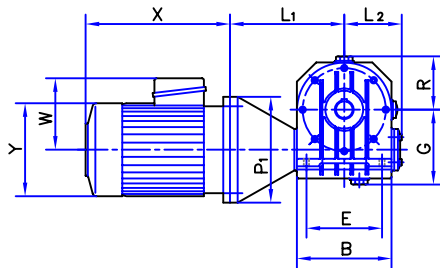
MOTORIZED GEARBOXES TYPE MV...

MV...A



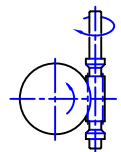
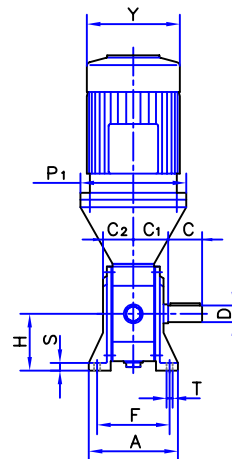
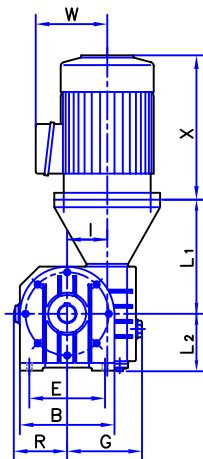
Helice direita  
Rigth helice

MV...B



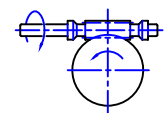
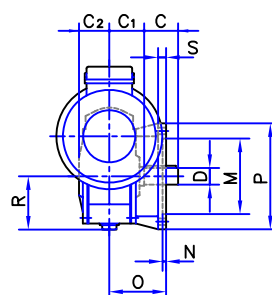
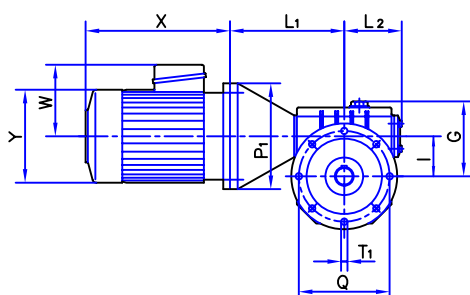
Helice direita  
Rigth helice

MV...V



Helice direita  
Rigth helice

MV...F

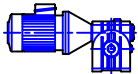


Helice direita  
Rigth helice



### MOTO-REDUTORES TIPO MV...

### MOTORIZED GEARBOXES TYPE MV...

	MV2 MV53		MV3 MV70			MV4 MV87		MV5 MV99		MV6 MV113		
	A	118		140			170		195		260	
B	125		160			205		224		254		
C	40		50			60		70		80		
C 1	43,5		52			67		76		101,5		
C 2	42		50			63		72		94		
D k6	22		28			32		38		45		
E	100		130			170		190		210		
F	96		115			140		156		220		
G	99		121			149		171		189		
H	75		95			122		130		150		
H 1	128		165			209		229,2		263,3		
H 2	22		25			35		30,8		36,7		
I	53		70			87		99,2		113,3		
L 2	76		96			121		131		146		
M	100		130			145		185		185		
N	4		5			5		5		6		
O	69		87,5			112		125		150		
P	140		175			215		258		268		
Q	120		154			185		220		238		
R	72		88			112		121		135		
S	10		12			15		15		18		
T	9		11			14		14		18		
T 1	9		11			12		12		14		
W	VER TABELA DE MOTORES						SEE TABLE OF MOTORS					
X	VER TABELA DE MOTORES						SEE TABLE OF MOTORS					
Y	VER TABELA DE MOTORES						SEE TABLE OF MOTORS					







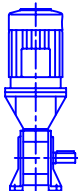
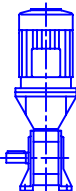
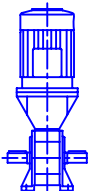


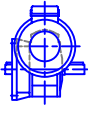
### DIMENSOES EM FUNÇÃO DO TAMANHO DO MOTOR

### DIMENSIONS ACCORDING TO THE MOTOR SIZE

MV...	MV2 MV53			MV3 MV70			MV4 MV87			MV5 MV99		MV6 MV113	
	MOTOR	63	71	80	63	71	80-90	80-90	100-112	90	100-112	90	100-112
L1	153	153	173	182	182	202	235	245	255	265	282	292	
P1	140	160	200	140	160	200	200	250	200	250	200	250	

### VERSAO

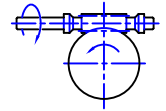
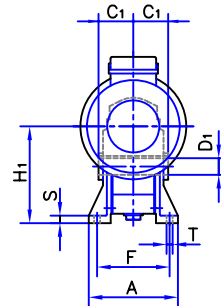
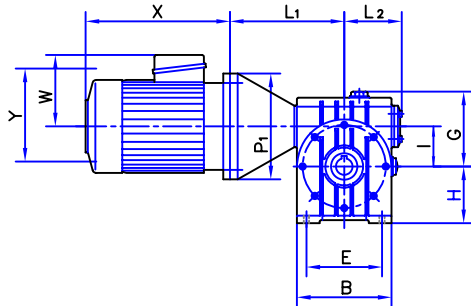
### VERSION

MV...A				MV...B			
	N	S	D		N	S	D
MV...V				MV...F			
	N	S	D		N1	S1	D1

MOTO-REDUTORES TIPO MV...O

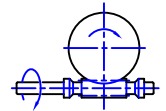
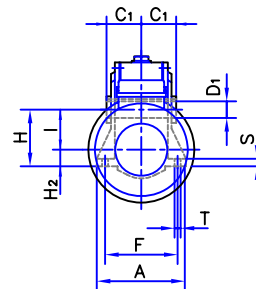
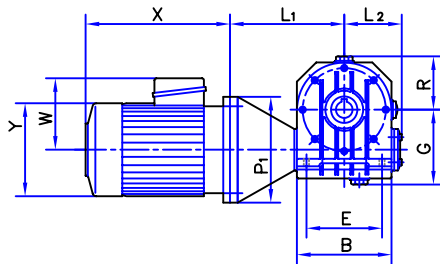
MOTORIZED GEARBOXES TYPE MV...O

MV...OA



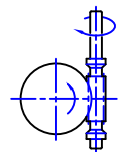
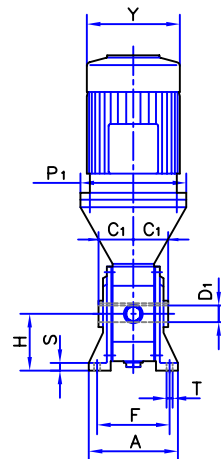
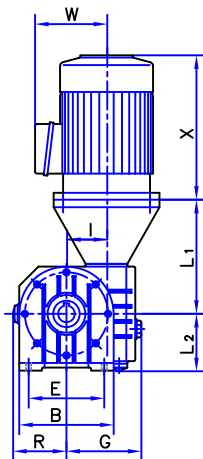
Helice direita  
Rigth helice

MV...OB



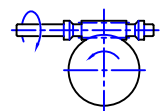
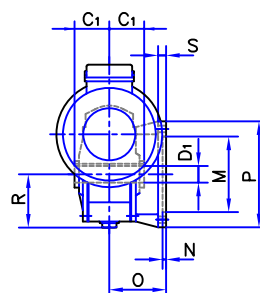
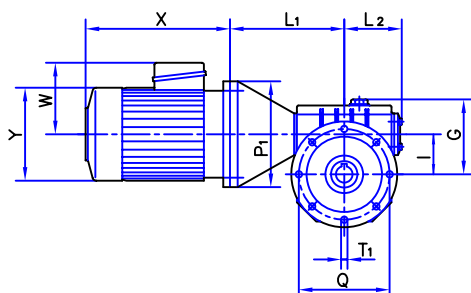
Helice direita  
Rigth helice

MV...OV



Helice direita  
Rigth helice

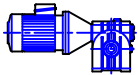
MV...OF



Helice direita  
Rigth helice

### MOTO-REDUTORES TIPO MV...0

### MOTORIZED GEARBOXES TYPE MV...0

	MV2	MV3	MV4	MV5	MV6
	MV53	MV70	MV87	MV99	MV113
A	118	140	170	195	260
B	125	160	205	224	254
C1	43,5	52	67	76	101,5
D1H7	22	28	35	40	45
E	100	130	170	190	210
F	96	115	140	156	220
G	99	121	149	171	189
H	75	95	122	130	150
H1	128	165	209	229,2	263,3
H2	22	25	35	30,8	36,7
I	53	70	87	99,2	113,3
L2	76	96	121	131	146
M	100	130	145	185	185
N	4	5	5	5	6
O	69	87,5	112	125	150
P	140	175	215	258	268
Q	120	154	185	220	238
R	72	88	112	121	135
S	10	12	15	15	18
T	9	11	14	14	18
T1	9	11	12	12	14
W	VER TABELA DE MOTORES			SEE TABLE OF MOTORS	
X	VER TABELA DE MOTORES			SEE TABLE OF MOTORS	
Y	VER TABELA DE MOTORES			SEE TABLE OF MOTORS	

### DIMENSOES EM FUNÇÃO DO TAMANHO DO MOTOR

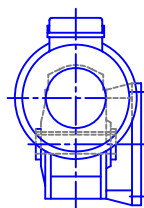
### DIMENSIONS ACCORDING TO THE MOTOR SIZE

MV...0	MV2 MV53			MV3 MV70			MV4 MV87			MV5 MV99		MV6 MV113	
	MOTOR	63	71	80	63	71	80-90	80-90	100-112	90	100-112	90	100-112
L1	153	153	173	182	182	202	235	245	255	265	282	292	
P1	140	160	200	140	160	200	200	250	200	250	200	250	

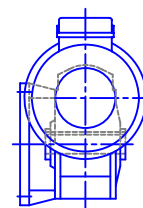
### VERSAO

### VERSION

MV...OF



N

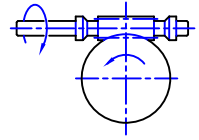
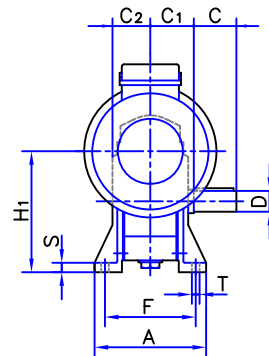
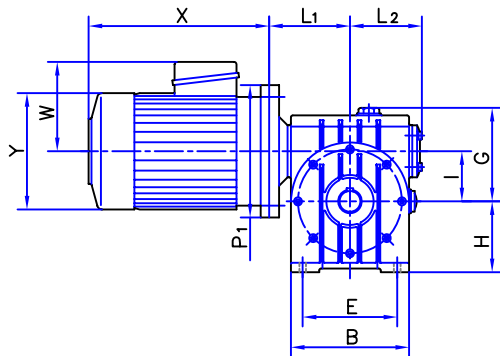


S

MOTO-REDUTORES TIPO MV...C

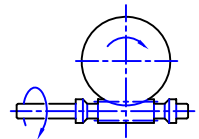
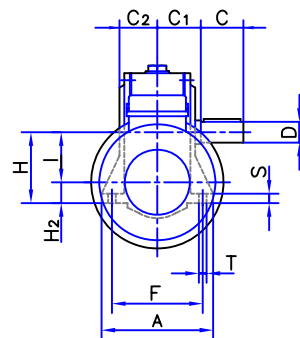
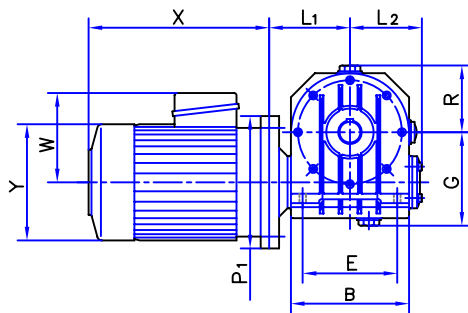
MOTORIZED GEARBOXES TYPE MV...C

MV...CA



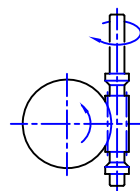
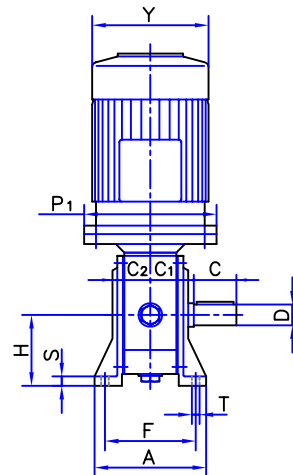
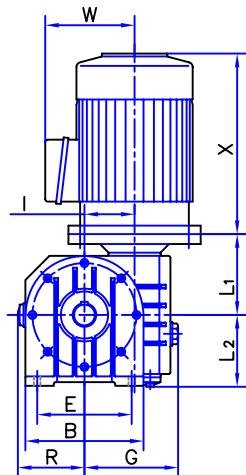
Helice direita  
Rigth helice

MV...CB



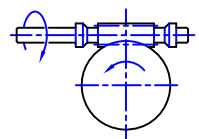
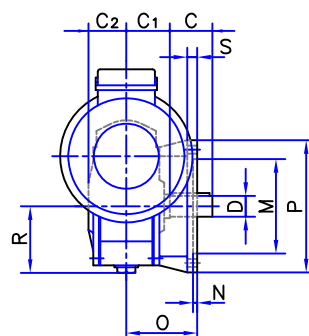
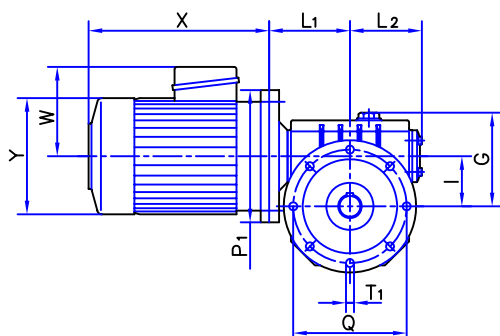
Helice direita  
Rigth helice

MV...CV



Helice direita  
Rigth helice

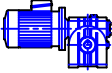
MV...CF



Helice direita  
Rigth helice

### MOTO-REDUTORES TIPO MV...C

### MOTORIZED GEARBOXES TYPE MV...C

	MV2 MV53	MV3 MV70	MV4 MV87	MV5 MV99	MV6 MV113
A	118	140	170	195	260
B	125	160	205	224	254
C	40	50	60	70	80
C1	43,5	52	67	76	101,5
C2	42	50	63	72	94
D k6	22	28	32	38	45
E	100	130	170	190	210
F	96	115	140	156	220
G	99	121	149	171	189
H	75	95	122	130	150
H1	128	165	209	229,2	263,3
H2	22	25	35	30,8	36,7
I	53	70	87	99,2	113,3
L2	76	96	121	131	146
M	100	130	145	185	185
N	4	5	5	5	6
O	69	87,5	112	125	150
P	140	175	215	258	268
Q	120	154	185	220	238
R	72	88	112	121	135
S	10	12	15	15	18
T	9	11	14	14	18
T1	9	11	12	12	14
W	VER TABELA DE MOTORES			SEE TABLE OF MOTORS	
X	VER TABELA DE MOTORES			SEE TABLE OF MOTORS	
Y	VER TABELA DE MOTORES			SEE TABLE OF MOTORS	








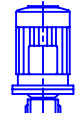
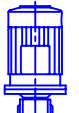
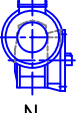
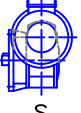

### DIMENSOES EM FUNÇÃO DO TAMANHO DO MOTOR

### DIMENSIONS ACCORDING TO THE MOTOR SIZE

MV...C	MV2 MV53			MV3 MV70			MV4 MV87		MV5 MV99		MV6 MV113	
MOTOR	63	71	80	63	71	80-90	80-90	100-112	90	100-112	90	100-112
L1	79	79	79	99.5	99.5	99.5	128	128	137	137	152	152
P1	140	160	200	140	160	200	200	250	200	250	200	250

### VERSAO

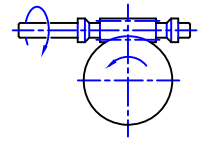
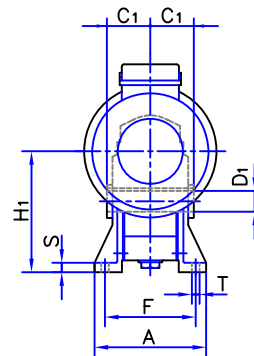
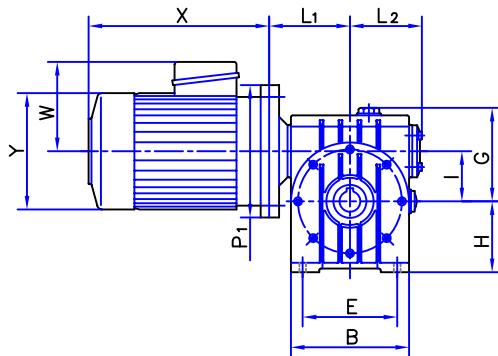
### VERSION

MV...CA				MV...CB			
	N	S	D		N	S	D
MV...CV				MV...CF			
	N	S	D		N1	S1	D1

MOTO-REDUTORES TIPO MV...CO

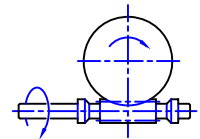
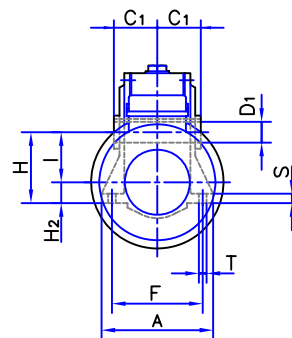
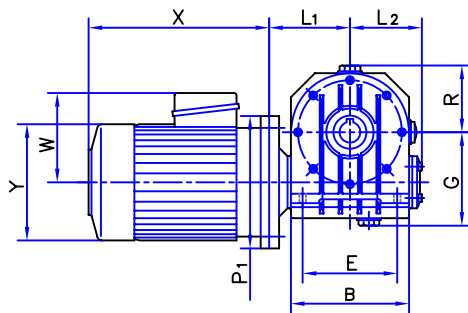
MOTORIZED GEARBOXES TYPE MV...CO

MV...COA



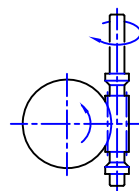
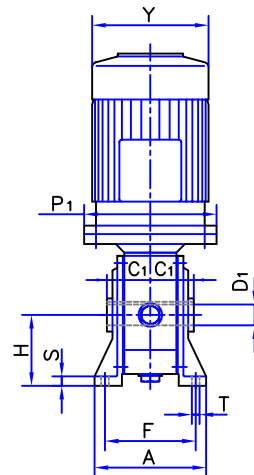
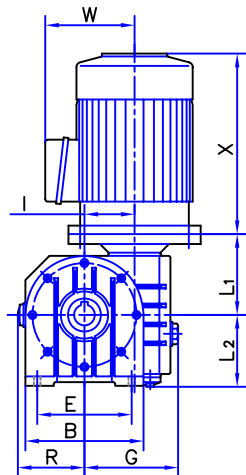
Helice direita  
Righth helice

MV...COB



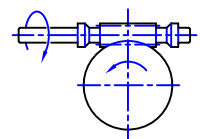
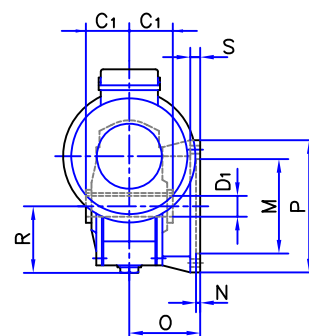
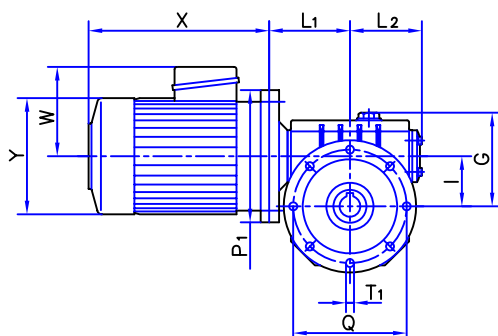
Helice direita  
Righth helice

MV...COV

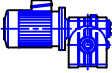


Helice direita  
Righth helice

MV...COF

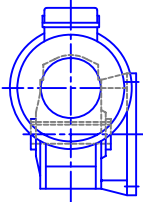
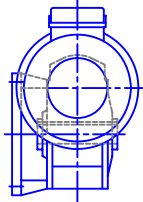


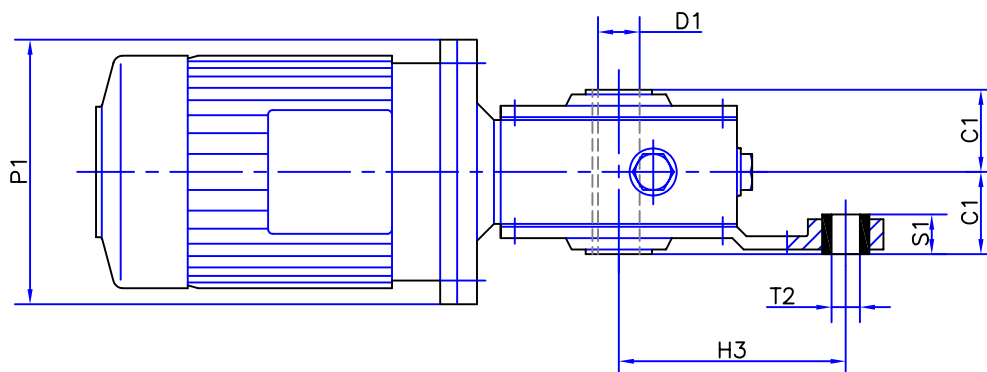
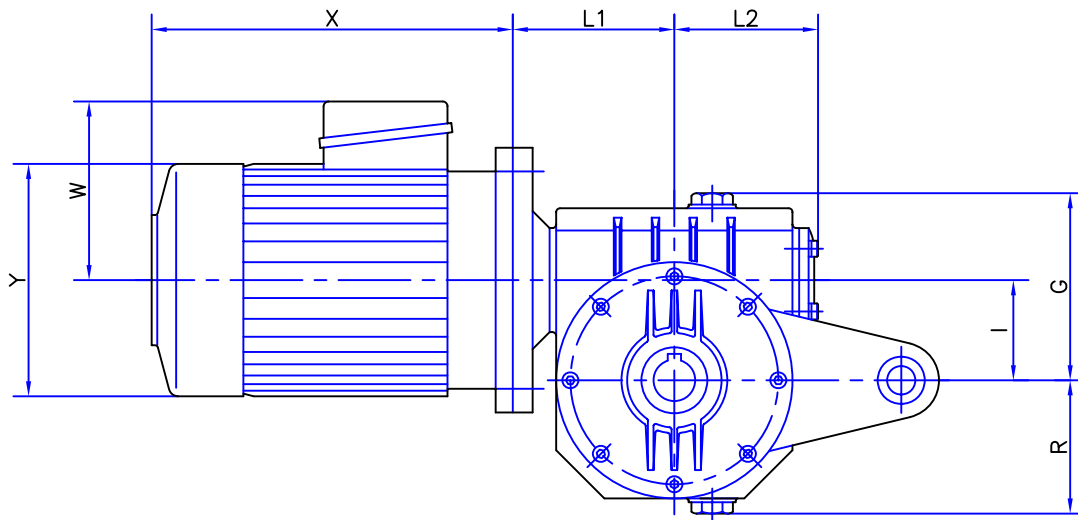
Helice direita  
Righth helice

MOTO-REDUTORES TIPO MV...CO		MOTORIZED GEARBOXES TYPE MV...CO				
	MV2 MV53	MV3 MV70	MV4 MV87	MV5 MV99	MV6 MV113	
A	118	140	170	195	260	
B	125	160	205	224	254	
C1	43,5	52	67	76	101,5	
D1H7	22	28	35	40	45	
E	100	130	170	190	210	
F	96	115	140	156	220	
G	99	121	149	171	189	
H	75	95	122	130	150	
H1	128	165	209	229,2	263,3	
H2	22	25	35	30,8	36,7	
I	53	70	87	99,2	113,3	
L2	76	96	121	131	146	
M	100	130	145	185	185	
N	4	5	5	5	6	
O	69	87,5	112	125	150	
P	140	175	215	258	268	
Q	120	154	185	220	238	
R	72	88	112	121	135	
S	10	12	15	15	18	
T	9	11	14	14	18	
T1	9	11	12	12	14	
W	VER TABELA DE MOTORES			SEE TABLE OF MOTORS		
X	VER TABELA DE MOTORES			SEE TABLE OF MOTORS		
Y	VER TABELA DE MOTORES			SEE TABLE OF MOTORS		

DIMENSOES EM FUNÇÃO DO TAMANHO DO MOTOR							DIMENSIONS ACCORDING TO THE MOTOR SIZE					
MV...CO	MV2 MV53			MV3 MV70			MV4 MV87		MV5 MV99		MV6 MV113	
MOTOR	63	71	80	63	71	80-90	80-90	100-112	90	100-112	90	100-112
L1	79	79	79	99.5	99.5	99.5	128	128	137	137	152	152
P1	140	160	200	140	160	200	200	250	200	250	200	250

VERSAO	VERSION
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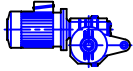
MV...COF	 N	 S
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### MOTO-REDUTORES TIPO MV...COT

### MOTORIZED GEARBOXES TYPE MV...COT

	MV2 MV53	MV3 MV70	MV4 MV87	MV5 MV99	MV6 MV113
C1	43,5	52	67	76	101,5
D1H7	22	28	35	40	45
G	99	121	149	171	189
H3	120	150	180	210	240
I	53	70	87	99,2	113,3
L 2	76	96	121	131	146
R	72	88	112	121	135
S1	21	27.5	27.5	33.5	49.5
T2	15	18	18	22	28
W	VER TABELA DE MOTORES			SEE TABLE OF MOTORS	
X	VER TABELA DE MOTORES			SEE TABLE OF MOTORS	
Y	VER TABELA DE MOTORES			SEE TABLE OF MOTORS	

### DIMENSOES EM FUNÇÃO DO TAMANHO DO MOTOR

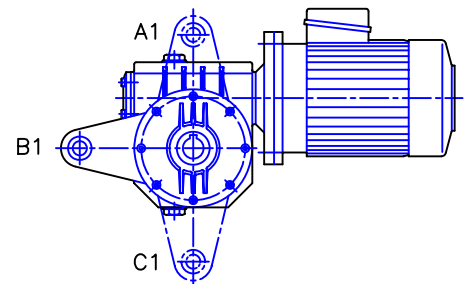
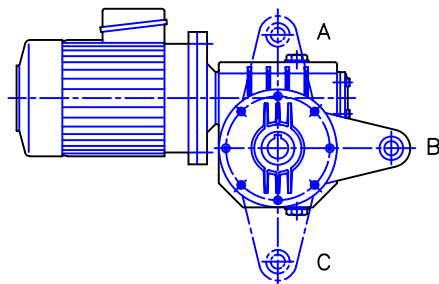
### DIMENSIONS ACCORDING TO THE MOTOR SIZE

MV...COT	MV2 MV53			MV3 MV70			MV4 MV87		MV5 MV99		MV6 MV113	
	MOTOR	63	71	80	63	71	80-90	80-90	100-112	90	100-112	90
L1	79	79	79	99.5	99.5	99.5	128	128	137	137	152	152
P1	140	160	200	140	160	200	200	250	200	250	200	250

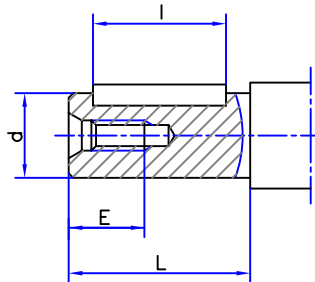
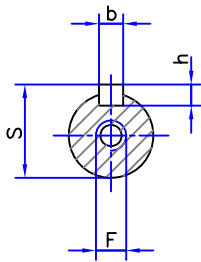
### VERSAO

### VERSION

MV...COT

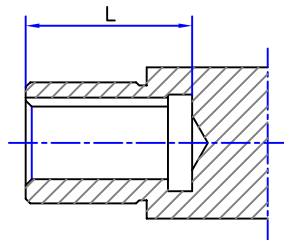
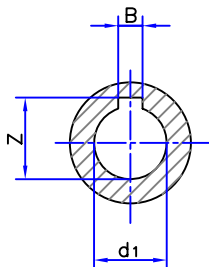


VEIO DE ENTRADA  
INPUT SHAFT



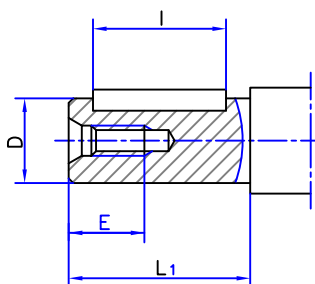
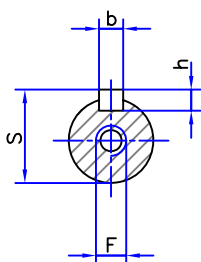
dk6	L	F	E	S	Cavalete Keyway		
					b h9	h	l
15	40	M5	13	17,1	5	5	30
18	50	M6	20	20,5	6	6	40
22	60	M8	20	24,5	6	6	50
28	70	M8	20	30,9	8	7	60
32	80	M10	25	35,3	10	8	70

VEIO OCO DE ENTRADA (PARA ACOMODAR VEIO DO MOTOR)  
HOLLOW INPUT SHAFT (TO ACCOMMODATE MOTOR SHAFT)



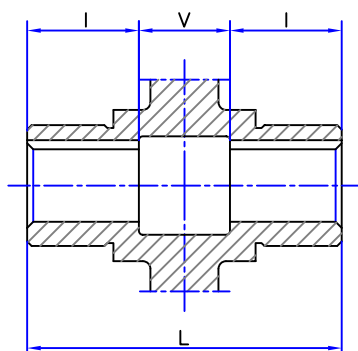
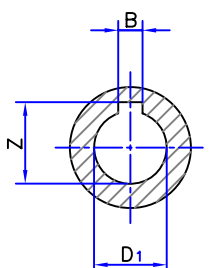
d1 F7	B H9	Z	L
11	4	12,7	28
14	5	16,2	35
19	19	21,6	45
24	8	27	55
28	8	31	65
38	10	41,4	85

VEIO DE SAIDA  
OUTPUT SHAFT



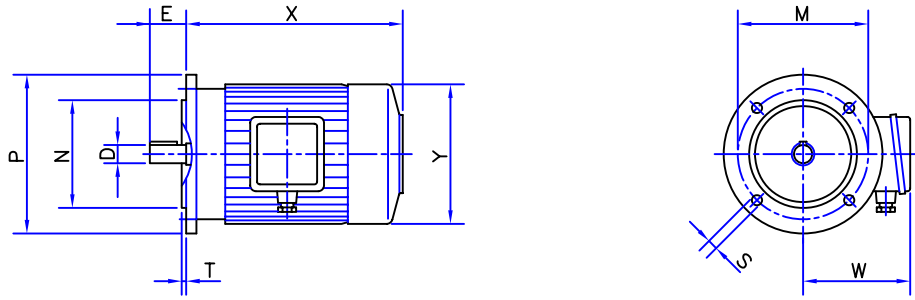
Dk6	L1	F	E	S	Cavalete Keyway		
					b h9	h	l
22	40	M8	20	24,5	6	6	30
28	50	M8	20	30,9	8	7	40
32	60	M10	25	35,3	10	8	50
38	70	M10	25	41,3	10	8	60
45	80	M12	32	48,5	14	9	70

VEIO OCO DE SAIDA  
HOLLOW OUTPUT SHAFTS



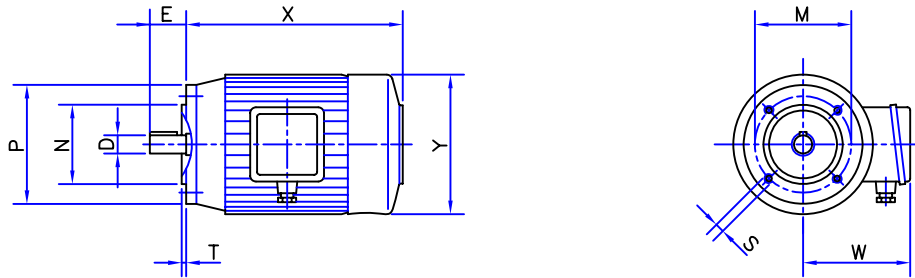
D1 H7	B H9	Z	l	V	L
22	6	24,6	17	35	87
28	8	31	24	40	104
35	10	38,4	34	50	134
40	12	43,2	42	55	152
45	14	48,6	73	65	203

B5



Motor tipo Motor type	4 polos 4 poles		6 polos 6 poles		8 polos 8 poles		D	E	N	M	P	S	T	W	X	Y	Kg
	CV	KW	CV	KW	CV	KW											
63A	0,18	0,13	0,12	0,09			11	23	95	115	140	8,5	3	92	183	124	3,5
63B	0,25	0,18	0,18	0,13	0,08	0,06											4,5
71A	0,33	0,25	0,25	0,18	0,12	0,09	14	30	110	130	160	8,5	3,5	100	215	142	5,5
71B	0,50	0,37	0,33	0,25	0,18	0,13											6,5
80A	0,75	0,55	0,50	0,37	0,25	0,18	19	40	130	165	200	11,5	3,5	120	240	158	9
80B	1	0,75	0,75	0,55	0,33	0,25											10
90S	1,5	1,1	1	0,75	0,50	0,37	24	50	130	165	200	11,5	3,5	126	255	178	12
90L	2	1,5	1,5	1,1	0,75	0,55									280		15
100LA	3	2,2	2	1,5	1	0,75								138	305	194	21
100LB	4	3	—	—	1,5	1,1	28	60	180	215	250	14	4	138	305	194	23
112M	5,5	4	3	2,2	2	1,5								155	332	220	32
132S	7,5	5,5	4	3	3	2,2									382		45
132M	10	7,5	5,5	4	4	3	38	80	230	265	300	14	4	176	420	262	55
132L	—	—	7,5	5,5	—	—									420		60

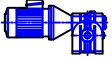
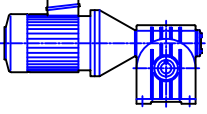
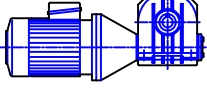
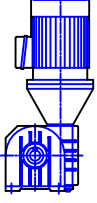

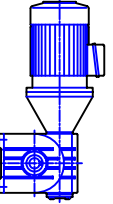
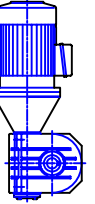
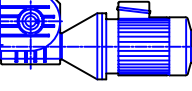
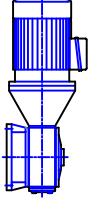
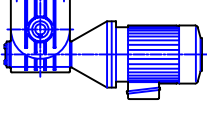
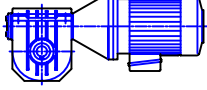
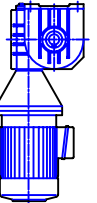

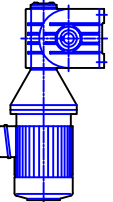
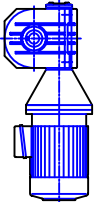
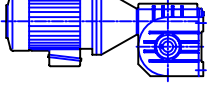
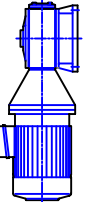
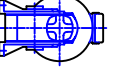
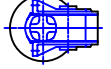
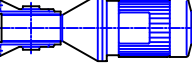
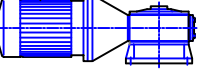


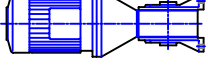
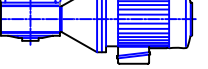
B14

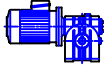
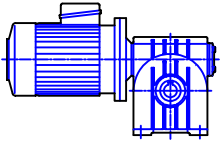
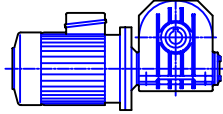
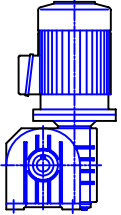
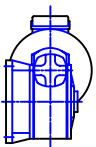
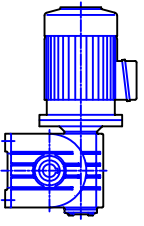
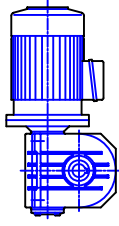
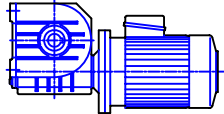
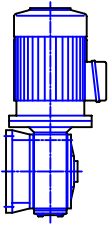
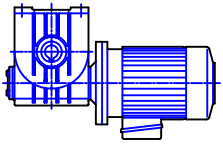
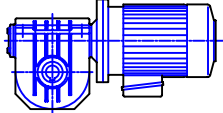
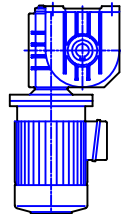
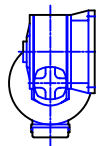
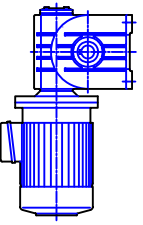
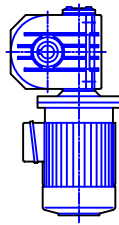
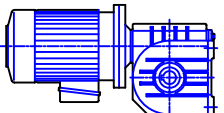
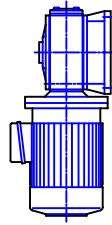
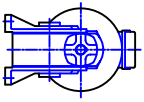
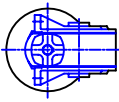
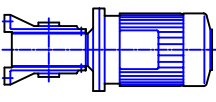
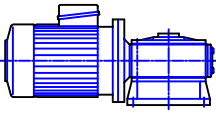
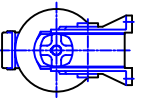
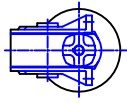
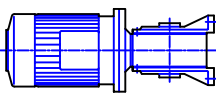
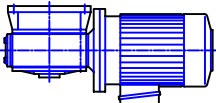


Motor tipo Motor type	4 polos 4 poles		6 polos 6 poles		8 polos 8 poles		D	E	N	M	P	S	T	W	X	Y	Kg
	CV	KW	CV	KW	CV	KW											
63A	0,18	0,13	0,12	0,09			11	23	60	75	90	M5	2,5	92	183	124	3,5
63B	0,25	0,18	0,18	0,13	0,08	0,06											4,5
71A	0,33	0,25	0,25	0,18	0,12	0,09	14	30	70	85	105	M6	2,5	100	215	142	5,5
71B	0,50	0,37	0,33	0,25	0,16	0,12											6,5
80A	0,75	0,55	0,50	0,37	0,25	0,18	19	40	80	100	120	M6	3	120	240	158	9
80B	1	0,75	0,75	0,55	0,33	0,25											10
90S	1,5	1,1	1	0,75	0,50	0,37	24	50	95	115	140	M8	3	126	255	178	12
90L	2	1,5	1,5	1,1	0,75	0,55									280		15
100LA	3	2,2	2	1,5	1	0,75								138	305	194	21
100LB	4	3	—	—	1,5	1,1	28	60	110	130	160	M8	3,5	138	305	194	23
112M	5,5	4	3	2,2	2	1,5								155	332	220	32
132S	7,5	5,5	4	3	3	2,2									382		45
132M	10	7,5	5,5	4	4	3	38	80	130	165	200	M10	3,5	176	420	262	55
132L	—	—	7,5	5,5	—	—									420		60

N.B.—Dimensoes W-X-Y e pesos variam com a marca do motor.

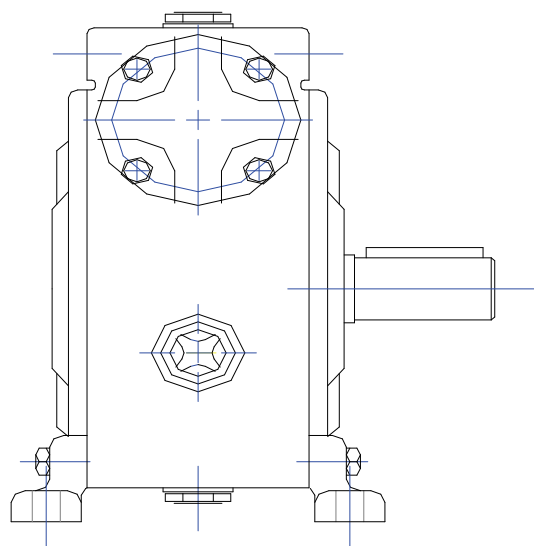
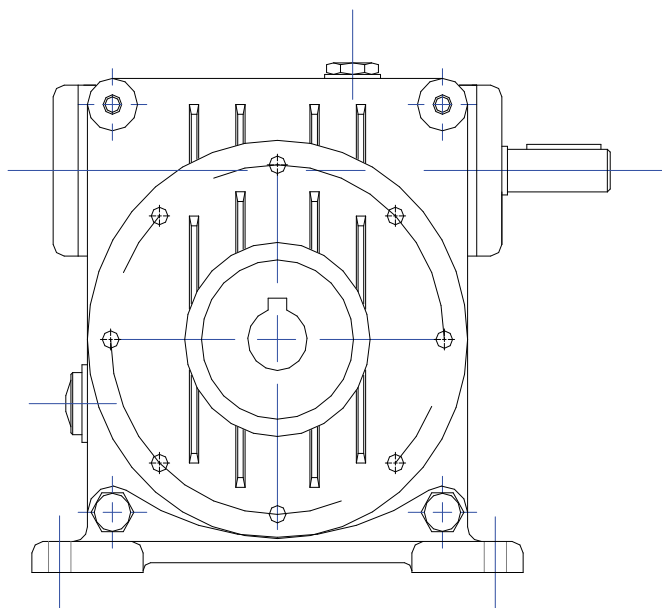
N.B.—Dimensions W-X-Y and weights vary with the make of the motor.

	MV...A MV...OA	MV...B MV...OB	MV...V MV...OV	MV...F MV...OF
B3				
V6				
B8				
V5				
B6				
B7				

	MV...CA MV...COA	MV...CB MV...COB	MV...CV MV...COV	MV...CF MV...COF
B3				
V6				
B8				
V5				
B6				
B7				

# ***REDUTORES***

## **Tipo - L**



**OLIMAR**

**CONSTRUÇÕES ELECTROMECÂNICAS DOMINGOS FRANCISCO RAMILO, s.a.r.l.**

2380 ALCANENA CODEX - APARTADO 3 - PORTUGAL - Telefones: 351/49/891535 (5 linhas) - Telex -16353 Fax-

# REDUTOR DE RODA CORÔA / SEM-FIM TIPO - L

## ESPECIFICAÇÕES TÉCNICAS:

### CARTÉR:

- Em ferro fundido de grande qualidade.
- A sua fabricação precisa, garante um alinhamento exacto das engrenagens.
- Os pés são maciços e fortemente nervurados e dão um amplo suporte que assegura uma rigidez absoluta, devido à sua configuração é possível uma diversão mais ampla de versões p/ montagem.

### ENGRENAGENS:

- O sem-fim é uma única peça.
- Material usado para o sem-fim é aço ao carbono de grande resistência, temperado por indução ou em alguns casos um aço de liga com tratamento térmico antes de ser cortado.
- A corôa é fundida em bronze fosforoso.
- As engrenagens são rectificadas e largamente dimensionadas para transmitir continuamente a potência nominal.

### VEIOS E APOIOS:

- Todos os veios são rectificados e apoiados em rolamentos de rolos cónicos de grande capacidade de carga.
- Sem-fim e veio de saída com retentor para evitar perdas de óleo e entrada de poeiras.

### RENDIMENTO:

- O rendimento é muito elevado e atinge 96/98% sob plena carga.

### LUBRIFICAÇÃO:

- As engrenagens funcionam em banho de óleo c/nível controlado por visor de vidro.
- Entrada e saída de óleo por sistema de bujão roscado.
- Os rolamentos recebem lubrificação adequada mediante chapinhagem.

### REFRIGERAÇÃO:

- A sua capacidade de refrigeração do carter e da ventoinha de Arrefecimento é suficiente para temperaturas de óleo até 80°C.

### ENSAIO:

- Todos os componentes do redutor são examinados durante e depois da fabricação.
- Feito a montagem verifica-se o contacto e o alinhamento correcto das engrenagens.
- Segue um ensaio conforme ficha de inspecção e ensaio interna de forma a garantir a conformidade do equipamento para expedição.



### REDUTORES TIPO L

roda sem-fim  
worm gear

### GEARBOX TYPE L

RAZÃO RATIO	TIPO TYPE	POTENCIA/POWER C.V.			N.FABRICO ORDER NUMBER
		750 r.p.m.	1000 r.p.m.	1500 r.p.m.	
70	5	0,78	0,92	1,1	7012,5
66	7	2,6	3,0	4,30	6614
65	6	0,8	1,0	1,68	6513
60	2	0,19	0,21	0,27	6011.5
	3	0,45	0,51	0,62	6012
	4	0,73	0,90	1,10	6012.5
	8	4,0	5,1	6,70	6015
	10	8,4	10,9	14,5	6017
59	9	5,0	6,3	8,4	5916
56	5	0,96	1,2	1,4	5613
52	10	9,1	11,4	15,3	5218
51	7	3,0	3,8	5,1	5115
50	9	5,4	6,9	9,3	5017
48	4	0,9	1,2	1,45	4813
47	3	0,64	0,74	0,91	4712.5
	6	1,40	1,78	2,45	4714
45	10	8,2	13,3	17,2	4519
43	2	0,28	0,33	0,50	4312
	9	5,7	7,4	9,8	4318
41	4	1,1	1,4	2,0	4113.5
	7	3,50	4,60	6,1	4116
	8	4,9	6,20	8,3	4117
40	5	1,35	1,72	2,10	4014
	101	10,7	13,6	18,3	40110
37	3	0,73	0,88	1,2	3713
	91	6,0	7,6	10,2	3719
36	6	1,52	1,90	2,77	3615
35	7	3,76	4,85	6,58	3517
	8	5,2	6,65	8,85	3518
33	3	0,35	0,41	0,53	3312.5
	91	6,65	8,10	11,10	33110
	101	12,65	15,90	21,60	33111,5
30	2	0,38	0,46	0,56	6021,5
	3	0,89	1,10	1,41	6022
	4	1,26	1,57	1,95	6022.5
	5	1,76	2,10	2,64	3015
	7	4,25	5,56	7,38	3018
	8	5,78	7,25	9,8	6025
28	6	1,78	2,25	3,25	2816
26	10	14,58	18,75	25,6	5228
25,5	7	4,74	6,10	8,21	5125
25	9	8,12	10,50	13,56	5027
24	6	2,9	3,41	4,96	2417
	8	6,74	8,65	11,58	4826
23,5	3	1,0	1,28	1,61	4722.5





REDUTORES TIPO L

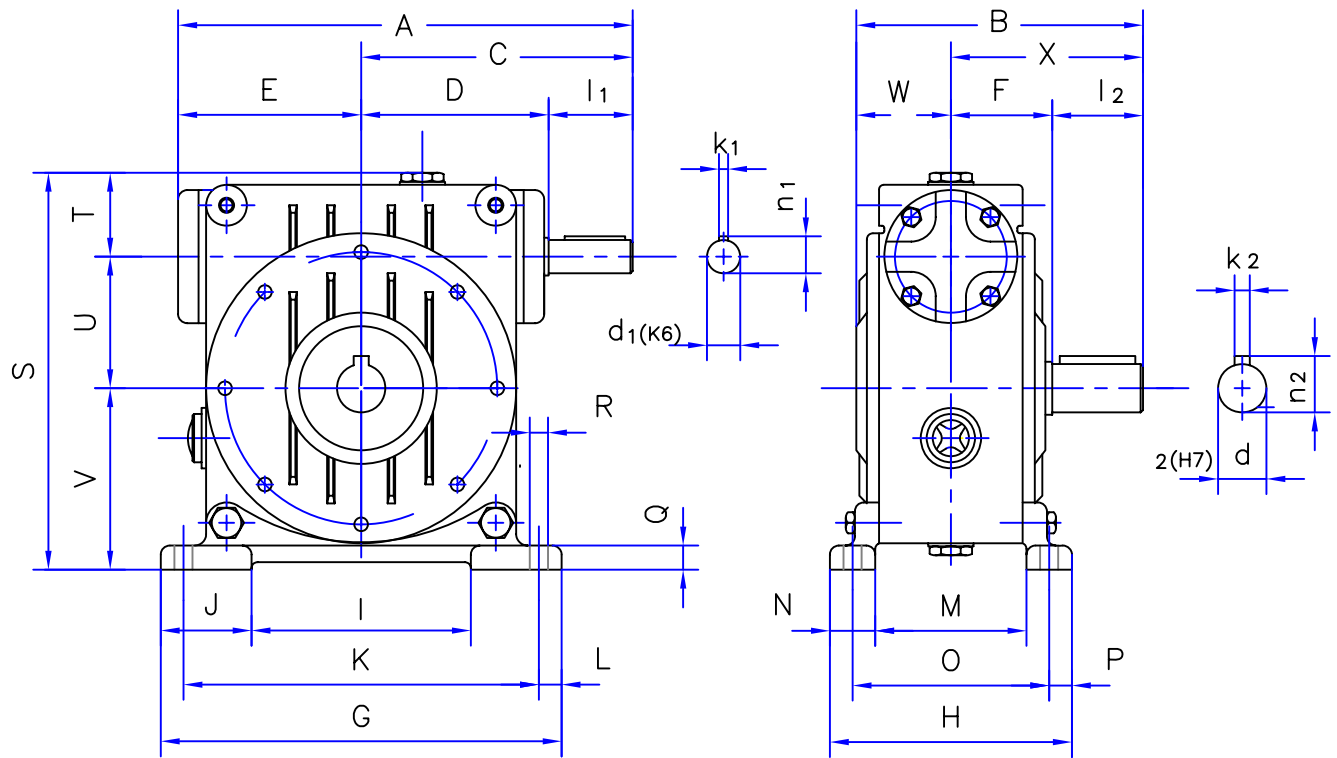
roda sem-fim  
worm gear

GEARBOX TYPE L

RAZÃO RATIO	TIPO TYPE	POTENCIA - POWER C.V.			N° FABRICO ORDER NUMBER
		750 r.p.m.	1000 r.p.m.	1500 r.p.m.	
23	4	1,57	1,95	2,41	4623
21,5	2	0,45	0,56	0,67	4322
	9	8,2	10,3	14,1	4328
20,5	4	1,81	2,32	2,78	4123,5
	7	5,62	7,14	9,85	4126
	8	6,85	8,74	11,95	4127
20	3	1,25	1,48	1,87	6032
	4	1,76	2,25	2,86	6032,5
	10	18,2	22,65	32,1	40210
19	5	2,14	2,81	3,45	3824
18,5	9	9,10	11,72	16,85	3729
18	6	2,98	4,0	5,4	3625
16,5	10	21,8	27,4	35,7	33211,5
	2	0,56	0,71	0,83	3322,5
16	9	10,5	12,9	18,4	32210
	4	1,85	2,48	3,16	3224
	8	8,3	10,9	14,5	4836
15,3	3	1,39	1,74	2,1	4632,5
15	2	0,71	0,80	0,91	6041,5
	3	1,44	1,78	2,41	6042
	4	2,20	2,61	3,6	6042,5
	5	2,68	2,99	4,2	3025
	7	6,75	8,84	11,9	3028
	10	24,8	29,4	39,8	4539
14,3	2	0,56	0,63	0,78	4332
	9	10,8	13,5	18,9	4338
14	6	3,4	4,2	5,8	2826
13,3	10	25,7	32,6	43,5	40310
12,3	3	1,68	2,0	2,6	3733
	9	11,9	15,3	20,9	3739
12	4	2,58	3,25	3,85	4843
11,6	8	9,7	13,2	17,6	3538
11,25	10	28,2	35,9	49,1	4549
10,6	2	0,91	1,24	1,58	3232,5
10	5	3,6	4,1	5,2	4044
	7	9,2	12,3	16,2	3038
	10	31,8	40,1	54,8	40410
9,3	6	4,5	6,0	8,2	2836
9,25	3	1,9	2,41	3,2	3743
8,75	8	13,6	15,9	21,8	3548
8,5	4	2,9	3,94	4,95	3444
	10	35,8	45,3	60,7	34411,5
8,25	9	16,8	20,4	28,6	33410
7,5	7	11,8	14,6	19,3	3048

REDUTORES Tipo L

GEARBOXES Type L



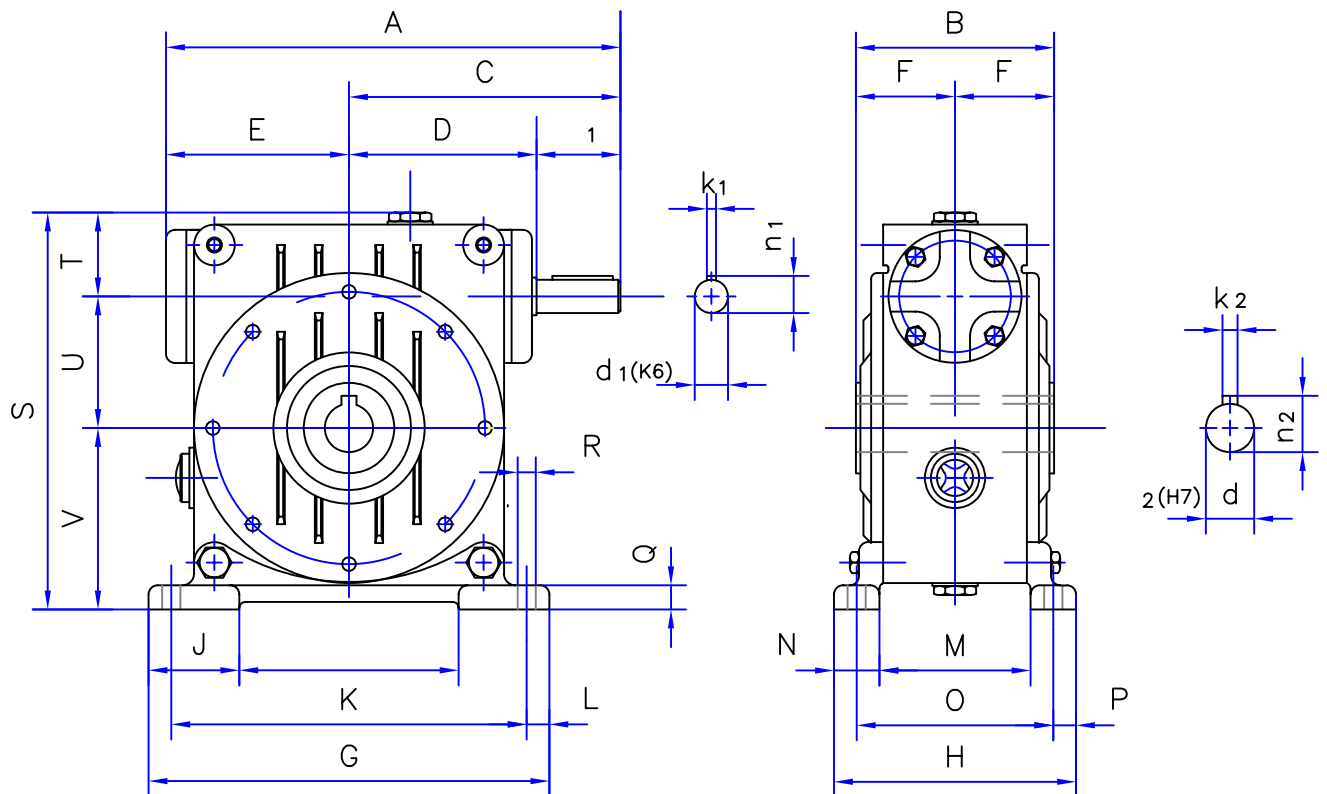
TIPO	L2	L3	L4	L5	L6	L7	L8	L9	L10
A	194.5	243	300.5	331	372.5	452.5	527.5	600	726
B	122.5	151.5	189.5	212	273.5	313	357	397.5	497
C	117.5	147	179.5	200	227	278	306.5	342	406
D	77.5	97	119.5	130	147	188	216.5	242	296
E	77	96	121	131	145.5	184.5	221	258	320
F	43.5	52	67	76	101.5	115	130	147.5	173.5
G	168	208	265	290	350	410	497	565	670
H	95	119	160	183	237	254	298	322	385
I	78	96	145	140	200	194	267	345	400
J	45	56	60	75	75	108	115	110	135
K	147	185	235	255	304	370	445	512	614
L	10.5	11.5	15	17.5	23	20	26	26.5	28
M	61	81	100	123	157	174	194	218	275
N	17	19	30	30	40	40	52	52	55
O	78	100	130	153	197	214	246	270	330
P	8.5	9.5	15	15	20	20	26	26	27.5
Q	10	12	16	20	26	23	34	34	43
R	8.5	8.5	12	13.5	17	17	22	23	25
S	162	213	261.5	296	335	411	496.5	569	674
T	37.5	48	54.5	61.8	67.7	74.5	94	106	126
U	53	79	87	99.2	113.3	152	172.5	205	240
V	71.5	95	120	135	154	184.5	230	258	308
W	42	49.5	62.5	66	92	108	127	140	168.5
X	83.5	102	127	146	181.5	205	230	257.5	328.5
d <sub>1</sub>	15	18	22	28	32	38	42	52	60
l <sub>1</sub>	40	50	60	70	80	90	90	100	110
k <sub>1</sub>	5	6	6	8	10	10	12	16	18
n <sub>1</sub>	17.1	20.5	24.5	30.9	35.3	41.3	45.1	55.8	64.2
d <sub>2</sub>	22	28	32	38	45	52	58	65	70
l <sub>2</sub>	40	50	60	70	80	90	100	110	155
k <sub>2</sub>	6	8	10	10	14	16	16	18	20
n <sub>2</sub>	24.5	31.9	37.3	41.3	48.5	55.8	61.8	69.2	74.5
Kg.									
Oleo (lts)									

TABELAS TRANSMISSÕES SEMFIM L TAB00065

OBSERVAÇÃO: - A indicação da capacidade de óleo, não dispensa a verificação do seu nível através do respectivo indicador.

REDUTORES Tipo-LO

GEARBOXES Type-LO

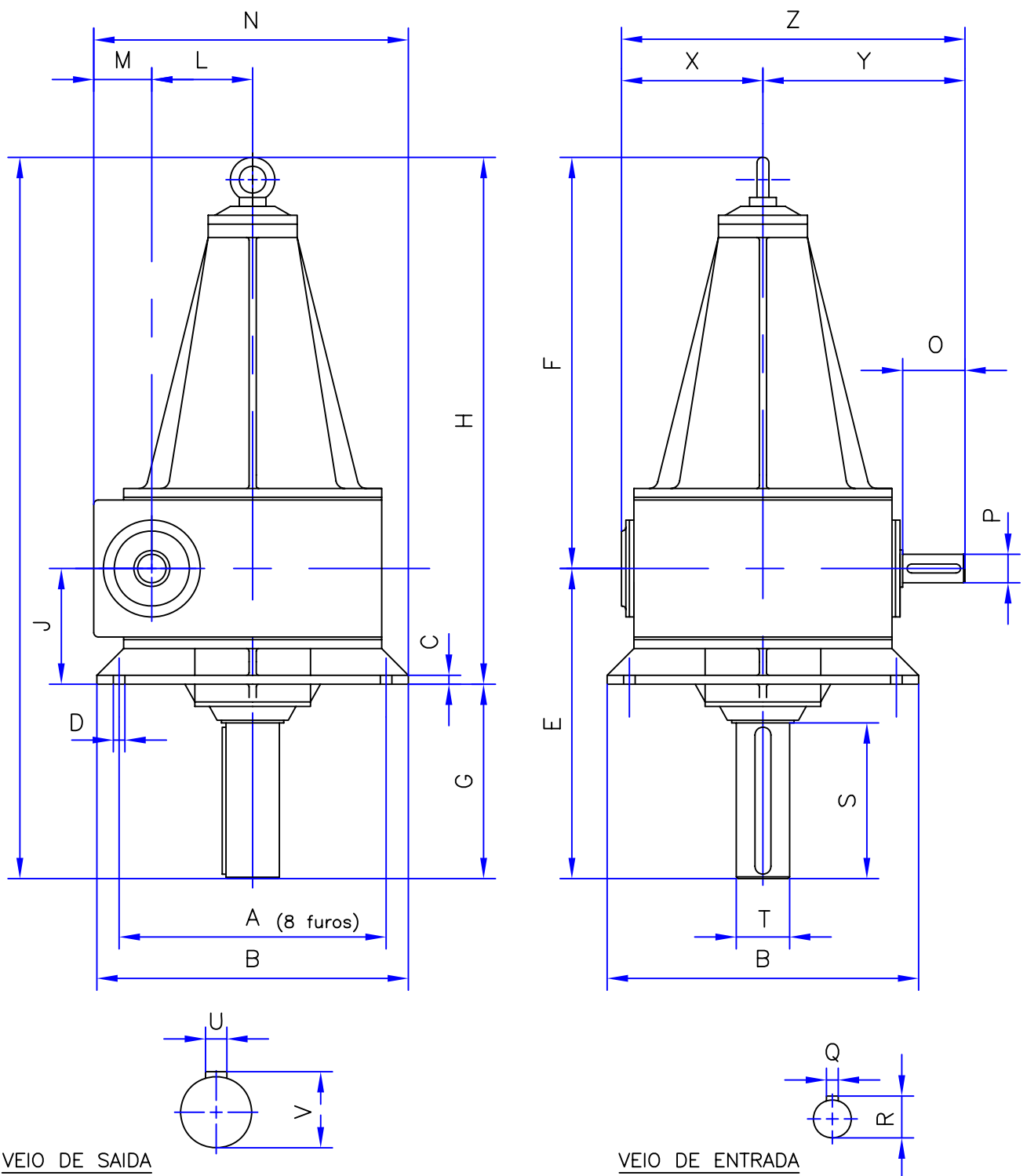


TIPO	L053	L070	L087	L099	L0113	L072	L08	L09	L010
A	194.5	243	300.5	331	372.5	452.5	527.5	600	726
B	87	104	134	152	203	230	260	295	347
C	117.5	147	179.5	200	227	268	306.5	342	406
D	77.5	97	119.5	130	147	188	216.5	242	296
E	77	96	121	131	145.5	184.5	221	258	320
F	43.5	52	67	76	101.5	115	130	147.5	173.5
G	168	208	265	290	350	410	497	565	670
H	95	119	160	183	237	254	298	322	385
I	78	96	145	140	200	194	267	345	400
J	45	56	60	75	75	108	115	110	135
K	147	185	235	255	304	370	445	512	614
L	10.5	11.5	15	17.5	23	20	26	26.5	28
M	61	81	100	123	157	174	194	218	275
N	17	19	30	30	40	40	52	52	55
O	78	100	130	153	197	214	246	270	330
P	8.5	9.5	15	15	20	20	26	26	27.5
Q	10	12	16	20	26	23	34	34	43
R	8.5	8.5	12	13.5	17	17	22	23	25
S	162	213	261.5	296	335	411	496.5	569	674
T	37.5	48	54.5	61.8	67.7	74.5	94	106	126
U	53	70	87	99.2	113.3	152	172.5	205	240
V	71.5	95	120	135	154	184.5	230	258	308
d <sub>1</sub>	15	18	22	28	32	38	42	52	60
l <sub>1</sub>	40	50	60	70	80	80	90	100	110
k <sub>1</sub>	5	6	6	8	10	10	12	16	18
n <sub>1</sub>	17.1	20.5	24.5	30.9	35.3	41.3	45.1	55.8	64.2
d <sub>2</sub>	22	28	35	40	45	48	60	65	70
k <sub>2</sub>	6	8	10	12	14	14	18	18	20
n <sub>2</sub>	24.5	31	38.4	43.2	48.6	51.6	64.3	69.3	74.7
Kg.									
Oleo (lts)									

TABELAS\TRANSMISSOES\R-SEMIFIM\LO\_TAB0068

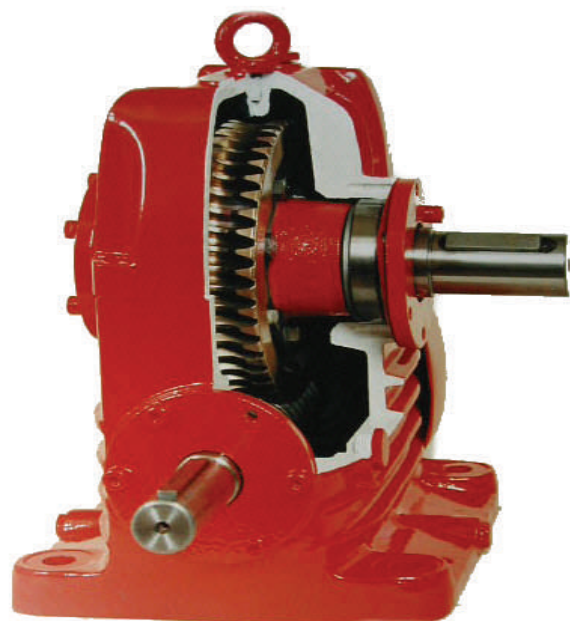
OBSERVAÇÃO:- A indicação da capacidade de óleo, não dispensa a verificação do seu nível através do respectivo indicador.

REDUTORES ESPECIAS PARA AGITADORES-Tipo 413LA SPECIAL GEARBOXES FOR AGITATOR Type 413LA



TIPO	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S	T	U	V	X	Y	Z
413LA10	∅530	∅600	14	∅17	701.5	752.5	477	977	1454	224.5	240	120	660	110	∅60 <sup>m6</sup>	18	64.2	400	∅100 <sup>k6</sup>	28	106.1	320	406	726
413LA9	∅460	∅500	12	∅15	579	691	394	876	1270	185	205	100	555	100	∅52 <sup>m6</sup>	16	55.8	325	∅90 <sup>k6</sup>	25	95.3	260	342	602
413LA8	∅400	∅450	12	∅15	500	618	330	788	1118	170	172.5	90	487.5	90	∅42 <sup>k6</sup>	12	45.1	275	∅80 <sup>m6</sup>	22	85.5	223	306.5	529.5
413LA7	∅350	∅400	10	∅13	420	541	275	686	961	145	152	75	427	80	∅38 <sup>k6</sup>	10	41.3	225	∅70 <sup>m6</sup>	20	74.6	184	268	452
413LA6	∅300	∅350	10	∅13	348.5	462	218.5	592	810.5	130	113.3	65.2	353.5	80	∅32 <sup>k6</sup>	10	35.3	175	∅60 <sup>m6</sup>	18	64.2	144	227	371

REDUTORES E MOTO-REDUTORES  
GEARBOXES AND  
MOTORIZED GEARBOXES  
TIPO A/R—TYPE A/R



# REDUTOR DE RODA DE CORÔA – SEM-FIM TIPO- A/R

## ESPECIFICAÇÕES TÉCNICAS:

### CARTÉR:

- Em ferro fundido de grande qualidade.
- A sua fabricação precisa, garante um alinhamento exacto das engrenagens.
- Os pés são maciços e fortemente nervurados e dão um amplo suporte que assegura uma rigidez absoluta.

### ENGRENAGENS:

- O sem-fim e o seu eixo é fabricado de uma só peça.
- Material usado para o sem-fim é aço ao carbono de grande resistência, temperado por indução ou em alguns casos um aço de liga com tratamento térmico antes de ser cortado.
- A corôa é fundida em bronze fosforoso.
- As engrenagens são rectificadas e largamente dimensionadas para transmitir continuamente a potência nominal.

### VEIOS E APOIOS:

- Todos os veios são rectificados e apoiados em rolamentos de rolos cónicos de grande capacidade de carga.
- Sem-fim e veio de saída com retentor para evitar perdas de óleo e entrada de poeiras.

### RENDIMENTO:

- O rendimento é muito elevado e atinge 96/98% sob plena carga.

### LUBRIFICAÇÃO:

- As engrenagens funcionam em banho de óleo c/nível controlado por visor de vidro.
- Entrada e saída de óleo por sistema de bujão roscado.
- Os rolamentos recebem lubrificação adequada mediante chapinhagem.

### REFRIGERAÇÃO:

- A sua capacidade de refrigeração do carter através de ventoinha própria de arrefecimento é suficiente para temperaturas de óleo até 80°C.

### ENSAIO:

- Todos os componentes do redutor são examinados durante e depois da fabricação.
- Feita a montagem verifica-se o contacto e o alinhamento correcto das engrenagens.
- Segue um ensaio conforme ficha de inspecção e ensaio interna de forma a garantir a conformidade do equipamento para expedição.



REDUTORES TIPO A... e R...

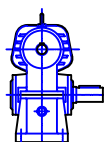
GEARBOXES TYPE A... e R...

RAZAO RATIO i	VELOCIDADE DE ENTRADA <R.P.M.>						INPUT SPEED			TIPO TYPE		N.FABRICO ORDER NUMBER
	750			1000			1500					
	POT. POWER CV	REND. EFFIC. %	MOM. TORQUE Nm	POT. POWER CV	REND. EFFIC. %	MOM. TORQUE Nm	POT. POWER CV	REND. EFFIC. %	MOM. TORQUE Nm			
19,5	34,2	78,0	5305	44,8	79,4	5180	60,8	81,9	4818	A121	R121	39213
18,5	11,3	77,9	1620	14,4	79,3	1586	19,6	81,8	1475	A91	R91	3729
18	3,3	79,0	464	4,2	80,2	450	5,6	82,6	419	A62	R62	3625
17,66	37,0	79,5	5178	47,0	80,9	5023	63,8	83,3	4697	A121	R121	53310
17	25,8	78,9	3458	33,0	80,0	3351	44,6	82,4	3059	A101	R101	33211,5
	30,3	79,2	4055	38,4	80,4	3922	52,0	82,7	3586	A111	R111	34213
16,5	12,5	79,0	1628	16,0	80,2	1580	21,7	82,5	1420	A91	R91	32210
16	10,2	79,8	1299	13,0	81,2	1263	17,6	83,7	1177	A81	R81	4836
15,33	31,7	79,9	3866	40,3	81,4	3755	54,6	83,9	3456	A111	R111	46310
15	8,3	79,0	988	10,6	80,2	954	14,4	82,6	894	A72	R72	3028
	28,1	79,6	3346	35,8	81,0	3243	48,5	83,4	2998	A101	R101	4539
14,66	43,6	79,7	5075	55,4	81,2	4923	74,9	83,5	4579	A121	R121	44311,5
	55,0	79,8	6400	69,6	81,3	6191	94,3	83,6	5645	A131	R131	44313
14,33	13,1	80,0	1496	16,6	81,5	1450	23,5	83,8	1348	A91	R91	4338
14	3,5	78,9	384	4,4	80,0	372	6,0	82,4	362	A62	R62	2826
13,33	30,9	79,7	3272	39,2	81,2	3165	53,1	83,6	2920	A101	R101	40310
13,33	35,2	81,0	3690	44,8	82,2	3576	60,8	84,7	3324	A111	R111	5249
	50,7	81,3	5324	64,7	82,3	5164	87,8	84,6	4800	A121	R121	39313
12,33	14,6	80,0	1437	18,6	81,5	1393	25,2	83,8	1293	A91	R91	3739
11,66	12,0	80,2	1118	15,3	81,6	1090	20,8	84,0	1008	A81	R81	3538
11,5	32,2	80,7	3540	48,8	82,1	3444	66,2	84,6	3211	A111	R111	46410
11,25	34,1	80,3	3068	43,6	81,7	2988	59,0	84,2	2860	A101	R101	4549
11	68,1	81,0	6042	87,0	82,5	5889	117,8	85,0	5434	A131	R131	44413
10	11,3	80,3	903	14,4	81,7	878	19,5	84,2	812	A72	R72	3038
	38,6	80,7	3098	49,1	82,1	3008	66,5	84,6	2780	A101	R101	40410
9,75	60,0	81,2	4729	76,0	82,8	4583	103	85,3	4350	A121	R121	39413
	74,2	81,2	5850	94,2	82,7	5669	127,6	85,2	5261	A131	R131	39414
9,33	4,8	80,0	358	6,1	81,5	347	8,3	83,8	326	A62	R62	2836
8,75	16,4	80,6	1027	18,6	82,0	997	25,2	84,5	924	A81	R81	3548
8,5	43,5	80,8	2972	55,2	82,2	2880	74,8	84,7	2672	A101	R101	34411,5
	50,5	81,0	3463	64,1	82,4	3350	86,8	84,9	3106	A111	R111	34413
	67,4	67,4	4648	84,8	83,1	4507	116	85,6	4182	A121	R121	34414
8,25	19,6	81,3	1310	24,9	82,9	1270	34,0	85,4	1227	A91	R91	33410
7,5	13,7	81,6	831	17,3	83,1	804	23,4	85,7	738	A72	R72	3048

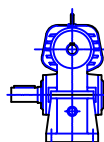
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VERSION

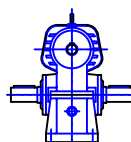
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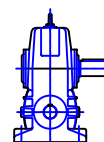


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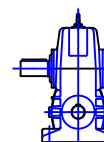


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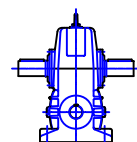
R...



N



S

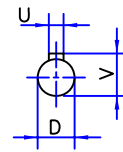
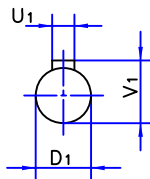
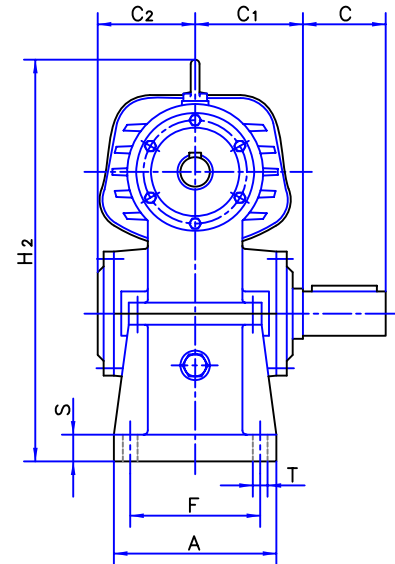
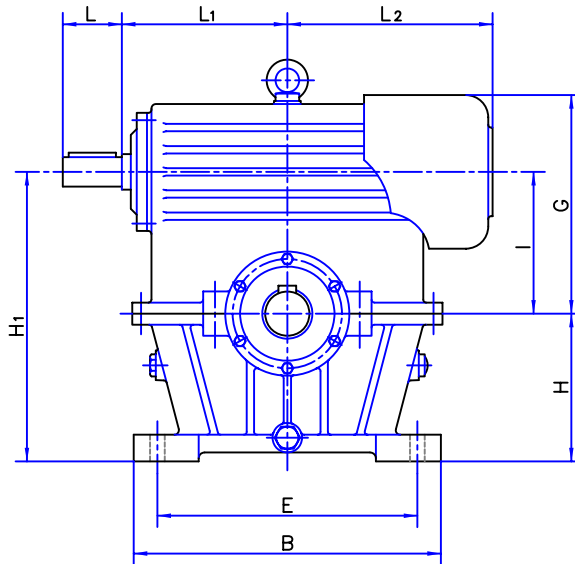


D



REDUTORES TIPO A...

GEARBOXES TYPE A...

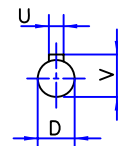
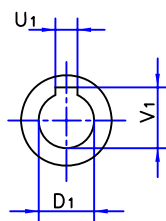
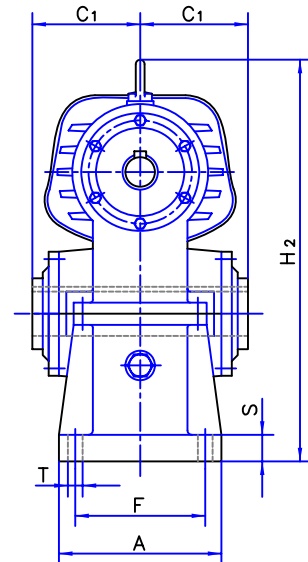
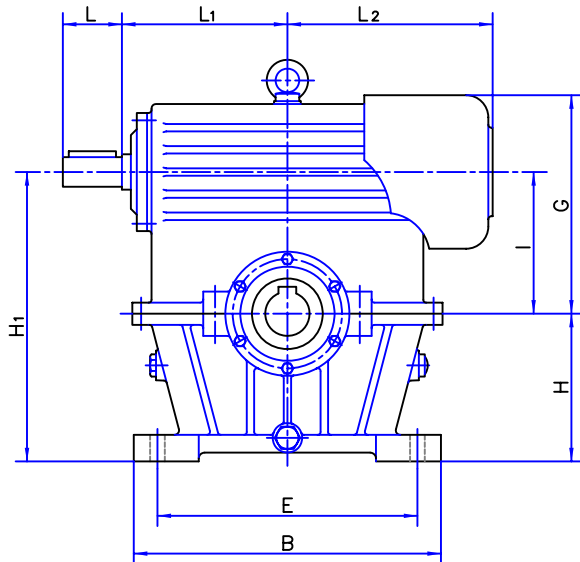


TABELAS\TRANSMISSOES\R-SEMFIM\TAB0052

TIPO TYPE	A62	A72	A81	A91	A101	A111	A121	A131
A	160	180	230	247	270	310	350	522
B	280	420	450	490	550	630	710	826
C	80	90	120	135	155	180	195	220
C1	101,5	115	129	135,5	159	167	185	250
C2	97	116	125	139	145	162	180	242
DK6	32	38	42	52	60	65	70	75
D1K6	45	52	58	62	70	80	90	110
E	245	325	350	430	440	510	625	598
F	125	130	180	195	205	235	260	432
G	182	233	273	315	380	413	472	541
H	130	180	200	252	265	300	325	381
H1	243,3	332	372,5	457	505	573	632	722
H2	350	460	520	607	675	750	820	951
I	113,3	152	172,5	205	240	273	307	341
L	80	80	90	100	110	120	130	150
L1	147	188	216,5	239	270	309	345,5	396
L2	146	185	221	325	372	408	470	522
S	20	32	35	43	45	52	60	60
T	15	18	18	20	24	28	35	42
U	10	10	12	16	18	18	20	20
U1	14	16	16	18	20	22	25	28
V	35,3	41,3	45,1	55,8	64,2	69,2	74,6	79,6
V1	48,5	55,8	61,8	66,2	74,6	85,5	95,3	116,1

REDUTORES TIPO A...0

GEARBOXES TYPE A...0

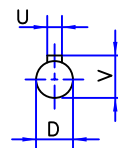
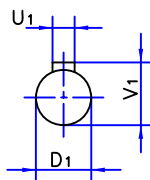
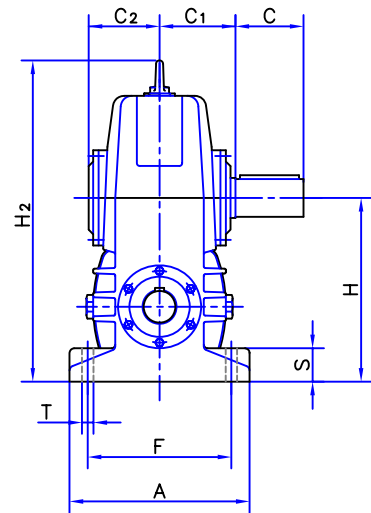
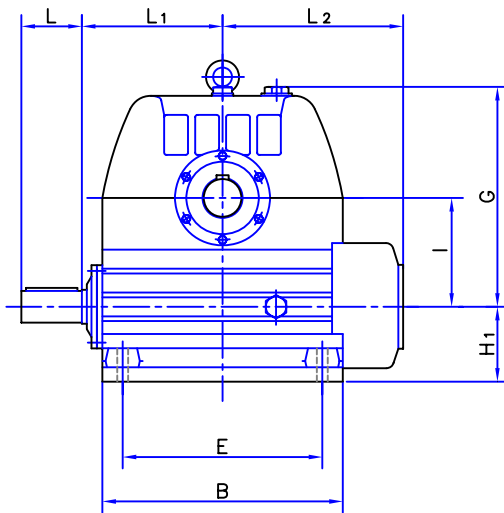


TABELAS\TRANSMISSOES\R-SEMFIM\AO\_TAB0055

TIPO TYPE	A62.0	A72.0	A81.0	A91.0	A101.0	A111.0	A121.0	A131.0
A	160	180	230	247	270	310	350	522
B	280	420	450	490	550	630	710	826
C1	93	115	129	135,5	159	167	185	250
DK6	32	38	42	52	60	65	70	75
D1H7	40	48	60	65	70	80	90	110
E	245	325	350	430	440	510	625	598
F	125	130	180	195	205	235	260	432
G	182	233	273	315	380	413	472	541
H	130	180	200	252	265	300	325	381
H1	243,3	332	372,5	457	505	573	632	722
H2	350	460	520	607	675	750	820	951
I	113,3	152	172,5	205	240	273	307	341
L	80	80	90	100	110	120	130	150
L1	147	188	216,5	239	270	309	345,5	396
L2	146	185	221	325	372	408	470	522
S	20	32	35	43	45	52	60	60
T	15	18	18	20	24	28	35	42
U	10	10	12	16	18	18	20	20
U1	12	14	18	18	20	22	25	28
V	35,3	41,3	45,1	55,8	64,2	69,2	74,6	79,6
V1	43,2	51,6	64,3	69,3	74,7	85,6	95,4	116,2

REDUTORES TIPO R...

GEARBOXES TYPE R...

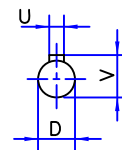
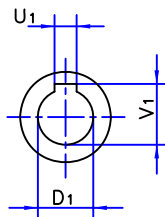
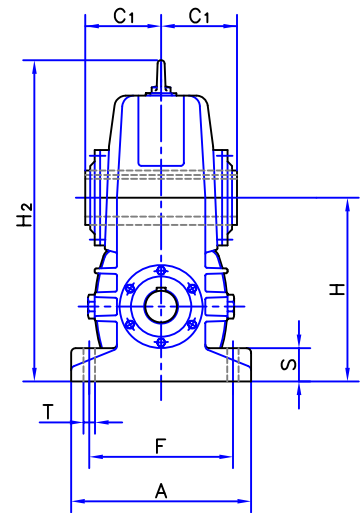
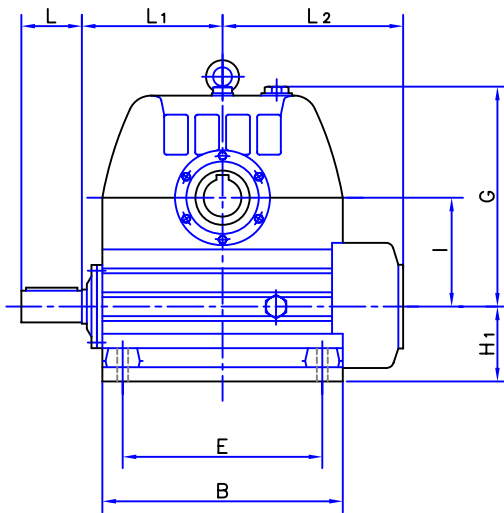


TABELAS\TRANSMISSOES\R--SEMFI\M\R\TAB0079

TIPO TYPE	R62	R72	R81	R91	R101	R111	R121	R131
A	240	260	320	340	380	430	470	512
B	250	355	440	455	530	550	610	725
C	80	90	120	135	155	180	195	220
C1	101.5	115	129	135.5	159	167	185	250
C2	97	116	125	139	145	162	180	242
D k6	32	38	42	52	60	65	70	75
D1 k6	45	52	58	62	70	80	90	110
E	200	260	320	400	440	475	510	612
F	190	203	260	270	300	350	380	432
G	254	323	363	426	496	562	618	708
H	213.3	269.5	319.5	345	405	458	512	571
H1	100	117.5	147	140	165	185	205	230
H2	393	488	558	613	708	794	878	1003
I	113.3	152	172.5	205	240	273	307	341
L	80	80	90	100	110	120	130	150
L1	147	200	246.5	239	296	309	345.5	396
L2	190	256	325	325	398	408	470	522
S	35	35	45	45	50	55	60	60
T	18	21	21	21	25	28	35	45
U	10	10	12	16	18	18	20	20
U1	14	16	16	18	20	22	25	28
V	35.3	41.3	45.1	55.8	64.2	69.2	74.6	79.6
V1	48.5	55.8	61.8	66.2	74.6	85.5	95.3	116.1

REDUTORES TIPO R...0

GEARBOXES TYPE R...0



TABELAS\TRANSMISSOES\R--SEMFI\M\R\TAB0103

TIPO TYPE	R62.0	R72.0	R81.0	R91.0	R101.0	R111.0	R121.0	R131.0
A	240	260	320	340	380	430	470	512
B	250	355	440	455	530	550	610	725
C1	93	115	129	135.5	159	167	185	250
D k6	32	38	42	52	60	65	70	75
D1 H7	40	48	60	65	70	80	90	110
E	200	260	320	400	440	475	510	612
F	190	203	260	270	300	350	380	432
G	254	323	363	426	496	562	618	708
H	213.3	269.5	319.5	345	405	458	512	571
H1	100	117.5	147	140	165	185	205	230
H2	393	488	558	613	708	794	878	1003
I	113.3	152	172.5	205	240	273	307	341
L	80	80	90	100	110	120	130	150
L1	147	200	246.5	239	296	309	345.5	396
L2	190	256	325	325	398	408	470	522
S	35	35	45	45	50	55	60	60
T	18	21	21	21	25	28	35	45
U	10	10	12	16	18	18	20	20
U1	12	14	18	18	20	22	25	28
V	35.3	41.3	45.1	55.8	64.2	69.2	74.6	79.6
V1	43.2	51.6	64.3	69.3	74.7	85.6	95.4	116.2

MOTO-REDUTORES TIPO MA... E MR...

MOTORIZED GEARBOXES TYPE MA... e MR...

POTENCIA POWER		V.SAIDA OUTPUT	RAZAO RATIO	M2	F.S	TIPO TYPE	N.FABRICO ORDER NUMBER	POTENCIA POWER		V.SAIDA OUTPUT	RAZAO RATIO	M2	F.S	TIPO TYPE	N.FABRICO ORDER NUMBER		
CV	KW	r.p.m.	i	(Nm)				CV	KW	r.p.m.	i	(Nm)					
2	1,5	21	65	682	1,05	MA62/90L MR62/90L	6513	15	11	27	52	3977	1,27	MA101/160M MR101/160M	5218		
		30	47	470	1,45	MA62/90L MR62/90L	4714			56	25	1917	1,11	MA91/160M MR91/160M	5027		
3	2,2	39	36	550	1,1	MA62/100L MR62/100L	3615			65	21,5	1652	1,15	MA91/160M MR91/160M	4328		
		50	28	429	1,26	MA62/100L MR62/100L	2816			75	18,5	1432	1,31	MA91/160M MR91/160M	3729		
4	3	21	66	1363	1,32	MA72/100L MR72/100L	6614			87	16	1234	1,17	MA81/160M MR81/160M	4836		
		58	24	493	1,1	MA62/100L MR62/100L	2417			93	15	1154	1,3	MA72/160L MR72/160L	3038		
5,5	4	27	51	1458	1,14	MA72/112M MR72/112M	5115			20	15	20	69	716	1,23	MA121/160L MR121/160L	6918
		34	41	1158	1,34	MA72/112M MR72/112M	4116					23	60	6226	1,08	MA111/160L MR111/160L	6018
		78	18	504	1,0	MA62/112M MR62/112M	3625					27	52	5303	1,16	MA111/160L MR111/160L	5219
		100	14	393	1,09	MA62/112M MR62/112M	2826					30	46	4773	1,21	MA111/160L MR111/160L	46110
7,5	5,5	23	60	2334	1,10	MA81/132S MR81/132S	6015					31	45	4619	1,04	MA101/160L MR101/160L	4519
		29	48	1851	1,18	MA81/132S MR81/132S	4816					35	40	4091	1,3	MA101/160L MR101/160L	40110
		40	35	1342	1,06	MA72/132S MR72/132S	3517	87,5	16			1636	1,08	MA91/160L MR91/160L	32210		
		46	30	1167	1,21	MA72/132S MR72/132S	3018	100	14			1432	1,17	MA91/160L MR91/160L	4338		
		55	25,5	976	1,32	MA72/132S MR72/132S	5125	122	11,5			1173	1,04	MA81/160L MR81/160L	3538		
		155	9	345	1,10	MA62/132S MR62/132S	2836	186	7,5			769	1,17	MA72/160L MR72/160L	3048		
10	7,5	24	59	2983	1,05	MA91/132M MR91/132M	5916	25	18,5			23	60	493	1,08	MA121/180M MR121/180M	6019
		28	50	2557	1,14	MA91/132M MR91/132M	5017					26	53	6884	1,19	MA121/180M MR121/180M	53110
		32	43	2237	1,21	MA91/132M MR91/132M	4318			36	39	4972	1,09	MA111/180M MR111/180M	39111,5		
		34	41	2105	1,03	MA81/132M MR81/132M	4117			42	33	4261	1,07	MA101/180M MR101/180M	33111,5		
		40	35	1790	1,09	MA81/132M MR81/132M	3518			54	26	3977	1,05	MA101/180L MR101/180L	5228		
		46	30	1556	1,2	MA81/132M MR81/132M	6025			116	12	1543	1,01	MA91/160L MR91/160L	3739		
		68	20,5	1053	1,19	MA72/132M MR72/132M	4126			155	9	1154	1,01	MA81/180M MR81/180M	3548		
12,5	9,2	38	37	2355	1,01	MA91/132M MR91/132M	3719	30	22	23	60	9339	1,22	MA131/180L MR131/180L	60110		
		42	33	2130	1,10	MA91/132M MR91/132M	33110			31	45	6929	1,12	MA121/180L MR121/180L	45111,5		
		58	24	1543	1,14	MA81/132M MR81/132M	4826			36	39	5966	1,23	MA121/180L MR121/180L	39113		
		68	20,5	1361	1,18	MA81/132M MR81/132M	4127			41	34	5239	1,0	MA111/180L MR111/180L	34113		
		93	15	962	1,15	MA72/132M MR72/132M	3028			46	30	4669	1,07	MA111/180L MR111/180L	6028		
15	11	20	69	5370	1,31	MA111/160M MR111/160M	6917	54	26	3977	1,19	MA111/180L MR111/180L	5229				
		23	60	4669	1,19	MA101/160M MR101/160M	6017	61	23	3521	1,25	MA111/180L MR111/180L	46210				

MOTO-REDUTORES TIPO MA... E MR...

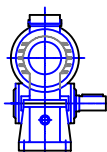
MOTORIZED GEARBOXES TYPE MA... e MR...

POTENCIA POWER		V.SAIDA OUTPUT	RAZAO RATIO	M2	F.S	TIPO TYPE	N.FABRICO ORDER NUMBER	POTENCIA POWER		V.SAIDA OUTPUT	RAZAO RATIO	M2	F.S	TIPO TYPE	N.FABRICO ORDER NUMBER
CV	KW	r.p.m.	i	(Nm)				CV	KW	r.p.m.	i	(Nm)			
30	22	70	20	3068	1,3	MA101/180L MR101/180L	40210	60	45	57	24,5	7536	1,07	MA131/225M MR131/225M	49212
		175	8	1227	1,13	MA91/180L MR91/180L	33410			70	20	6137	1,07	MA131/225M MR131/225M	60310
40	30	27	51	10607	1,02	MA131/200L MR131/200L	51111,5			72	19,5	5966	1,01	MA121/225M MR121/225M	39213
		32	44	8950	1,09	MA131/200L MR131/200L	44113			82	17	5239	1,06	MA121/225M MR121/225M	53310
		41	34	6985	1,01	MA121/200L MR121/200L	34114			96	14,5	4475	1,25	MA121/225M MR121/225M	44311,5
		46	30	6226	1,08	MA121/200L MR121/200L	6029			107	13	4014	1,01	MA111/225M MR111/225M	5249
		53	26,5	5403	1,21	MA121/200L MR121/200L	53210			122	11,5	3521	1,10	MA101/225M MR101/225M	46410
		72	19,5	3977	1,14	MA111/200L MR111/200L	39211,5			140	10	3068	1,11	MA101/225M MR101/225M	40410
		82	17	3492	1,11	MA101/200L MR101/200L	34211,5			165	8,5	2600	1,24	MA101/225M MR101/225M	34411,5
		93	15	3079	1,21	MA101/200L MR101/200L	4539			75	55	96	14,5	5593	1,26
50	37	26	39	11015	1,24	MA131/225S MR131/225S	39114	107	13			5018	1,09	MA111/250M MR111/250M	39313
		42	33	2130	1,10	MA131/225S MR131/225S	34213	165	8,5			3254	1,16	MA111/250M MR111/250M	34413
		46	30	7782	1,14	MA131/225S MR131/225S	60210	100	75	127	11	5637	1,18	MA131/280S MR131/280S	44413
		62	22,5	5774	1,08	MA121/225S MR121/225S	45211,5			140	10	5114	1,03	MA121/280S MR121/280S	39413
		107	13	4365	1,06	MA101/225S MR101/225S	40310			165	8,5	4339	1,16	MA121/280S MR121/280S	34414
		127	11	2818	1,18	MA101/225S MR101/225S	4549			125	90	140	10	6392	1,02
		130	15	2753	1,09	MA111/225S MR111/225S	46310								

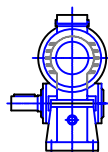
VERSAO

VERSION

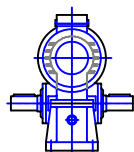
MA...  
MA...C



N

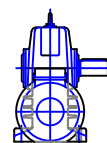


S

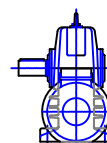


D

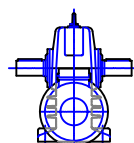
MR...  
MR...C



N



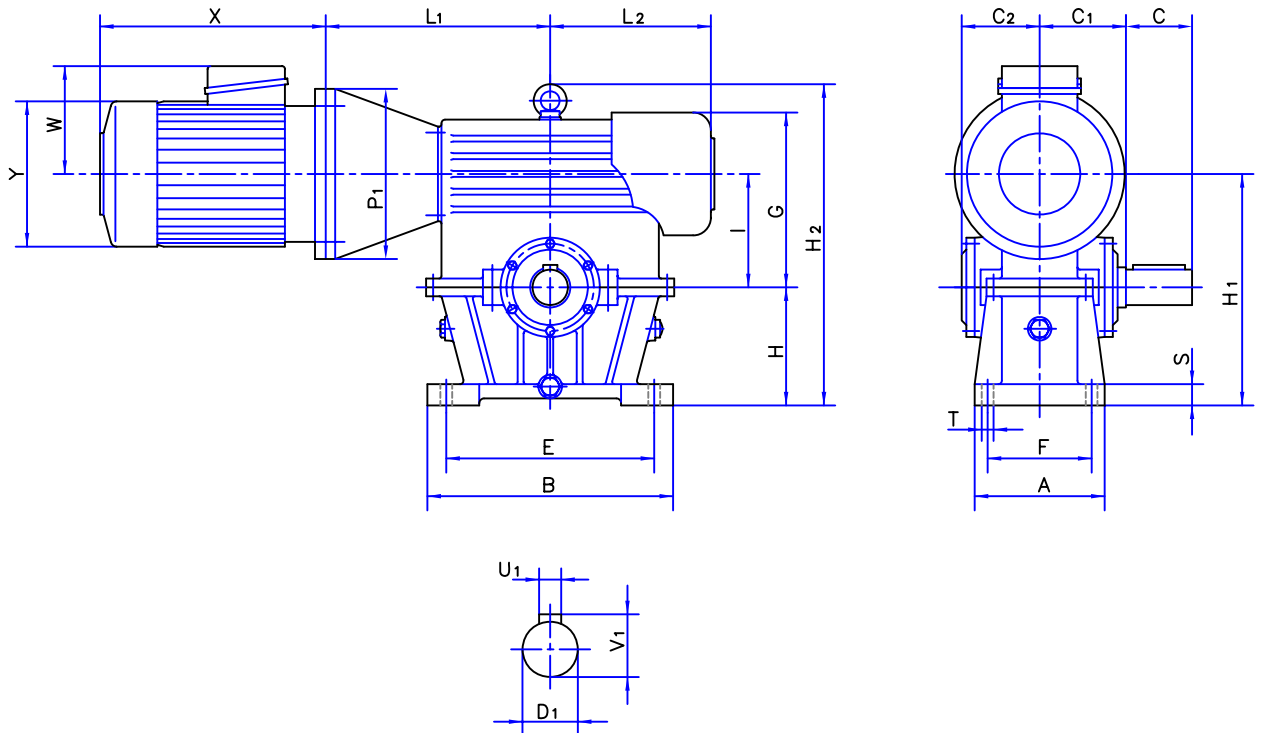
S



D

MOTO-REDUTORES TIPO MA...

MOTORIZED GEARBOXES TYPE MA...

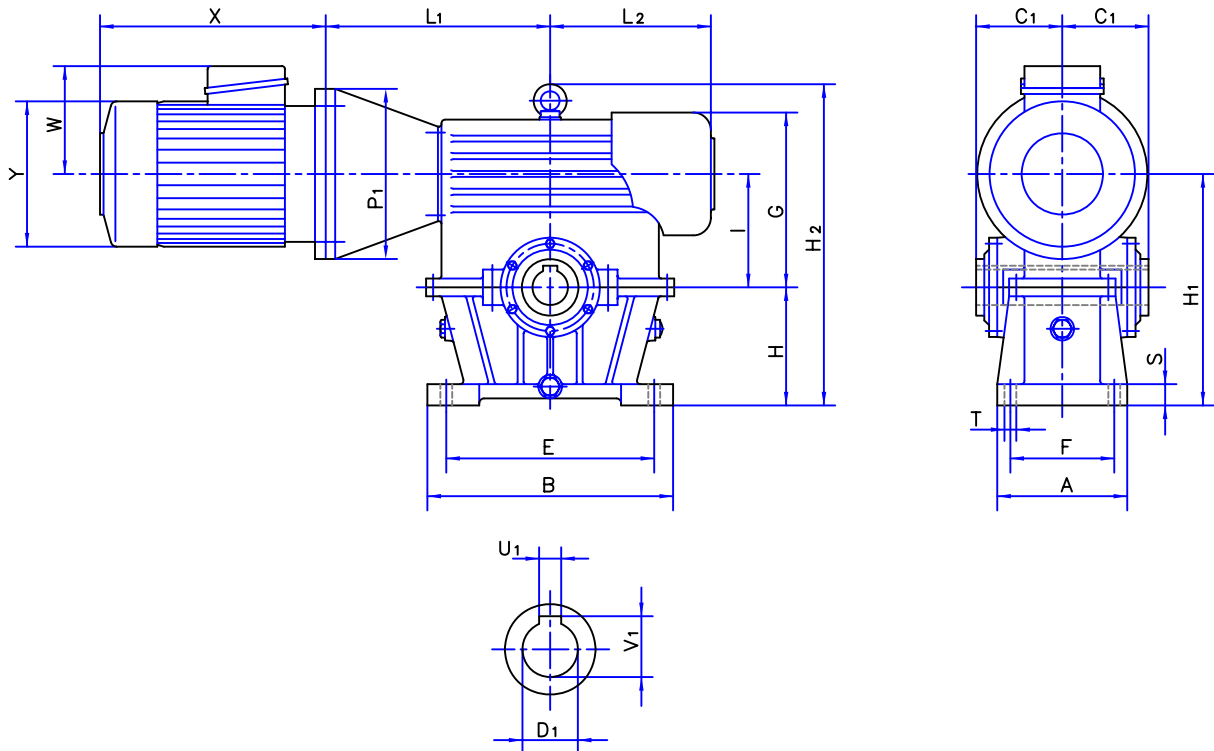


TABELAS\TRANSMISSOES\VR-SEMIFIM\TAB0101

TIPO TYPE	A	B	C	C1	C2	D1 k6	E	F	G	H	H1	H2	I	L1	L2	P1	S	T	U1	V1	W	X	Y
MA62/90S														282		200					126	255	178
MA62/90L														282		200					126	280	178
MA62/100L	160	280	80	101.5	97	45	245	125	182	130	243.3	350	113.3	292	146	250	20	15	14	48.5	138	305	194
MA62/112M														292		250					155	332	220
MA62/132S														312		300					176	382	262
MA72/112M														333		250					155	332	220
MA72/132S														353		300					176	382	262
MA72/132M	180	420	90	115	116	52	325	130	233	180	332	460	152	353	185	300	32	18	16	55.8	176	420	262
MA72/160M														383		350					234	491	316
MA72/160L														383		350					234	536	316
MA81/132S														391.5		300					176	382	262
MA81/132M														391.5		300					176	420	262
MA81/160M	230	450	120	129	125	58	350	180	273	200	372.5	520	172.5	421.5	221	350	35	18	16	61.8	234	491	316
MA81/160L														421.5		350					234	536	316
MA81/180M														421.5		350					246	555	360
MA91/132M														424		300					176	420	262
MA91/160M														454		350					234	491	316
MA91/160L	247	490	135	135.5	139	62	430	195	315	252	457	607	205	454	325	350	43	20	18	66.2	234	536	316
MA91/180M														454		350					246	555	360
MA91/180L														454		350					246	597	360
MA101/160M														495		350					234	491	316
MA101/160L														495	372	350	45	24	20	74.6	234	536	316
MA101/180M														495		350					246	555	360
MA101/180L														495		350					246	597	360
MA111/160M														544		350					234	491	316
MA111/160L														544		350					234	536	316
MA111/180M	310	630	180	167	162	80	510	235	413	300	573	750	273	544	408	350	52	28	22	85.5	246	555	360
MA111/180L														544		350					246	597	360
MA121/160L														590.5		350					234	491	316
MA121/180M	350	710	195	185	180	90	625	260	472	325	632	820	307	590.5	470	350	60	35	25	95.3	234	536	316
MA121/180L														590.5		350					246	555	360
MA131/180L	522	826	220	250	242	110	598	432	541	381	722	951	341	661	522	350	60	42	28	116.1	246	555	360
MA131/200L														661		400					306	665	460

MOTO-REDUTORES TIPO MA...O

MOTORIZED GEARBOXES TYPE MA...O



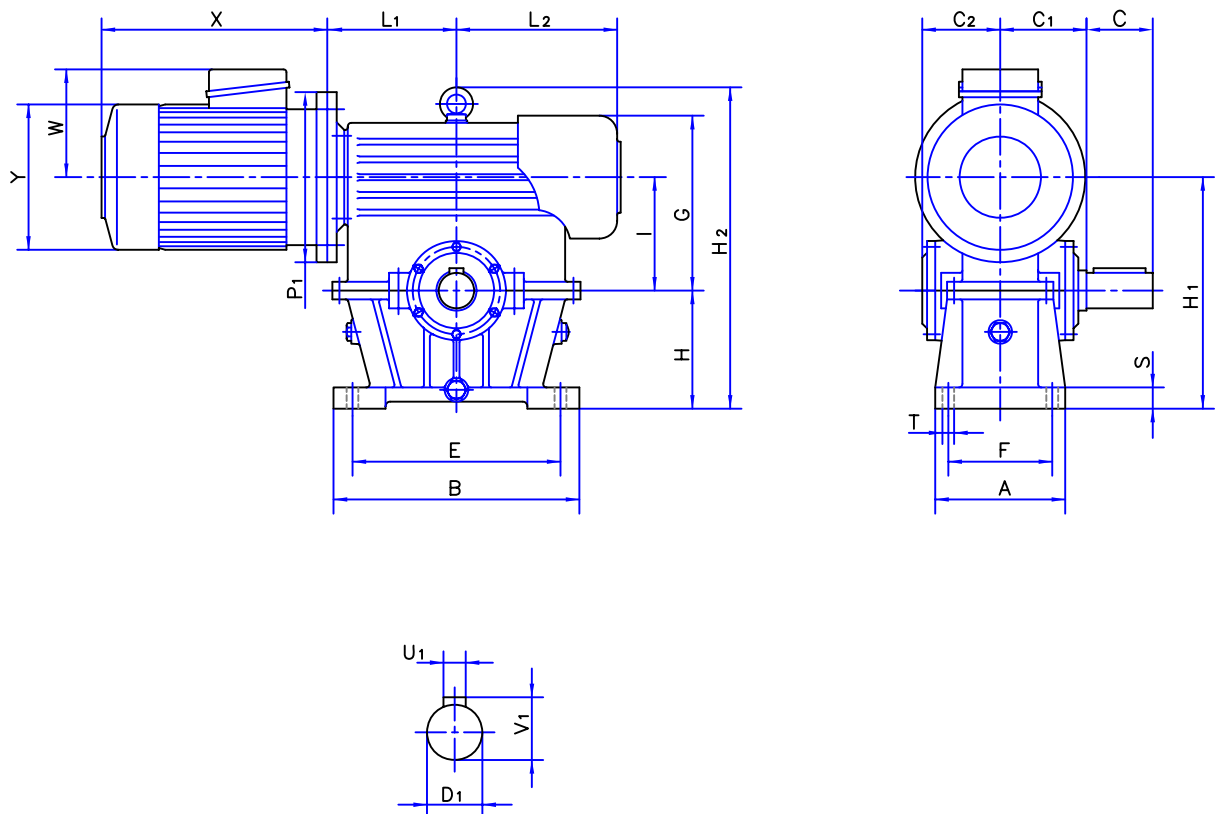
TABELAS\TRANSMISSOES\IR-SEMFI\TAB0102

TIPO TYPE	A	B	C1	D1 H7	E	F	G	H	H1	H2	I	L1	L2	P1	S	T	U1	V1	W	X	Y
MA62.0/90S												282		200					126	255	178
MA62.0/90L												282		200					126	280	178
MA62.0/100L	160	280	93	40	245	125	182	130	243.3	350	113.3	292	146	250	20	15	12	43.2	138	305	194
MA62.0/112M												292		250					155	332	220
MA62.0/132S												312		300					176	382	262
MA72.0/112M												333		250					155	332	220
MA72.0/132S												353		300					176	382	262
MA72.0/132M	180	420	115	48	325	130	233	180	332	460	152	353	185	300	32	18	14	51.6	176	420	262
MA72.0/160M												383		350					234	491	316
MA72.0/160L												383		350					234	536	316
MA81.0/132S												391.5		300					176	382	262
MA81.0/132M												391.5		300					176	420	262
MA81.0/160M	230	450	129	60	350	180	273	200	372.5	520	172.5	421.5	221	350	35	18	18	64.3	234	491	316
MA81.0/160L												421.5		350					234	536	316
MA81.0/180M												421.5		350					246	555	360
MA91.0/132M												424		300					176	420	262
MA91.0/160M												454		350					234	491	316
MA91.0/160L	247	490	135.5	65	430	195	315	252	457	607	205	454	325	350	43	20	18	69.3	234	536	316
MA91.0/180M												454		350					246	555	360
MA91.0/180L												454		350					246	597	360
MA101.0/160M												495		350					234	491	316
MA101.0/160L	270	550	159	70	440	205	380	265	505	675	240	495	372	350	45	24	20	74.7	234	536	316
MA101.0/180M												495		350					246	555	360
MA101.0/180L												495		350					246	597	360
MA111.0/160M												544		350					234	491	316
MA111.0/160L	310	630	167	80	510	235	413	300	573	750	273	544	408	350	52	28	22	85.6	234	536	316
MA111.0/180M												544		350					246	555	360
MA111.0/180L												544		350					246	597	360
MA121.0/160L												590.5		350					234	491	316
MA121.0/180M	350	710	185	90	625	260	472	325	632	820	307	590.5	470	350	60	35	25	95.4	234	536	316
MA121.0/180L												590.5		350					246	555	360
MA131.0/180L	522	826	250	110	598	432	541	381	722	951	341	661	522	350	60	42	28	116.2	246	555	360
MA131.0/200L												661		400					306	665	460



MOTO-REDUTORES TIPO MA...C

MOTORIZED GEARBOXES TYPE MA...C

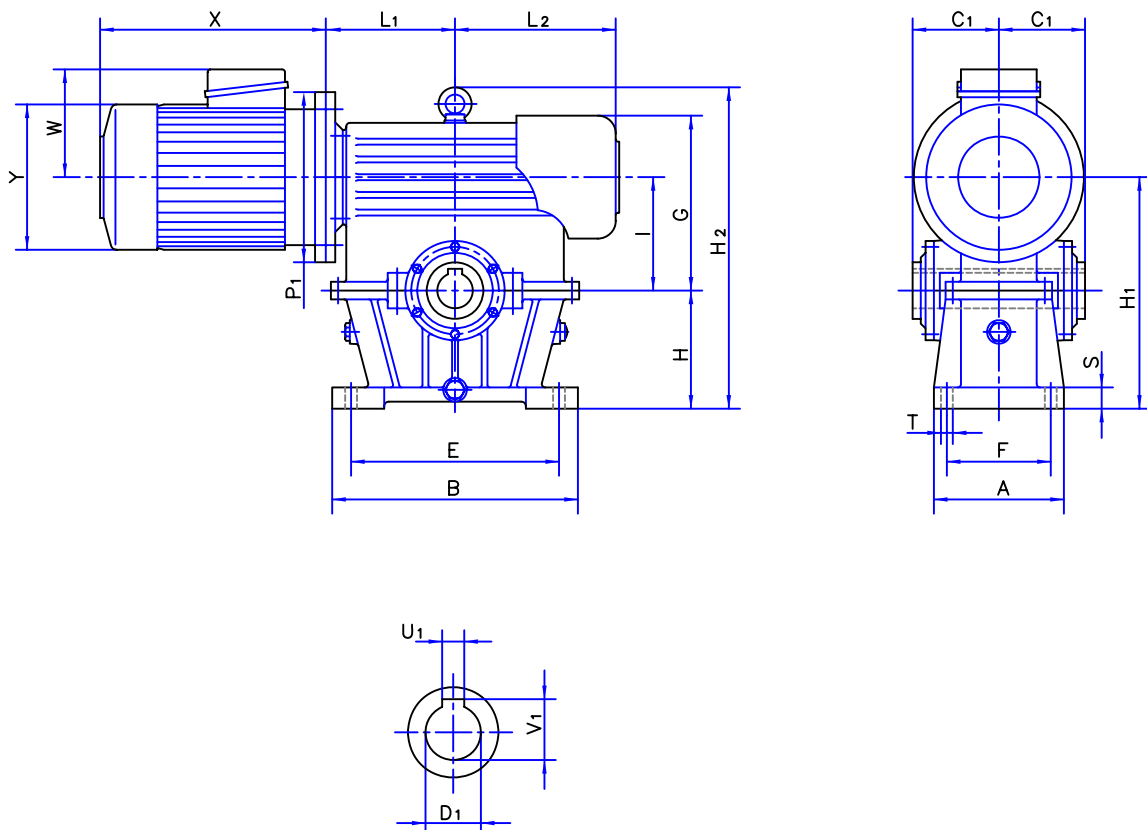


TABELAS\TRANSMISSOES\R--SEMFI\TAB0112

TIPO TYPE	A	B	C	C1	C2	D1 k6	E	F	G	H	H1	H2	I	L1	L2	P1	S	T	U1	V1	W	X	Y
MA62C/90S														152		200					126	255	178
MA62C/90L														152		200					126	280	178
MA62C/100L	160	280	80	101.5	97	45	245	125	182	130	243.3	350	113.3	152	146	250	20	15	14	48.5	138	305	194
MA62C/112M														152		250					155	332	220
MA62C/132S														168		300					176	382	262
MA72C/112M														195		250					155	332	220
MA72C/132S														195		300					176	382	262
MA72C/132M	180	420	90	115	116	52	325	130	233	180	332	460	152	195	185	300	32	18	16	55.8	176	420	262
MA72C/160M														195		350					234	491	316
MA72C/160L														195		350					234	536	316

MOTO-REDUTORES TIPO MA...CO

MOTORIZED GEARBOXES TYPE MA...CO

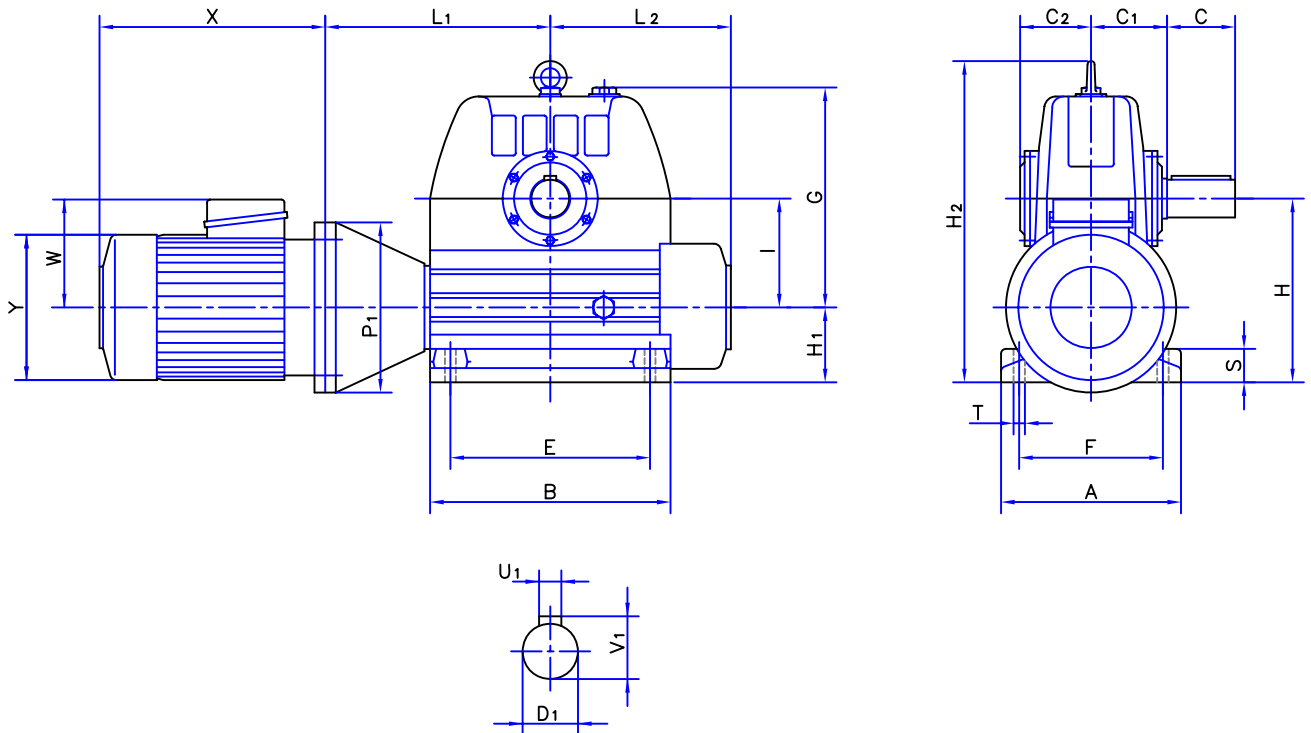


TABELAS\TRANSMISSOES\R--SEMFI\TAB0113

TIPO TYPE	A	B	C1	D1 H7	E	F	G	H	H1	H2	I	L1	L2	P1	S	T	U1	V1	W	X	Y
MA62CO/90S												152		200					126	255	178
MA62CO/90L												152		200					126	280	178
MA62CO/100L	160	280	93	40	245	125	182	130	243.3	350	113.3	152	146	250	20	15	12	43.2	138	305	194
MA62CO/112M												152		250					155	332	220
MA62CO/132S												168		300					176	382	262
MA72CO/112M												195		250					155	332	220
MA72CO/132S												195		300					176	382	262
MA72CO/132M	180	420	115	48	325	130	233	180	332	460	152	195	185	300	32	18	14	51.6	176	420	262
MA72CO/160M												195		350					234	491	316
MA72CO/160L												195		350					234	536	316

MOTO-REDUTORES TIPO MR...

MOTORIZED GEARBOXES TYPE MR...

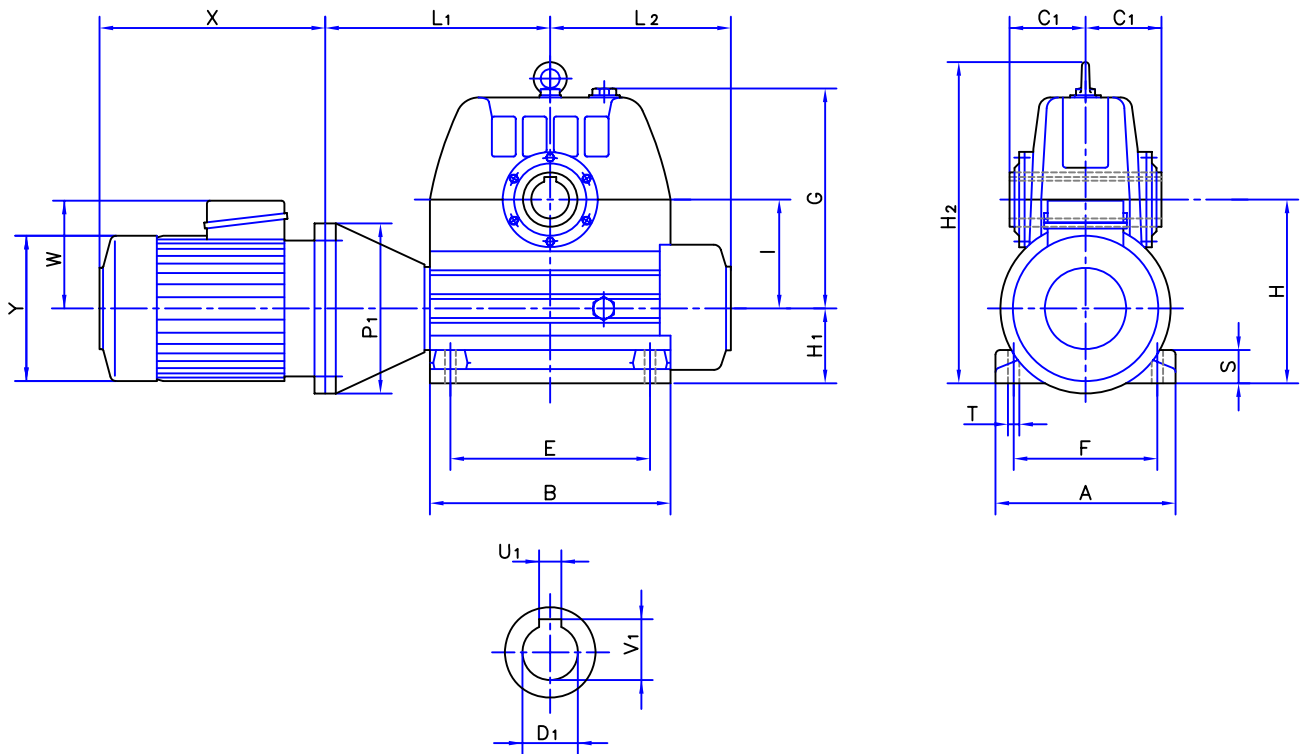


TABELAS\TRANSMISSOES\VR-SEMFIN\VR\TAB0100

TIPO TYPE	A	B	C	C1	C2	D1 k6	E	F	G	H	H1	H2	I	L1	L2	P1	S	T	U1	V1	W	X	Y
MR62/90S														282		200					126	255	178
MR62/90L														282		200					126	280	178
MR62/100L	240	250	80	101.5	97	45	200	190	254	213.3	100	393	113.3	292	190	250	35	18	14	48.5	138	305	194
MR62/112M														292		250					155	332	220
MR62/132S														312		300					176	382	262
MR72/112M														345		250					155	332	220
MR72/132S														365		300					176	382	262
MR72/132M	260	355	90	115	116	52	260	203	323	269.5	117.5	488	152	365	256	300	35	21	16	55.8	176	420	262
MR72/160M														395		350					234	491	316
MR72/160L														395		350					234	536	316
MR81/132S														421.5		300					176	382	262
MR81/132M														421.5		300					176	420	262
MR81/160M	320	440	120	129	125	58	320	260	363	319.5	147	558	172.5	451.5	325	350	45	21	16	61.8	234	491	316
MR81/160L														451.5		350					234	536	316
MR81/180M														451.5		350					246	555	360
MR91/132M														424		300					176	420	262
MR91/160M														454		350					234	491	316
MR91/160L	340	455	135	135.5	139	62	400	270	426	345	140	613	205	454	325	350	45	21	18	66.2	234	536	316
MR91/180M														454		350					246	555	360
MR91/180L														454		350					246	597	360
MR101/160M														521		350					234	491	316
MR101/160L	380	530	155	159	145	70	440	300	496	405	165	708	240	521	398	350	50	25	20	74.6	234	536	316
MR101/180M														521		350					246	555	360
MR101/180L														521		350					246	597	360
MR111/160M														544		350					234	491	316
MR111/160L	430	550	180	167	162	80	475	350	562	458	185	794	273	544	408	350	55	28	22	85.5	234	536	316
MR111/180M														544		350					246	555	360
MR111/180L														544		350					246	597	360
MR121/160L														590.5		350					234	491	316
MR121/180M	470	610	195	185	180	90	510	380	618	512	205	878	307	590.5	470	350	60	35	25	95.3	234	536	316
MR121/180L														590.5		350					246	555	360
MR131/180L	512	725	220	250	242	110	612	432	708	571	230	1003	341	661	522	350	60	45	28	116.1	246	555	360
MR131/200L														661		400					306	665	460

MOTO-REDUTORES TIPO MR...0

MOTORIZED GEARBOXES TYPE MR...0

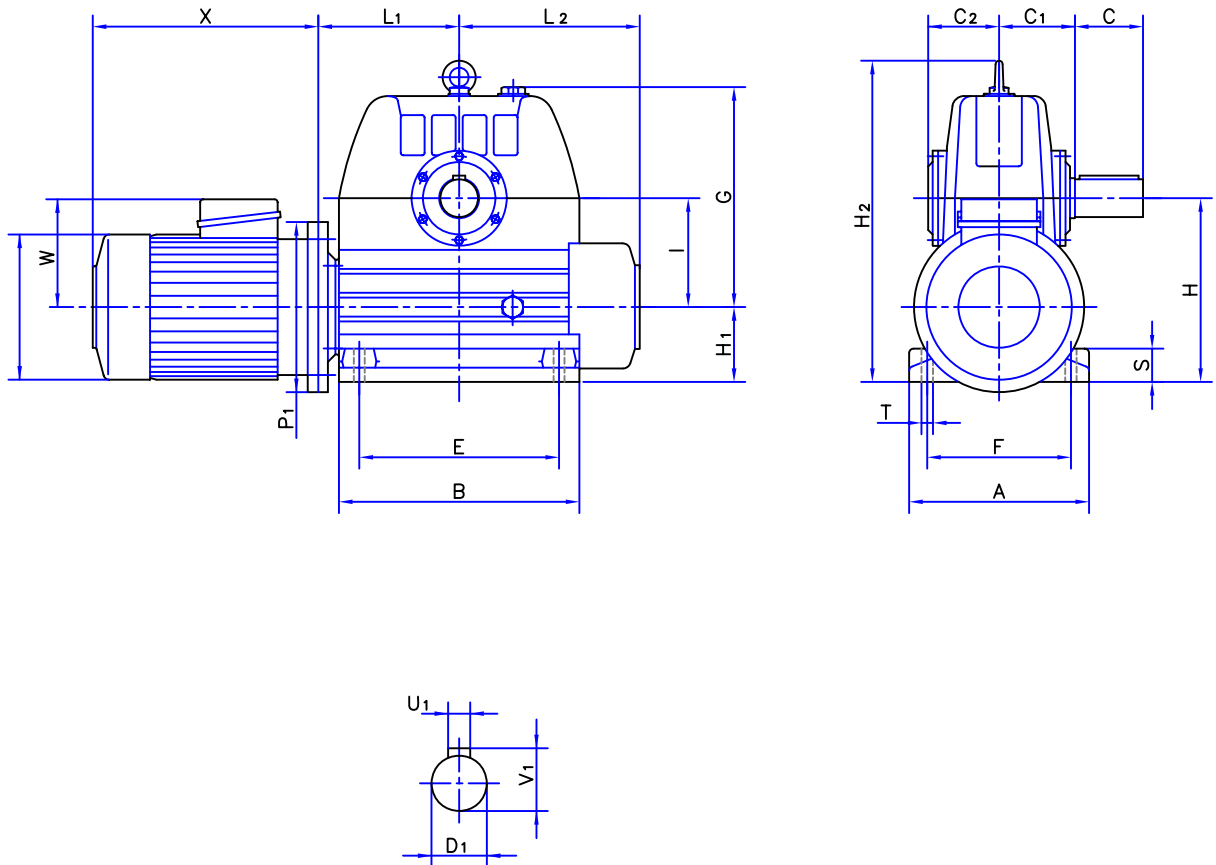


TIPO TYPE	A	B	C1	D1 H7	E	F	G	H	H1	H2	I	L1	L2	P1	S	T	U1	V1	W	X	Y
MR62.0/90S												282		200					126	255	178
MR62.0/90L												282		200					126	280	178
MR62.0/100L	240	250	93	40	200	190	254	213.3	100	393	113.3	292	190	250	35	18	12	43.2	138	305	194
MR62.0/112M												292		250					155	332	220
MR62.0/132S												312		300					176	382	262
MR72.0/112M												345		250					155	332	220
MR72.0/132S												365		300					176	382	262
MR72.0/132M	260	355	115	48	260	203	323	269.5	117.5	488	152	365	256	300	35	21	14	51.6	176	420	262
MR72.0/160M												395		350					234	491	316
MR72.0/160L												395		350					234	536	316
MR81.0/132S												421.5		300					176	382	262
MR81.0/132M												421.5		300					176	420	262
MR81.0/160M	320	440	129	60	320	260	363	319.5	147	558	172.5	451.5	325	350	45	21	18	64.3	234	491	316
MR81.0/160L												451.5		350					234	536	316
MR81.0/180M												451.5		350					246	555	360
MR91.0/132M												424		300					176	420	262
MR91.0/160M												454		350					234	491	316
MR91.0/160L	340	455	135.5	65	400	270	426	345	140	613	205	454	325	350	45	21	18	69.3	234	536	316
MR91.0/180M												454		350					246	555	360
MR91.0/180L												454		350					246	597	360
MR101.0/160M												521		350					234	491	316
MR101.0/160L	380	530	159	70	440	300	496	405	165	708	240	521	398	350	50	25	20	74.7	234	536	316
MR101.0/180M												521		350					246	555	360
MR101.0/180L												521		350					246	597	360
MR111.0/160M												544		350					234	491	316
MR111.0/160L	430	550	167	80	475	350	562	458	185	794	273	544	408	350	55	28	22	85.6	234	536	316
MR111.0/180M												544		350					246	555	360
MR111.0/180L												544		350					246	597	360
MR121.0/160L												590.5		350					234	491	316
MR121.0/180M	470	610	185	90	510	380	618	512	205	878	307	590.5	470	350	60	35	25	95.4	234	536	316
MR121.0/180L												590.5		350					246	555	360
MR131.0/180L	512	725	250	110	612	432	708	571	230	1003	341	661	522	350	60	45	28	116.2	246	555	360
MR131.0/200L												661		400					306	665	460

TABELAS \ TRANSMISSOES \ R-SEMFIM \ RO \ TAB0104

MOTO-REDUTORES TIPO MR...C

MOTORIZED GEARBOXES TYPE MR...C

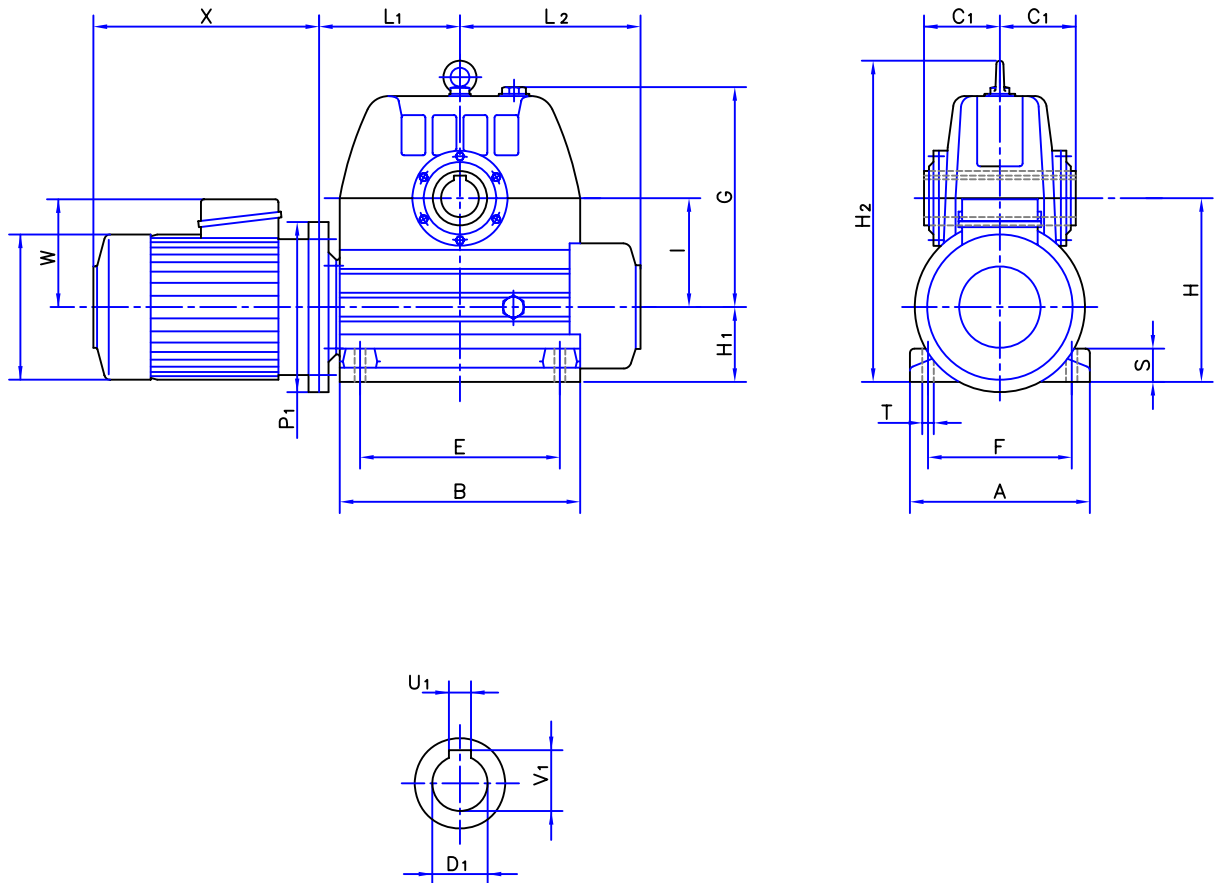


TABELAS\TRANSMISSOES\R--SEMFI\TAB0114

TIPO TYPE	A	B	C	C1	C2	D1 k6	E	F	G	H	H1	H2	I	L1	L2	P1	S	T	U1	V1	W	X	Y
MR62C/90S														152		200					126	255	178
MR62C/90L														152		200					126	280	178
MR62C/100L	240	250	80	101.5	97	45	200	190	254	213.3	100	393	113.3	152	190	250	35	18	14	48.5	138	305	194
MR62C/112M														152		250					155	332	220
MR62C/132S														168		300					176	382	262
MR72C/112M														207		250					155	332	220
MR72C/132S														207		300					176	382	262
MR72C/132M	260	355	90	115	116	52	260	203	323	269.5	117.5	488	152	207	256	300	35	21	16	55.8	176	420	262
MR72C/160M														207		350					234	491	316
MR72C/160L														207		350					234	536	316

MOTO-REDUTORES TIPO MR...CO

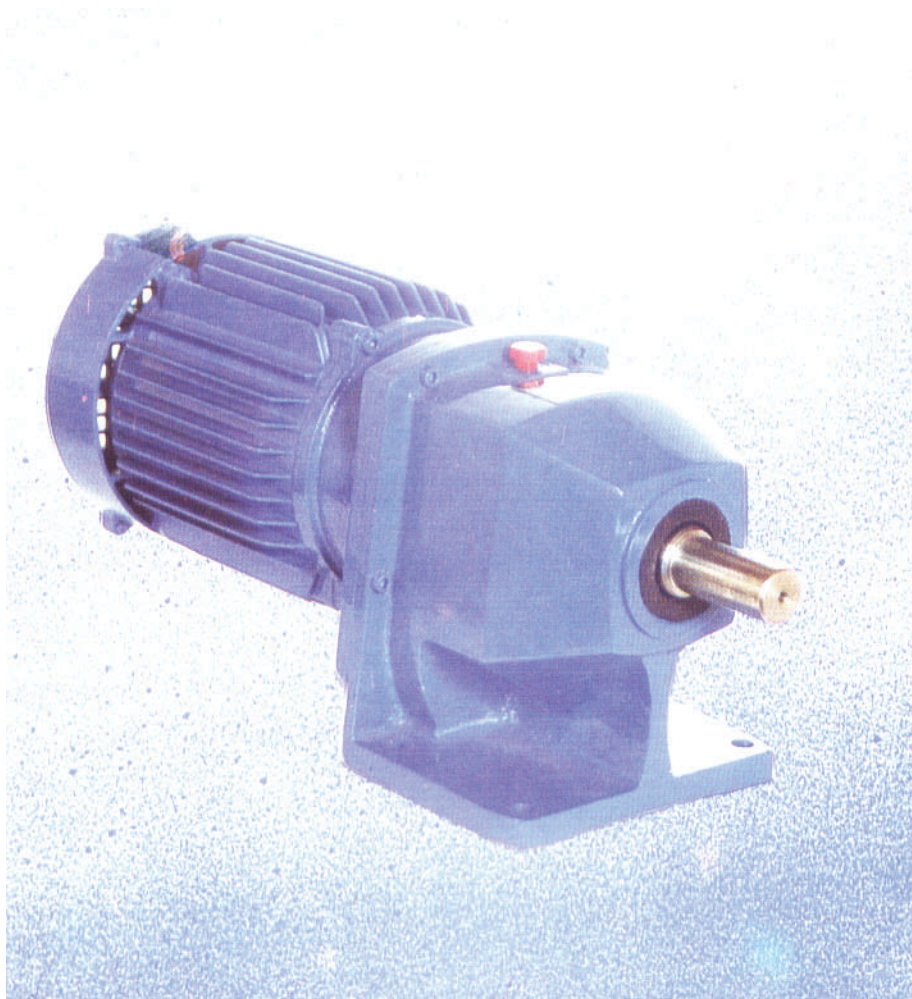
MOTORIZED GEARBOXES TYPE MR...CO



TABELAS\TRANSMISSOES\R--SEMFI\TAB0115

TIPO TYPE	A	B	C1	D1 H7	E	F	G	H	H1	H2	I	L1	L2	P1	S	T	U1	V1	W	X	Y
MR62CO/90S												152		200					126	255	178
MR62CO/90L												152		200					126	280	178
MR62CO/100L	240	250	93	40	200	190	254	213.3	100	393	113.3	152	190	250	35	18	12	43.2	138	305	194
MR62CO/112M												152		250					155	332	220
MR62CO/132S												168		300					176	382	262
MR72CO/112M												207		250					155	332	220
MR72CO/132S												207		300					176	382	262
MR72CO/132M	260	355	115	48	260	203	323	269.5	117.5	488	152	207	256	300	35	21	14	51.6	176	420	262
MR72CO/160M												207		350					234	491	316
MR72CO/160L												207		350					234	536	316

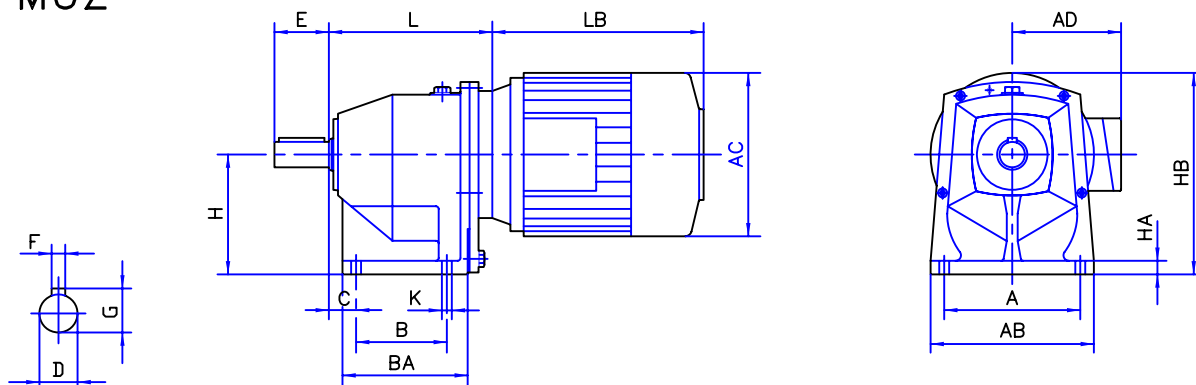
**MOTO-REDUTORES  
MOTORIZED GEARBOXES  
TIPO UZ / TYPE UZ**



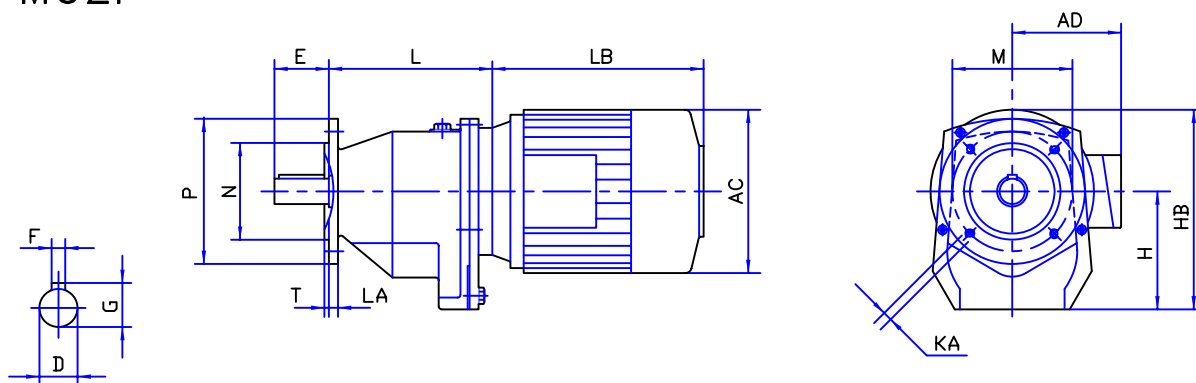
TIPO		MUZ-MUZF-UZ-UZF				TYPE		MUZ-MUZF-UZ-UZF	
POTENCIA POWER		VEL.SAIDA OUTPUT	RAZAO RATIO	MOMENTO TORQUE	F.SERVIÇO S.FACTOR	TIPO	TYPE	N. DE FABRICO ORDER NUMBER	PESO WEIGHT (Kg)
CV	KW	R.P.M.	i	M2 (Nm)					
0,5	0,37	72	19,1	50	1,3	MUZ100/71M-4		358.533	11,8
		84	16,4	43	1,5	MUZ100/71M-4		358.459	11,8
		108	12,8	33	1,9	MUZ100/71M-4		358.357	11,8
		130	10,6	28	2,4	MUZ100/71M-4		358.296	11,8
		180	7,6	20	3,2	MUZ100/71M-4		213.357	11,8
		222	6,2	16	3,9	MUZ100/71M-4		213.296	11,8
		263	10,6	14	2,3	MUZ100/71M-2		358.296	11,8
		367	7,6	10	3,1	MUZ100/71M-2		213.357	11,8
		450	6,2	8	3,8	MUZ100/71M-2		213.296	11,8
0,75	0,55	47	19,1	114	3	MUZ132/80M-6		359.531	17,3
		58	15,5	92	2,6	MUZ132/80M-6		359.431	17,3
		72	19,1	75	3,1	MUZ132/80M-4		359.531	17,3
		96	14,5	56	1,1	MUZ100/80M-4		272.533	13,6
		112	12,5	48	1,3	MUZ100/80M-4		272.459	13,6
		144	9,7	37	1,6	MUZ100/80M-4		272.357	13,6
		174	8,0	31	2,1	MUZ100/80M-4		272.296	13,6
		222	6,3	24	2,7	MUZ100/80M-4		213.296	13,6
		263	10,6	20	1,6	MUZ100/71M-2		358.296	11,8
367	7,6	15	2,1	MUZ100/71M-2		213.357	11,8		
450	6,2	12	2,6	MUZ100/71M-2		213.296	11,8		
1	0,75	72	19,1	100	1,6	MUZ132/80M-4		359.531	17,3
		90	15,5	80	2	MUZ132/80M-4		359.431	17,3
		112	12,5	64	1	MUZ100/80M-4		272.459	14,3
		144	9,7	50	1,2	MUZ100/80M-4		272.357	14,3
		174	8,0	41	1,5	MUZ100/80M-4		272.296	14,3
		222	6,3	32	1,9	MUZ100/80M-4		213.296	14,3
		290	9,7	25	1,1	MUZ100/80M-2		272.357	14,3
		354	8,0	20	1,4	MUZ100/80M-2		272.296	14,3
		450	6,3	16	1,8	MUZ100/80M-2		213.296	14,3
1,5	1,1	60	15,3	180	1,6	MUZ132/90L-6		288.531	22,4
		74	12,4	145	2,2	MUZ132/90L-6		288.431	22,4
		91	15,3	118	1,9	MUZ132/90S-4		288.531	20,5
		112	12,4	96	2,4	MUZ132/90S-4		288.431	20,5
		142	9,8	76	2,8	MUZ132/90S-4		288.339	20,5
		184	7,6	58	1,1	MUZ100/90S-4		213.357	17,5
		222	6,3	48	1,3	MUZ100/90S-4		213.296	17,5
		290	9,7	37	1	MUZ100/80M-2		272.357	14,3
		354	8,0	30	1,2	MUZ100/80M-2		272.296	14,3
450	6,3	24	1,4	MUZ100/80M-2		213.296	14,3		
2	1,5	91	15,3	157	1,3	MUZ132/90L-4		288.531	22,4
		112	12,4	128	1,7	MUZ132/90L-4		288.431	22,4
		142	9,8	101	2,1	MUZ132/90L-4		288.339	22,4
		184	7,6	78	1	MUZ100/90L-4		213.357	19,4
		222	6,3	65	1,2	MUZ100/90L-4		213.296	19,4
		290	9,8	49	2	MUZ132/90S-2		288.339	20,5
		372	7,6	38	1	MUZ100/90S-2		213.357	17,5
		450	6,3	32	1,2	MUZ100/90S-2		213.296	17,5
		3	2,2	100	9,4	215	1,1	MUZ132/112M-6	
127	7,4			169	1,3	MUZ132/112M-6		218.339	35
150	9,4			143	1,2	MUZ132/100L-4		218.431	27
190	7,4			113	1,4	MUZ132/100L-4		218.339	27
235	6,0			91	1,7	MUZ132/100L-4		218.274	27
290	9,8			74	1,2	MUZ132/90L-2		288.339	22,4
385	7,4			56	1,6	MUZ132/90L-2		218.339	22,4
475	6,0			45	2,1	MUZ132/90L-2		218.274	22,4
4	3			190	7,4	151	1,2	MUZ132/100L-4	
		235	6,0	122	1,4	MUZ132/100L-4		218.274	30
		385	7,4	74	1,1	MUZ132/100L-2		218.339	30
		475	6,0	60	1,3	MUZ132/100L-2		218.274	30



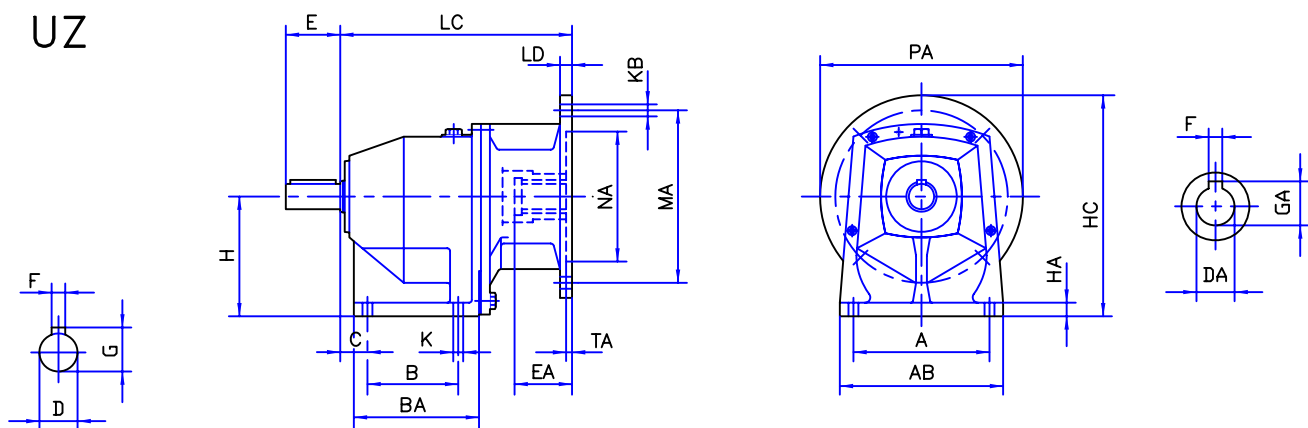
### MUZ



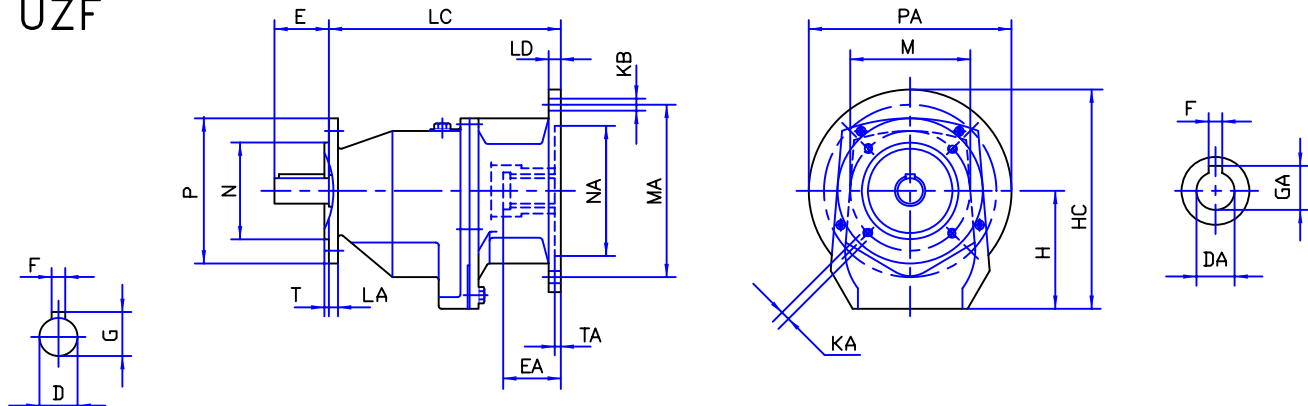
### MUZF



### UZ



### UZF



# OLIMAR

## DIMENSOES ATRAVANCAMENTO

## OVERALL DIMENSIONS

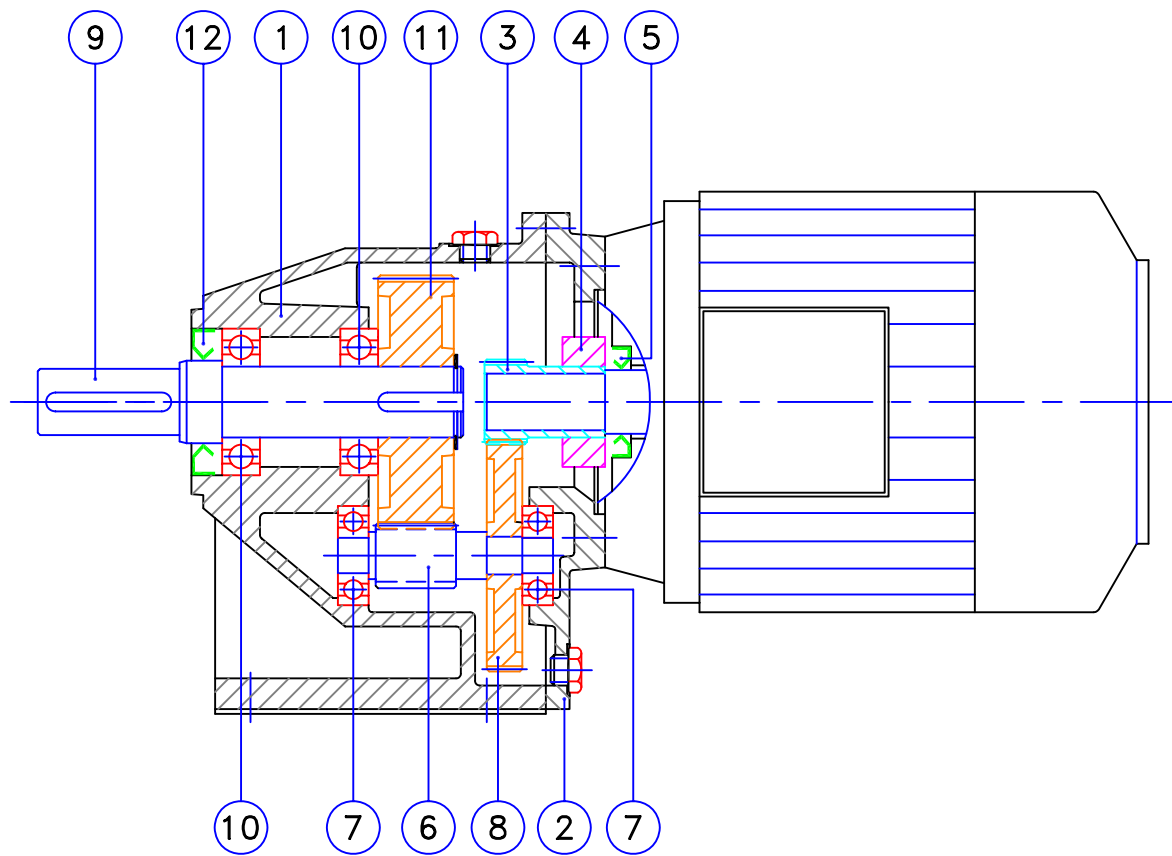
TIPO TYPE MUZ-MUZF UZ-UZF	A	AB	AC	AD	B	BA	C	D j6	DA F7	E	EA	F	G	GA	H	HA	HB
100/71M	135	160	142	100	80	115	27,5	24	14	50	35	8	26,9	27	100	12	171
100/80M			19	45					179								
100/90S			24	55					189								
100/90L			24	55					189								
132/80M	150	180	158	120	100	140	30	28	19	60	45	8	30,9	31	132	15	211
132/90S			24	55					221								
132/90L			24	55					221								
132/100L			28	65					229								
132/112M			28	65					242								

TIPO TYPE MUZ-MUZF UZ-UZF	HC	K	KA	KB	L	LA	LB	LC	LD	M	MA	N	NA	P	PA	T	TA
100/71M	180	9	M8	9	145	10	215	205	10	115	130	95	110	140	160	3	3,5
100/80M	200			11,5	155		240	215	11		165		130		200		3,5
100/90S	200			11,5	165		255	225	12		165		130		200		3,5
100/90L	200			11,5	165		280	225	12		165		130		200		3,5
132/80M	232	12	M8	11,5	170	10	240	240	11	130	165	110	130	160	200	3,5	3,5
132/90S	232			11,5	180		255	250	12		165		130		200		3,5
132/90L	232			11,5	180		280	250	12		165		130		200		3,5
132/100L	257			14	190		305	260	14		215		180		250		4
132/112M	257			14	190		332	260	14		215		180		250		4

POSICOES DE MONTAGEM

MOUNTING POSITION

	MUZ	MUZF	UZ	UZF
B3				
B6				
B7				
B8				
V5				
V6				

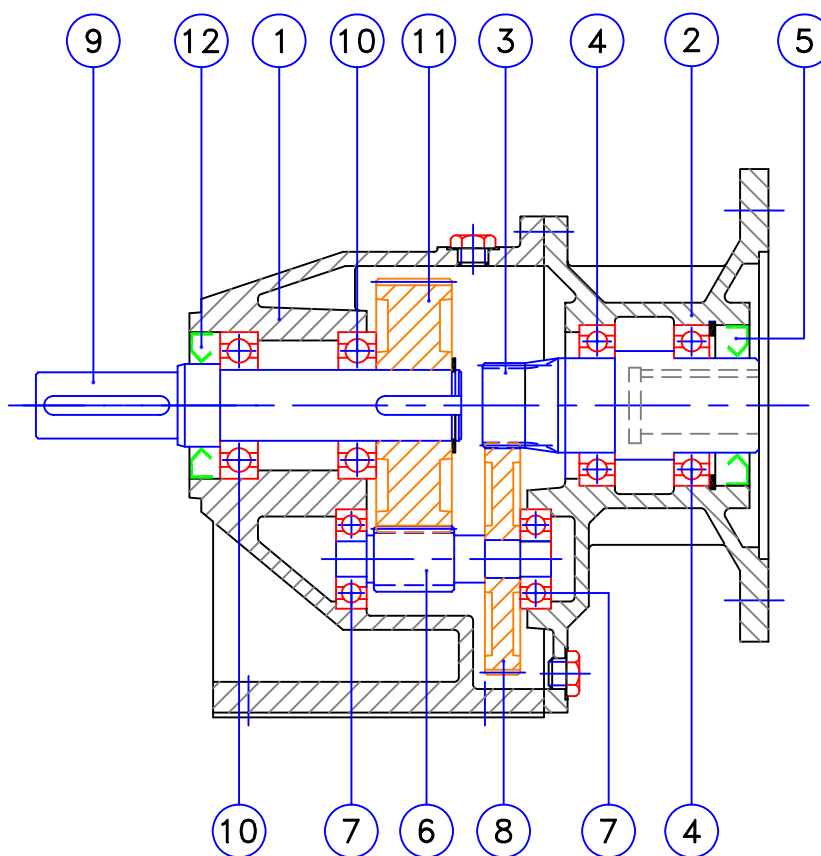


POSIÇÃO	LISTA DE MATERIAL
1	CARTER
2	SUORTE
3	CARRETE HELICOIDAL
4	ANILHO
5	RETENTOR
6	VEIO CARRETE HELICOIDAL
7	ROLAMENTO
8	RODA HELICOIDAL
9	VEIO DE SAIDA
10	ROLAMENTO
11	RODA HELICOIDAL
12	RETENTOR

Por favor indique pela seguinte ordem: Tipo do moto-redutor  
N. de fabrico  
posição de montagem  
N. da respectiva peça

ITEM N.	SPARE PARTS LIST
1	GEAR HOUSING
2	SUPPORT
3	HELICAL GEAR
4	SWIVEL
5	SEAL RING
6	HELICAL GEAR SHAFT
7	BEARING
8	HELICAL GEAR WHELL
9	OUTPUT SHAFT
10	BEARING
11	HELICAL GEAR WHELL
12	SEAL RING

To order spare parts please specify: syze of motorised gearbox  
order number  
mouting position  
part number as shown



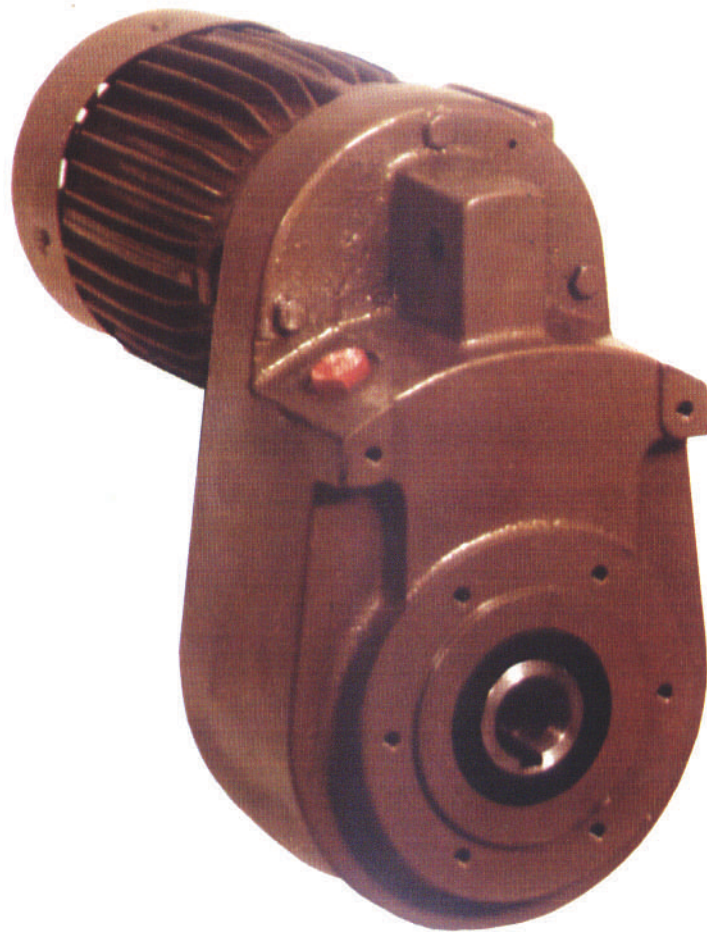
POSIÇÃO	LISTA DE MATERIAL
1	CARTER
2	SUPORTE
3	VEIO CARRETE HELICOIDAL
4	ROLAMENTO
5	RETENTOR
6	VEIO CARRETE HELICOIDAL
7	ROLAMENTO
8	RODA HELICOIDAL
9	VEIO DE SAIDA
10	ROLAMENTO
11	RODA HELICOIDAL
12	RETENTOR

Por favor indique  
pela seguinte ordem: Tipo do moto-redutor  
N. de fabrico  
posição de montagem  
N. da respectiva peça

ITEM N.	SPARE PARTS LIST
1	GEAR HOUSING
2	SUPPORT
3	HELICAL GEAR SHAFT
4	BEARING
5	SEAL RING
6	HELICAL GEAR SHAFT
7	BEARING
8	HELICAL GEAR WHELL
9	OUTPUT SHAFT
10	BEARING
11	HELICAL GEAR WHELL
12	SEAL RING

To order spare parts  
please specify: size of motorised gearbox  
order number  
mounting position  
part number as shown

**MOTO-REDUTORES  
MOTORIZED GEARBOXES  
TIPO UG / TYPE UG**



# MOTO-REDUCTOR

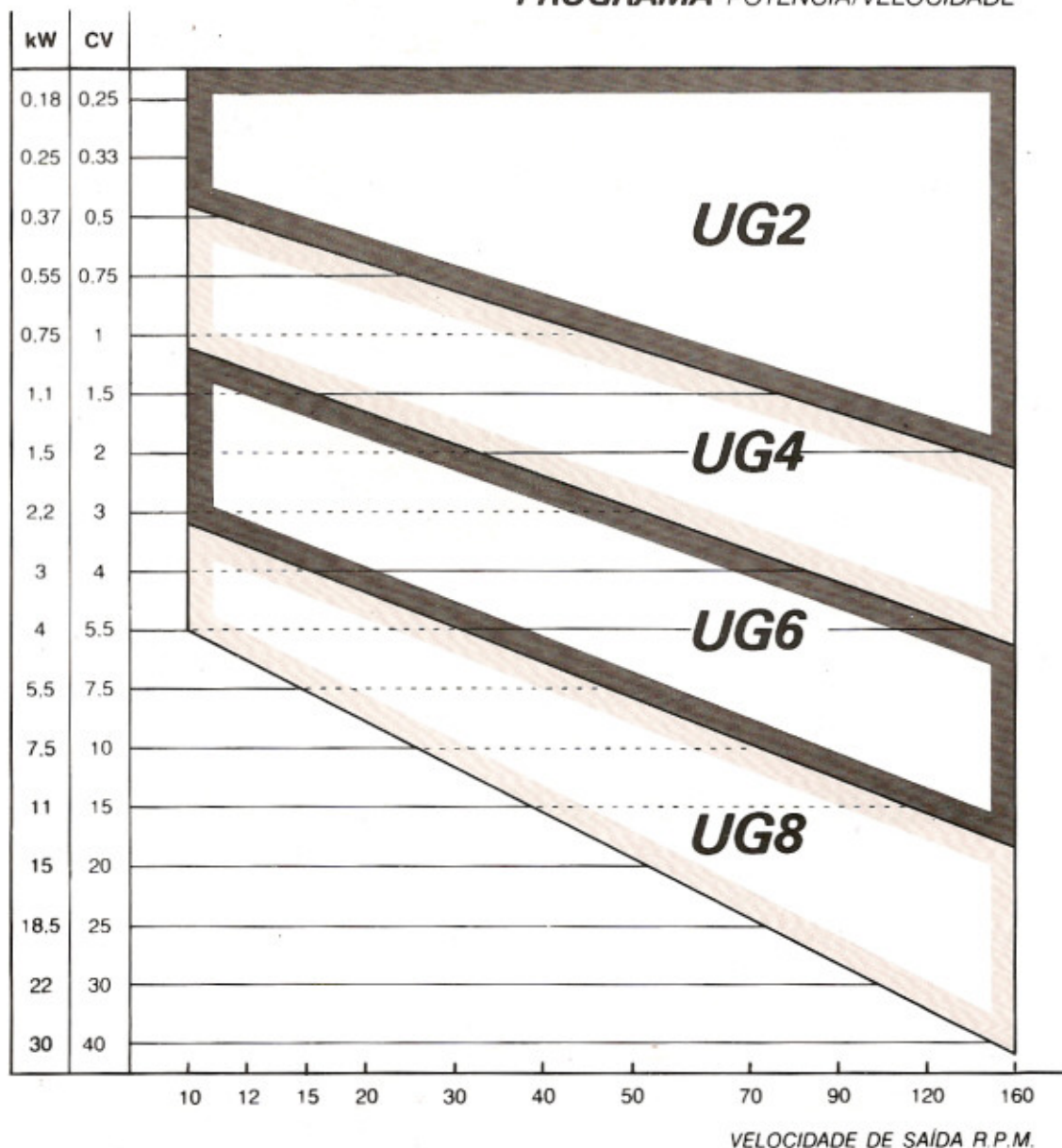
## TIPO UG

- EIXOS PARALELOS**
- FORMA ALONGADA**
- ATRAVANCAMENTO REDUZIDO**
- ECONOMIA DE ENERGIA**
- ISENTO DE VIBRAÇÕES**
- FUNCIONAMENTO SILENCIOSO**

**FACILIDADE DE ABSORÇÃO DO BINÁRIO DE REACÇÃO:**

- POR PATILHA NO CARTER**
- OU**
- POR FLANGE ADICIONAL**

**PROGRAMA POTÊNCIA/VELOCIDADE**



MOTO-REDUTORES Tipo UG

MOTORIZED GEARBOXES Type UG

POTENCIA POWER		VEL.SAIDA OUTPUT R.P.M.	RAZAO RATIO i	MOMENTO TORQUE M2 (Nm)	TIPO TYPE	N.FABRICO ORDER NUMBER
CV	KW					
0.25	0.18	10	67.25	170	801UG2/8	267018
		12	58.54	142	801UG2/8	258018
		14	67.25	122	711UG2/6	267016
		16	58.54	108	711UG2/6	258016
		18	53.51	96	711UG2/6	253016
		21	67.25	82	711UG2/4	267014
		24	58.54	71	711UG2/4	258014
		27	53.51	63	711UG2/4	253014
		29	33.56	59	711UG2/6	233016
		33	43.90	52	711UG2/4	243014
		39	36.70	44	711UG2/4	236014
		43	33.56	39	711UG2/4	233014
		51	28.45	33	711UG2/4	228014
		56	26.00	30	711UG2/4	226014
		63	23.15	27	711UG2/4	223014
		67	21.75	25	711UG2/4	221014
		85	17.05	20	711UG2/4	217014
				103	14.06	17
		128	11.33	13	711UG2/4	211014
		162	8.92	10	711UG2/4	208014
0.5	0.37	10	67.25	345	901UG2/8	267038
		12	58.54	286	901UG2/8	258038
		14	67.25	243	801UG2/6	267038
		16	58.54	212	801UG2/6	258036
		18	53.51	189	801UG2/6	253036
		21	67.25	162	711UG2/4	267034
		24	58.54	141	711UG2/4	258034
		27	53.51	126	711UG2/4	253034
		29	33.56	117	801UG2/6	233036
		33	43.90	52	711UG2/4	233034
		39	36.70	87	711UG2/4	236034
		43	33.56	79	711UG2/4	233034
		51	28.45	67	711UG2/4	228034
		56	26.00	61	711UG2/4	226034
		63	23.15	54	711UG2/4	223034
		67	21.75	50	711UG2/4	221034
		85	17.05	40	711UG2/4	217034
				103	14.06	34
		128	11.33	26	711UG2/4	211034
		162	8.92	20	711UG2/4	208034

## MOTO-REDUTORES Tipo UG

## MOTORIZED GEARBOXES Type UG

POTENCIA POWER		VEL.SAIDA OUTPUT R.P.M.	RAZAO RATIO i	MOMENTO TORQUE M2 (Nm)	TIPO TYPE	N.FABRICO ORDER NUMBER
CV	KW					
0.75	0.55	10	69.55	515	901UG4/8	469048
		12	58.54	429	901UG2/8	258048
		14	67.25	368	801UG2/6	267046
		16	58.54	322	801UG2/6	258046
		18	53.51	286	801UG2/6	253046
		21	67.25	245	801UG2/4	263044
		24	58.54	215	801UG2/4	258044
		27	53.51	190	801UG2/4	253044
		29	33.56	178	801UG2/4	233046
		33	43.90	156	801UG2/4	243044
		39	36.70	132	801UG2/4	236044
		43	33.56	120	801UG2/4	233044
		51	28.45	101	801UG2/4	228044
		56	26.00	92	801UG2/4	226044
		63	23.15	82	801UG2/4	223044
		67	21.75	77	801UG2/4	221044
		85	17.05	61	801UG2/4	217044
		103	14.05	50	801UG2/4	214044
128	11.33	40	801UG2/4	211044		
162	8.92	32	801UG2/4	208044		
1	0.75	10	69.55	680	100.1UG4/8	469058
		12	58.15	567	100.1UG4/8	458058
		16	58.54	425	90.1UG2/6	258056
		18	53.17	378	901UG4/6	453056
		21	67.25	324	801UG2/4	267054
		24	58.54	283	801UG2/4	258054
		27	53.51	252	801UG2/4	253054
		33	43.90	206	801UG2/4	243054
		39	36.70	174	801UG2/4	236054
		43	33.56	158	801UG2/4	233054
		51	28.45	133	801UG2/4	228054
		56	26.00	121	801UG2/4	226034
		63	23.15	108	801UG2/4	223054
		67	21.75	101	801UG2/4	221054
		85	17.05	80	801UG2/4	217054
		103	14.05	66	801UG2/4	214054
		128	11.33	53	801UG2/4	211054
		162	8.92	42	801UG2/4	208054



## MOTO-REDUTORES Tipo UG

## MOTORIZED GEARBOXES Type UG

POTENCIA POWER		VEL.SAIDA OUTPUT R.P.M.	RAZAO RATIO i	MOMENTO TORQUE M2 (Nm)	TIPO TYPE	N.FABRICO ORDER NUMBER
CV	KW					
1.5	1.1	7	97.0	1472	100.1UG6/8	697068
		10	97.0	1030	90.1UG6/6	697066
		13	69.55	793	90.1UG4/6	469066
		16	58.15	644	901UG4/6	458066
		20	69.55	515	901UG4/4	469064
		24	58.54	429	901UG2/4	258064
		27	53.17	381	901UG4/4	453064
		32	43.86	322	901UG4/4	443064
		39	36.70	264	901UG2/4	236064
		51	28.45	202	901UG2/4	228064
		63	23.15	163	901UG2/4	223064
		67	21.75	153	901UG2/4	221064
		85	17.05	121	901UG2/4	217064
		103	14.06	100	901UG2/4	214064
		128	11.33	84	901UG2/4	211064
162	8.92	64	901UG2/4	208064		
2	1.5	7	97	1960	1121UG6/8	697078
		10	97	1370	1001UG6/6	697076
		13	53.17	1050	1121UG4/8	453078
		16	58.15	856	1121UG4/6	758076
		20	69.55	685	901UG4/4	469074
		25	58.15	548	901UG4/4	458074
		27	53.15	507	901UG4/4	453074
		32	43.86	428	901UG4/4	443074
		39	36.67	350	901UG4/4	436074
		41	34.4	334	901UG4/4	434074
		48	29.6	285	901UG4/4	429074
		51	27.9	268	901UG4/4	427074
		61	23.28	224	901UG4/4	423074
		67	21.75	205	901UG2/4	221074
		85	17.05	160	901UG2/4	217074
103	14.06	133	901UG2/4	214074		
128	11.33	07	901UG2/4	211074		
162	8.92	85	901UG2/4	208074		

## MOTO-REDUTORES Tipo UG

## MOTORIZED GEARBOXES Type UG

POTENCIA POWER		VEL.SAIDA OUTPUT R.P.M.	RAZAO RATIO i	MOMENTO TORQUE M2 (Nm)	TIPO TYPE	N.FABRICO ORDER NUMBER
CV	KW					
3	2.2	7.5	99.06		1321UG8/8	899088
		10	97.0	2040	1121UG6/6	697086
		12	76.43	1700	1121UG6/6	676086
		15	97.0	1360	1001UG6/4	697084
		18	76.43	1130	1001UG6/4	676084
		25	58.15	816	1001UG4/4	458084
		29	48.90	703	1001UG4/4	648084
		34	40.24	600	1001UG4/4	640084
		39	36.67	523	1001UG4/4	436084
		48	29.6	425	1001UG4/4	429084
		61	23.28	335	1001UG4/4	423084
		78	18.33	260	1001UG4/4	418084
		96	14.80	212	1001UG4/4	414084
		119	11.99	172	1001UG4/4	411084
152	9.37	134	1001UG4/4	409084		
4	3	10	99.06	2750	1321UG8/6	899096
		12	63.37	2290	1321UG8/8	863098
		15	97.0	1830	1001UG6/4	697094
		18	76.43	1528	1001UG6/4	676094
		23	61.71	1195	1001UG6/4	661094
		29	48.90	948	1001UG6/4	648094
		35	40.24	786	1001UG6/4	640094
		39	36.67	705	1001UG4/4	636094
		45	31.88	610	1001UG6/4	631094
		48	29.6	573	1001UG4/4	429094
		61	23.28	450	1001UG4/4	423094
		78	18.33	353	1001UG4/4	418094
		96	14.8	286	1001UG4/4	414094
		119	11.99	231	1001UG4/4	411094
152	9.37	180	1001UG4/4	409094		
5.5	4	10	99.06	3780	1321UG8/6	899106
		12	53.37	3150	1602UG8/8	863108
		15	99.06	2520	1121UG8/4	899104
		19	50.57	1990	1321UG8/6	850106
		23	61.71	1650	1121UG6/4	661104
		29	48.90	1300	1121UG6/4	648104
		35	40.24	1080	1121UG6/4	640104
		45	31.88	840	1121UG6/4	631104
		56	25.43	675	1121UG6/4	625104
		78	18.33	485	1121UG4/4	418104
		96	14.80	395	1121UG4/4	414104
		119	11.99	318	1121UG4/4	411104
		152	9.37	250	1121UG4/4	409104

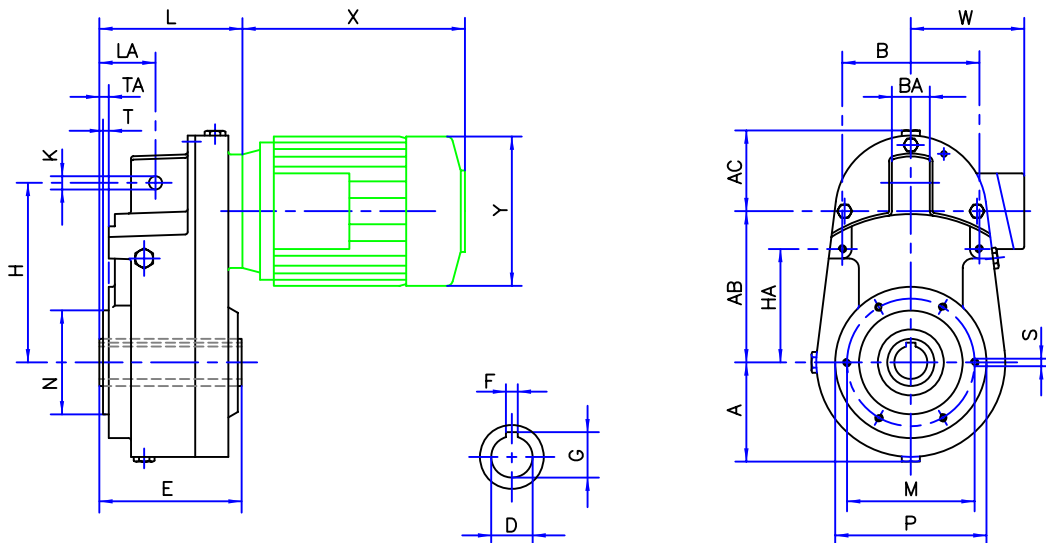
## MOTO-REDUTORES Tipo UG

## MOTORIZED GEARBOXES Type UG

POTENCIA POWER		VEL.SAIDA OUTPUT R.P.M.	RAZAO RATIO i	MOMENTO TORQUE M2 (Nm)	TIPO TYPE	N.FABRICO ORDER NUMBER
CV	KW					
7.5	5.5	15	99.06	3450	1321UG8/4	899114
		23	63.37	2240	1321UG8/4	863114
		28	50.57	1840	1321UG8/4	850114
		35	40.24	1470	1321UG6/4	640114
		45	31.88	1145	1321UG6/4	631114
		56	25.43	920	1321UG6/4	625114
		70	20.53	736	1321UG6/4	620114
		80	18.14	645	1321UG6/4	618114
		100	14.40	515	1321UG6/4	614114
		125	11.49	412	1321UG6/4	611114
		159	9.09	324	1321UG6/4	609114
10	7.5	28	50.57	2455	1321UG8/4	850124
		35	41.33	1965	1321UG8/4	841124
		41	35.30	1680	1321UG8/4	835124
		45	31.88	1530	1321UG8/4	631124
		56	25.43	1230	1321UG6/4	625124
		70	20.53	982	1321UG6/4	620124
		80	18.14	860	1321UG6/4	618124
		100	14.40	690	1321UG6/4	614124
		125	11.49	550	1321UG6/4	611124
		159	9.07	432	1321UG6/4	609124
15	11	41	35.30	2515	1602UG8/4	835134
		52	27.87	1985	1602UG8/4	827134
		63	22.96	1640	1602UG8/4	822134
		80	18.14	1290	1602UG6/4	618134
		100	14.40	1030	1602UG6/4	614134
		125	11.49	825	1602UG6/4	611134
		159	9.07	650	1602UG6/4	609134

### MOTO-REDUTORES Tipo-UG

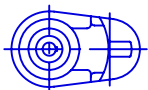
### MOTORIZED-GEARBOXES Type-UG



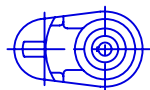
TIPO TYPE	A	AB	AC	B	BA	D H7	E	F	G	H	HA	K	L	LA	M	N j6	P	S	T	TA	W	X	Y
UG2/71M													137								100	215	142
UG2/80M													147								120	240	158
UG2/90S	100	160	80	145	40	35	144	10	38,4	190	120	14	157	55	130	110	160	M8 X 15	3,5	5,5	126	255	178
UG2/90L													157								126	280	178
UG4/80M													175								120	240	158
UG4/90S													185								126	255	178
UG4/90L	125	215	100	175	50	42	184	12	45,2	252	165	20	185	68	165	130	200	M10 X 20	3,5	6,5	126	280	178
UG4/100L													195								138	305	194
UG4/112M													195								155	332	220
UG6/90S													212								126	255	178
UG6/90L													212								126	280	178
UG6/100L													222								138	305	194
UG6/112M	162	290	130	220	60	55	225	16	58,9	340	220	25	222	85	215	180	250	M12 X 25	4	8	155	332	220
UG6/132S													242								176	382	262
UG6/132M													242								176	420	262
UG6/160M													272								234	491	316
UG8/100L													244								138	305	194
UG8/112M													244								155	332	220
UG8/132S													264								176	382	262
UG8/132M	200	380	150	240	60	70	260	20	74,7	440	300	25	264	110	265	230	300	M12 X 25	4	8	176	420	262
UG8/160M													294								234	491	316
UG8/160L													294								234	536	316

#### POSIÇÕES DE MONTAGEM

#### MOUNTING POSITION



H1



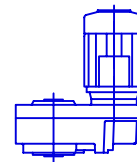
H2



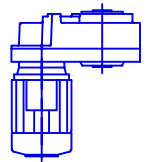
H3



H4

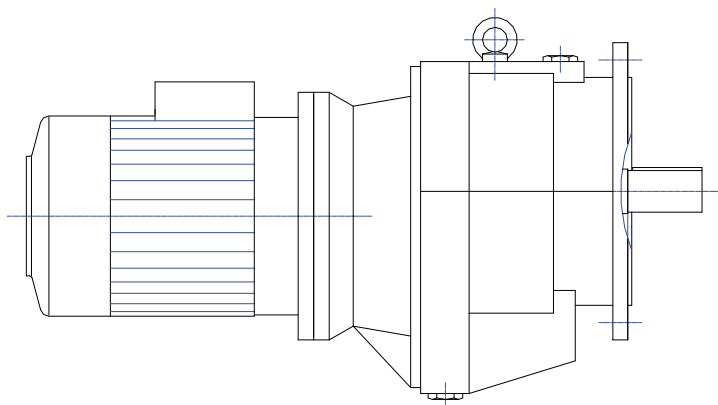
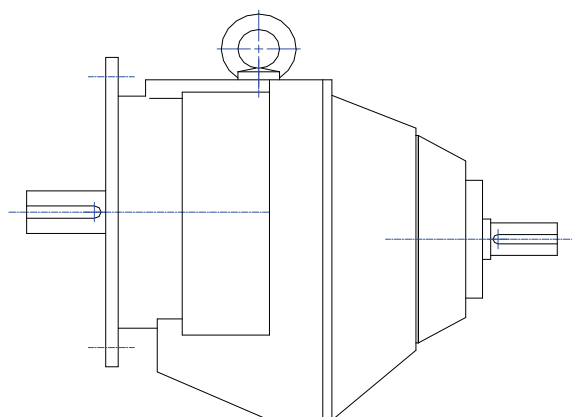
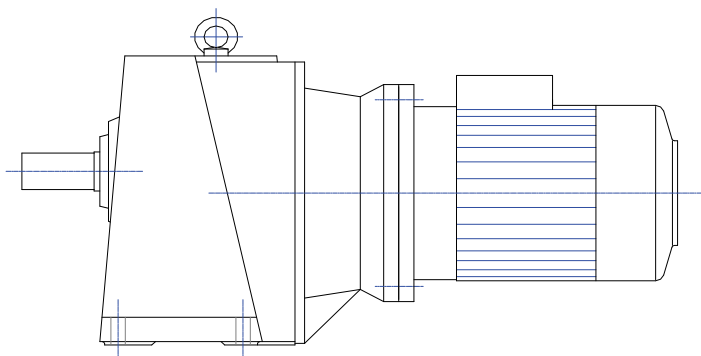


V1



V2

**REDUTORES E MOTO-REDUTORES  
GEARBOXES AND MOTORIZED GEARBOX  
TIPO UABD-UFD / UAT-UFT  
TYPE UABD-UFD / UAT-UFT**



# MOTO-REDUTOR TIPO “ UABD – UFD “ “UAT – UFT”

## ESPECIFICAÇÕES TÉCNICAS:

### CARTÉR:

-Em ferro fundido de grande qualidade.

-A sua fabricação precisa, garante um alinhamento exacto das engrenagens.

UFD: Cartér com flange circular o que permite aplicações rápidas e económicas.

### ENGRENAGENS:

-O material usado para as engrenagens é um aço de liga de grande resistência com tratamento térmico antes de ser cortado. As engrenagens são do tipo helicoidal, rectificadas e largamente dimensionadas para transmitir continuamente a potência nominal.

### VEIOS E APOIOS:

-Todos os veios são rectificadas e apoiados em rolamentos de esferas de grande capacidade de carga.

-Veios em aço ao Carbono de alta resistência .

-Veios de entrada e saída com retentor para evitar perdas de óleo e entradas de poeira.

### LUBRIFICAÇÃO:

-As engrenagens funcionam em banho de óleo c/nível controlado por visor de vidro.

-Entrada e saída de óleo por sistema de bujão roscado.

-Os rolamentos recebem lubrificação adequada mediante chapinhagem.

### REFRIGERAÇÃO:

-A capacidade de refrigeração do carter é suficiente para temperaturas de óleo até 80°C.

### ENSAIO:

-Todos os componentes do redutor são examinados durante e depois da fabricação.

-Feito a montagem verifica-se o contacto e o alinhamento correcto das engrenagens.

-Segue um ensaio conforme ficha de inspecção e ensaio interna de forma a garantir a conformidade do equipamento para expedição.

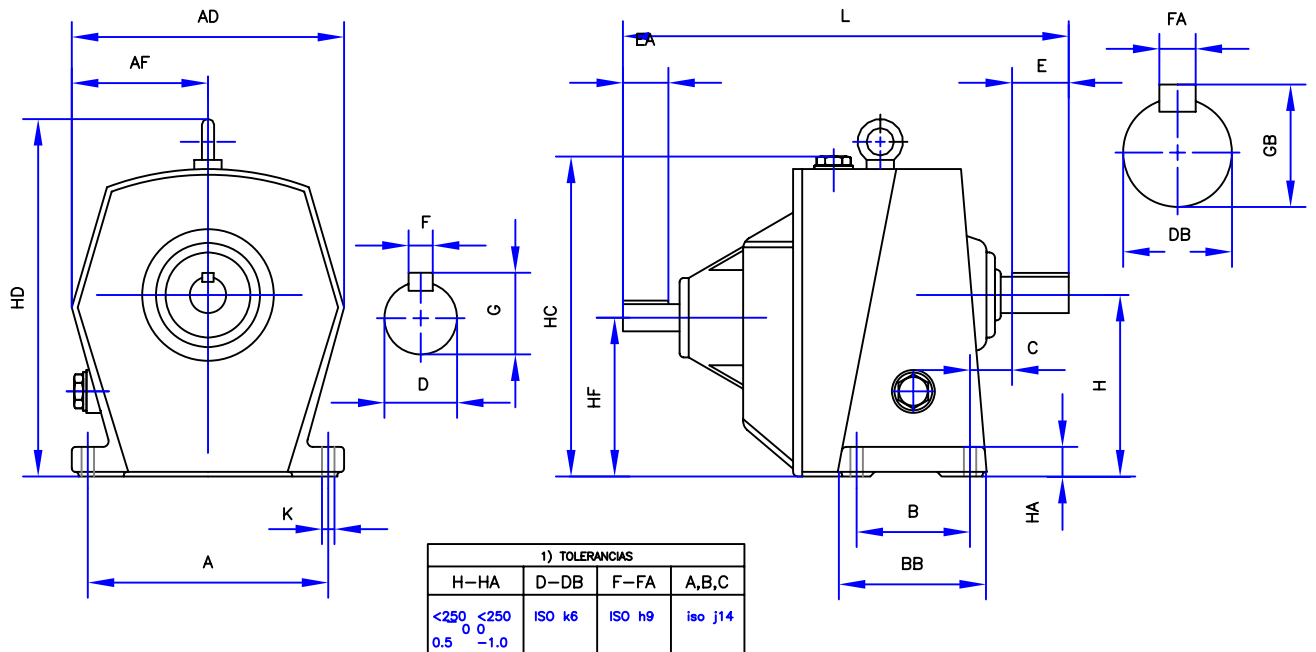
REDUTORES Tipo UAT/UFT

GEARBOXES Type UAT/UFT

RAZAO RATIO	TIPO TYPE	POTENCIA C.V. POWER C.V.			N.FABRICO ORDER N.	RAZAO RATIO	TIPO TYPE	POTENCIA C.V. POWER C.V.			N.FABRICO ORDER N.	
		750	1000	1500				750	1000	1500		
1/245	343	0.28	0.37	0.56	808	1/32	240	0.39	0.52	0.78	717	
	346	0.36	0.48	0.72	816		243	0.74	0.91	1.52	726	
	350	0.55	0.73	1.1	824		246	2.02	2.64	4.13	735	
	353	1.70	2.3	3.4	832		250	4.5	5.98	9.33	744	
	475	2.0	2.7	4.0	840		253	9.1	12.2	18.2	753	
1/196	343	0.30	0.40	0.61	807	1/25	239	0.28	0.38	0.56	707	
	346	0.40	0.54	0.81	815		240	0.59	0.78	1.19	716	
	350	0.60	0.80	1.2	823		243	0.82	1.10	1.68	725	
	353	2.0	2.7	4.1	831		246	2.06	2.75	4.13	734	
	475	2.36	3.2	4.8	839		250	4.9	6.49	9.76	743	
1/155	343	0.31	0.41	0.62	806	1/20	253	9.8	13.0	19.6	752	
	346	0.42	0.56	0.85	814		239	0.56	0.75	1.13	706	
	350	0.70	0.93	1.4	822		240	0.77	1.03	1.53	715	
	353	2.2	3	4.5	830		243	1.08	1.43	2.16	724	
	475	2.5	3.4	5.1	838		246	2.60	3.47	5.23	733	
1/124	343	0.33	0.44	0.67	805	1/16	250	6.14	8.20	12.3	742	
	346	0.55	0.73	1.1	813		253	12.3	16.4	24.6	751	
	350	0.80	1.06	1.6	821		1/12.5	239	0.57	0.75	1.14	705
	353	2.6	3.5	5.3	829			240	0.83	1.10	1.66	714
	475	3.0	4.0	6.1	837			243	1.51	2.03	3.03	723
1/98	343	0.39	0.52	0.78	724	246		2.86	3.82	5.73	732	
	346	0.70	0.93	1.4	804	250		7.25	9.67	14.5	741	
	350	1.05	1.4	2.1	820	253	11.9	15.9	24.5	750		
	353	2.8	3.7	5.6	828	1/10	239	0.56	0.74	1.12	704	
	475	3.2	4.2	6.4	836		240	0.83	1.10	1.65	713	
1/80	343	0.57	0.76	1.15	803		243	1.52	2.02	3.03	722	
	346	0.82	1.1	1.65	811		246	3.44	4.06	6.90	731	
	350	1.2	1.6	2.4	819		250	8.6	11.35	17.0	740	
	353	3.0	4.0	6.1	827	253	15.6	20.7	31.0	749		
	475	4.0	5.3	8.0	835	1/8	239	0.86	1.15	1.72	703	
1/64	343	0.65	0.86	1.3	802		240	1.58	2.11	3.18	712	
	346	0.95	1.26	1.9	810		243	2.14	2.86	4.28	721	
	350	1.4	1.86	2.8	818		246	5.12	7.15	10.8	730	
	353	3.35	4.5	6.7	826		250	12.2	16.12	24.5	739	
	475	4.4	5.9	8.8	834	253	21.5	28.5	42.8	748		
1/50	343	0.75	1	1.5	801	1/6.3	239	0.89	1.20	1.80	702	
	346	1.05	1.4	2.1	809		240	1.76	2.35	3.52	711	
	350	1.55	2.06	3.1	817		243	2.63	3.51	5.26	720	
	353	3.75	5.0	7.5	825		246	5.37	7.16	10.75	729	
	475	4.7	6.3	9.4	853		250	14.4	19.1	28.9	738	
1/40	239	0.17	0.35	0.51	709	253	21.8	28.8	43.1	747		
	240	0.20	0.42	0.63	718	1/6.3	239	0.89	1.18	1.85	701	
	243	0.57	0.77	1.15	727		240	1.78	2.39	3.60	710	
	246	1.56	2.08	3.14	736		243	2.65	3.55	5.28	719	
	250	3.55	5.04	7.51	745		246	5.6	7.4	20.9	728	
	246	7.28	10.28	14.6	754		250	16.9	22.5	33.6	737	
253	21.8	28.8	43.1	746								
1/32	239	0.34	0.45	0.67	708							

REDUTORES Tipo UABD

GEARBOXES TYPO UABD



TIPO	239	240	243	246	250	253
A 1)	168	195	212	265	330	372
AD	190	223	240	300	370	426
AF	90	105	120.	150	185	212
B 1)	70	76	100	130	160	200
BB	97	110	132	169	207	255
C 1)	18	20	20	25	28	32
D 1)	14	19	24	28	42	42
DB 1)	22	24	32	42	55	70
E	40	45	60	75	95	120
EA	30	40	50	60	80	80
F 1)	5	6	8	8	12	12
FA 1)	6	8	10	12	16	20
G	16	21.5	27	31	45.5	45.5
GB	24.5	27	35.5	45.5	60	76
H 1)	125	132	160	200	265	315
HA	26	26	26	32	37	42
HC	215	245	280	340	450	526
HD	-	-	-	375	491	568
HF 1)	110	117	140	175	230	260
K 2)	M8	3/8"	3/8"	1/2"	5/8"	3/4"
L	268	326	393	480	638	707

2) Os furos são executados para parafusos  $\phi$  K

LUBRIFICAÇÃO

Os moto-redutores são lubrificados a óleo com exceção das posições que requerem lubrificação com massa. Os redutores são sempre fornecidos cheios de lubrificantes.

POSICOES-Redutor tipo UABD

Montagem 239 240 243 246 250 253

QUANTIDADE DE OLEO (litros)

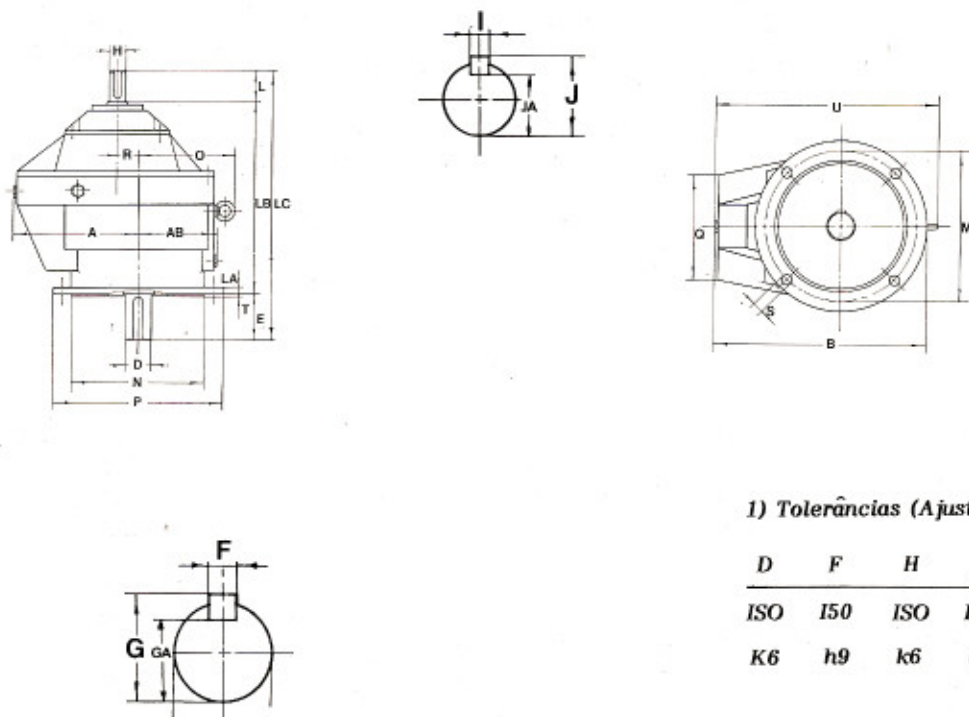
H1	0.6	0.85	1.5	3.0	5.0	8.3
H2	0.8	1.3	2.0	3.2	6.7	11.0
H3	0.8	1.3	2.0	3.2	6.7	11.0
H4	1.1	1.7	3.0	4.6	10.0	17.0
H5	1.8	2.8	4.2	8.5	17.0	27.0



## Dimensões

## Redutores UFD

Dimensões em m/m e sujeitas a modificação sem aviso



### 1) Tolerâncias (Ajustes)

D	F	H	I	N
ISO	ISO	ISO	ISO	ISO
K6	h9	k6	k9	J6

TIPO UFD	A	AB	B	D <sup>1</sup>	E	F <sup>1</sup>	G	GA	H <sup>1</sup>	I <sup>1</sup>	J	JA
239	138	92	238	22	40	6	24,5	18,5	14	5	16,1	11,1
240	143	109	268	24	45	8	26,9	19,9	19	6	21,5	15,5
243	171	119	296	32	60	10	35,3	27,3	24	8	26,9	19,9
246	210	137	360	42	75	12	45,1	37,1	28	8	30,9	23,9
250	275	177	475	55	95	16	58,8	48,8	42	12	45,1	37,1
253	328	205	553	70	120	20	74,6	62,6	42	12	45,1	37,1

TIPO UFD	L	LA	LB	LC	M	N <sup>1</sup>	O	P	Q	R	S	Furos	T	U
239	30	10	198	268	165	130		200	110	15	11,3	4	3,5	
240	40	12	241	326	215	180		250	131	15	15		4	
243	50	12	283	393	215	180		250	143	20	15		4	
246	60	15	345	480	265	230	175	300	200	25	15		4	385
250	80	15	463	638	350	300	224	400	236	35	18		4	499
253	80	15	509	709	400	350	252	450	275	55	18	8	4	580

### LUBRIFICAÇÃO

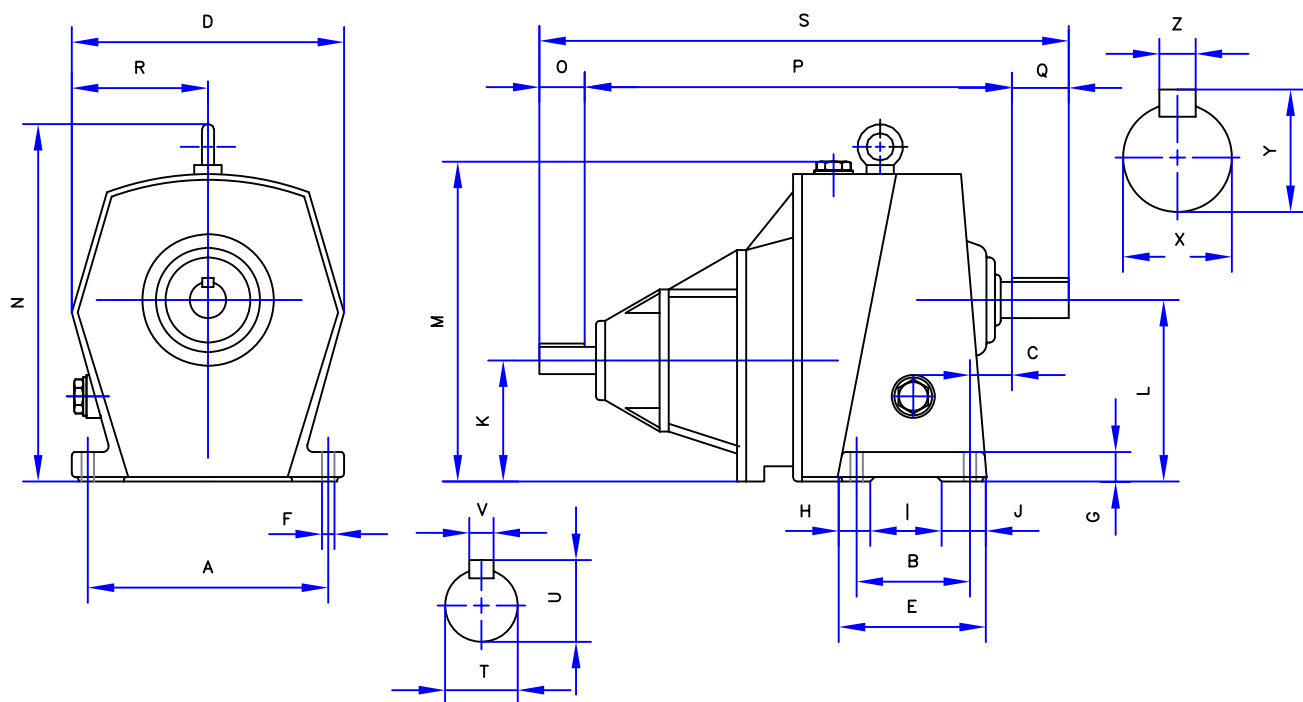
Os moto-redutores são lubrificados a óleo com exceção das posições F6 que requerem lubrificação com massa.

Os redutores são sempre fornecidos com lubrificantes.

Montagem	Posições - Redutor tipo UFD					
	239	240	243	246	250	253
	Quantidade de óleo (Litros)					
F1	2.0	2.5	3.8	6.2	13.8	22.0
F2	0.3	0.4	0.6	1.0	2.0	3.2
F3	1.3	1.7	2.5	4.5	9.0	14.0
F4	0.9	1.2	1.9	2.6	6.5	10.5
F5	0.9	1.2	1.9	2.6	6.5	10.5
	Quantidade de massa (Kg.)					
F6	0.8	1.0	1.8	3.5	9.0	13.0

REDUTORES Tipo UAT

GEARBOXES Type UAT



TIPO	343	346	350	353	475
A	212	265	330	372	470
B	100	130	160	200	270
C	20	25	28	32	50
D	240	300	370	426	555
E	132	169	207	255	340
F	12	15	18	22	25
G	26	32	37	42	50
H	27	39	42	50	66
I	64	76	95	125	174
J	41	54	70	80	100
K	90	105	140	155	205
L	160	200	265	315	390
M	280	340	450	526	635
N	—	375	491	568	686
O	30	40	50	60	80
P	293	356	434	518	665
Q	60	75	95	120	180
R	120	150	185	212	269
S	383	471	579	698	925
T (k6)	14	19	24	28	42
U	16.1	21.5	26.9	30.9	45.1
V	5	6	8	8	12
X (k6)	32	42	55	70	80
Y	35.3	45.1	58.8	74.6	85.5
Z	10	12	16	20	22

MOTO-REDUTORES		Typo	UABD-UFD	MOTORIZED GEARBOXES			Type	UABD-UFD	
POTENCIA		VEL.SAIDA	TIPO	MOMENTO	CLASSE			PESO	N.FABRICO
POWER		OUTPUT	TYPE	TORQUE				WEIGHT	ORDER NUMBER
CV	KW	R.P.M.		Kgxm	A	B	KG		
0.25	0.18	2.8	80M-8/343	63.9				113.702	
		3.8	71M-6/343	47.1				113.701	
		4.8	71M-6/343	37.2				113.601	
		5.7	71M-4/343	31.4				113.700	
		7.2	71M-4/343	24.8				113.600	
		9	71M-7/343	19.8				113.500	
		11.6	71M-4/343	15.4				113.400	
		14.3	71M-4/343	12.5				113.300	
		18.4	71M-4/343	9.7				113.200	
		22.8	71M-4/343	7.8				113.100	
		29	71M-4/343	6.1				113.000	
		35	71M-4/239	5.1				26.5	112.458
		44	71M-4/239	4.0				26.5	112.457
		55	71M-4/239	3.2				26.5	112.455
		70	71M-4/239	2.5				26.5	112.453
		91	71M-4/239	1.9				26.5	112.451
		116	71M-4/239	1.5				26.5	112.449
		138	71M-4/239	1.2				26.5	112.447
177	71M-4/239	1.0				26.5	112.445		
233	71M-4/239	0.7				26.5	112.443		
0.5	0.37	2.9	90S-8/350	123.4				113.705	
		3.8	80M-6/346	94.2				113.704	
		4.7	80M-6/346	76.1				113.604	
		5.7	71M-4/343	62.8				113.703	
		7.2	71M-4/343	49.7				113.603	
		9	71M-4/343	39.7				113.503	
		11.6	71M-4/343	30.8				113.403	
		14.3	71M-4/343	25.0				113.303	
		18.4	71M-4/343	19.4				113.203	
		22.8	71M-4/343	15.7				113.103	
		29	71M-4/343	12.3				113.003	
		35	71M-4/239	10.2				26.6	112.298
		44	71M-4/239	8.1				26.6	112.051
		55	71M-4/239	6.5				26.6	112.048
		71	71M-4/239	5.0				26.6	112.046
		91	71M-4/239	3.9				26.6	112.465
		115	71M-4/239	3.1				26.6	112.464
		139	71M-4/239	2.5				26.6	112.463
178	71M-4/239	2.0				26.6	112.462		
224	71M-4/239	1.5				26.6	112.462		
0.75	0.55	2.9	90L-8/353	185				113.708	
		3.9	80M-6/350	137				113.707	
		4.7	80M-6/350	114				113.607	
		5.7	80M-4/346	94.2				113.706	
		7.1	80M-4/346	75.6				113.606	
		9	80M-4/346	59.6				113.506	
		11.2	80M-4/346	47.9				113.406	
14.3	80M-4/343	37.5				113.306			

MOTO-REDUTORES		Tipo		UABD-UFD		MOTORIZED GEARBOXES		Type		UABD-UFD	
POTENCIA		VEL.SAIDA	TIPO	MOMENTO	CLASSE			PESO	N.FABRICO		
POWER	OUTPUT				TORQUE	A	B		C	WEIGHT	ORDER
CV	KW	R.P.M.	TYPE	Kgxm				KG			
0.75	0.55	18.4	80M-4/343	29.1						113.206	
		22.8	80M-4/343	23.5						113.106	
		29	80M-4/343	18.5						113.006	
		35	80M-4/240	15.3				33.5		112.054 A	
		43	80M-4/240	12.4				33.5		112.052 A	
		54	80M-4/240	9.9				33.5		112.049 A	
		71	80M-4/239	7.5				29.5		112.466 A	
		91	80M-4/239	5.9				29.5		112.465 A	
		115	80M-4/239	4.6				29.5		112.464 A	
		139	80M-4/239	3.8				29.5		112.463 A	
		178	80M-4/239	3.0				29.5		112.462 A	
		224	80M-4/239	2.3				29.5		112.461 A	
1	0.75	2.9	100L-8/353	246.8						113.711	
		3.8	100L-8/353	188						113.611	
		4.2	90S-6/353	170.4						113.710	
		5.9	80M-4/350	121.3						113.709	
		7.1	80M-4/350	100.8						113.609	
		9	80M-4/350	79.5						113.509	
		11.2	80M-4/346	63.9						113.409	
		13.9	80M-4/346	51.5						113.309	
		18.4	80M-4/343	38.9						113.209	
		22.8	80M-4/343	31.4						113.109	
		29	80M-4/343	24.6						113.009	
		34	80M-4/243	21.0				51.5		112.473	
		44	80M-4/240	16.2				33.5		112.326	
		54	80M-4/240	13.2				33.5		112.325	
		71	80M-4/239	10.0				29.5		112.324	
		91	80M-4/239	7.8				29.5		112.323	
		117	80M-4/239	6.1				29.5		112.322	
		139	80M-4/239	5.1				29.5		112.321	
179	80M-4/239	4				29.5		112.320			
228	80M-4/239	3.1				29.5		112.319			
1.5	1.1	2.9	100L-18-8/353	370						113.714	
		3.8	100L-18-8/353	282						113.614	
		4.2	90L-9/353	255						113.713	
		5	90L-6/353	214.8						113.613	
		7.1	90S-4/350	151.2						113.612	
		9.2	90S-4/350	116.7						113.512	
		11.3	90S-4/350	95.0						113.412	
		13.9	90S-4/346	77.2						113.312	
		17,6	90S-4/346	61.0						113.212	
		21,8	90S-4/346	49.2						113.112	
		29	90S-4/346	37.0						113.012	
		34	90S-4/243	31.5				55		112.341	
		44	90S-4/243	24.4				55		112.340	
		54	90S-4/243	19.8				55		112.339	
		68	90S-4/240	15.7				37		112.338	
		84	90S-4/240	12.7				37		112.337	

MOTO-REDUTORES		Tipo		UABD-UFD		MOTORIZED GEARBOXES		Type		UABD-UFD	
POTENCIA		VEL.SAIDA	TIPO	MOMENTO	CLASSE			PESO	N.FABRICO		
POWER	OUTPUT				TYPE	TORQUE	A		B	C	WEIGHT
CV	KW	R.P.M.		Kgxm				KG			
1.5	1.1	108	90S-4/240	9.9				37	112.336		
		141	90S-4/240	7.6				37	112.335		
		175	90S-4/240	6.1				37	112.479		
		224	90S-4/240	4.7				37	112.478		
2	1.5	2.8	112M-8/475	511					113.717		
		3.8	112M-8/353	376					113.617		
		4.2	100L-6/353	340.9					113.716		
		5	100L-6/353	286.4					113.616		
		7.4	100L-6/353	193.5					113.416		
		9.5	100L-6/353	150.7					113.316		
		11.6	100L-6/353	123.4					113.216		
		13.9	90L-4/350	103.0					113.315		
		17.6	90L-4/350	81.3					113.215		
		21.8	90L-4/346	65.6					113.115		
		27.9	90L-4/346	51.3					113.015		
		35	90L-4/246	40.9				82	112.490		
		44	90L-4/246	32.5				82	112.489		
		55	90L-4/243	26.0				57	112.352		
		71	90L-4/243	20.1				57	112.351		
		88	90L-4/243	16.2				57	112.134		
		109	90L-4/240	13.1				39	112.350		
142	90L-4/240	10.0				39	112.349				
179	90L-4/240	8.1				39	112.348				
225	90L-4/240	6.3				39	112.347				
3	2.2	3.8	112M-6/475	565.2					113.719		
		4.8	112M-6/475	447.5					113.619		
		5.8	100L-14-4/353	370.3					113.718		
		7.1	100L-14-4/353	302.5					113.618		
		9.2	100L-14-4/353	233.4					113.518		
		11.2	100L-14-4/353	171.7					113.418		
		14.4	100L-14-4/353	149.1					113.318		
		18.6	100L-14-4/353	115.4					113.218		
		22.1	100L-14-4/350	97.1					113.118		
		28	100L-14-4/350	76.7					113.018		
		35	100L-14-4/246	61.3				87.5	112.361		
		45	100L-14-4/246	47.7				87.5	112.360		
		56	100L-14-4/246	38.3				87.5	112.499		
		70	100L-14-4/246	30.6				87.5	112.498		
		89	100L-14-4/243	24.1				62.5	112.359		
		113	100L-14-4/243	19.0				62.5	112.358		
		142	100L-14-4/243	15.1				62.5	112.159		
176	100L-14-4/243	12.2				62.5	112.496				
224	100L-14-4/243	9.5				62.5	112.495				
4	3	5.8	100L-34-4/475	493.7					113.721		
		7.4	100L-34-4/353	387.0					112.621		
		9.7	100L-34-4/353	295.2					113.521		
		11.9	100L-34-4/353	240.6					113.421		
		14.9	100L-34-4/353	192.2					113.321		

MOTO-REDUTORES		Tipo	UABD-UFD	MOTORIZED GEARBOXES			Type	UABD-UFD	
POTENCIA		VEL.SAIDA	TIPO	MOMENTO	CLASSE			PESO	N.FABRICO
POWER		OUTPUT	TYPE	TORQUE				WEIGHT	ORDER NUMBER
CV	KW	R.P.M.		Kgxm	A	B	C	KG	
4	3	18.3	100L-34-4/353	156.5					113.221
		23.4	100L-34-4/353	122.3					112.335
		29.1	100L-34-4/353	98.4					113.021
		36	100L-34-4/250	79.5				143.5	112.508 A
		45	100L-34-4/250	63.6				143.5	112.507 A
		56	100L-34-4/246	51.1				90.5	112.499 A
		70	100L-34-4/246	40.9				90.5	112.498 A
		87	100L-34-4/246	32.9				90.5	112.164 A
		111	100L-34-4/246	25.8				90.5	112.162 A
		146	100L-34-4/246	19.6				90.5	112.504 A
		176	100L-34-4/243	16.9				65.5	112.496 A
224	100L-34-4/243	12.7				65.5	112.495 A		
5.5	4	9.1	112M-4/475	432.7					113.524
		11.9	112M-4/353	330.9					113.424
		14.9	112M-4/353	264.2					113.324
		18.3	112M-4/353	215.1					113.224
		22.5	112M-4/353	175.0					113.124
		28	112M-4/353	140.6					113.024
		36	112M-4/250	109.3				160	112.508
		45	112M-4/250	87.5				160	112.507
		59	112M-4/246	66.7				107	112.372
		71	112M-4/246	55.4				107	112.371
		87	112M-4/246	45.2				107	112.370
		112	112M-4/246	35.1				107	112.186
		146	112M-4/246	26.9				107	112.504
		177	112M-4/243	22.2				82	112.369
225	112M-4/243	17.5				82	112.368		
7.5	5.5	11.6	132S-4/475	462.9					113.427
		14.5	132S-4/475	370.3					113.327
		18.4	132S-4/475	291.8					113.227
		22.8	132S-4/475	235.5					113.127
		28	132S-4/353	191.7					113.027
		36	132S-4/250	149.1				187	112.384
		45	132S-4/250	119.3				187	112.183
		56	132S-4/250	95.8				187	112.515
		71	132S-4/250	75.6				187	112.514
		89	132S-4/250	60.3				134	112.513
		112	132S-4/246	47.9				134	112.382
		146	132S-4/246	36.7				134	112.381
		181	132S-4/246	29.6				134	112.308
232	132S-4/246	23.1				134	112.510		
10	7.5	18.4	132M-4/475	389.1					113.230
		22.6	132M-4/475	314.0					113.130
		28.2	132M-4/475	235.9					113.030
		37	132M-4/253	193.5				259	112.522
		46	132M-4/253	155.6				259	112.521
		56	132M-4/250	127.8				199	112.392
71	132M-4/250	100.8				199	112.391		

MOTO-REDUTORES Tipo UABD-UFD UAT-UFT		MOTORIZED GEARBOXES Type UABD-UFD UAT-UFT							
POTENCIA POWER		VEL.SAIDA OUTPUT R.P.M.	TIPO TYPE	MOMENTO TORQUE Kgxm	CLASSE			PESO WEIGHT KG	N.FABRICO ORDER NUMBER
CV	KW				A	B	C		
10	7.5	89	132M-4/250	80.4				199	112.226
		113	132M-4/250	63.3				199	112.519
		147	132M-4/250	48.7				199	112.222
		182	132M-4/246	39.3				146	112.389
		223	132M-4/246	32.1				146	112.388
15	11	28.2	160M-4/475	380.8					113.033
		71	160M-4/253	151.2				294	112.526
		91	160M-4/250	118.0				234	112.403
		116	160M-4/250	82.5				234	112.401
		144	160M-4/250	74.5				234	112.399
		178	160M-4/250	60.3				234	112.524
20	15	226	160M-4/250	47.5				234	112.523
		71	160L-4/253	201.6				315	112.420
		91	160L-4/253	157.3				315	112.529
		116	160L-4/253	123.4				315	112.528
		144	160L-4/250	99.4				255	112.416
		180	160L-4/250	79.5				255	112.414
25	18.5	228	160L-4/250	62.8				255	112.412
		71	180M-4/253	252.1				352	112.429
		91	180M-4/253	196.7				352	112.428
		116	180M-4/253	154.3				352	112.533
		141	180M-4/253	126.9				352	112.432
		180	180M-4/253	99.4				352	112.531
30	22	230	180M-4/253	77.8				352	112.530
		91	180L-4/253	236.0				376	112.504
		116	180L-4/253	185.1				376	112.369
		141	180L-4/253	152.3				376	112.368
		180	180L-4/253	119.3				376	113.427
		230	180L-4/253	93.3				376	113.327

REGIME DE TRABALHO		SERVICE FACTOR	
CLASSE TYPE OF LOAD	UNIFORME NORMAL	CHOQUES MODERADOS LIGHT LOADS	CHOQUES FORTES HEAVY LOADS
A	12 horas dia max.	8 horas dia max.	
	12 hours day max.	8 hours day max.	
B	18 horas dia max.	12 horas dia max.	3 horas dia max.
	18 hours day max.	12 hours day max.	3 hours day max.
C	24 horas dia max.	18 horas dia max.	8 horas dia interm.
	24 hours day max.	18 hours day max.	8 hours day interm.

REDUTORES Tipo UAT/UFT	GEARBOXES Type UAT/UFT
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Tabela de Equivalencia de Oleos		Table of Lubrificant Oils			
Fabricante Manufacturer	Recomendado Recommended	Equivalentes		Equivalents	
	BP	MOBIL	SHELL	GALP	E.L.F.
Engrenagens Gears	Energol HLP HM 100	Mobil Gear 629	Tellus 100	Transgear 100	O.L.N.A. 100





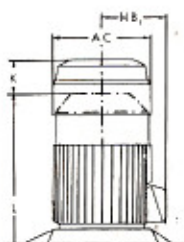


Dimensões	Moto-redutores UABD
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*A pedido podem fornecer-se com motores de 2 velocidades ou com freio*

Motoredutores com freio	Motor tipo	Dim. HB 1 mm	k
	71	106	50
	80	117	55
	90	124	60
	100	138	60
	112	165	65
	132	177	75

Para as restantes medidas ver em baixo



1) Tolerâncias (Ajustes)

H	e	HF	D	F	A, B, C
> 250	> 250				

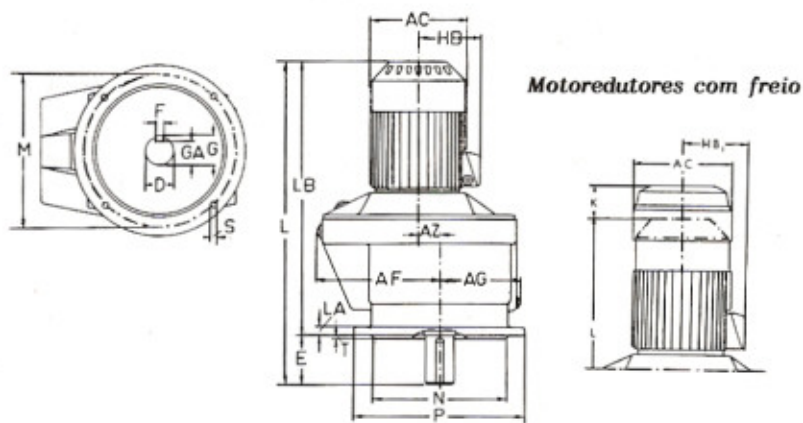
O	O	ISO	ISO	ISO
- 0,5	- 1,0	K9	h9	J14

- 2) Os furos são executados para parafuso diâmetro K
- 3) Os furos são executados para parafusos diâmetro KA
- 4) Os carris do UABD 239, 240 e 243 só têm 2 furos de fixação.

*Dimensões em m/m e sujeitas a modificação sem aviso*

HF <sup>1</sup>	K <sup>2</sup>	L	LB	YD	Com chumbadores				Com carris				Z	ZA	ZB	Desloc. máximo sobre os carris	TIPO UADB																			
					ZC	ZD	KA <sup>3,4</sup>	X	XB	XE	Y	YA						YB	YC																	
110	M8	434	394	80	180	8	M10	350	318	16	50	—	70	60	25	15	250	20	71B/239																	
		515	475																80B/239																	
117	M10	455	410	90	200	8	M10	476	440	18	70	—	76	60	35	20	250	90	71B/240																	
		546	501																80B/240																	
		551	506																90S/240																	
		567	522																90L/240																	
140	M10	497	437	90	200	8	M10	476	440	18	70	—	100	60	35	20	250	70	71B/243																	
		578	516																80B/243																	
		582	522																90S/243																	
		608	548																90L/243																	
		635	575																100L/243																	
		655	595																112M/243																	
175	M12	634	559	110	220	10	M10	510	340	91	126	100	30	60	55	20	250	105	80B/246																	
		638	563																90S/246																	
		664	589																90L/246																	
		692	617																100L/246																	
		712	637																112M/246																	
		771	696																132S/246																	
		809	734																132M/246																	
		230	M16																729	634	120	250	10	M12	655	445	145	135	105	55	70	65	25	300	160	90S/250
755	660			90L/250																																
779	684			100L/250																																
799	704			112M/250																																
858	763			132S/250																																
896	801			132M/250																																
1008	913			160M/250																																
1052	957			160L/250																																
260	M20			879	759	140	270	10	M16	835	620	150	165	120	80	80	80	30	360	210																112M/253
				938	818																															132S/253
		976	856	132M/253																																
		1087	967	160M/253																																
		1139	1011	160L/253																																
		1145	1025	180M/253																																
		1183	1063	180L/253																																

Dimensões	Moto-redutores UFD
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Moto-redutores com freio

Motor tipo	Dim. HB 1 mm	k
71	106	50
80	117	55
90	124	60
100	138	60
112	165	65
132	177	75

Para as restantes medidas ver em baixo

TIPO UFD	AC	AF	AG	D <sup>1</sup>	E	F <sup>1</sup>	G	HB	L	LA	LB	M	N <sup>1</sup>	P	S	Furos	T	AZ	GA
71B/239	141	138	92	22	40	6	24,5	106	434	10	394	165	130	200	11,3	4	3,5	15	18,5
80B/239	158							117	515		475								
71B/240	141	143	109	24	45	8	27	106	455	12	410	215	180	250	15	4	4	15	20
80B/240	158							117	546		501								
90S/240	178							127	557		506								
90L/240	178							127	567		522								
71B/243	141	171	120	32	60	10	35,5	106	497	12	437	215	180	250	15	4	4	20	27,5
80B/243	158							117	578		516								
90S/243	178							127	582		522								
90L/243	178							127	608		548								
100L/243	198							138	635		575								
112M/243	224							164	655		595								
80B/246	158	210	140	42	75	12	45,5	117	634	15	559	265	230	300	15	4	4	25	37,5
90S/246	178							127	638		563								
90L/246	178							127	664		589								
100L/246	198							138	692		617								
112M/246	224							164	712		637								
132S/246	250							176	777		696								
132M/246	250							176	809		734								
90S/250	178	275	177	55	95	16	60	127	729	15	634	350	300	400	18	4	4	35	50
90L/250	178							127	755		660								
100L/250	198							138	779		684								
112M/250	224							164	799		704								
132S/250	250							176	858		763								
132M/250	250							176	896		801								
160M/250	305							224	1008		913								
160L/250	305							224	1052		957								
112M/253	224	328	205	70	120	20	76	164	879	15	759	400	350	450	18	8	4	55	64
132S/253	250							176	938		818								
132M/253	250							176	976		856								
160M/253	305							224	1087		967								
160L/253	305							224	1139		1011								
180M/253	351							240	1145		1025								
180L/253	351							240	1183		1063								

1) Tolerâncias (Ajustes)

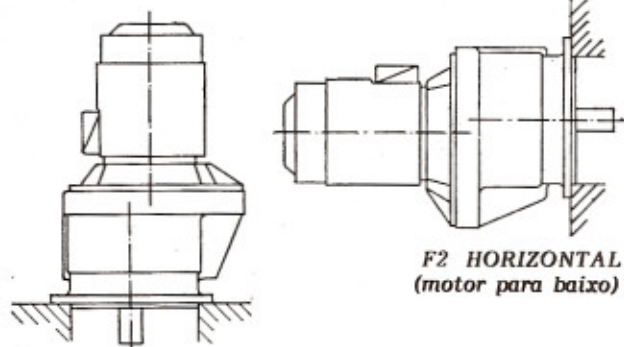
D	E	F
ISO k6	ISO h9	ISO j6

Dimensões em m/m e sujeitas a modificação sem aviso



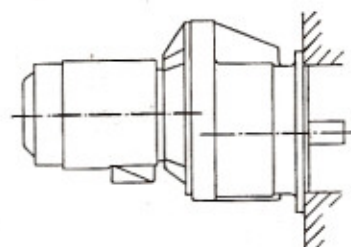
### posições de montagem

tipo **UFD**

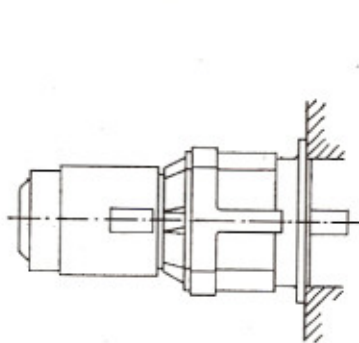


**F1 VERTICAL**  
(motor para cima)

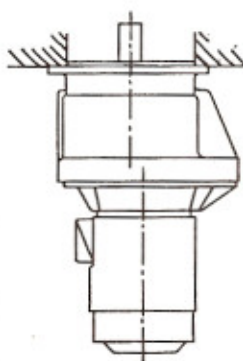
**F2 HORIZONTAL**  
(motor para baixo)



**F3 HORIZONTAL**  
(motor elevado)



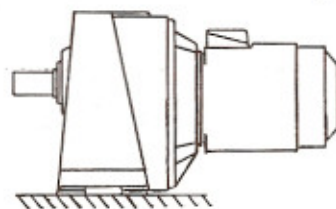
**MOTOR EM LINHA**  
F4 (motor à esquerda)  
F5 (motor à direita)



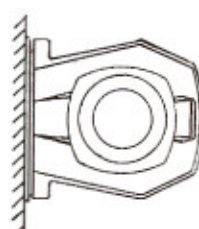
**F6 VERTICAL**  
(motor para baixo)

### posições de montagem

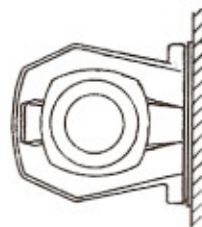
tipo **UABD**



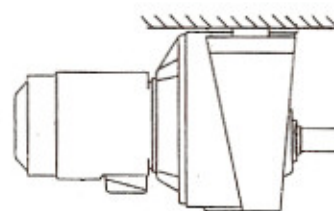
**H1 HORIZONTAL**



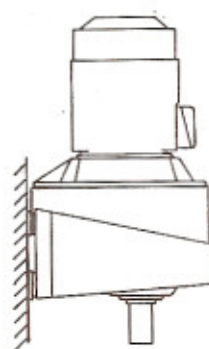
**H2 PAREDE**  
(à esquerda)



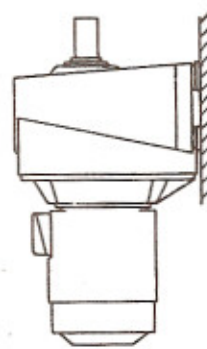
**H3 PAREDE**  
(à direita)



**H4 SUSPENSO**



**V1 VERTICAL**  
(motor para cima)



**V2 VERTICAL**  
(motor para baixo)

#### Posições—Redutor tipo UFD

Montagem	239	240	243	246	250	253
<b>Quantidade de óleo (Litros)</b>						
F1	2.0	2.5	3.8	6.2	13.8	22.0
F2	0.3	0.4	0.6	1.0	2.0	3.2
F3	1.3	1.7	2.5	4.5	9.0	14.0
F4	0.9	1.2	1.9	2.6	6.5	10.5
F5	0.9	1.2	1.9	2.6	6.5	10.5
<b>Quantidade de massa (Kg.)</b>						
F6	0.8	1.0	1.8	3.5	9.0	13.0

#### Posições—Redutor tipo UABD

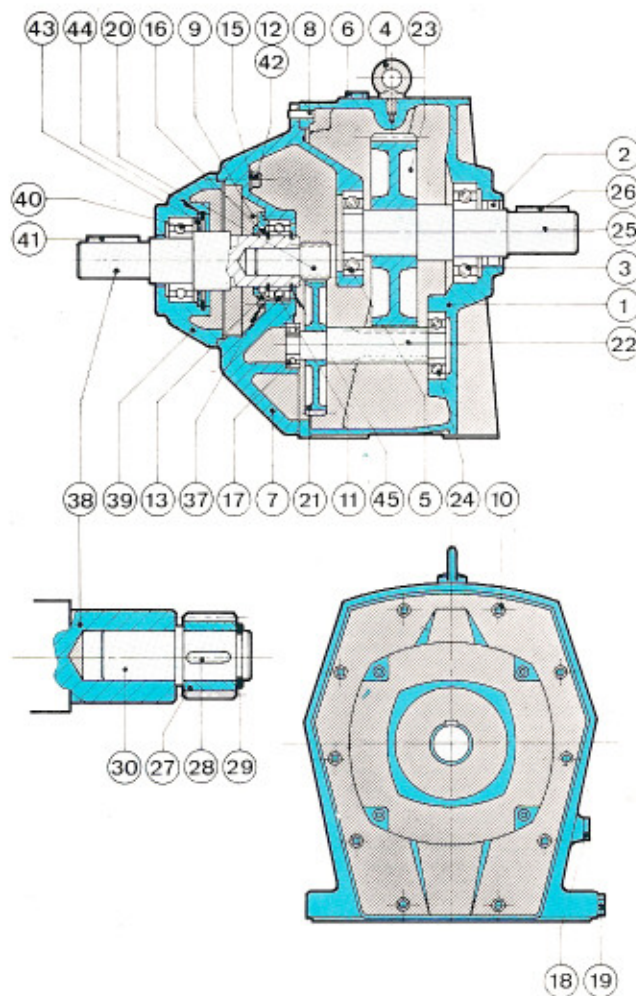
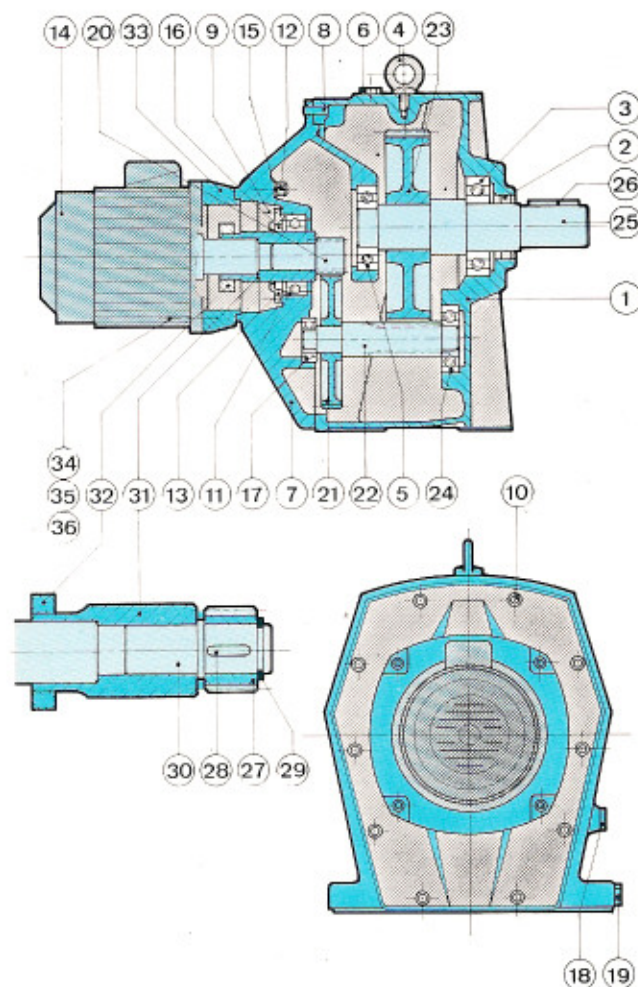
Montagem	239	240	243	246	250	253
<b>Quantidade de óleo (Litros)</b>						
H1	0.6	0.85	1.5	3.0	5.6	8.3
H2	0.8	1.3	2.0	3.2	6.7	11.0
H3	0.8	1.3	2.0	3.2	6.7	11.0
H4	1.1	1.7	3.0	4.6	10.0	17.0
V1	1.8	2.8	4.2	8.5	17.0	27.0
<b>Quantidade de massa (Kg.)</b>						
V2	0.9	1.3	2.0	4.0	10.0	15.0

## Componentes

## Redutores tipo UABD

### MOTO-REDUTOR

### REDUTOR



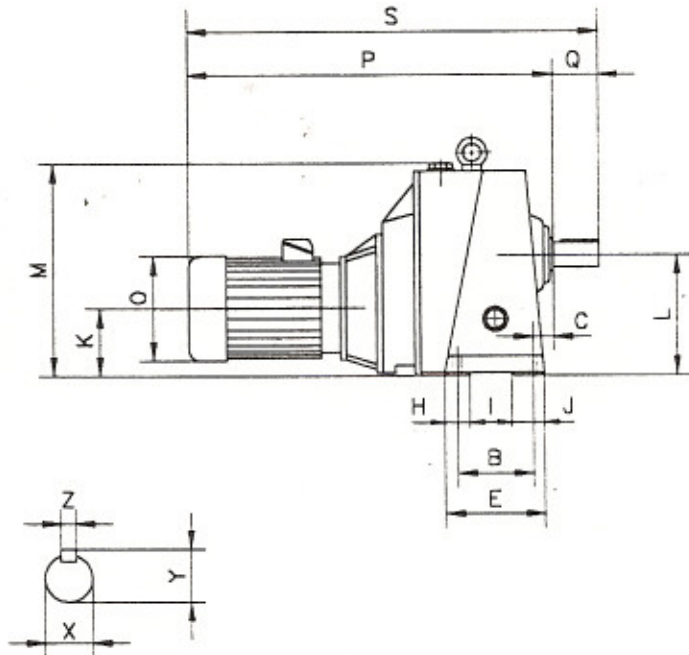
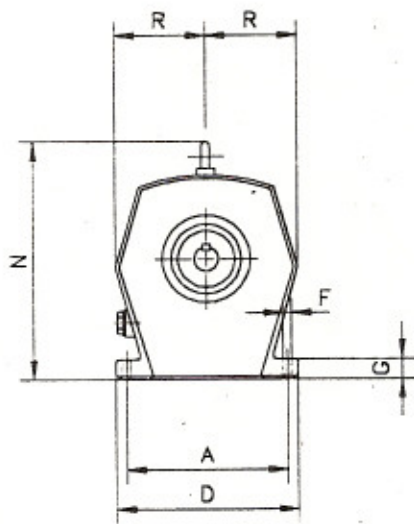
### LISTA DE PEÇAS

- 1 Carter
- 2 Retentor
- 3 Rolamento
- 4 Argola de suspensão
- 5 Rolamento
- 6 Bujão superior
- 7 Suporte do rolamento
- 8 Cavilha
- 9 Perno c/ porca
- 10 Parafuso umbrako
- 11 Rolamento
- 12 Parafuso umbrako
- 13 Tampa do rolamento
- 14 Motor
- 15 Anilha de cobre
- 16 Tetentor
- 17 Rolamento
- 18 Visor de nível de 3/4 "G"
- 19 Bujão de purga de
- 20 Veio carreto de entrada
- 21 Roda da 1ª redução
- 22 Veio carreto da 2ª redução

- 23 Roda da 2ª redução
- 24 Rolamento
- 25 Veio de saída
- 26 Cavalete do veio de saída
- 27 Carreto da 1ª redução
- 28 Cavalete do carreto 1ª redução
- 29 Freio exterior
- 30 Veio de extensão
- 31 Manga de ligação
- 32 Anilha de aperto
- 33 Disco de ligação
- 34 Perno umbrako
- 35 Anilha de mola
- 36 Porca sextavada
- 37 Oringue
- 38 Veio de entrada
- 39 Tampa do suporte
- 40 Rolamento
- 41 Cavalete do veio de entrada
- 42 Porca sextavada
- 43 Anilha de protecção do óleo
- 44 Freio interior
- 45 Freio exterior

MOTO-REDUTORES Tipo UAT

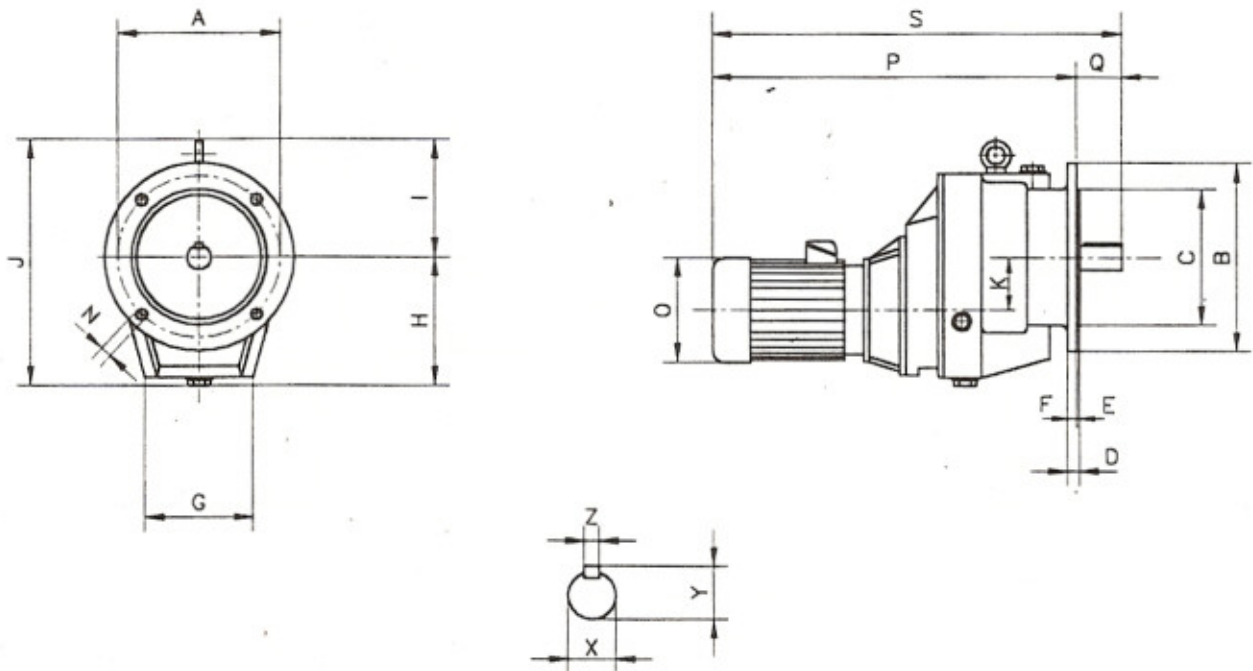
MOTORIZED GEARBOXES Type UAT



TIPO	343/71	343/80	346/71	346/80	346/90	350/71	350/80	350/90	350/100 350/112	353/80	353/90	353/100 353/112	353/132	475/90	475/100 475/112	475/132	475/160
A	212	212	265	265	265	330	330	330	330	372	372	372	372	470	470	470	470
B	100	100	130	130	130	160	160	160	160	200	200	200	200	270	270	270	270
C	20	20	25	25	25	28	28	28	28	32	32	32	32	50	50	50	50
D	240	240	300	300	300	370	370	370	370	426	426	426	426	555	555	555	555
E	132	132	169	169	169	207	207	207	207	255	255	255	255	340	340	340	340
F	12	12	15	15	15	18	18	18	18	22	22	22	22	25	25	25	25
G	26	26	32	32	32	37	37	37	37	42	42	42	42	50	50	50	50
H	27	27	39	39	39	42	42	42	42	50	50	50	50	66	66	66	66
I	64	64	76	76	76	95	95	95	95	125	125	125	125	174	174	174	174
J	41	41	54	54	54	70	70	70	70	80	80	80	80	100	100	100	100
K	90	90	105	105	105	140	140	140	140	155	155	155	155	205	205	205	205
L	160	160	200	200	200	265	265	265	265	315	315	315	315	390	390	390	390
M	280	280	340	340	340	450	450	450	450	526	526	526	526	635	635	635	635
N	---	---	375	375	375	491	491	491	491	568	568	568	568	686	686	686	686
O	140	157	140	157	180	140	157	180	220	157	180	220	255	180	220	254	306
P	480	528	516	564	606	579	627	669	760	698	732	823	920	811	904	1001	1179
Q	60	60	75	75	75	95	95	95	95	120	120	120	120	180	180	180	180
R	120	120	150	150	150	185	185	185	185	212	212	212	212	269	269	269	269
S	540	588	591	639	681	674	722	722	855	818	852	943	1040	991	1084	1181	1359
X <sub>in</sub>	32	32	42	42	42	55	55	55	55	70	70	70	70	80	80	80	80
Y	35.3	35.3	45.1	45.1	45.1	58.8	58.8	58.8	58.8	74.6	74.6	74.6	74.6	85.5	85.5	85.5	85.5
Z	10	10	12	12	12	16	16	16	16	20	20	20	20	22	22	22	22

MOTO-REDUTORES Tipo UFT

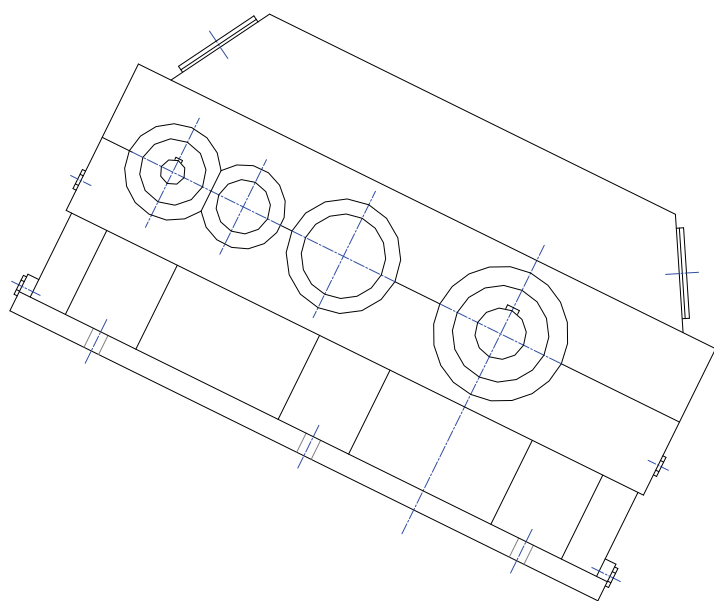
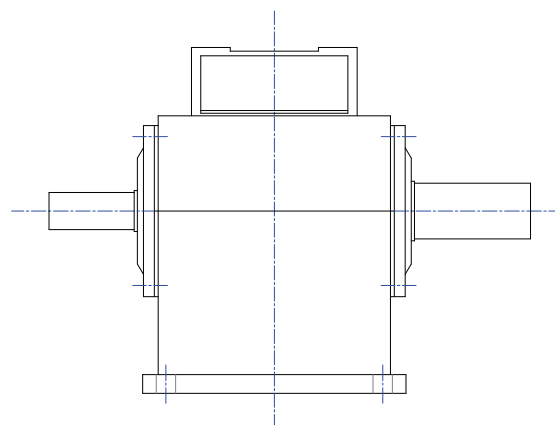
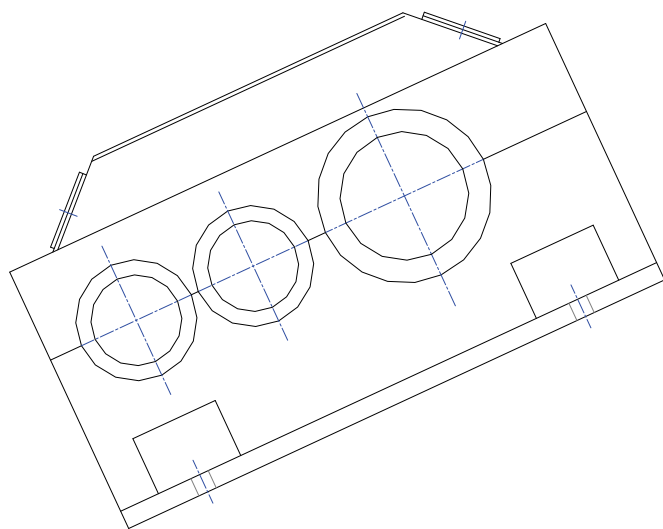
MOTORIZED GEARBOXES Type UFT



TIPO	343/71	343/80	346/71	346/80	346/90	350/71	350/80	350/90	350/100 350/112	353/80	353/90	353/100 353/112	353/132	475/80	475/100 475/112	475/132	475/160
A	215	215	265	265	265	350	350	350	350	400	400	400	400	500	500	500	500
B	250	250	300	300	300	400	400	400	400	450	450	450	450	550	550	550	550
C	180	180	230	230	230	300	300	300	300	350	350	350	350	400	400	400	400
D	16	16	19	19	19	19	19	19	19	19	19	19	19	25	25	25	25
E	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5
F	12	12	15	15	15	15	15	15	15	15	15	15	15	20	20	20	20
G	143	143	200	200	200	236	236	236	236	275	275	275	275	336	336	336	336
H	171	171	210	210	210	275	275	275	275	328	328	328	328	391	391	391	391
I	120	120	163	163	163	223	223	223	223	251	251	251	251	282	282	282	282
J	291	291	373	373	373	498	498	498	498	579	579	579	579	673	673	673	673
K	70	70	95	95	95	125	125	125	125	160	160	160	160	185	185	185	185
N	15	15	15	15	15	18	18	18	18	18	18	18	18	19	19	19	19
O	140	157	140	157	180	140	157	180	220	157	180	220	254	180	220	254	306
P	480	528	516	564	606	579	627	669	760	698	732	823	920	811	904	1001	1179
Q	60	60	75	75	75	95	95	95	95	120	120	120	120	180	180	180	180
S	540	588	591	639	681	674	722	764	855	818	852	943	1040	991	1084	1181	1359
X <sub>m</sub>	32	32	42	42	42	55	55	55	55	70	70	70	70	80	80	80	80
Y	35.3	35.3	45.1	45.1	45.1	58.8	58.8	58.8	58.8	74.6	74.6	74.6	74.6	85.5	85.5	85.5	85.5
Z	10	10	12	12	12	16	16	16	16	20	20	20	20	22	22	22	22
Furos	4	4	4	4	4	4	4	4	4	8	8	8	8	8	8	8	8

TABELA 03 - Motor UFT - 03-1-14800005

**REDUTORES DE VEIOS PARALELOS**  
**GEARBOXES PARALLEL SHAFT**  
**TIPO UDH-UTH / TYPE UDH-UTH**



# “REDUTORES VEIOS PARALELOS UDH,UTH,CUDH,CUTH”

## ESPECIFICAÇÕES TÉCNICAS:

### **CARTÉR:**

- Em ferro fundido e construção laminada.
- A sua fabricação precisa, garante um alinhamento exacto das engrenagens.

### **ENGRENAGENS:**

- Material: aço vazado, aço de liga, aço de cementação
- Têmpera por indução e cementação
- Rectificação do flanco dos dentes

### **VEIOS E APOIOS:**

- Todos os veios são rectificadados e apoiados em rolamentos de esferas de grande capacidade de carga. e rolamentos oscilantes.
- Veios em aço ao Carbono de alta resistência .
- Veios de entrada e saída com retentor para evitar perdas de óleo e entradas de poeira.

### **LUBRIFICAÇÃO:**

- As engrenagens funcionam em banho de óleo c/nível controlado por visor de vidro.
- Entrada e saída de óleo por sistema de bujão roscado.
- Os rolamentos recebem lubrificação adequada mediante chapinhagem.

### **REFRIGERAÇÃO:**

- A capacidade de refrigeração do carter é suficiente para temperaturas de óleo até 80°C.

### **ENSAIO:**

- Todos os componentes do redutor são examinados durante e depois da fabricação.
- Feito a montagem verifica-se o contacto e o alinhamento correcto das engrenagens.
- Segue um ensaio conforme ficha de inspecção e ensaio interna de forma a garantir a conformidade do equipamento para expedição.



<b>TIPO UDH</b>	<b>REDUTOR</b>	<b>2 ANDARES</b>
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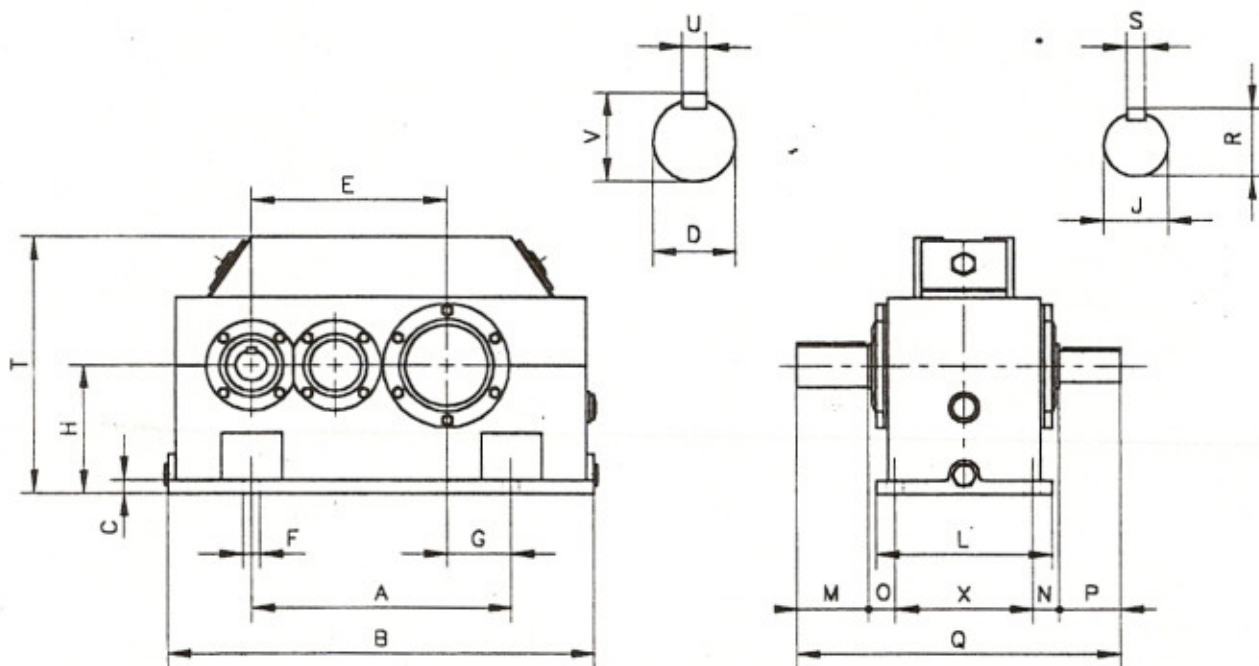
<b>POTÊNCIA MÁX. CV/r.p.m</b>							
<b>RAZÃO TEÓRICA-REAL</b>			<b>MOMENTO K.m</b>	<b>1500</b>	<b>1000</b>	<b>750</b>	<b>Nº de fabrico</b>
<b>195</b>	<b>6,3</b>	<b>6,17</b>		<b>9,5</b>	<b>7,4</b>	<b>6,06</b>	<b>250 247</b>
	<b>8</b>	<b>7,9</b>		<b>8,1</b>	<b>6,37</b>	<b>5,18</b>	<b>250 316</b>
	<b>10</b>	<b>9,75</b>		<b>7,5</b>	<b>5,9</b>	<b>4,8</b>	<b>250 390</b>
	<b>12,5</b>	<b>12,79</b>		<b>5,1</b>	<b>4,01</b>	<b>3,26</b>	<b>518 247</b>
	<b>16</b>	<b>16,36</b>		<b>4,1</b>	<b>3,22</b>	<b>2,62</b>	<b>518 316</b>
	<b>20</b>	<b>20,2</b>		<b>3,7</b>	<b>2,9</b>	<b>2,36</b>	<b>518 390</b>
	<b>25</b>	<b>24</b>		<b>2,8</b>	<b>2,2</b>	<b>1,79</b>	<b>617 390</b>
	<b>31,5</b>	<b>31,7</b>		<b>2,6</b>	<b>2,04</b>	<b>1,66</b>	<b>518 613</b>
	<b>40</b>	<b>37,8</b>		<b>2,1</b>	<b>1,65</b>	<b>1,34</b>	<b>617 613</b>
<b>255</b>	<b>6,3</b>	<b>6,42</b>		<b>24,5</b>	<b>19,2</b>	<b>15,6</b>	<b>252 255</b>
	<b>8</b>	<b>8,13</b>		<b>20,8</b>	<b>16,3</b>	<b>13,3</b>	<b>252 323</b>
	<b>10</b>	<b>10,2</b>		<b>17,1</b>	<b>13,4</b>	<b>10,9</b>	<b>252 405</b>
	<b>12,5</b>	<b>12,75</b>		<b>12,4</b>	<b>9,76</b>	<b>7,93</b>	<b>500 255</b>
	<b>16</b>	<b>16,15</b>		<b>10,3</b>	<b>8,11</b>	<b>6,59</b>	<b>500 323</b>
	<b>20</b>	<b>20,5</b>		<b>8,9</b>	<b>7,0</b>	<b>5,69</b>	<b>500 405</b>
	<b>25</b>	<b>25,5</b>		<b>6,7</b>	<b>5,27</b>	<b>4,28</b>	<b>631 405</b>
	<b>31,5</b>	<b>31,65</b>		<b>5,9</b>	<b>4,64</b>	<b>3,77</b>	<b>500 633</b>
	<b>40</b>	<b>39,9</b>		<b>4,7</b>	<b>3,7</b>	<b>3,0</b>	<b>631 633</b>
<b>315</b>	<b>6,3</b>	<b>6,34</b>		<b>36,0</b>	<b>28,2</b>	<b>22,9</b>	<b>256 248</b>
	<b>8</b>	<b>8,11</b>		<b>34,0</b>	<b>26,7</b>	<b>21,7</b>	<b>256 317</b>
	<b>10</b>	<b>10,36</b>		<b>28,0</b>	<b>22,0</b>	<b>17,9</b>	<b>256 405</b>
	<b>12,5</b>	<b>12,92</b>		<b>22,0</b>	<b>17,3</b>	<b>14,0</b>	<b>505 248</b>
	<b>16</b>	<b>16</b>		<b>17,1</b>	<b>13,4</b>	<b>10,9</b>	<b>505 317</b>
	<b>20</b>	<b>20,45</b>		<b>15,2</b>	<b>11,9</b>	<b>9,72</b>	<b>505 405</b>
	<b>25</b>	<b>25,6</b>		<b>13,5</b>	<b>10,6</b>	<b>8,64</b>	<b>632 405</b>
	<b>31,5</b>	<b>31,36</b>		<b>11,2</b>	<b>8,82</b>	<b>7,16</b>	<b>505 621</b>
	<b>40</b>	<b>39,34</b>		<b>9,5</b>	<b>7,48</b>	<b>6,08</b>	<b>632 621</b>
<b>390</b>	<b>6,3</b>	<b>6,17</b>		<b>41,5</b>	<b>32,6</b>	<b>26,5</b>	<b>250 247.2</b>
	<b>8</b>	<b>7,9</b>		<b>40,0</b>	<b>31,5</b>	<b>25,6</b>	<b>250 316.2</b>
	<b>10</b>	<b>9,75</b>		<b>33,0</b>	<b>26,0</b>	<b>21,1</b>	<b>250 390.2</b>
	<b>12,5</b>	<b>12,79</b>		<b>26,2</b>	<b>20,6</b>	<b>16,8</b>	<b>518 247.2</b>
	<b>16</b>	<b>16,36</b>		<b>22,1</b>	<b>17,4</b>	<b>14,1</b>	<b>518 316.2</b>
	<b>20</b>	<b>20,2</b>		<b>19,6</b>	<b>15,4</b>	<b>12,5</b>	<b>518 390.2</b>
	<b>25</b>	<b>24,06</b>		<b>15,7</b>	<b>12,4</b>	<b>10,0</b>	<b>617 390.2</b>
	<b>31,5</b>	<b>31,75</b>		<b>13,4</b>	<b>10,6</b>	<b>8,6</b>	<b>518 613.2</b>
	<b>40</b>	<b>37,82</b>		<b>11,9</b>	<b>9,4</b>	<b>7,6</b>	<b>617 613.2</b>
<b>510</b>	<b>6,3</b>	<b>6,42</b>		<b>114,0</b>	<b>90,0</b>	<b>73,0</b>	<b>252 255.2</b>
	<b>8</b>	<b>8,13</b>		<b>98,7</b>	<b>77,7</b>	<b>63,0</b>	<b>252 323.2</b>
	<b>10</b>	<b>10,2</b>		<b>88,1</b>	<b>69,3</b>	<b>56,4</b>	<b>252 405.2</b>
	<b>12,5</b>	<b>12,75</b>		<b>64,8</b>	<b>51,0</b>	<b>41,4</b>	<b>500 255.2</b>
	<b>16</b>	<b>16,15</b>		<b>56,0</b>	<b>44,0</b>	<b>35,8</b>	<b>500 323.2</b>
	<b>20</b>	<b>20,25</b>		<b>46,8</b>	<b>36,8</b>	<b>30,0</b>	<b>500 405.2</b>
	<b>25</b>	<b>25,5</b>		<b>37,1</b>	<b>29,2</b>	<b>23,8</b>	<b>631 405.2</b>
	<b>31,5</b>	<b>31,65</b>		<b>32,3</b>	<b>25,4</b>	<b>20,6</b>	<b>500 633.2</b>
	<b>40</b>	<b>39,94</b>		<b>26,0</b>	<b>20,5</b>	<b>16,6</b>	<b>631 633.2</b>

<b>TIPO UDH</b>	<b>REDUTOR</b>	<b>2 ANDARES</b>
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<b>POTÊNCIA MÁX. CV/r.p.m</b>							
<b>RAZÃO TEÓRICA-REAL</b>			<b>MOMENTO K.m</b>	<b>1500</b>	<b>1000</b>	<b>750</b>	<b>Nº de fabrico</b>
<b>630</b>	<b>6,3</b>	<b>6,34</b>		<b>179,0</b>	<b>141,0</b>	<b>115,0</b>	<b>256 248.2</b>
	<b>8</b>	<b>8,11</b>		<b>157,0</b>	<b>124,0</b>	<b>100,0</b>	<b>256 317.2</b>
	<b>10</b>	<b>10,36</b>		<b>136,0</b>	<b>107,0</b>	<b>87,0</b>	<b>256 405.2</b>
	<b>12,5</b>	<b>12,92</b>		<b>114,0</b>	<b>90,0</b>	<b>73,0</b>	<b>505 248.2</b>
	<b>16</b>	<b>16</b>		<b>99,0</b>	<b>78,0</b>	<b>63,0</b>	<b>505 317.2</b>
	<b>20</b>	<b>20,45</b>		<b>76,0</b>	<b>60,0</b>	<b>49,0</b>	<b>505 405,2</b>
	<b>25</b>	<b>25,59</b>		<b>59,0</b>	<b>46,0</b>	<b>37,5</b>	<b>632 405.2</b>
	<b>31,5</b>	<b>31,36</b>		<b>51,0</b>	<b>40,0</b>	<b>32,5</b>	<b>505 621.2</b>
	<b>40</b>	<b>39,24</b>		<b>38,0</b>	<b>30,0</b>	<b>24,3</b>	<b>632 621.2</b>
<b>780</b>	<b>6,3</b>	<b>6,17</b>		<b>273,0</b>	<b>214,0</b>	<b>174,0</b>	<b>250 247.4</b>
	<b>8</b>	<b>7,9</b>		<b>231,0</b>	<b>182,0</b>	<b>148,0</b>	<b>250 316.4</b>
	<b>10</b>	<b>9,75</b>		<b>198,0</b>	<b>155,0</b>	<b>126,0</b>	<b>250 390.4</b>
	<b>12,5</b>	<b>12,79</b>		<b>164,0</b>	<b>127,0</b>	<b>103,0</b>	<b>518 247.4</b>
	<b>16</b>	<b>16,36</b>		<b>141,0</b>	<b>109,0</b>	<b>88,0</b>	<b>518 316.4</b>
	<b>20</b>	<b>20,2</b>		<b>112,0</b>	<b>86,0</b>	<b>70,0</b>	<b>518 390.4</b>
	<b>25</b>	<b>24,06</b>		<b>88,0</b>	<b>67,0</b>	<b>55,0</b>	<b>617 390.4</b>
	<b>31,5</b>	<b>31,75</b>		<b>75,0</b>	<b>57,0</b>	<b>47,0</b>	<b>518 613.4</b>
	<b>40</b>	<b>37,82</b>		<b>59,0</b>	<b>45,0</b>	<b>37,0</b>	<b>617 613.4</b>
<b>1020</b>	<b>6,3</b>	<b>6,42</b>		<b>820,0</b>	<b>645,0</b>	<b>525,0</b>	<b>252 255.4</b>
	<b>8</b>	<b>8,13</b>		<b>690,0</b>	<b>540,0</b>	<b>440,0</b>	<b>251 323.4</b>
	<b>10</b>	<b>10,2</b>		<b>570,0</b>	<b>427,0</b>	<b>355,0</b>	<b>252 405.4</b>
	<b>12,5</b>	<b>12,75</b>		<b>470,0</b>	<b>355,0</b>	<b>295,0</b>	<b>500 255.4</b>
	<b>16</b>	<b>16,15</b>		<b>400,0</b>	<b>310,0</b>	<b>255,0</b>	<b>500 323.4</b>
	<b>20</b>	<b>20,25</b>		<b>315,0</b>	<b>240,0</b>	<b>197,0</b>	<b>500 405.4</b>
	<b>25</b>	<b>25,5</b>		<b>242,0</b>	<b>190,0</b>	<b>155,0</b>	<b>631 405.4</b>
	<b>31,5</b>	<b>31,65</b>		<b>207,0</b>	<b>162,0</b>	<b>132,0</b>	<b>500 633.4</b>
	<b>40</b>	<b>39,94</b>		<b>165,0</b>	<b>122,0</b>	<b>102,0</b>	<b>631 633.4</b>
<b>1260</b>	<b>6,3</b>	<b>6,34</b>		<b>1280,0</b>	<b>1006,0</b>	<b>820,0</b>	<b>256 248.4</b>
	<b>8</b>	<b>8,11</b>		<b>1120,0</b>	<b>882,0</b>	<b>716,0</b>	<b>256 317.4</b>
	<b>10</b>	<b>10,36</b>		<b>995,0</b>	<b>783,0</b>	<b>636,0</b>	<b>256 405.4</b>
	<b>12,5</b>	<b>12,92</b>		<b>830,0</b>	<b>654,0</b>	<b>530,0</b>	<b>505 248.4</b>
	<b>16</b>	<b>16</b>		<b>710,0</b>	<b>560,0</b>	<b>455,0</b>	<b>505 317.4</b>
	<b>20</b>	<b>20,45</b>		<b>560,0</b>	<b>440,0</b>	<b>358,0</b>	<b>505 405.4</b>
	<b>25</b>	<b>25,59</b>		<b>445,0</b>	<b>350,0</b>	<b>285,0</b>	<b>632 405.4</b>
	<b>31,5</b>	<b>31,36</b>		<b>370,0</b>	<b>290,0</b>	<b>236,0</b>	<b>505 621.4</b>
	<b>40</b>	<b>39,24</b>		<b>300,0</b>	<b>236,0</b>	<b>192,0</b>	<b>632 621.4</b>

REDUTORES Tipo UDH

GEARBOXES Type UDH



TIPO	255	315	390	510	630	780	1020	1260
A	340	340	550	760	890	1050	1425	1758
B	560	640	780	980	1180	1440	1885	2260
C	18	30	25	25	25	30	35	40
D	55	70	75	80	90	140	160	200
E	255	315	390	510	630	780	1020	1260
F	20	22	25	25	27	33	33	42
G	85	67	150	225	255	275	390	498
H	170	220	245	315	400	400	580	740
J	42	42	50	50	50	50	80	90
L	230	227	340	386	405	405	650	725
M	95	120	150	180	195	195	280	350
N	35	40.5	41	55.5	60	58	70	72
O	35	50.5	41	55.5	60	58	90	72
P	80	80	110	110	110	140	160	195
Q	425	481	627	736	770	996	1150	1314
R	45.1	45.1	53.5	53.5	53.5	74.6	85.5	95.4
S	12	12	14	14	14	20	22	25
T	340	420	465	610	760	885	1170	1410
U	16	20	20	22	25	36	40	45
V	58.8	74.6	20	85.5	95.3	147.9	168.5	210
X	180	190	280	335	345	490	550	625
Furos	--	--	--	1	1	2	2	2
intermédios—EQUIDISTANTES—								

TIPO UTH	REDUTOR	3 ANDARES
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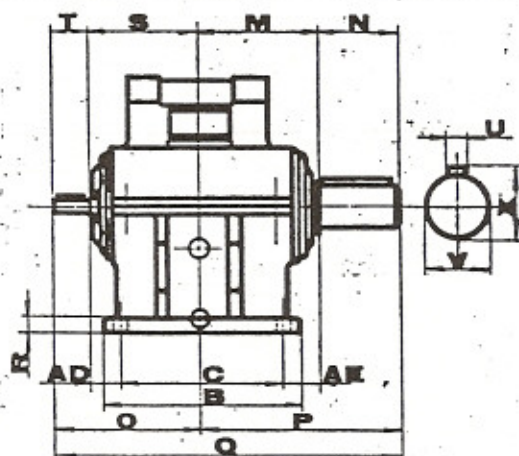
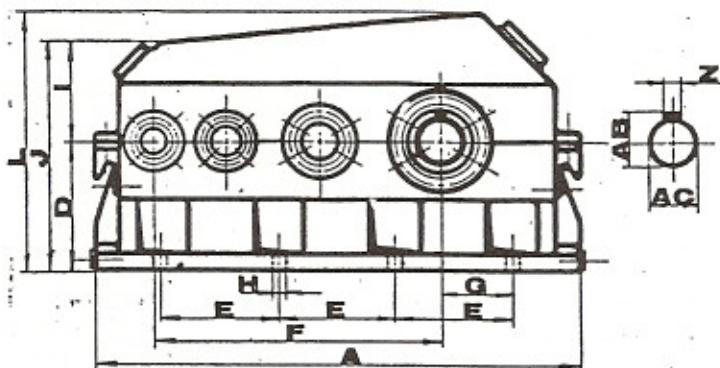
POTÊNCIA MÁX. CV/r.p.m							
RAZÃO REAL-TEÓRICA			MOMENTO K.m	1500	1000	750	Nº de fabrico
1.50	48,9	295	55,6	2,38	1,58	1,19	255.474.405
	49,5	380	142,3	6,07	4,04	3,03	250.316.621
	49,8	475	183	5,66	3,77	2,83	252.323.613
	51,3	605	517	21,2	14,1	10,6	256.317.633
	48,4	720	774	33,4	22,3	16,7	250.316.613
	50,5	880	1.039	43	28,7	21,5	252.323.621
	49,7	1070	1.720	72,4	48,2	36,2	246.317.613
	51,3	1210	3.880	158	105,4	79,1	256.317.633
	50	1360	3.880	162	108	81	250.316.633
	50,5	1760	7.797	323	215	161	252.323.621
1.64	49,7	2140	13.760	579	386	289	256.317.613
	63,1	295	77,6	2,95	1,97	1,47	255.391.633
	62,0	380	137,6	4,64	3,09	2,32	250.613.405
	62,5	475	183	6,12	4,08	3,06	252.405.613
	64,8	605	423	13,6	9,1	6,8	505.317.405
	63,8	720	648	21,2	14,1	10,6	518.316.390
	64,6	880	916	29,6	19,7	14,8	252.633.405
	62,4	1070	1.440	48,3	32,2	24,1	505.317.390
	65,6	1210	3.880	123,8	82,5	61,9	256.405.633
	61,7	1360	3.880	132	88	66	250.390.633
1.80	64,6	1760	6.374	222	148	111	252.633.405
	63,5	2140	13.760	453	302	226	256.405.613
	80,1	295	57	1,49	0,99	0,74	506.391.405
	81,8	380	115,2	3,02	2,01	1,51	518.390.405
	78,9	475	151,7	4,02	2,68	2,01	500.405.390
	81,1	605	423	10,9	7,2	5,4	632.317.405
	78,7	720	648	17,2	11,4	8,5	518.390.390
	82,0	880	916	23,3	15,5	11,6	500.405.405
	79,7	1070	1440	37,8	25,2	18,9	505.405.390
	82,8	1210	3400	85,9	57,3	42,9	505.405.405
1.98	81,8	1360	3400	87	58	43,5	518.390.405
	81,0	1760	5238	135	90	67	631.405.317
	79,7	2140	11520	302	201	151	505.405.390
	97,1	295	55,6	1,2	0,8	0,6	506.474.405
	101,3	380	127,2	2,69	1,79	1,34	518.483.405
	98,9	475	183	3,86	2,57	1,93	500.323.613
	101,3	605	517	10,6	7,1	5,3	505.317.633
	93,9	720	774	17,2	11,5	8,6	250.613.613
	103,4	880	916	18,5	12,3	9,2	631.405.405
	98,1	1070	1720	36,7	24,4	18,3	505.317.613
	100,6	1210	3880	80,7	53,8	40,3	256.621.633
	97,4	1360	3880	83,7	55,8	41,8	250.613.633
	103,4	1760	6374	139	92	69	631.405.405
	98,1	2140	13760	293	195	146	505.317.613

<b>1.120</b>	<b>125,2</b>	<b>295</b>	<b>77,6</b>	<b>1,49</b>	<b>0,99</b>	<b>0,74</b>	<b>506.391.633</b>
	<b>125,4</b>	<b>380</b>	<b>156</b>	<b>2,66</b>	<b>1,77</b>	<b>1,33</b>	<b>518.390.621</b>
	<b>124,1</b>	<b>475</b>	<b>183</b>	<b>3,08</b>	<b>2,05</b>	<b>1,54</b>	<b>500.405.361</b>
	<b>126,8</b>	<b>605</b>	<b>517</b>	<b>8,5</b>	<b>5,6</b>	<b>4,2</b>	<b>632.317.633</b>

<b>TIPO UTH</b>			<b>REDUTOR</b>		<b>3 ANDARES</b>		
<b>POTÊNCIA MÁX. CV/r.p.m</b>							
<b>RAZÃO REAL-TEÓRICA</b>		<b>MOMENTO K.m</b>	<b>1500</b>	<b>1000</b>	<b>750</b>	<b>Nº de fabrico</b>	
	<b>123,8</b>	<b>720</b>	<b>774</b>	<b>13</b>	<b>8,7</b>	<b>6,5</b>	<b>518.390.613</b>
	<b>125,7</b>	<b>880</b>	<b>1039</b>	<b>17,3</b>	<b>11,5</b>	<b>8,6</b>	<b>500.405.621</b>
	<b>122,8</b>	<b>1070</b>	<b>1720</b>	<b>29,3</b>	<b>19,5</b>	<b>14,6</b>	<b>632.317.613</b>
	<b>129,4</b>	<b>1210</b>	<b>3880</b>	<b>62,7</b>	<b>41,8</b>	<b>31,3</b>	<b>505.405.633</b>
	<b>123,4</b>	<b>1360</b>	<b>3880</b>	<b>65,8</b>	<b>43,8</b>	<b>32,9</b>	<b>617.316.633</b>
	<b>125,7</b>	<b>1760</b>	<b>7797</b>	<b>129</b>	<b>86</b>	<b>65</b>	<b>500.405.621</b>
	<b>122,8</b>	<b>2140</b>	<b>13760</b>	<b>234</b>	<b>156</b>	<b>117</b>	<b>632.317.613</b>
<b>1.155</b>	<b>151,8</b>	<b>295</b>	<b>77,6</b>	<b>1,07</b>	<b>0,71</b>	<b>0,53</b>	<b>506.474.633</b>
	<b>155,3</b>	<b>380</b>	<b>156</b>	<b>2,15</b>	<b>1,43</b>	<b>1,07</b>	<b>518.483.621</b>
	<b>156,6</b>	<b>475</b>	<b>183</b>	<b>2,44</b>	<b>1,63</b>	<b>1,22</b>	<b>631.405.613</b>
	<b>158,9</b>	<b>605</b>	<b>453</b>	<b>5,9</b>	<b>3,9</b>	<b>2,9</b>	<b>632.621.405</b>
	<b>156,1</b>	<b>720</b>	<b>774</b>	<b>10,3</b>	<b>6,9</b>	<b>5,1</b>	<b>653.390.613</b>
	<b>158,6</b>	<b>880</b>	<b>1039</b>	<b>13,7</b>	<b>9,1</b>	<b>6,8</b>	<b>631.405.621</b>
	<b>156,9</b>	<b>1070</b>	<b>1720</b>	<b>22,9</b>	<b>15,3</b>	<b>11,4</b>	<b>632.405.613</b>
	<b>162</b>	<b>1210</b>	<b>3880</b>	<b>50,1</b>	<b>33,4</b>	<b>25</b>	<b>632.405.633</b>
	<b>152,3</b>	<b>1360</b>	<b>3880</b>	<b>53,3</b>	<b>35,5</b>	<b>26,6</b>	<b>617.390.633</b>
	<b>158,6</b>	<b>1760</b>	<b>7797</b>	<b>103</b>	<b>68</b>	<b>51</b>	<b>631.405.621</b>
	<b>156,9</b>	<b>2140</b>	<b>13760</b>	<b>183</b>	<b>122</b>	<b>91</b>	<b>632.405.613</b>
<b>1.196</b>	<b>196,2</b>	<b>295</b>	<b>77,6</b>	<b>0,82</b>	<b>0,55</b>	<b>0,41</b>	<b>654.474.633</b>
	<b>195,8</b>	<b>380</b>	<b>156</b>	<b>1,66</b>	<b>1,11</b>	<b>0,83</b>	<b>653.483.621</b>
	<b>194</b>	<b>475</b>	<b>183</b>	<b>1,97</b>	<b>1,31</b>	<b>0,98</b>	<b>500.633.613</b>
	<b>198,5</b>	<b>605</b>	<b>517</b>	<b>5,4</b>	<b>3,6</b>	<b>2,7</b>	<b>505.621.633</b>
	<b>194,6</b>	<b>720</b>	<b>774</b>	<b>8,3</b>	<b>5,5</b>	<b>4,1</b>	<b>518.613.613</b>
	<b>196,5</b>	<b>880</b>	<b>1039</b>	<b>11</b>	<b>7,3</b>	<b>5,5</b>	<b>500.633.621</b>
	<b>192,2</b>	<b>1070</b>	<b>1720</b>	<b>18,7</b>	<b>12,4</b>	<b>9,3</b>	<b>505.621.613</b>
	<b>198,5</b>	<b>1210</b>	<b>3880</b>	<b>40,9</b>	<b>27,2</b>	<b>20,4</b>	<b>505.621.633</b>
	<b>188,6</b>	<b>1360</b>	<b>3880</b>	<b>43</b>	<b>28,7</b>	<b>21,5</b>	<b>617.483.633</b>
	<b>196,5</b>	<b>1760</b>	<b>7.797</b>	<b>83</b>	<b>55</b>	<b>47</b>	<b>500.633.621</b>
	<b>192,3</b>	<b>2140</b>	<b>13.760</b>	<b>149</b>	<b>99</b>	<b>74</b>	<b>505.621.613</b>
<b>1.245</b>	<b>256,6</b>	<b>295</b>	<b>77,6</b>	<b>0,63</b>	<b>0,42</b>	<b>0,31</b>	<b>654.620.633</b>
	<b>248,5</b>	<b>380</b>	<b>156</b>	<b>1,31</b>	<b>0,87</b>	<b>0,65</b>	<b>653.613.621</b>
	<b>246,7</b>	<b>475</b>	<b>183</b>	<b>1,55</b>	<b>1,03</b>	<b>0,77</b>	<b>631.633..613</b>
	<b>248,4</b>	<b>605</b>	<b>517</b>	<b>4,3</b>	<b>2,9</b>	<b>2,1</b>	<b>632.621.633</b>
	<b>245,3</b>	<b>720</b>	<b>774</b>	<b>6,6</b>	<b>4,4</b>	<b>3,3</b>	<b>653.613.613</b>
	<b>248</b>	<b>880</b>	<b>1039</b>	<b>8,7</b>	<b>5,8</b>	<b>4,3</b>	<b>631.633.621</b>
	<b>240,5</b>	<b>1070</b>	<b>1720</b>	<b>14,9</b>	<b>9,9</b>	<b>7,4</b>	<b>632.621.613</b>
	<b>248,4</b>	<b>1210</b>	<b>3880</b>	<b>32,7</b>	<b>21,8</b>	<b>16,3</b>	<b>632.621.633</b>
	<b>239,4</b>	<b>1360</b>	<b>3880</b>	<b>33,9</b>	<b>22,6</b>	<b>16,9</b>	<b>617.613.633</b>
	<b>248</b>	<b>1760</b>	<b>7797</b>	<b>65</b>	<b>43</b>	<b>33</b>	<b>631.633.621</b>
	<b>240,5</b>	<b>2140</b>	<b>13760</b>	<b>119</b>	<b>79</b>	<b>59</b>	<b>632.621.613</b>

## Dimensões

## Redutores UTH



TIPO UTH	A	B	C	D	E	F	G	H	I	J	L	M	N	O
295	545	235	185	155	200	295	87	18	145	300	300	137,5	95	187,5
380	680	306	252	215	220	380	97	22	205	420	420	165	95	239
475	850	365	305	260	225	475	155	22	230	490	490	207,5	120	287,5
605	1085	400	320	325	392,5	605	190	27	305	630	630	228	180	305
720	1210	480	415	340	485	720	230	33	320	660	660	267,5	200	362,5
880	1480	615	520	400	360	880	225	42	385	785	785	337,5	250	437,5
1070	1735	580	490	450	445	1070	285	42	300	750	875	303	250	418
1210	2030	850	760	570	500	1210	375	42	370	940	1165	450	300	582
1360	2180	900	780	580	580	1360	400	45	401	981	1165	470	300	600

	P	Q	R	S	T	U	V	X	Z	AB	AC	AD	AE	fueros base
295	232,5	420	30	137,5	50	16	55m6	58,8	8	27	24k6	45	45	3
380	260	499	30	159	80	16	55m6	58,8	12	45,1	42k6	33	39	3
475	327,5	615	30	207,5	80	20	70m6	74,6	12	45,1	42k6	55	55	3
605	408	713	22	225	80	22	85m6	90,5	12	45,1	42k6	65	68	3
720	467,5	830	22	267,5	95	28	110m6	116,1	14	51,5	48k6	60	60	3
880	587,5	1025	25	327,5	110	36	140m6	147,7	16	55,8	52k6	67,5	77,5	4
1070	553	971	35	298	120	36	140m6	147,7	16	58,9	55k6	53	58	4
1210	750	1332	35	442	140	40	160m6	168,5	18	69,2	65k6	62	70	4
1360	770	1370	35	460	140	45	180m6	189,7	20	74,6	70m6	70	80	4

TIPO CUDH		REDUTOR			2 andares	
RAZÃO: teo-rica	REDUTOR:	Momento: potência máxima / r.p.m.			número de fabrico	
		Kgm.	1.500	1.000		
10,7	CUDH 2		30,0	24,0	18,0	433 247
10,8	3		75,0	56,0	47,0	333 323
10,3	4		136,0	106,0	87,0	326 313
11,0	5		456,0	340,0	284,0	342 323
13,7	CUDH 2		24,0	18,0	15,0	433 316
13,5	3		54,0	42,0	34,0	333 405
12,7	4		112,0	88,0	72,0	326 390
13,8	5		376,0	284,0	236,0	342 405
16,9	CUDH 2		20,0	15,0	12,5	433 390
16,8	3		46,0	36,0	29,0	414 405
15,8	4		98,0	75,0	61,0	326 483
16,8	5		320,0	248,0	204,0	414 405
21,0	CUDH 2		17,0	13,5	11,0	433 483
21,0	3		38,0	30,0	25,0	333 633
20,0	4		77,0	58,0	48,0	326 613
21,6	5		252,0	192,0	157,0	342 633
26,5	CUDH 2		12,0	9,0	7,5	433 613
26,2	3		30,0	24,0	19,0	414 633
25,4	4		60,0	46,0	37,0	414 613
26,2	5		192,0	152,0	124,0	414 633

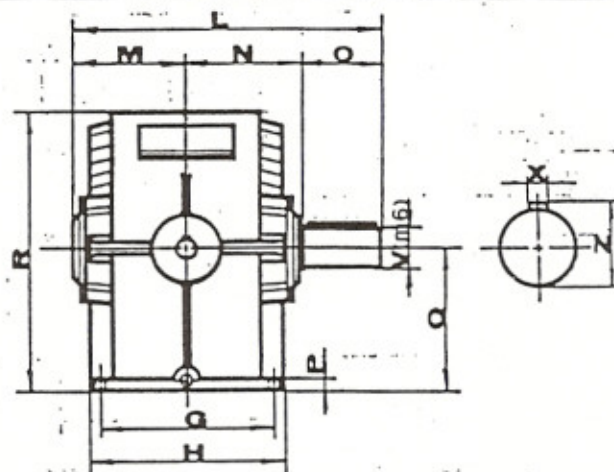
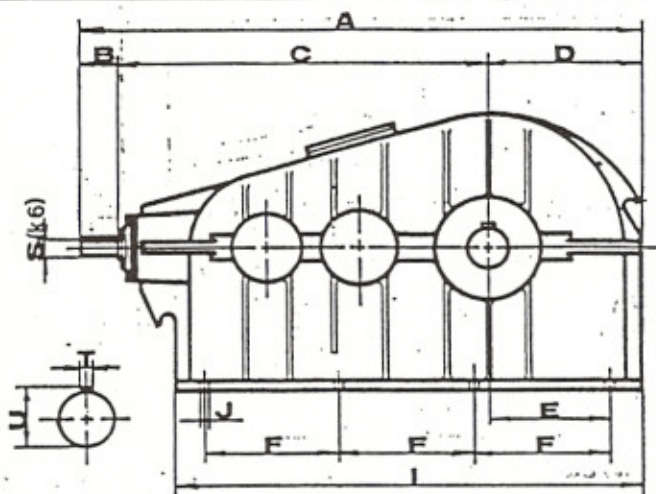
TIPO CUTH		REDUTOR			3 andares		
36,0	CUTH 2		5,9	4,6	3,7	353	323 316
34,0	3		32,0	25,0	20,0	333	317 323
32,7	4		51,0	40,0	32,0	326	316 317
33,3	5		75,0	57,0	47,0	326	323 316
35,0	6		207,0	162,0	132,0	342	317 323
44,4	CUTH 2		4,7	3,7	3,0	353	323 390
42,8	3		26,0	20,0	16,0	333	317 405
41,7	4		38,0	30,0	24,0	326	316 405
41,0	5		59,0	45,0	37,0	326	323 390
43,9	6		168,0	125,0	104,0	342	317 405
55,8	CUTH 2		3,3	2,6	2,2	353	405 390
54,6	3		21,0	14,0	10,0	333	405 405
51,6	4		34,0	23,0	17,0	326	390 405
51,5	5		47,0	31,0	24,0	326	405 390
56,0	6		158,0	105,0	79,0	342	405 405
70,0	CUTH 2		2,9	1,9	1,5	353	323 613
66,8	3		13,6	9,0	6,8	333	317 633
64,0	4		29,0	19,0	14,0	326	316 621
64,6	5		32,0	22,0	17,0	326	323 613
68,6	6		123,0	82,0	61,0	342	317 633
87,5	CUTH 2		1,5	1,0	0,75	353	405 613
85,4	3		10,9	7,2	5,4	333	405 633
79,0	4		23,0	15,0	11,0	326	390 621
81,0	5		26,0	17,0	13,0	326	405 613
87,5	6		85,0	57,0	42,0	342	405 633





### Dimensões

### Redutores CUTH



REDUTOR	A	B	C	D	E	F	G	H	I	J	L
CUTH 1											
CUTH 2	920	60	595	265	200	220	310	360	740	23	555
CUTH 3	1310	110	865	335	292,5	325	425	490	1060	23	705
CUTH 4	1510	110	985	415	367,5	385	510	580	1250	27	845
CUTH 5	1720	110	1125	485	427,5	450	690	770	1465	33	1095
CUTH 6	2270	140	1510	620	557,5	595	730	820	1910	33	1205

	M	N	O	P	Q	R	S	T	U	V	X	Z
CUTH 1												
CUTH 2	200	205	150	25	245	480	28	8	30,9	70	20	74,6
CUTH 3	260	265	180	25	320	620	42	12	45,1	90	25	95,3
CUTH 4	315	320	210	25	390	765	50	14	53,5	110	28	116,1
CUTH 5	415	430	250	30	450	885	50	14	53,5	140	36	147,7
CUTH 6	445	460	300	35	590	1150	60	18	64,2	160	40	168,5

# **ANEXO**

## LUBRIFICAÇÃO E MUDAS DE ÓLEO

A utilização de um lubrificante de boa qualidade e com características adaptadas às condições de utilização de um redutor, é factor determinante para uma boa duração das engrenagens do mesmo.

A lubrificação das engrenagens é assegurada por chapinhagem destas na reserva de óleo existente no cárter inferior.

A lubrificação dos rolamentos é feita automaticamente pela projecção de óleo das engrenagens e por jacto sobre as paredes do Cartér.

Quando a posição de certos rolamentos é porventura isolada das projecções de óleo, a sua lubrificação é feita por massa, dado apresentar boa qualidade, ser facilmente injectável e antioxidante.

Todos os redutores Olimar, são atestados, na fábrica, até ao nível correcto, de óleo lubrificante.

Considerar no entanto:

- a) um eventual derrame de óleo, durante o transporte, grande permanência em armazém, posição incorrecta, ou outro qualquer motivo, assim é muito importante antes do arranque do redutor, verificar o nível de óleo deste, e em caso de necessidade atestar até ao nível correcto.
- b) Que a mudança de posição, na aplicação do redutor, em relação à inicialmente pedida, embora possa ser feita sem qualquer alteração especial de montagem exige a mudança, da entrada do óleo e do indicador de nível, para as posições correspondentes à aplicação pretendida.
- c) Que no caso de um moto-redutor a montar na posição vertical com o motor por baixo é necessário substituir o óleo por massa.
- d) Que não é aconselhável que o nível de óleo seja superior ao do visor.
- e) Que o óleo deve ser mudado depois das primeiras 200 horas de funcionamento (rodagem), e as restantes mudas de óleo depois de cada 2000 horas de trabalho, devendo drenar-se o óleo ainda quente, imediatamente após a paragem do redutor.

### TABELA DE EQUIVALÊNCIAS

CLASSE DO REDUTOR E TIPO DO REDUTOR	ÓLEO RECOMENDADO	MARCAS EQUIVALENTES				
		CASTROL	ELF	BP	MOBIL	SHELL
<b>RODA DE COROA SEM-FIM TIPO V,L,A/R</b>	<b>ALPHA SP 460</b>	REDUCTELF SP 460	ENERGOL GR-XP 460	MOBIL GEAR 640	O.M.AL.A 460	GALP CYX 460
<b>ENGRENAGENS CILINDRICAS</b> TIPOS:UABD,UFD,UAT,UFT, UG,UZ, ATÉ 10CV	<b>ALPHA SP 150</b>	OL.N.A 150	ENERGOL HPL 150	MOBIL GEAR 150	TELLUS 150	GALP TRANGEAR 150
TIPOS:UDH,UTH,CUDH,CUTH	<b>ALPHA SP 460</b>	OL.N.A 460	ENERGOL HPL 460	MOBIL GEAR 460	TELLUS 460	GALP TRANGEAR 460
>10CV	<b>ALPHA SP 320</b>	OL.N.A 320	ENERGOL HPL 320	MOBIL GEAR 320	TELLUS 320	GALP TRANGEAR 320

NOTA: Para óleos sintéticos MOBIL utilizar: Corôa/Sem-Fim SHC 634  
Engrenagens SHC 631

OBSERVAÇÕES: Quando a posição de montagem se situa com o motor por baixo do redutor utilizar massa:  
**BPENERGREASE NO**

### CARACTERÍSTICAS BASE DOS ÓLEOS

CLASSE DO REDUTOR	VISCOSIDADE				Ponto de Inflamação	Índice De Viscosidade	Ponto de Congelamento °C	Densidade A 15,5°C
	Cinemática		Englep 50°C	Redwood 140°C				
	40°C	100°C						
Roda /Sem-Fim	450	26,1	31,5	550	219	76	-6	0,944
Engrenagens	105	11,5	3,5	173	246	101	-24	0,886

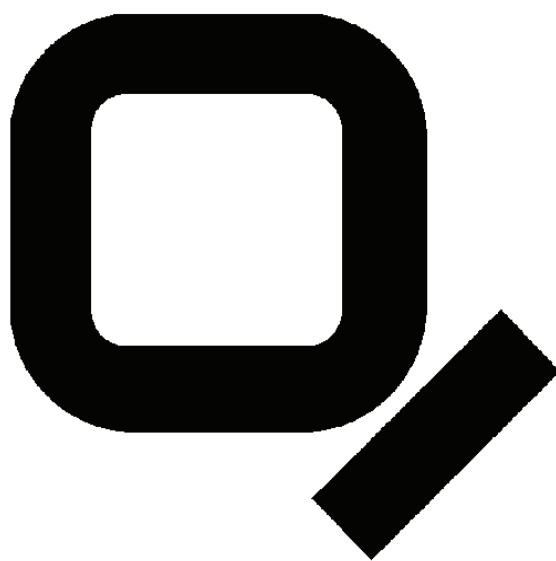
Os óleos que se indicam foram seleccionados segundo orientação dos serviços técnicos das respectivas marcas. As equivalências, em relação ao óleo recomendado, foram determinadas segundo características técnicas mais próximas aquele, não se garantindo a sua absoluta analogia com o mesmo ou entre si. Quando da posição de montagem especial motor por baixo do redutor poderá ser utilizada massa de outra marca desde que seja observada a sua equivalência com o tipo recomendado.

## NOTAS:

- Os valores de velocidade de saída (r.p.m) indicados na tabela de potências dos **MOTO-REDUTORES** estão sujeitos a uma variação de  $\pm 5 \%$
- Na tabela de potências de **REDUTORES** tipo UAT/UFT a Tolerância admissível para a razão é de  $\pm 3\%$
- Na tabela de potências de moto-redutores tipo UABD/UFD-UAT/UFT Ter em conta a seguinte tabela de correspondência:

CLASSE	REGIME DE TRABALHO		
	UNIFORME	CHOQUES MODERADOS	CHOQUES FORTES
A	12 horas dia máx.	8 horas dia máx.	
B	18 horas dia máx.	12 horas dia máx.	3 horas dia máx.
C	24 horas dia máx.	18 horas dia máx.	8 horas dia interm.

- P/ outras versões de redutores/moto-redutores contactar Deptº Técnico/Comercial da **OLIMAR**



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