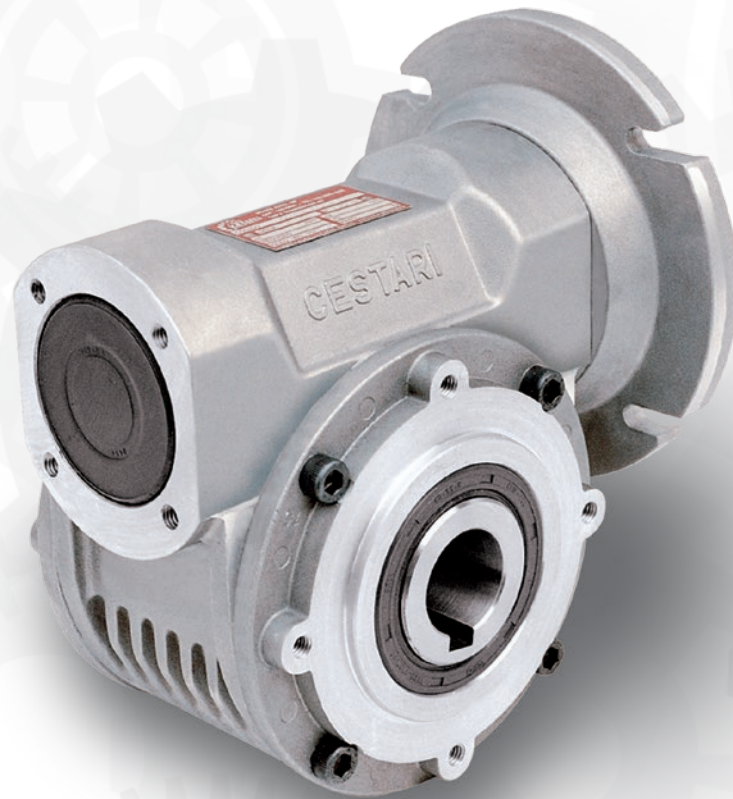


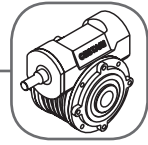
ALUMAG

Worm Gearboxes and Gearmotors





Description	Página
General characteristics	2
Product code	3
Service factor	4
Technical data - standard motors (60Hz)	5
Technical data - single and duplex gearboxes	6 a 10
Sizes of single gearboxes - feet mounted	11
Sizes of single gearboxes - output cover and flange mounted	12
Sizes of single gearmotors - feet mounted and motor flange	13
Sizes of single gearmotors - output cover and flange mounted with motor flange	14
Sizes of single gearmotors - feet mounted	15
Sizes of single gearmotors - output cover and flange mounted	16
Sizes of duplex gearboxes - feet mounted	17
Sizes of duplex gearboxes - output cover and flange mounted	18
Sizes of duplex gearmotors - feet mounted and motor flange	19
Sizes of duplex gearmotors - output cover and flange mounted with motor flange	20
Sizes of duplex gearmotors - feet mounted	21
Sizes of duplex gearmotors - output cover and flange mounted	22
Sizes of the shafts	23
Service instructions	24



Alumag worm gearboxes are designed to drive all kinds of small, low speed machines and devices in applications where the light weight of the set is an essential characteristic. With reductions from 1:10 to 1:6400 and mounting forms that allow their installation in different positions, they require minimum space due to their reduced dimensions.

They are manufactured under strict quality control with state-of-the-art technology, using high quality materials, machines and tools.

WORM

The worms are made of chromium-nickel steel, reaching a surface hardness from 58 to 60 HRc after heat treatment. The involute gear profile is ground with maximum precision, providing the gearbox with high-performance and smooth-operation.

WORM GEARS

The worm gears are made of a special-alloy centrifuged bronze with mechanical properties that ensure excellent operation and durability. They have globoidal form and helical teeth, produced in highly precise machines with special tools (Precision class "A", as per DIN 3968).

FRAMES

The die-cast frames are made of high-quality aluminum, standing out for their design, strength and versatility. The outer surface is fully finned, considerably improving cooling. They are precisely machined, having double action, synthetic-rubber lip seal in the input and output, ensuring complete sealing and avoiding the ingress of foreign bodies into the housing, as well as leak of lubricant.

OUTPUT SHAFTS

The output shafts are sized to withstand the indicated loads. All the seats, output ends and holes (in case of hollow shafts) are ground.

BEARINGS

The worms and the output shafts are supported by ball bearings. The selection of those rolling bearings is done so as to ensure their long life.

LUBRICATION

The lubrication by synthetic oil ensures perfect lubrication of the parts.

COOLING

The cooling is done by means of the lubricant, and frame area is enough to dissipate the heat and keep the thermal balance.



Gearbox (page 6 to 10)

Execution

Motor (page 5)

P. T.

L	03	1	20
Model	Size	Number of Stages	
	03		
	04	1	
	05	2	
	*45		

0	0	N	0
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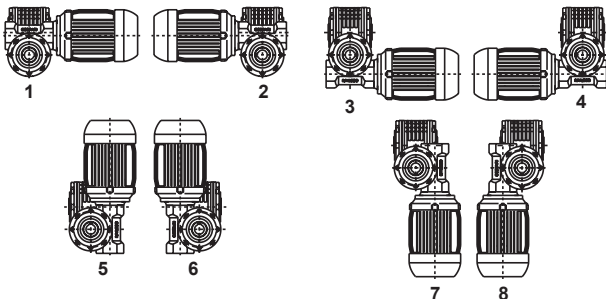
B	A	W
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1

Identifies the duplex input position in relation to the 2nd gearbox

Note: Only for double reduction, adopt as reference the 2nd reducer (output) in the working position 1, looking from the front at the input shaft.

- 0 - For single reduction
- 1 - Parallel shafts upper right input
- 2 - Parallel shafts upper left input
- 3 - Parallel shafts lower right input
- 4 - Parallel shafts lower left input
- 5 - Orthogonal shafts upper right input
- 6 - Orthogonal shafts lower left input
- 7 - Orthogonal shafts lower right input
- 8 - Orthogonal shafts lower left input



Reduction					
Single		Double			
Red	Code	Red.	Code	Red.	Code
10	20	100	40	900	59
15	24	125	42	1000	60
20	26	150	44	1200	62
25	28	200	46	1500	64
30	30	250	48	1800	65
40	32	300	50	2000	66
50	34	400	52	2400	68
60	36	450	53	3000	70
80	38	500	54	3600	71
		600	56	4000	72
		750	57	4800	74
		800	58	6400	75

Input element
0 - Single input
2 - Single input with motor flange
5 - Double end input
7 - Double end input with motor flange

Execução
N - Normal right
E - Normal left
D - Double end shaft
V - Hollow shaft

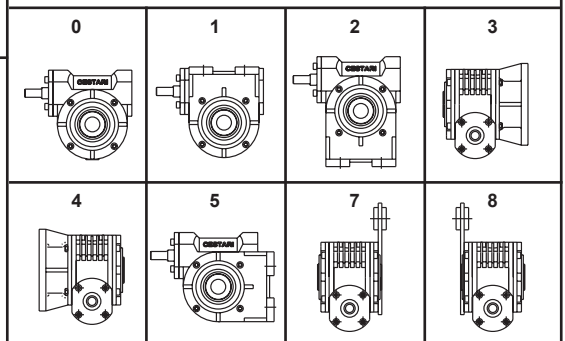
Working Position		
1	2	3
4	5	6

Motor manufacturer
0 - Without motor
C - Customer's motor
W - Weg

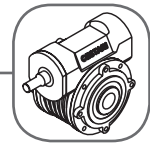
Motor type
0 - Without motor
1 - Customer's motor
A - High-efficiency plus motor
E - Special motor
P - High-efficiency premium motor

Carcaça
0 - without motor
B - 63
C - 71
D - 80

Accessory type and position	
0 - No accessories	
1 - Normal foot worm side	
2 - Normal foot output shaft side	
3 - Output flange right side	
4 - Output flange left side	
5 - Side foot	
7 - Torque arm right side	
8 - Torque arm left side	



* Size 45 = Duplex composed of sized 04 and 05



**Only for single gearboxes For
4-pole motor 60 Hz
n1 = 1750 rpm**

WEG Motor Frame			63			71		80	
Motor Rated Power (CV)			0,16	0,25	0,33	0,50	0,75	1,0	1,50
Motor Rated Power (kW)			0,12	0,18	0,25	0,37	0,55	0,75	1,10
Size	Reduction	n2							
L03	10	175	3,00	2,00	1,44				
	15	117	2,92	1,94	1,40				
	20	88	2,42	1,61	1,16				
	25	70	2,00	1,33	0,96				
	27	65	2,00	1,33	0,96				
	30	58	1,92	1,28	0,92				
	40	44	1,33	0,89					
	50	35	1,25	0,83					
L04	60	29	1,00						
	10	175	5,75	3,83	2,76	1,86	1,25		
	15	117	4,17	2,78	2,00	1,35	0,91		
	20	88	4,50	3,00	2,16	1,46	0,98		
	25	70	3,67	2,44	1,76	1,19	0,80		
	30	58	3,42	2,28	1,64	1,11	0,75		
	40	44	2,75	1,83	1,32	0,89			
	50	35	2,58	1,72	1,24	0,84			
L05	60	29	1,75	1,17	0,84				
	80	22	1,58	1,06					
	10	175	11,17	7,44	5,36	3,62	2,44	1,79	1,22
	15	117	8,17	5,44	3,92	2,65	1,78	1,31	0,89
	20	88	6,58	4,39	3,16	2,14	1,44	1,05	0,72
	25	70	5,83	3,89	2,80	1,89	1,27	0,93	
	30	58	5,42	3,61	2,60	1,76	1,18	0,87	
	40	44	4,00	2,67	1,92	1,30	0,87		
50	35	3,33	2,22	1,60	1,08	0,73			
60	29	3,00	2,00	1,44	0,97				
80	22	2,58	1,72	1,24	0,84				

The services factors in bold type are preferred in the supply program of WEG-CESTARI (only applied in case of gearmotors).

n1 - Speed in input

n2 - Speed in the output



WEG motor

Poles	Frame	Power		n1	Code
		cv	kW		
2	63	0,16	0,12	3380	BAW
		0,25	0,18		
		0,33	0,25		
		0,50	0,37		
	71	0,75	0,55	3430	BAW
		1,0	0,75	3450	
	80	1,5	1,1	3420	BAW
2,0		1,5	3400		
4	63	0,16	0,12	1720	BAW
		0,25	0,18		
		0,33	0,25		
	71	0,5	0,37	1720	BAW
		0,75	0,55		
	80	1,0	0,75	1730	BAW
		1,5	1,1	1720	
6	63	0,16	0,12	1140	BAW
	71	0,25	0,18	1110	BAW
		0,33	0,25	1100	
	80	0,5	0,37	1150	BAW
		0,75	0,55		
8	71	0,16	0,12	820	BAW
	80	0,25	0,18	865	BAW
		0,33	0,25	860	

Preferred in the supply program of WEG-CESTARI: 4-pole motors.

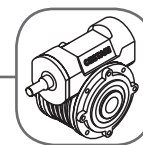
Aluminum frame

Protection degree IP 55

n1 = motor speed (rpm)

WEG motors come in two voltages for frames 63 and 71 (230/380 V) and 4 voltages for frame 80.

Technical Data of Single Gearboxes



Rated Reduction	Input speed (rpm) n ₁	Output speed (rpm) n ₂	Sizes								
			3			4			5		
			Pn ₁ (cv)	M ₂ (kgf.m)	η	Pn ₁ (cv)	M ₂ (kgf.m)	η	Pn ₁ (cv)	M ₂ (kgf.m)	η
10	3400	350	0,73	1,22	0,80	1,30	2,24	0,82	2,51	4,49	0,85
	1750	175	0,48	1,53	0,78	0,93	3,06	0,80	1,82	6,12	0,82
	1150	115	0,34	1,63	0,78	0,73	3,57	0,78	1,25	6,32	0,81
	875	88	0,29	1,83	0,78	0,63	3,98	0,77	1,01	6,52	0,79
15	3400	227	0,60	1,43	0,75	0,96	2,24	0,74	2,00	4,99	0,79
	1750	117	0,47	2,04	0,71	0,68	3,06	0,73	1,33	6,12	0,75
	1150	77	0,31	2,04	0,71	0,54	3,57	0,71	1,00	6,93	0,74
	875	58	0,24	2,04	0,70	0,46	3,98	0,70	0,81	7,34	0,74
20	3400	170	0,48	1,43	0,70	1,00	2,96	0,70	1,63	4,99	0,73
	1750	88	0,38	2,04	0,66	0,73	4,08	0,68	1,07	6,12	0,70
	1150	58	0,26	2,14	0,66	0,51	4,28	0,68	0,77	6,63	0,69
	875	44	0,21	2,24	0,65	0,42	4,59	0,67	0,64	7,14	0,68
25	3400	136	0,42	1,43	0,65	0,83	2,96	0,68	1,53	5,71	0,71
	1750	70	0,33	2,04	0,61	0,60	4,08	0,66	0,95	6,63	0,68
	1150	46	0,23	2,14	0,60	0,45	4,59	0,65	0,68	7,14	0,67
	875	35	0,18	2,24	0,60	0,38	4,99	0,65	0,57	7,65	0,66
30	3400	113	0,38	1,43	0,60	0,78	2,96	0,60	1,41	5,61	0,63
	1750	58	0,30	2,04	0,56	0,56	4,08	0,59	0,89	6,63	0,61
	1150	38	0,20	2,14	0,56	0,42	4,59	0,58	0,65	7,24	0,60
	875	29	0,17	2,24	0,55	0,36	5,10	0,57	0,53	7,65	0,59
40	3400	85	0,29	1,33	0,54	0,63	2,96	0,56	1,15	5,71	0,59
	1750	44	0,23	1,83	0,49	0,45	4,08	0,55	0,66	6,12	0,57
	1150	29	0,16	1,94	0,49	0,33	4,49	0,54	0,50	7,03	0,56
	875	22	0,13	2,04	0,48	0,28	4,99	0,54	0,42	7,65	0,56
50	3400	68	0,24	1,33	0,52	0,59	2,96	0,48	0,91	5,10	0,53
	1750	35	0,20	1,83	0,46	0,42	4,08	0,47	0,55	5,61	0,50
	1150	23	0,14	1,94	0,46	0,30	4,28	0,46	0,39	6,12	0,50
	875	18	0,11	2,04	0,46	0,25	4,59	0,45	0,33	6,52	0,49
60	3400	57	0,20	1,22	0,48	0,52	2,96	0,45	0,72	4,49	0,49
	1750	29	0,18	1,83	0,42	0,28	3,06	0,44	0,49	5,61	0,47
	1150	19	0,12	1,83	0,41	0,22	3,57	0,43	0,34	5,91	0,46
	875	15	0,09	1,83	0,41	0,20	4,08	0,42	0,27	6,12	0,46
80	3400	43	---	---	---	0,35	2,24	0,38	0,59	4,18	0,42
	1750	22	---	---	---	0,25	3,06	0,37	0,43	5,61	0,40
	1150	14	---	---	---	0,17	3,06	0,37	0,30	5,71	0,38
	875	11	---	---	---	0,13	3,06	0,37	0,24	5,91	0,37
Gearbox mass (kg)			1,1			2,0			3,0		

n₁ Input speed

n₂ Output speed

M₂ Accepted torque in the output (kgf.m)

Pn₁ Accepted power in the input (cv)

η Efficiency

Conversion factor kW = cv/1,36

Nm = kgf.m x 9,81

Synthetic oil supplied with the motor

Dimensions: pages 11 to 16



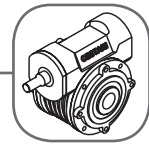
Technical Data of Duplex Gearboxes

Size	Rated Reduction	Input speed (rpm) n ₁	Output speed (rpm) n ₂	Pn ₁ (cv)	M ₂ (kgf.m)	η	Sizes page
L04240*	100	1750	17,50	0,162	3,98	0,60	17 to 22
		1150	11,50	0,107	3,98	0,60	
		875	8,75	0,081	3,98	0,60	
L04244*	150	1750	11,67	0,118	3,98	0,55	17 to 22
		1150	7,67	0,077	3,98	0,55	
		875	5,83	0,059	3,98	0,55	
L04246*	200	1750	8,75	0,108	4,59	0,52	17 to 22
		1150	5,75	0,071	4,59	0,52	
		875	4,38	0,054	4,59	0,52	
L04248*	250	1750	7,00	0,096	4,99	0,51	17 to 22
		1150	4,60	0,063	4,99	0,51	
		875	3,50	0,048	4,99	0,51	
L04250*	300	1750	5,83	0,078	4,59	0,48	17 to 22
		1150	3,83	0,051	4,59	0,48	
		875	2,92	0,040	4,59	0,47	
L04252*	400	1750	4,38	0,064	4,59	0,44	17 to 22
		1150	2,88	0,042	4,59	0,44	
		875	2,19	0,032	4,59	0,44	
L04253*	450	1750	3,89	0,069	5,10	0,40	17 to 22
		1150	2,56	0,045	5,10	0,40	
		875	1,94	0,035	5,10	0,40	
L04254*	500	1750	3,50	0,057	4,99	0,43	17 to 22
		1150	2,30	0,037	4,99	0,43	
		875	1,75	0,029	4,99	0,42	
L04256*	600	1750	2,92	0,055	5,10	0,38	17 to 22
		1150	1,92	0,036	5,10	0,38	
		875	1,46	0,028	5,10	0,37	
L04257*	750	1750	2,33	0,045	4,99	0,36	17 to 22
		1150	1,53	0,030	4,99	0,36	
		875	1,17	0,023	4,99	0,36	
L04258*	800	1750	2,19	0,042	4,99	0,36	17 to 22
		1150	1,44	0,028	4,99	0,36	
		875	1,09	0,022	4,99	0,35	
L04259*	900	1750	1,94	0,043	5,10	0,32	17 to 22
		1150	1,28	0,028	5,10	0,32	
		875	0,97	0,022	5,10	0,31	
L04260*	1000	1750	1,75	0,037	4,99	0,33	17 to 22
		1150	1,15	0,025	4,99	0,32	
		875	0,88	0,019	4,99	0,32	

M₂ Accepted torque in the output (kgf.m)
Conversion factor kW = cv/1.36 Nm = kgf.m x 9.81

Pn₁ Accepted power in the input (cv)
η Efficiency

* Input position of the duplex 1 to 8 according to page 3



Size	Rated Reduction	Input speed (rpm) n ₁	Output speed (rpm) n ₂	Pn ₁ (cv)	M ₂ (kgf.m)	η	Sizes page
L04262*	1200	1750	1,46	0,034	4,99	0,30	17 to 22
		1150	0,96	0,022	4,99	0,30	
		875	0,73	0,017	4,99	0,30	
L04264*	1500	1750	1,17	0,030	4,99	0,27	17 to 22
		1150	0,77	0,020	4,99	0,27	
		875	0,58	0,015	4,99	0,27	
L04265*	1800	1750	0,97	0,023	4,08	0,24	17 to 22
		1150	0,64	0,015	4,08	0,24	
		875	0,49	0,012	4,08	0,23	
L04266*	2000	1750	0,88	0,025	4,59	0,22	17 to 22
		1150	0,58	0,017	4,59	0,22	
		875	0,44	0,013	4,59	0,22	
L04268*	2400	1750	0,73	0,024	4,99	0,21	17 to 22
		1150	0,48	0,016	4,99	0,21	
		875	0,36	0,013	4,99	0,20	
L04270*	3000	1750	0,58	0,020	4,59	0,19	17 to 22
		1150	0,38	0,014	4,59	0,18	
		875	0,29	0,010	4,59	0,18	
L04271*	3600	1750	0,49	0,015	4,08	0,18	17 to 22
		1150	0,32	0,011	4,08	0,17	
		875	0,24	0,008	4,08	0,17	
L04272*	4000	1750	0,44	0,011	3,06	0,17	17 to 22
		1150	0,29	0,007	3,06	0,17	
		875	0,22	0,005	3,06	0,17	
L04274*	4800	1750	0,36	0,010	3,06	0,16	17 to 22
		1150	0,24	0,007	3,06	0,15	
		875	0,18	0,005	3,06	0,15	
L05240*	100	1750	17,50	0,257	6,52	0,62	17 to 22
		1150	11,50	0,169	6,52	0,62	
		875	8,75	0,128	6,52	0,62	
L05244*	150	1750	11,67	0,206	7,34	0,58	17 to 22
		1150	7,67	0,135	7,34	0,58	
		875	5,83	0,103	7,34	0,58	
L05246*	200	1750	8,75	0,165	7,14	0,53	17 to 22
		1150	5,75	0,108	7,14	0,53	
		875	4,38	0,082	7,14	0,53	
L05248*	250	1750	7,00	0,147	7,65	0,51	17 to 22
		1150	4,60	0,096	7,65	0,51	
		875	3,50	0,073	7,65	0,51	

M₂ Accepted torque in the output (kgf.m)
 Conversion factor kW = cv/1,36 Nm = kgf.m x 9,81

Pn₁ Accepted power in the input (cv)
 η Efficiency

* Input position of the duplex 1 to 8 according to page 3



Technical Data of Duplex

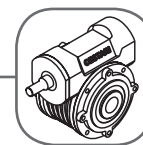
Size	Rated Reduction	Input speed (rpm) n1	Output speed (rpm) n2	Pn1.(cv)	M2 (kgf.m)	η	Sizes page
L05250*	300	1750	5,83	0,121	7,14	0,48	17 to 22
		1150	3,83	0,080	7,14	0,48	
		875	2,92	0,061	7,14	0,48	
L05252*	400	1750	4,38	0,097	7,14	0,45	17 to 22
		1150	2,88	0,064	7,14	0,45	
		875	2,19	0,050	7,14	0,44	
L05253*	450	1750	3,89	0,099	7,65	0,42	17 to 22
		1150	2,56	0,065	7,65	0,42	
		875	1,94	0,051	7,65	0,41	
L05254*	500	1750	3,50	0,085	7,65	0,44	17 to 22
		1150	2,30	0,056	7,65	0,44	
		875	1,75	0,043	7,65	0,43	
L05256*	600	1750	2,92	0,080	7,65	0,39	17 to 22
		1150	1,92	0,052	7,65	0,39	
		875	1,46	0,041	7,65	0,38	
L05257*	750	1750	2,33	0,067	7,65	0,37	17 to 22
		1150	1,53	0,044	7,65	0,37	
		875	1,17	0,035	7,65	0,36	
L05258*	800	1750	2,19	0,063	7,65	0,37	17 to 22
		1150	1,44	0,041	7,65	0,37	
		875	1,09	0,032	7,65	0,36	
L05259*	900	1750	1,94	0,063	7,65	0,33	17 to 22
		1150	1,28	0,041	7,65	0,33	
		875	0,97	0,032	7,65	0,32	
L05260*	1000	1750	1,75	0,055	7,65	0,34	17 to 22
		1150	1,15	0,036	7,65	0,34	
		875	0,88	0,027	7,65	0,34	
L05262*	1200	1750	1,46	0,050	7,65	0,31	17 to 22
		1150	0,96	0,033	7,65	0,31	
		875	0,73	0,025	7,65	0,31	
L05264*	1500	1750	1,17	0,045	7,65	0,28	17 to 22
		1150	0,77	0,030	7,65	0,27	
		875	0,58	0,023	7,65	0,27	
L05265*	1800	1750	0,97	0,032	6,12	0,26	17 to 22
		1150	0,64	0,021	6,12	0,26	
		875	0,49	0,017	6,12	0,25	
L05266*	2000	1750	0,88	0,033	6,52	0,24	17 to 22
		1150	0,58	0,022	6,52	0,24	
		875	0,44	0,017	6,52	0,24	
L05268*	2400	1750	0,73	0,029	7,65	0,27	17 to 22
		1150	0,48	0,019	7,65	0,27	
		875	0,36	0,014	7,65	0,27	
L05270*	3000	1750	0,58	0,025	6,52	0,21	17 to 22
		1150	0,38	0,017	6,52	0,20	
		875	0,29	0,013	6,52	0,20	
L05271*	3600	1750	0,49	0,022	6,12	0,19	17 to 22
		1150	0,32	0,014	6,12	0,19	
		875	0,24	0,011	6,12	0,19	
L05272*	4000	1750	0,44	0,021	5,91	0,17	17 to 22
		1150	0,29	0,014	5,91	0,17	
		875	0,22	0,011	5,91	0,17	
L05274*	4800	1750	0,36	0,019	5,91	0,16	17 to 22
		1150	0,24	0,013	5,91	0,15	
		875	0,18	0,010	5,91	0,15	
L45240*	100	1750	17,50	0,253	6,52	0,63	17 to 22
		1150	11,50	0,172	6,52	0,61	
		875	8,75	0,131	6,52	0,61	
L45244*	150	1750	11,67	0,203	7,34	0,59	17 to 22
		1150	7,67	0,138	7,34	0,57	
		875	5,83	0,105	7,34	0,57	
L45246*	200	1750	8,75	0,162	7,14	0,54	17 to 22
		1150	5,75	0,108	7,14	0,53	
		875	4,38	0,084	7,14	0,52	
L45248*	250	1750	7,00	0,144	7,65	0,52	17 to 22
		1150	4,60	0,096	7,65	0,51	
		875	3,50	0,075	7,65	0,50	

M2 Accepted torque in the output (kgf.m)
Conversion factor kW = cv/1,36 Nm = kgf.m x 9,81

Pn1 Accepted power in the input (cv)
 η Efficiency

* Input position of the duplex 1 to 8 according to page 3

Technical Data of Duplex Gearboxes



Size	Rated Reduction	Input speed (rpm) n ₁	Output speed (rpm) n ₂	Pn ₁ (cv)	M ₂ (kgf.m)	η	Sizes page
L45250*	300	1750	5,83	0,119	7,14	0,49	17 to 22
		1150	3,83	0,080	7,14	0,48	
		875	2,92	0,062	7,14	0,47	
L45252*	400	1750	4,38	0,095	7,14	0,46	17 to 22
		1150	2,88	0,062	7,14	0,46	
		875	2,19	0,048	7,14	0,45	
L45253*	450	1750	3,89	0,097	7,65	0,43	17 to 22
		1150	2,56	0,065	7,65	0,42	
		875	1,94	0,051	7,65	0,41	
L45254*	500	1750	3,50	0,083	7,65	0,45	17 to 22
		1150	2,30	0,055	7,65	0,45	
		875	1,75	0,042	7,65	0,44	
L45256*	600	1750	2,92	0,078	7,65	0,40	17 to 22
		1150	1,92	0,051	7,65	0,40	
		875	1,46	0,040	7,65	0,39	
L45257*	750	1750	2,33	0,066	7,65	0,38	17 to 22
		1150	1,53	0,043	7,65	0,38	
		875	1,17	0,034	7,65	0,37	
L45258*	800	1750	2,19	0,061	7,65	0,38	17 to 22
		1150	1,44	0,040	7,65	0,38	
		875	1,09	0,032	7,65	0,37	
L45259*	900	1750	1,94	0,061	7,65	0,34	17 to 22
		1150	1,28	0,040	7,65	0,34	
		875	0,97	0,031	7,65	0,33	
L45260*	1000	1750	1,75	0,051	7,65	0,37	17 to 22
		1150	1,15	0,034	7,65	0,36	
		875	0,88	0,026	7,65	0,36	
L45262*	1200	1750	1,46	0,047	7,65	0,33	17 to 22
		1150	0,96	0,032	7,65	0,32	
		875	0,73	0,025	7,65	0,31	
L45264*	1500	1750	1,17	0,043	7,65	0,29	17 to 22
		1150	0,77	0,029	7,65	0,28	
		875	0,58	0,023	7,65	0,27	
L45265*	1800	1750	0,97	0,031	6,12	0,27	17 to 22
		1150	0,64	0,021	6,12	0,26	
		875	0,49	0,016	6,12	0,26	
L45266*	2000	1750	0,88	0,030	6,52	0,27	17 to 22
		1150	0,58	0,020	6,52	0,26	
		875	0,44	0,015	6,52	0,26	
L45268*	2400	1750	0,73	0,032	7,65	0,24	17 to 22
		1150	0,48	0,021	7,65	0,24	
		875	0,36	0,017	7,65	0,23	
L45270*	3000	1750	0,58	0,025	6,52	0,21	17 to 22
		1150	0,38	0,017	6,52	0,21	
		875	0,29	0,013	6,52	0,20	
L45271*	3600	1750	0,49	0,021	6,12	0,20	17 to 22
		1150	0,32	0,014	6,12	0,19	
		875	0,24	0,011	6,12	0,19	
L45272*	4000	1750	0,44	0,021	5,91	0,17	17 to 22
		1150	0,29	0,014	5,91	0,17	
		875	0,22	0,011	5,91	0,16	
L45274*	4800	1750	0,36	0,019	5,91	0,16	17 to 22
		1150	0,24	0,013	5,91	0,15	
		875	0,18	0,010	5,91	0,15	
L45275*	6400	1750	0,27	0,017	5,91	0,13	17 to 22
		1150	0,18	0,011	5,91	0,13	
		875	0,14	0,009	5,91	0,13	

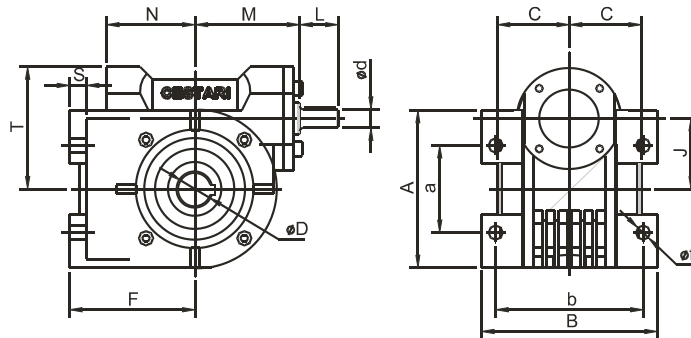
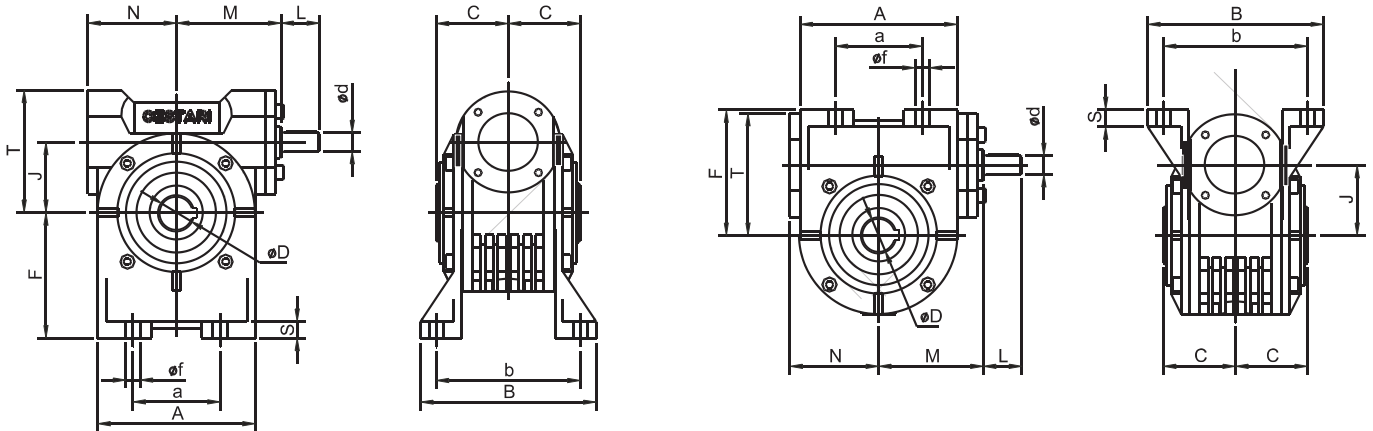
M₂ Accepted torque in the output (kgf.m)
 Conversion factor kW = cv/1,36 Nm = kgf.m x 9,81

Pn₁ Accepted power in the input (cv)
 η Efficiency

* Input position of the duplex 1 to 8
 according to page 3

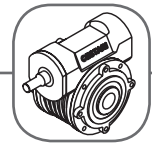


**Foot mounted
Single Reduction**

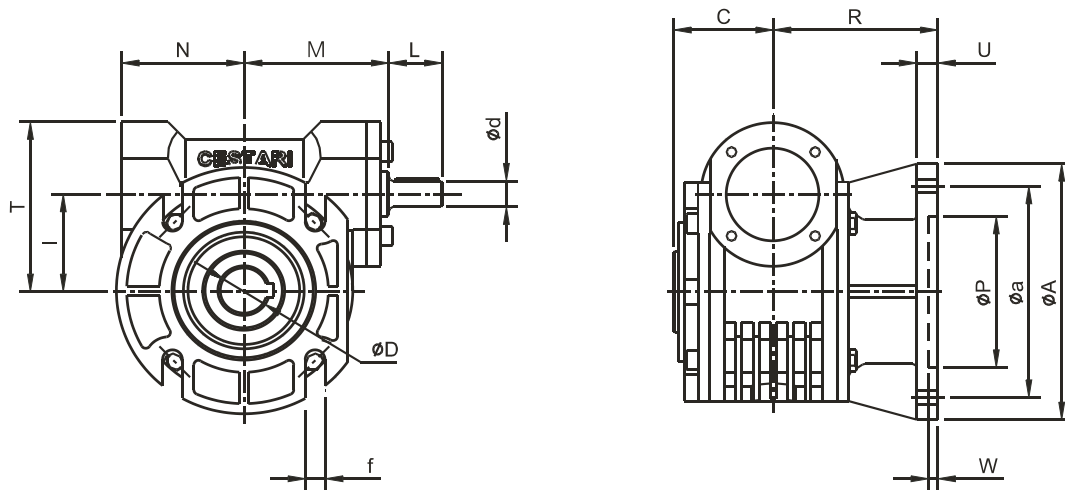


Sizes of the gearboxes in mm

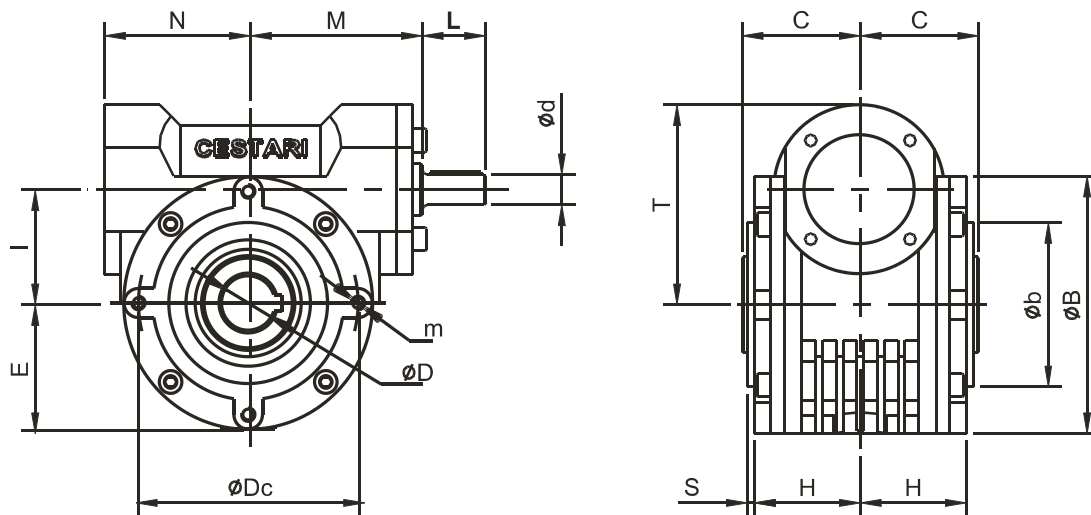
Size	A	a	B	b	C	øD _{H7}	F ⁰ _{-0,05}	ød _{h8}	øf	J	M	N	L	S	T
03	84	50	86,8	70	37	14	74	9	6,5	35	58	46	21	8	60
04	94	52	105,8	88	46,5	18 19	75	11	8,5	42	67	53	24	10	73
05	112	63	124,8	98	52	24 25	90	16	8,5	50	78,5	62,5	30	12	86



Flange mounted



Cover mounted



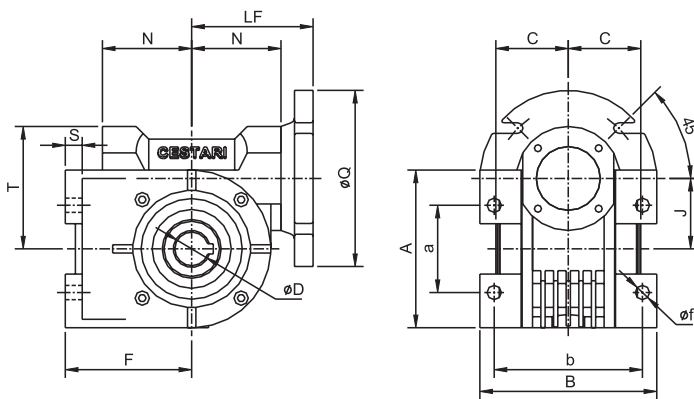
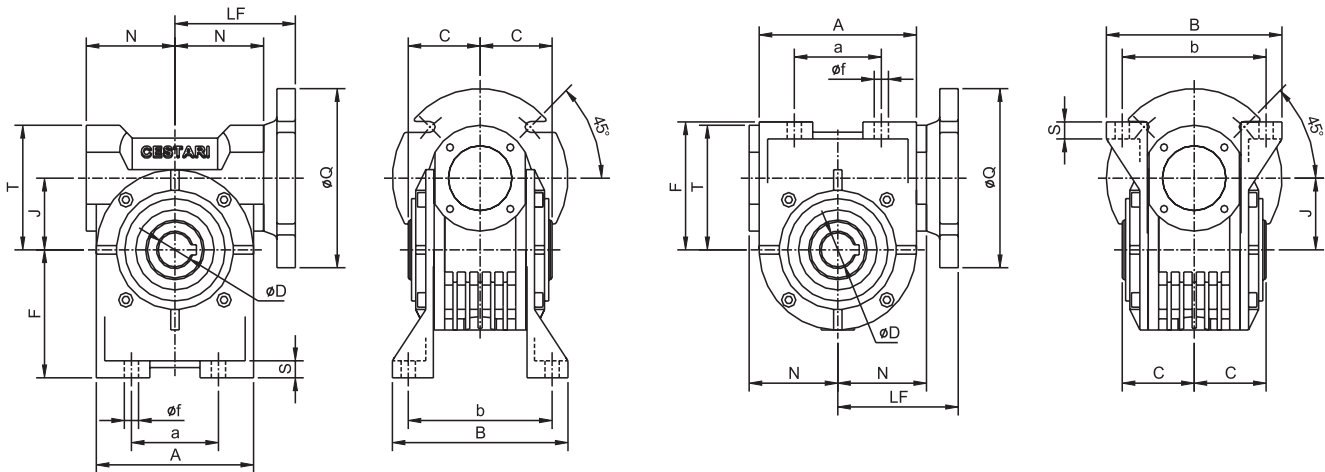
Sizes of the gearboxes in mm

Size	øA	øa	øB	øb _{f7}	C	øD _{H7}	øD _c	ød _{h8}	E	f	H	J	M	N	øP _{H7}	R	S	T	U	W	m
03	80	68	84	50	37	14	65	9	42	6,5	37	35	58	46	50	58,4	2	60	6	4	M5
04	110	87	94	60	46,5	18 19	75	11	47	8,5	41,4	42	67	53	60	71,4	2,5	73	9	4	M5
05	125	90	112	68	52	24 25	94	16	56	10,5	46	50	78,5	62,5	70	93,4	3	86	12	5	M6



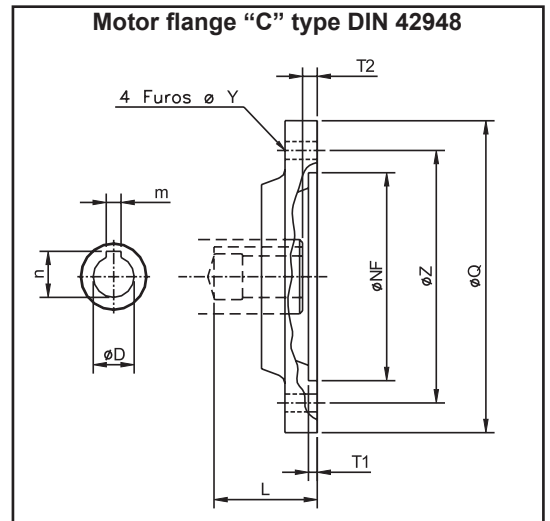
Foot mounted and motor flange

Single Reduction



DETAIL OF THE MOTOR FLANGE

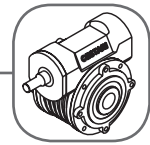
Motor flange "C" type DIN 42948



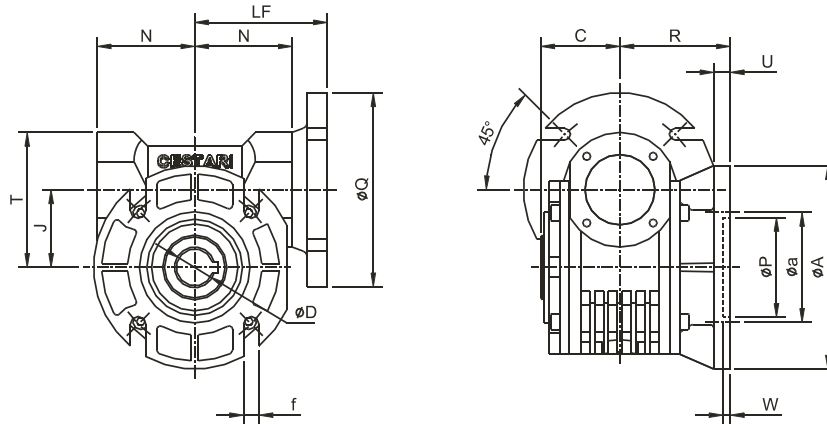
Sizes of the gearmotors in mm

Size	A	a	B	b	C	ØD _{H7}	F _{-0,05} ⁰	Øf	J	LF	N	S	T
03	84	50	86,8	70	37	14	74	6,5	35	63,5	46	8	60
04	94	52	105,8	88	46,5	18 19	75	8,5	42	72	53	10	73
05	112	63	124,8	98	52	24 25	90	8,5	50	82,5	62,5	12	86

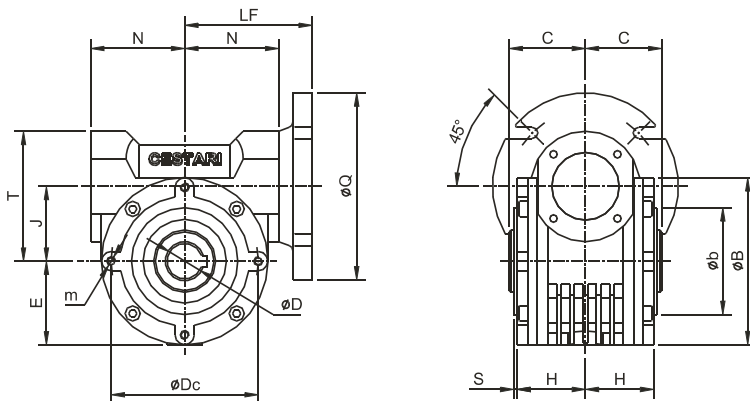
Size	Motor frame	dimensions of the flange									
		ØQ	ØY	ØZ	ØNF _{H7}	T1	T2	L	ØDE7	mH9	n
03	63	90	5,3	75	60	3	5,5	29	11	4	12,8
	63	90	5,3	75	60	3	3	29	11	4	12,8
04	71	105	6,4	85	70	3	5	30	14	5	16,3
	63	90	5,3	75	60	3	3,5	29	11	4	12,8
05	71	105	6,4	85	70	3	3,5	30	14	5	16,3
	80	120	6,4	100	80	3,5	4	40	19	6	21,8



Single Reduction

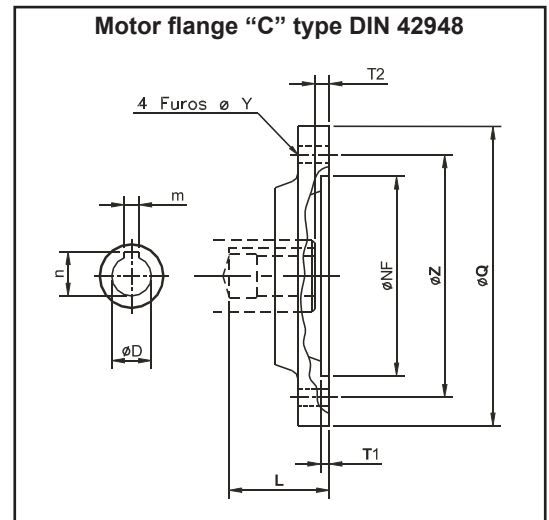


Cover mounted



DETAIL OF THE MOTOR FLANGE

Motor flange "C" type DIN 42948



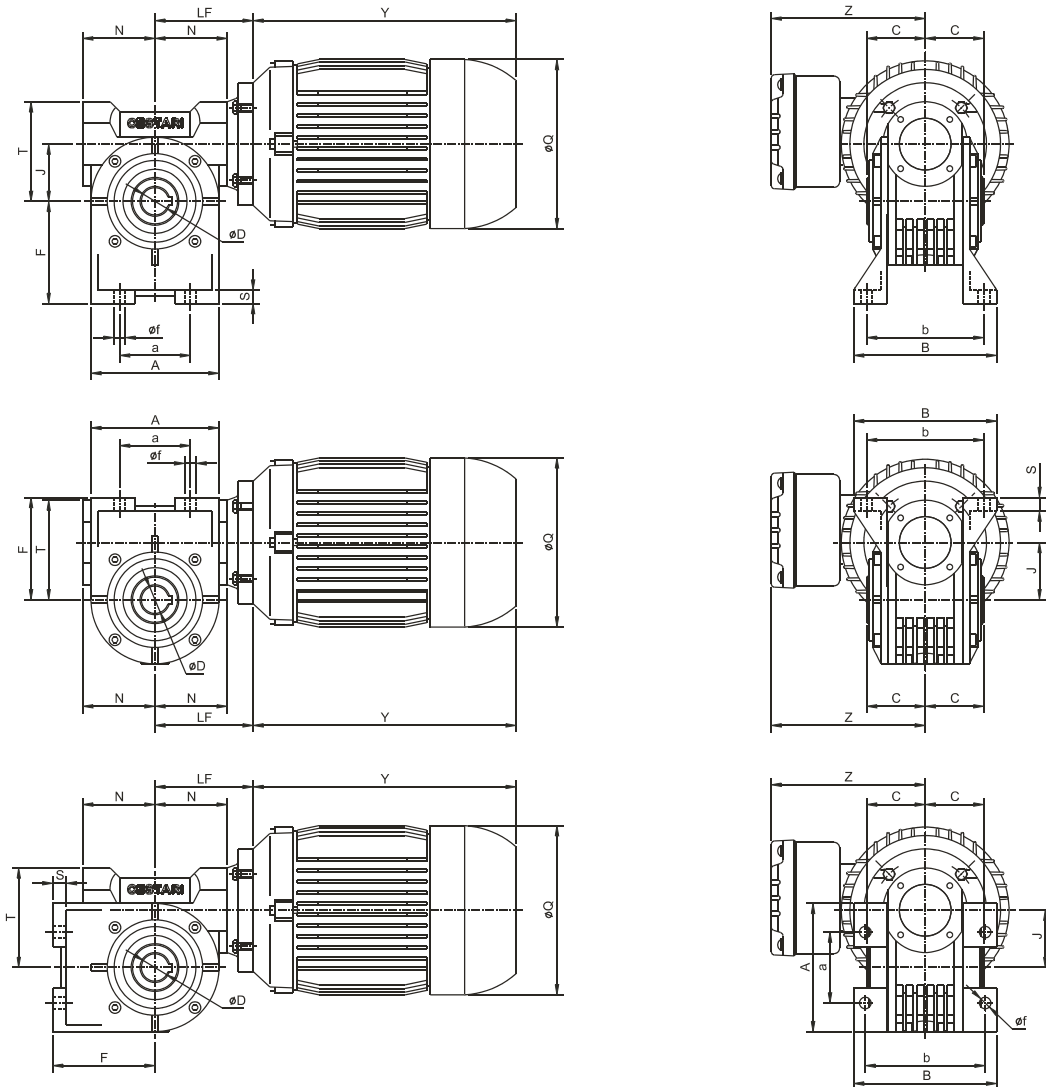
Sizes of the gearboxes in mm

Size	øA	øa	øB	øb _{f7}	C	øD _{H7}	øDc	E	øf	H	J	LF	N	øP _{H7}	R	S	T	U	W	m
03	80	68	84	50	37	14	65	42	6,5	37	35	63,5	46	50	58,4	2	60	6	4	M5
04	110	87	94	60	46,5	18 19	75	47	8,5	41,4	42	72	53	60	71,4	2,5	73	9	4	M5
05	125	90	112	68	52	24 25	94	56	10,5	46	50	82,5	62,5	70	93,4	3	86	12	5	M6

Size	Motor frame	Sizes of the flange									
		øQ	øY	øZ	øNF _{H7}	T1	T2	L	øDE7	m _{H9}	n
03	63	90	5,3	75	60	3	5,5	29	11	4	12,8
	63	90	5,3	75	60	3	3	29	11	4	12,8
04	71	105	6,4	85	70	3	5	30	14	5	16,3
	63	90	5,3	75	60	3	3,5	29	11	4	12,8
05	71	105	6,4	85	70	3	3,5	30	14	5	16,3
	80	120	6,4	100	80	3,5	4	40	19	6	21,8



**Foot mounted
Single Reduction**

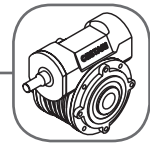


Sizes of the gearmotors in mm

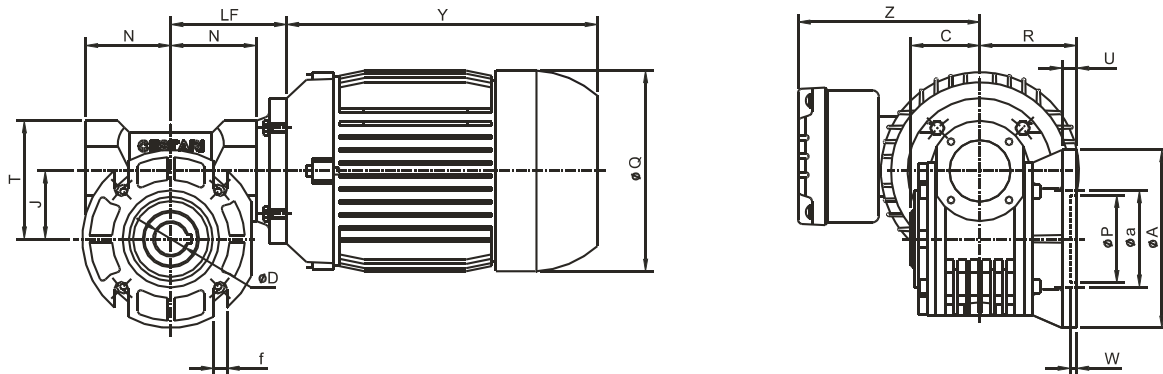
Size	A	a	B	b	C	øD _{H7}	F ⁰ _{-0,05}	øf	J	LF	N	S	T
03	84	50	86,8	70	37	14	74	6,5	35	63,5	46	8	60
04	94	52	105,8	88	46,5	18 19	75	8,5	42	72	53	10	73
05	112	63	124,8	98	52	24 25	90	8,5	50	82,5	62,5	12	86

Motor sizes in mm

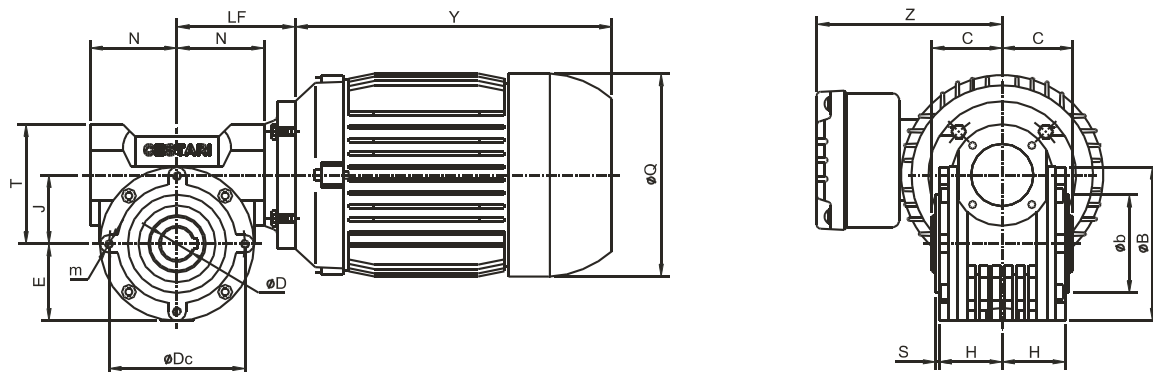
Size	Motor frame	Motor dimensions		
		øQ	øY	øZ
03	63	124	193	113
	71	139	218	121
04	63	124	193	113
	71	139	218	121
05	80	157	236	130



Flange mounted



Cover mounted



Sizes of the gearmotors in mm

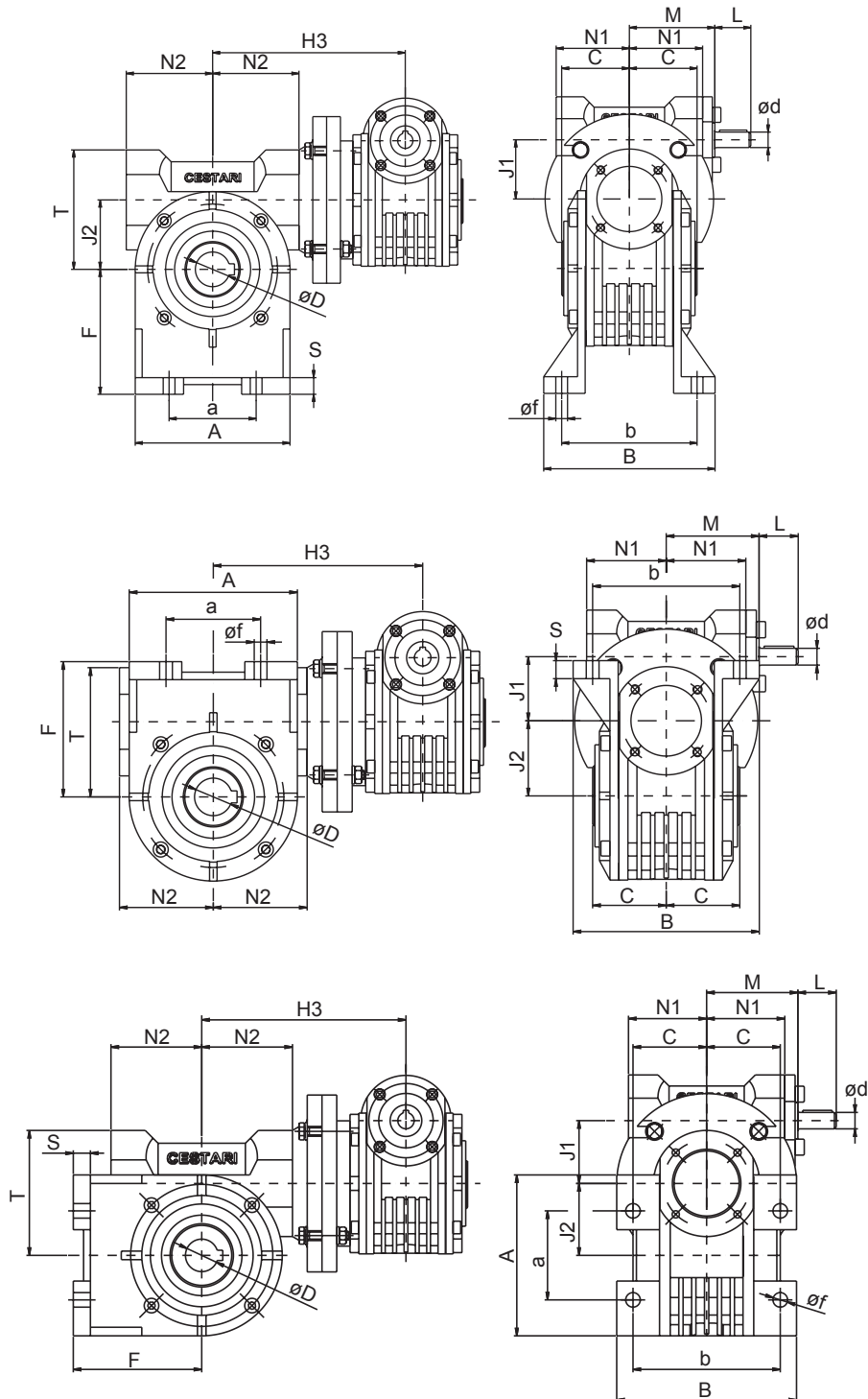
Size	øA	øa	øB	øb _{F7}	C	øD _{H7}	øD _c	E	øf	H	J	LF	N	øP _{H7}	R	S	T	U	W	m
03	80	68	84	50	37	14	65	42	6,5	37	35	63,5	46	50	58,4	2	60	6	4	M5
04	110	87	94	60	46,5	18 19	75	47	8,5	41,4	42	72	53	60	71,4	2,5	73	9	4	M5
05	125	90	112	68	52	24 25	94	56	10,5	46	50	82,5	62,5	70	93,4	3	86	12	5	M6

Motor sizes in mm

Size	Motor frame	Motor sizes		
		øQ	øY	øZ
03	63	124	193	113
	71	139	218	121
04	63	124	193	113
	71	139	218	121
05	63	124	193	113
	80	157	236	130

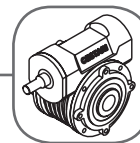


**Foot mounted
Double**

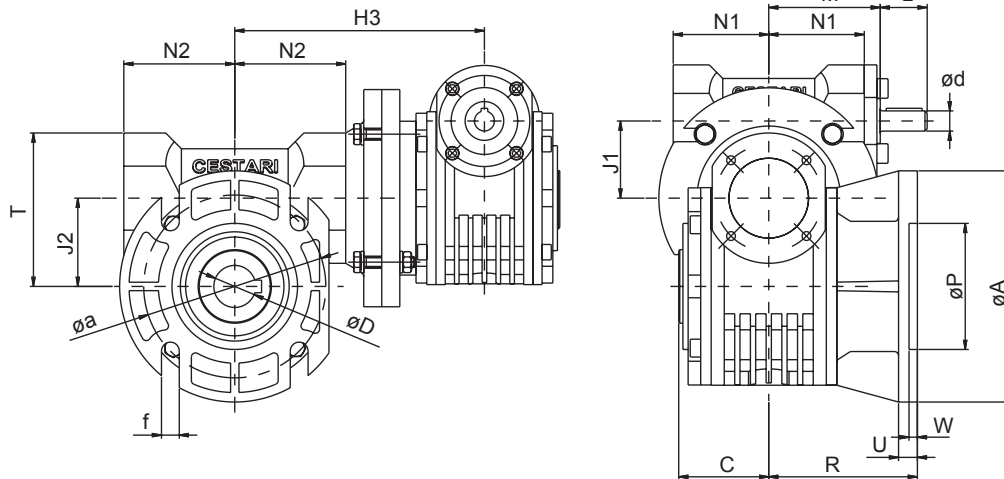


Sizes of the gearboxes in mm

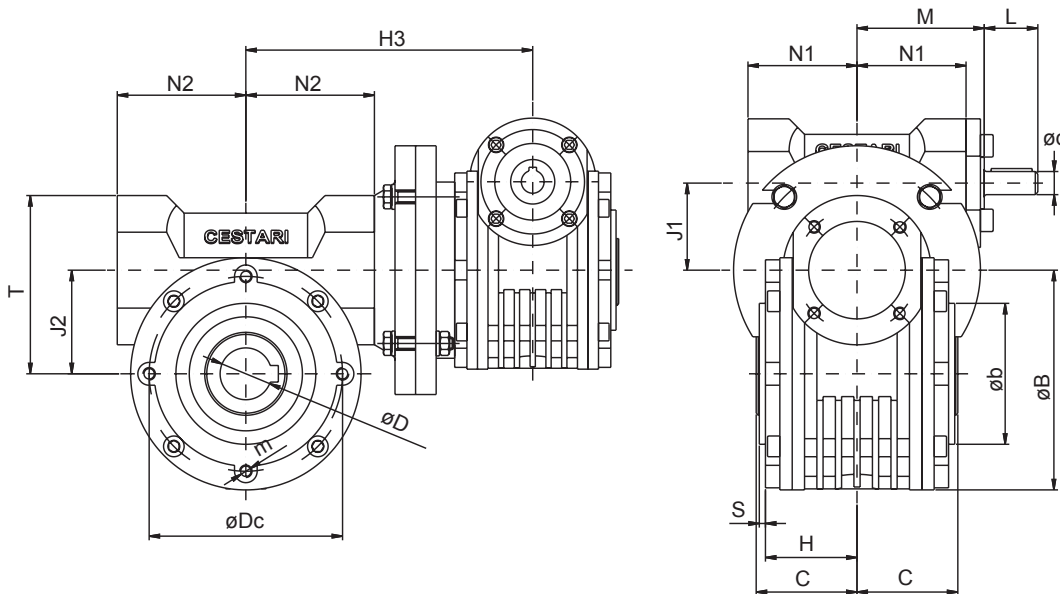
Size	A	a	B	b	C	$\varnothing D_{H7}$	$\varnothing d_{h8}$	$F_{0,05}^0$	$\varnothing f$	H3	J1	J2	L	M	N1	N2	S	T
L042_--	94	52	105,8	88	46,5 19	18	9	75	8,5	126,5	35	42	21	58	46	53	10	73
L052_--	112	63	124,8	98	52 25	24	9	90	8,5	136,5	35	50	21	58	46	62,5	12	86
L452_--	112	63	124,8	98	52 25	24	11	90	8,5	140	42	50	24	67	53	62,5	12	86



Flange mounted



Cover mounted



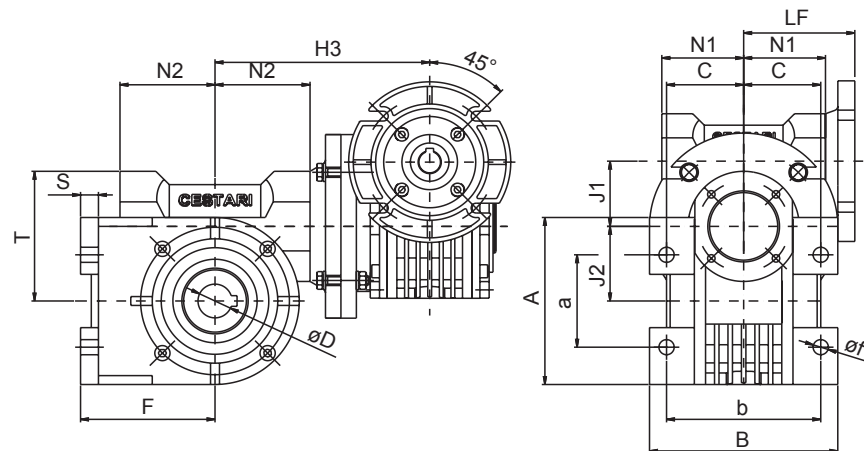
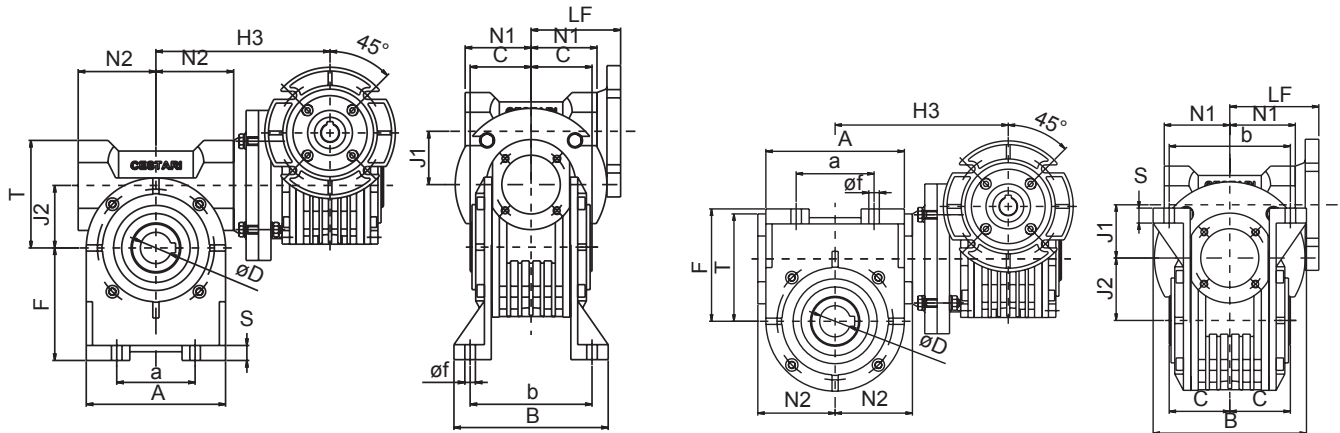
Sizes of the gearboxes in mm

Size	ϕA	ϕa	ϕB	ϕb_1	C	ϕD_{H7}	ϕDc	E	f	H	ϕd_{h8}	H3	J1	J2	L	M	m	N1	N2	ϕP_{H7}	R	S	T	U	W
L042_--	110	87	94	60	46,5	18	75	47	8,5	41,4	9	126,5	35	42	21	58	M5	46	53	60	71,4	2,5	73	9	4
L052_--	125	90	112	68	52	24	94	56	10,5	46	9	136,5	35	50	21	58	M6	46	62,5	70	93,4	3	86	12	5
L452_--	125	90	112	68	52	24	94	56	10,5	46	11	140	42	50	24	67	M6	53	62,5	70	93,4	3	86	12	5



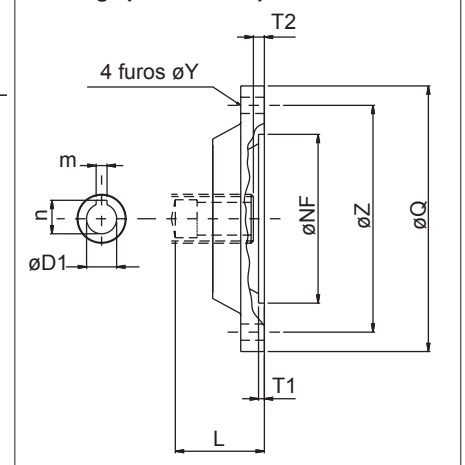
Foot mounted and motor flange

Dupla Redução



DETALHE DO FLANGE PARA MOTOR

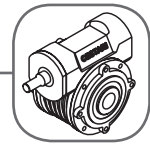
Flange para motor tipo "C" DIN 42948



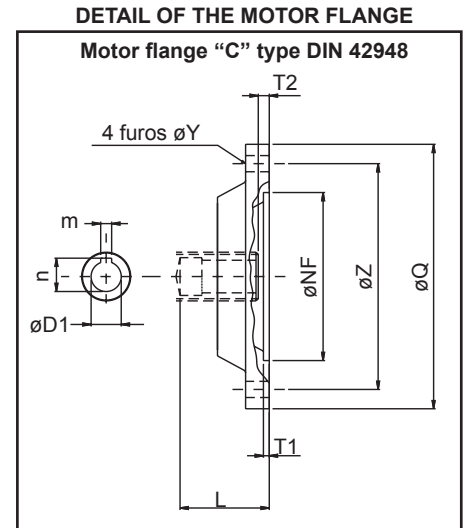
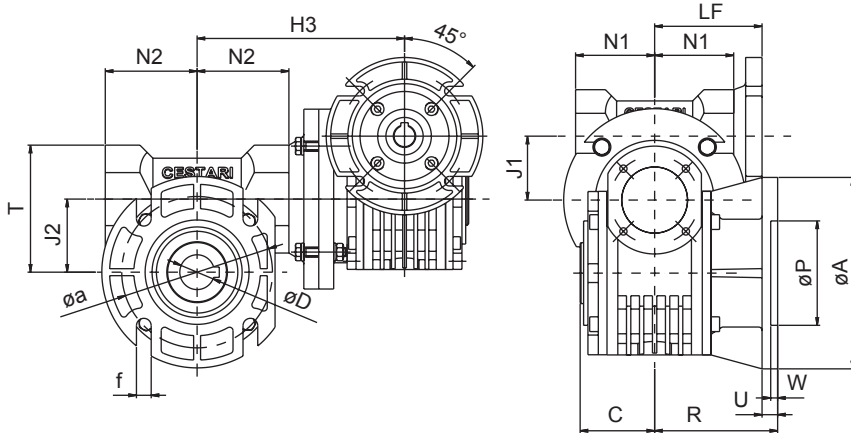
Sizes of the gearboxes in mm

Size	A	a	B	b	C	øDH7	F _{-0,05} ⁰	øf	H3	J1	J2	LF	N1	N2	S	T
L042_	94	52	105,8	88	46,5	18	75	8,5	126,5	35	42	63,5	46	53	10	73
L052_	112	63	124,8	98	52	24	90	8,5	136,5	35	50	63,5	46	62,5	12	86
L452_	112	63	124,8	98	52	24	90	8,5	140	42	50	72	53	62,5	12	86

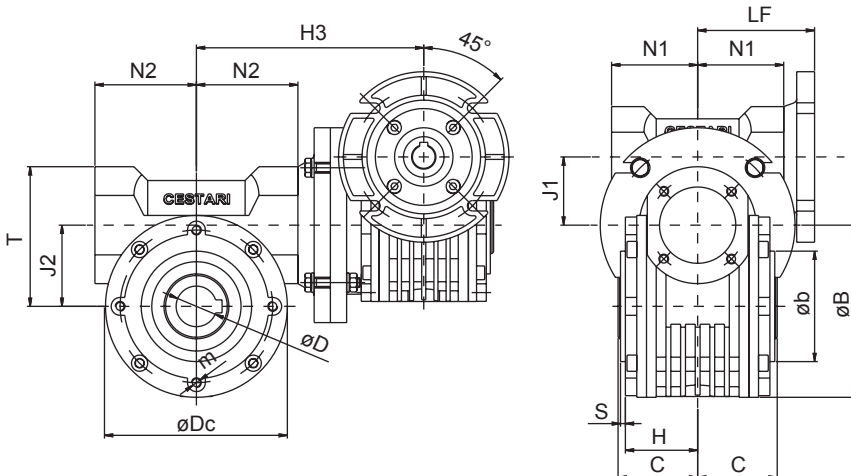
Size	Motor frame	Sizes of the flange									
		øQ	øY	øZ	øNFH7	T1	T2	L	øD1E7	mH9	n
L042_	63	90	5,3	75	60	3	5,5	29	11	4	12,8
L052_	63	90	5,3	75	60	3	5,5	29	11	4	12,8
L452_	63	90	5,3	75	60	3	3	29	11	4	12,8
	71	105	6,4	85	70	3	5	30	14	5	16,3



Flange mounted



Cover mounted



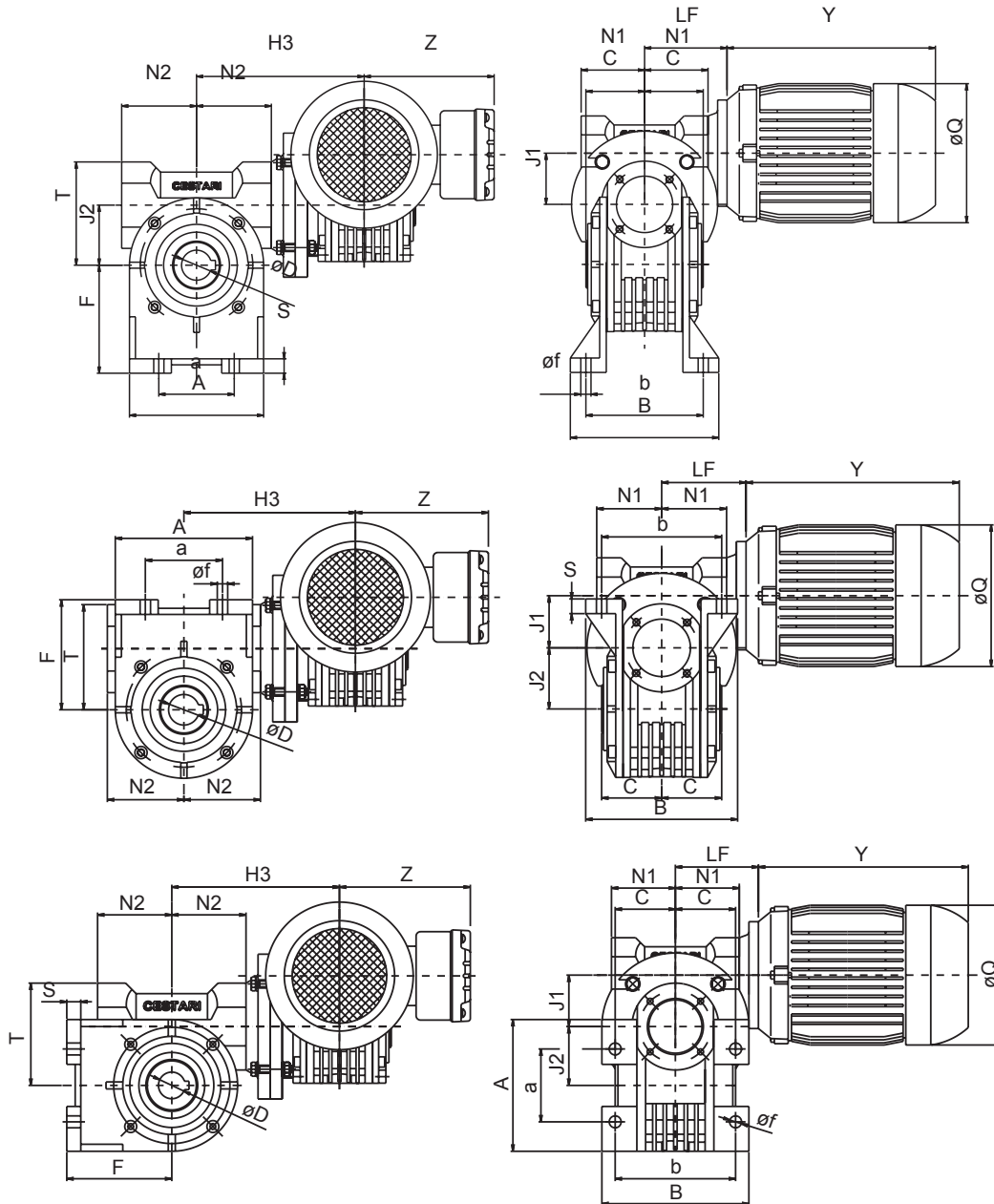
Sizes of the gearboxes in mm

Size	øA	øa	øB	øb _{f7}	C	øDH ₇	øDc	E	f	H	H3	J1	J2	LF	m	N1	N2	øPH ₇	R	S	T	U	W
L042_ _ _	110	87	94	60	46,5 19	18	75	47	8,5	41,4	126,5	35	42	63,5	M5	46	53	60	71,4	2,5	73	9	4
L052_ _ _	125	90	112	68	52	24	94	56	10,5	46	136,5	35	50	63,5	M6	46	62,5	70	93,4	3	86	12	5
L452_ _ _	125	90	112	68	52	24	94	56	10,5	46	140	42	50	72	M6	53	62,5	70	93,4	3	86	12	5

Size	Motor frame	Sizes of the flange									
		øQ	øY	øZ	øNF _{H7}	T1	T2	L	øD1E ₇	mH ₉	n
L042_ _ _	63	90	5,3	75	60	3	5,5	29	11	4	12,8
L052_ _ _	63	90	5,3	75	60	3	5,5	29	11	4	12,8
L452_ _ _	63	90	5,3	75	60	3	3	29	11	4	12,8
	71	105	6,4	85	70	3	5	30	14	5	16,3



Foot mounted - Double Reduction

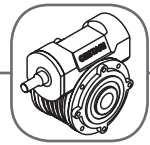


Sizes of the gearmotors in mm

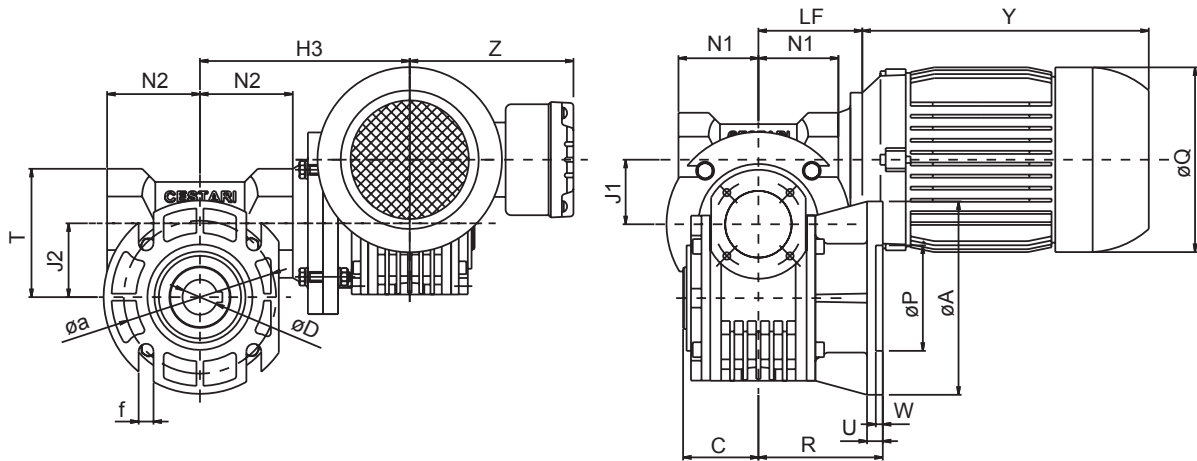
Size	A	a	B	b	C	øDH7	F ⁰ _{-0,05}	øf	H3	J1	J2	LF	N1	N2	S	T
L042_--	94	52	105,8	88	46,5 19	18	75	8,5	126,5	35	42	63,5	46	53	10	73
L052_--	112	63	124,8	98	52	24	90	8,5	136,5	35	50	63,5	46	62,5	12	86
L452_--	112	63	124,8	98	52	24 25	90	8,5	140	42	50	72	53	62,5	12	86

Motor sizes in mm

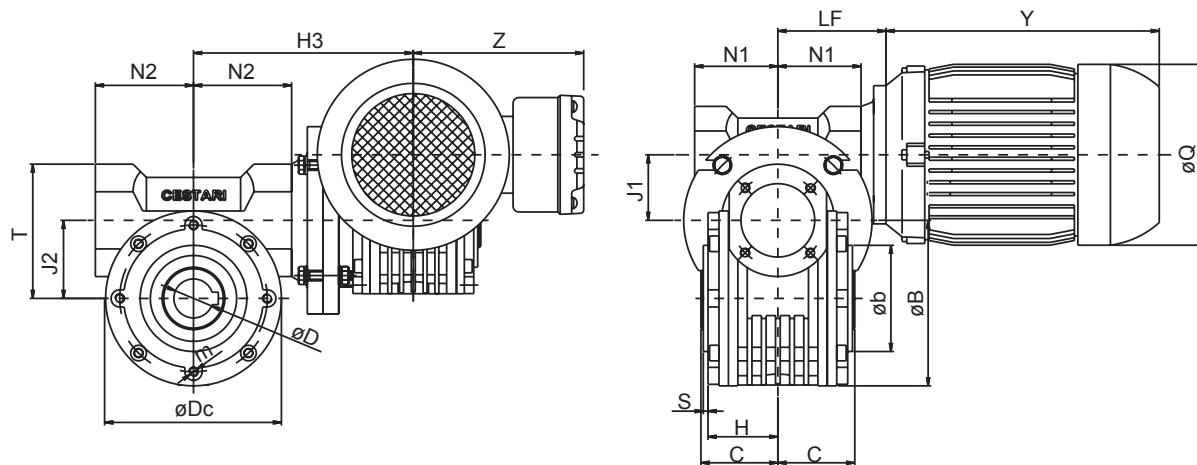
Size	Motor frame	Motor sizes		
		øQ	Y	Z
L042_--	63	124	193	113
L052_--	63	124	193	113
L452_--	63	124	193	113
	71	139	218	121



Flange mounted



Cover mounted



Sizes of the gearmotors in mm

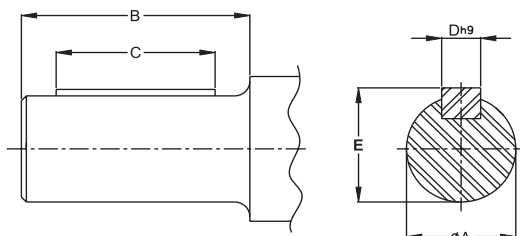
Size	øA	øa	øB	øb _{f7}	C	øDH7	øDc	E	f	H	H3	J1	J2	LF	m	N1	N2	øPH7	R	S	T	U	W
L042_ _ _	110	87	94	60	46,5	18	75	47	8,5	41,4	126,5	35	42	63,5	M5	46	53	60	71,4	2,5	73	9	4
L052_ _ _	125	90	112	68	52	24	94	56	10,5	46	136,5	35	50	63,5	M6	46	62,5	70	93,4	3	86	12	5
L452_ _ _	125	90	112	68	52	24	94	56	10,5	46	140	42	50	72	M6	53	62,5	70	93,4	3	86	12	5

Motor sizes in mm

Size	Motor frame	Motor sizes		
		øQ	Y	Z
L042_ _ _	63	124	193	113
L052_ _ _	63	124	193	113
L452_ _ _	63	124	193	113
	71	139	218	121



Input shaft

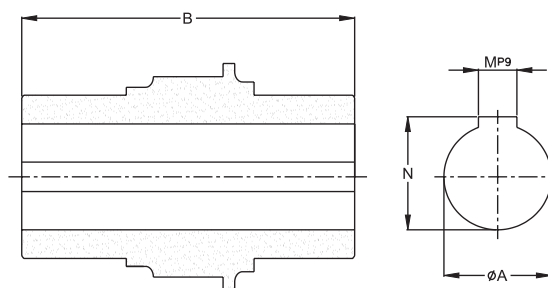


Sizes in mm

Size	ØA _{h8}	B	C	E	D _{h9}
03	9	21	17	10,2	3 ⁰ _{-0,025}
04	11	24	16	12,5	4 ⁰ _{-0,025}
05	16	30	22	18	5 ⁰ _{-0,030}

Key according to DIN 6885/1

Hollow output shaft



Sizes in mm

Size	ØA _{H7}	B	N	M _{p9}
03	14	74	16,3	5 ^{-0,012} _{-0,042}
04	18	93	20,8	6 ^{-0,012} _{-0,042}
05	24	104	27,3	8 ^{-0,015} _{-0,051}

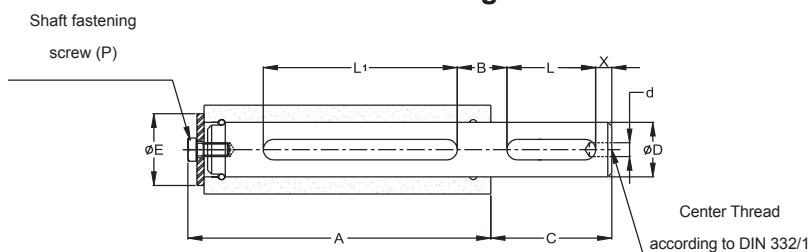
Solid output shaft

Sizes in mm

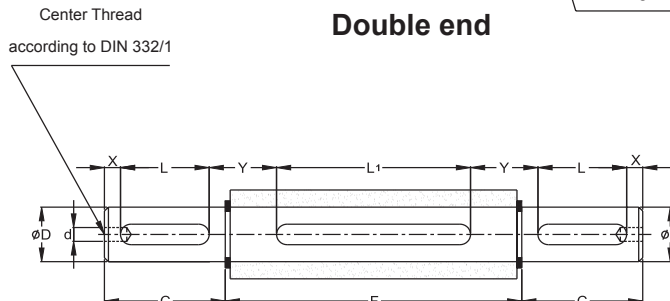
	03	04	05
A	79	99	112,4
B	30	36,5	31
C _{h6}	30	40	60
ØD	14	18	25
d _{x1} *	M5 x 12,5	M6 x 16	M10 x 22
ØE	20	28	32
F ₁	76	95,4	100,4
L	22	32	50
L	22	32	69
P	M5 x 15	M6 x 16	M10 x 25
Y	31	35,7	33,2
X	4	4	5

* l - thread length

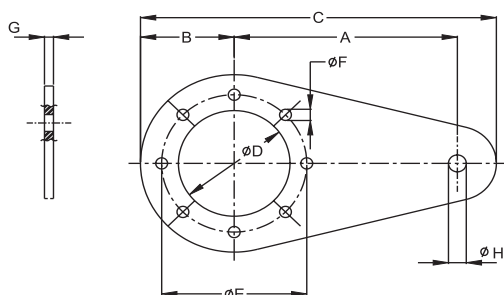
Single



Double end

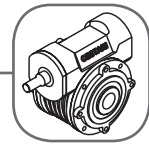


Torque arm sizes



Sizes in mm

Size	A	B	C	ØD	ØE	ØF	G	ØH
03	100	42	159,5	50	65	5,3	4	8
04	100	47	164,5	60	75	5,3	4	8
05	100	56	173,5	68	94	6,4	4	8



GEARBOX INSTALLATION

Remove the protective layer off the shaft ends with varsol, turpentine or similar solvent.

ATTENTION: The solvent cannot reach the lip seals, and never use sandpaper to remove the varnish.

The gearboxes must be installed in the correct working position.

The elements to be mounted on the shafts, such as couplings, pulleys, sprockets, etc. must have their weights and sizes compatible with the gearbox, and be assembled with slight effort, as close as possible to the shaft seat.

The elements must be drilled with tolerance H7. Carefully align the elements mounted on the shafts, even elastic couplings.

ATTENTION: It is unacceptable the mounting by means of strikes, since such method damages the rolling bearings and teeth of the worm gear.

LUBRICATION

Proper lubrication is responsible for the performance and useful life of the gearbox.

Recommended Synthetic Lubricants		
Manufacturer	Viscosity mm ² /s (c St) at 40°C ISO - NLGI	Lubricant type Maximum Oil Temp. 90° C
ExxonMobil	VG 460	SHC 634
Shell	VG 460	TIVELA S 460
Kluber	VG 460	KLUBER SYNTH – EG4-460
Kluber	VG 460	SYNTHESO D 460 EP
Petrobrás	VG 460	LUBRAX SYNTESIS GEAR O 460
Castrol	VG 460	Syntethic A 460
Quantity		
L03 = 30ML	L04= 50ML	L05= 70ML

OPERATING TEMPERATURE AND OIL TEMPERATURE

The operating temperature is the oil temperature after the stabilization of the working temperature at full load. (after approximately three hours of continuous operation)

The external temperature of the frame is approximately 15 °C below the operating temperature (oil temperature)

The operating temperature for WEG-CESTARI gearboxes is between 18°C (minimum) and 90°C (maximum) under regular operating conditions.

In the first 500 hours, it is recommended to check the oil quality; if it is contaminated or particles are present, it must be changed.

At the oil changes, the oil must be drained still hot so as to facilitate the flow and cleaning.

In case of adverse environment conditions (high humidity, aggressiveness, dust), the change period may be reduced - in this case, upon orientation.

In the changes, the same oil indicated on the gearbox nameplate and in this manual must be used.

Do not mix oils from different manufacturers.

The oil change interval is defined according to the operating temperature - see table below.

Operating Temperature	CLP Mineral Oil	CLP HC Synthetic Oil Hydrocarbons	CLP PG Synthetic Oil Polyglycol
80 °C	5000 hours	15000hours25000	horas
85 °C	3500 hours	10000 hours	18000 hours
90 °C	2500 hours	7500 hours	13000 hours
95 °C	2000 hours	6000 hours	8500 hours
100 °C	---	3800 hours	6000 hours
105 °C	---	2500 hours	4000 hours
110 °C	---	2000 hours	3000 hours



FACTORY:

Rod. Monte Alto/Vista Alegre, km 3
Monte Alto | SP | Brasil | 15910-000

SALES | 55 (16) 3244-1000 | vendas@wegcestari.com

SERVICE | 55 (16) 3244-1020 | service@wegcestari.com

SAC | 55 (16) 3244-1018 | sac@wegcestari.com

www.wegcestari.com

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