

DOGA

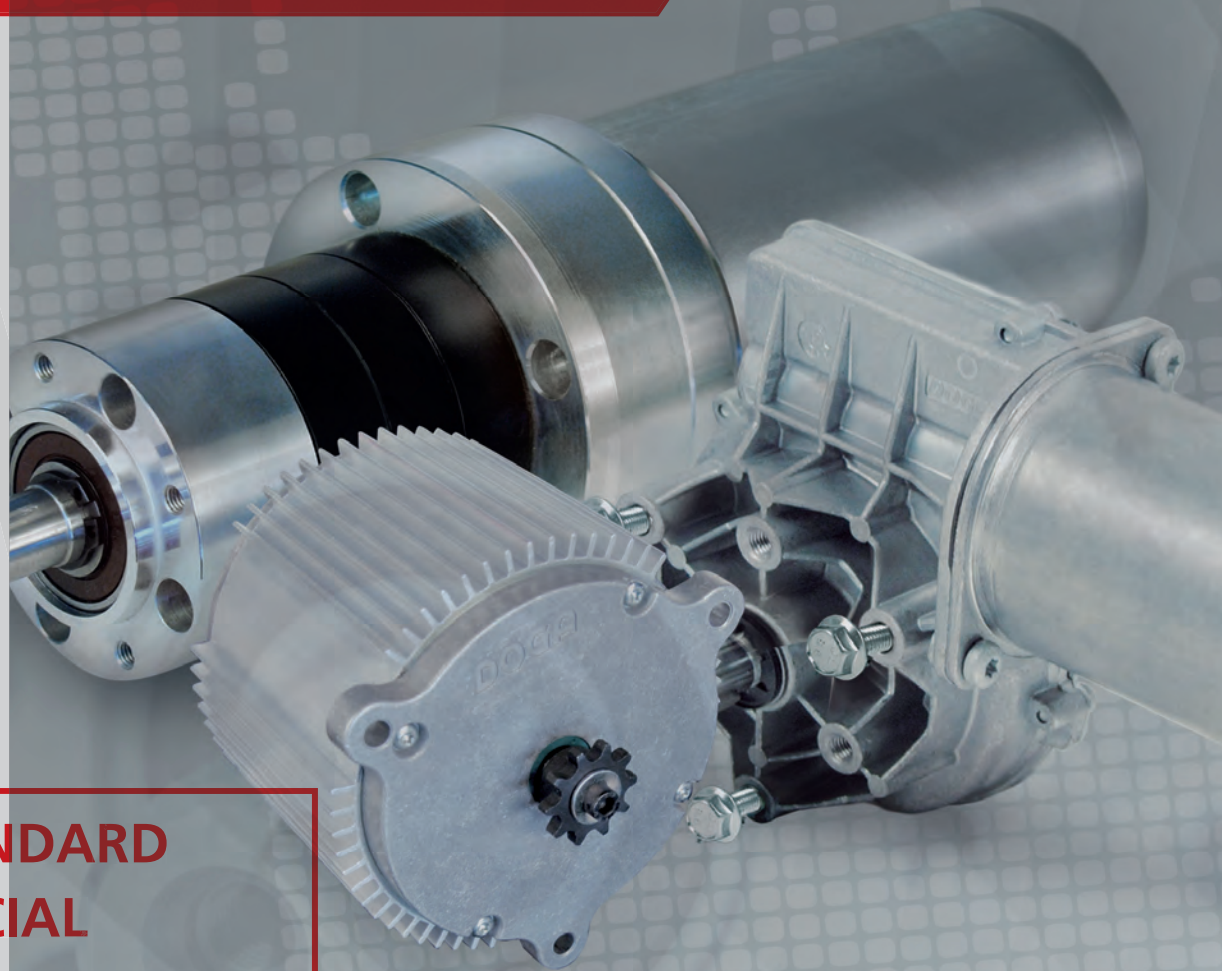
MOTORREDUCTORES **GEARED MOTORS** MOTOREDUCTEURS À VIS **GETRIEBEMOTOREN**

MOTORES C.C. **D.C. MOTORS** MOTEURS À C.C. **GLEICHSTROMMOTOREN**

MOTORES PLANETARIOS **PLANETARY GEARMOTORS** MOTEURS PLANETAIRES **PLANETENGETRIEBEMOTOREN**

E-MOBILITY

drivesystems



**STANDARD
SPECIAL
CUSTOMIZED**

One motor for each application.

032017

OTHER PRODUCT LINES



DOGA can develop for YOU !!

STANDARD
SPECIAL
CUSTOMIZED



motores a medida

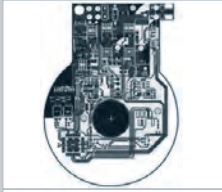
Los motores y motorreductores de corriente continua DOGA de este catálogo han sido desarrollados por nuestros ingenieros para lograr una adaptación óptima a las necesidades del cliente en todo tipo de aplicaciones, en el sector automóvil o en el sector industrial.



En DOGA somos especialistas en adaptar nuestros productos "estándar" a las necesidades del cliente: desde un conector especial, un eje a medida, un bobinado que ajuste las prestaciones del motor, hasta un diseño de motor completamente de nuevo.



Nuestra misión es la de desarrollar motores y motorreductores de corriente continua a medida, y hasta 72 V, para satisfacer las necesidades particulares de nuestros clientes.



motores especiales

DOGA ofrece a sus clientes su tecnología y experiencia en la fabricación de motores y motorreductores de corriente continua, para desarrollar soluciones específicas que requieran una motorización en corriente continua y en baja tensión, hasta 72 V, en tecnología de imanes permanentes, con carbones o tecnología brushless.



moteurs sur mesure

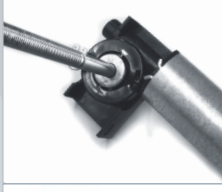
Les moteurs et motoréducteurs à courant continu DOGA de ce catalogue ont été conçus par nos ingénieurs pour une adaptation optimale aux besoins du client et pour tout type d'application, tant pour le secteur automobile que pour l'industrie en général.



Chez DOGA nous sommes spécialistes dans l'adaptation de produits "standard" aux nécessités du client. Du connecteur spécial, à l'axe à dimension spéciale, l'induit pour ajuster les capacités du moteur jusqu'à la conception totale d'un nouveau moteur.



Notre mission est de développer des moteurs et motoréducteurs à courant continu sur mesure, et jusqu'à 72V, pour satisfaire les besoins de nos clients.



moteurs spécialement conçus

DOGA offre à ses clients sa technologie et expérience dans la fabrication de moteurs et motoréducteurs c.c., afin de développer des solutions spécifiques demandant une motorisation à courant continu et de basse tension, jusqu'à 72V, tant avec une technologie à aimants permanents qu'avec ou sans charbons (brushless).



customized motors

The DOGA DC motors and gearmotors in this catalog have been developed by our engineers to obtain an optimal adaptation to the needs of the client for all type of applications which come from a variety of industries.

At DOGA, we are a specialist in adapting our "standard" products to meet the desires of our customers. From a special connector, to a shaft, to a selected winding that fits the specification of the motor to even a brand new design of motor, DOGA does them all.

Our mission is to develop customized DC motors and gearmotors, up to 72 V, to satisfy the needs of our clients.

special motors

DOGA offers their technology and experience in the manufacture of DC motors and gearmotors, to develop specific solutions that operate on DC voltages to 72 Volts, using permanent magnet technology, both Brush type (PMDC) and Brushless (BLDC).

Kundenspezifisch

Die Gleichstrommotoren mit und ohne Getriebe in diesem Katalog sind von unseren Technikern entwickelt worden, um die beste Anpassung an die Kundenanforderungen zu erzielen, für jede Art von Anwendung, sei es im Automotivbereich, sei es in der übrigen Industrie.

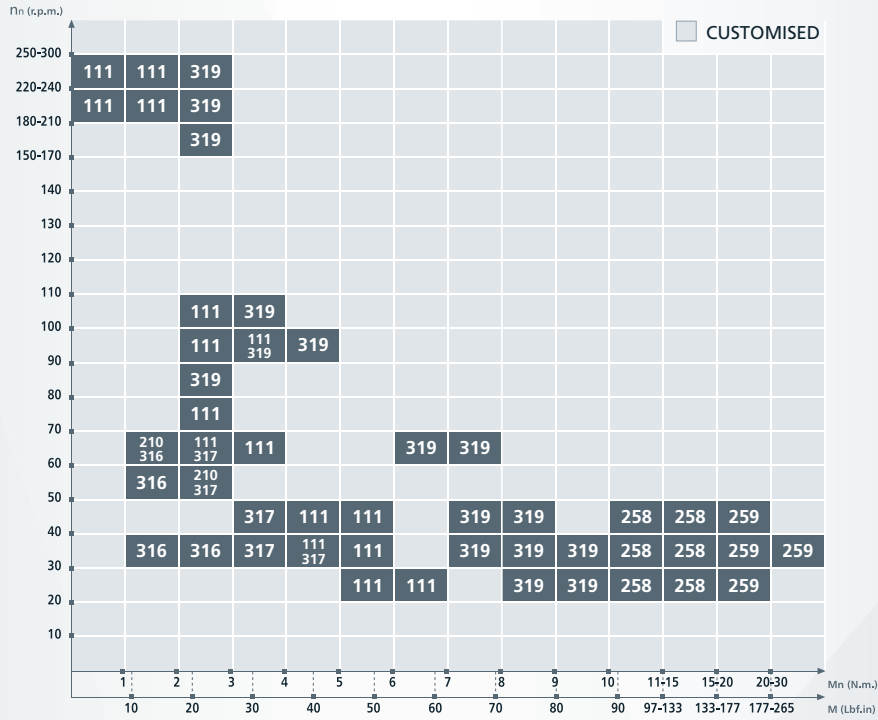
Wir bei Doga sind Spezialisten darin, unsere "Standardmodelle" an die Anforderungen des Kunden anzupassen. Seien es eine besondere Steckverbindung oder ein besonderes Wellenende, eine Wicklung, die den Wirkungsgrad des Motors verfeinert bis hin zu einem vollständigen neuen Design.

Wir sehen es als unsere Aufgabe an, Gleichstrommotoren mit und ohne Getriebe kundenspezifisch zu entwerfen, bis zu 72V Spannung, um die Bedürfnisse unserer Kunden zu erfüllen.

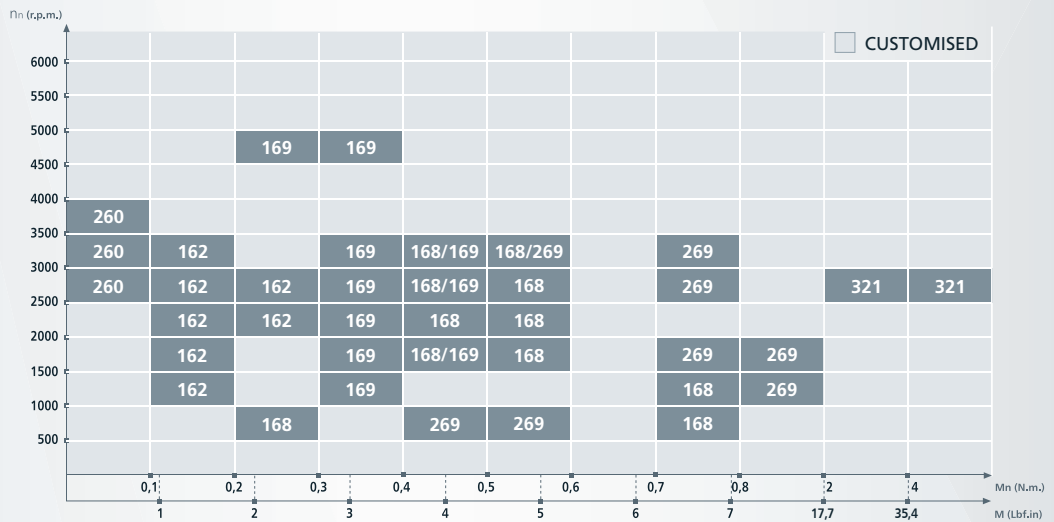
Spezialmotoren

DOGA bietet seinen Kunden Technologie und Erfahrung bei der Herstellung von Gleichstrommotoren mit und ohne Getriebe an, um spezifische Lösungen zu finden, die eines Gleichstromantriebs im Niederspannungsbereich bis zu 72 V bedürfen, in Permanentmagnettechnik ebenso wie in bürstenlosen Technik.

MOTORREDUCTORES CC SIN FIN
MOTORS WITH WORM GEAR
MOTEREDUCTEURS À CC VIS SANS FIN
GLEICHSTROMSCHNECKENGETRIEBEMOTOREN



MOTORES CC
DC MOTORS
MOTEURS À CC
GLEICHSTROMMOTOREN



MOTORES CON REDUCTOR PLANETARIO
PLANETARY GEAR DC MOTORS
MOTEURS À CC AVEC RÉDUCTEUR PLANÉTAIRE
GLEICHSTROMPLANETENGETRIEBEMOTOREN

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MOTORS WITH WORM GEAR
MOTOREDUCTEURS À C.C. À VIS SANS FIN
GLEICHSTROMSCHNECKENGETRIEBEMOTOREN

MOTORES C.C.
D.C. MOTORS
MOTEURS À C.C.
GLEICHSTROMMOTOREN

MOTORES C.C. CON REDUCTOR PLANETARIO
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**e-mobility
motor**

**planetary
gearmotors**



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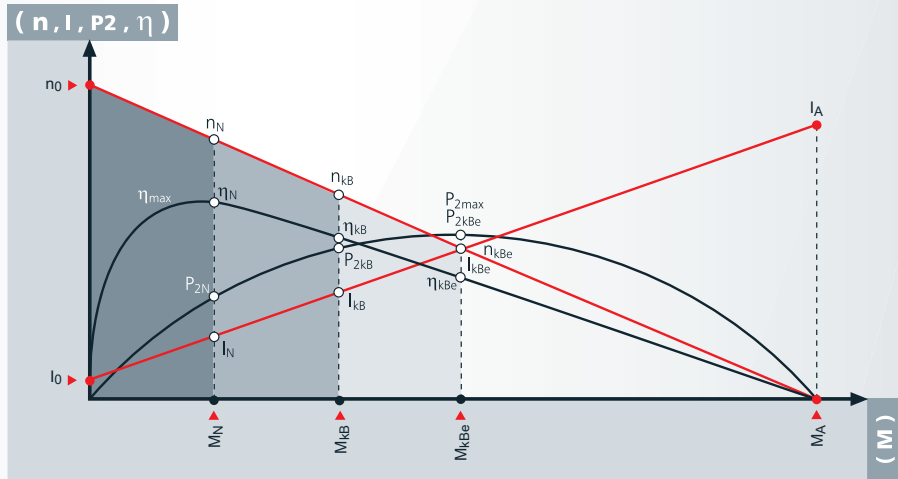


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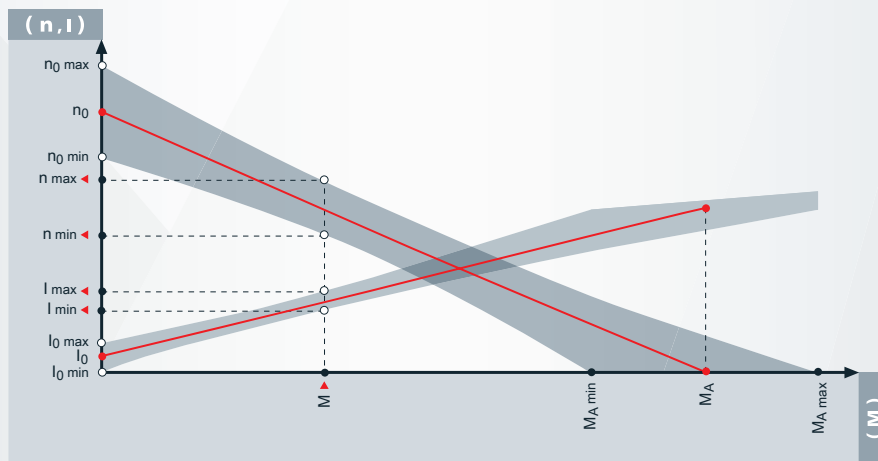
	ESPAÑOL	ENGLISH	FRANÇAIS	DEUTSCH
BRO	Bronce	Bronze	Bronze	Bronze
CEL	Resina fenólica estratificada	Resin bonded fabric	Résine phénollique stratifiée	Hartgewebe
i	Relación de reducción	Transmission ratio	Rapport de réducteur	Untersetzung
I	Corriente	Current	Courant	Stromaufnahme
I₀	Corriente en vacío	No load current	Courant à vide	Stromaufnahme im Leerlauf
I_a	Corriente de arranque	Starting current	Courant de démarrage	Anlaufstrom
I_n	Corriente nominal	Nominal current	Courant nominal	Nennstrom
IP	Grado de estanqueidad	Protection degree	Etanchéité	Feuchtigkeitsschutzklasse
M	Par	Torque	Couple	Drehmoment
Ma	Par de arranque	Starting torque	Couple de démarrage	Anzugsdrehmoment
Mk	Par de autobloqueo	Self-locking torque	Couple d'autoblocage	Selbsthemmungsmoment
Mn	Par nominal	Nominal torque	Couple nominal	Nenndrehmoment
η(%)	Rendimiento	Efficiency	Rendement	Wirkungsgrad
n	Velocidad	Speed	Vitesse	Geschwindigkeit
n₀	Velocidad en vacío	No load speed	Vitesse à vide	Geschwindigkeit im Leerlauf
n_n	Velocidad nominal	Nominal speed	Vitesse nominale	Nenngeschwindigkeit
P	Peso aproximado	Approximate weight	Poids approximatif	Gewicht (ca.)
P	Potencia	Power	Puissance	Leistung
P₁	Potencia absorbida (U.I)	Absorbed power (U.I)	Puissance absorbée (U.I.)	Aufgenommene Leistung (U.I)
P₂	Potencia nominal, útil	Nominal power, useful	Puissance nominale, utile	Abgegebene Leistung
PLA	Plástico	Plastic	Plastique	Kunststoff
U	Tensión	Voltage	Tension	Spannung
Un	Tensión nominal	Nominal voltage	Tension nominale	Nennspannung

características de las curvas characteristic curves caracteristiques des courbes Leistungskurven

- N** Servicio continuo
Continuous running
Service continu
Dauerbetrieb
- kB** Servicio intermitente
Short operation
Service intermittent
Kurzzeitbetrieb
- kBe** Servicio de muy corta duración
Very short operation
Service de très courte durée
Extremer Kurzzeitbetrieb



márgenes de tolerancia tolerance zones marges de tolerance Toleranzbereiche



Los valores de bloqueo (M_a , I_a) corresponden al par y la corriente del motor en frío con el eje de salida bloqueado.

Los valores nominales (U_n , I_n , M_n , n) están determinados para funcionamiento continuo (S1-VDE0530) a condiciones ambiente normales. Tolerancia $\pm 10\%$.

Las curvas son con el motor en frío.

The stall values of starting torque (M_a) and starting current (I_a) in this catalog correspond to the torque and the current of the motor at room temperature with the output shaft blocked.

The nominal values for voltage (U_n), current (I_n), torque (M_n) and speed (n) are for continuous operation (S1-VDE0530) in normal ambient conditions. The tolerance is 10% for all values shown unless otherwise noted. Performance curves are with the motor at 20 degrees C temperature.

Les valeurs de blocage (M_a , I_a) correspondent au couple du moteur à froid avec axe de sortie bloqué.

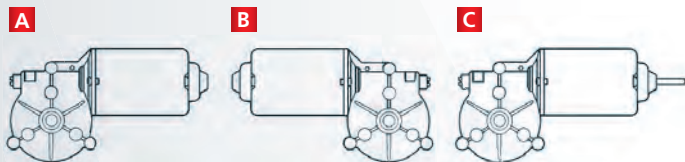
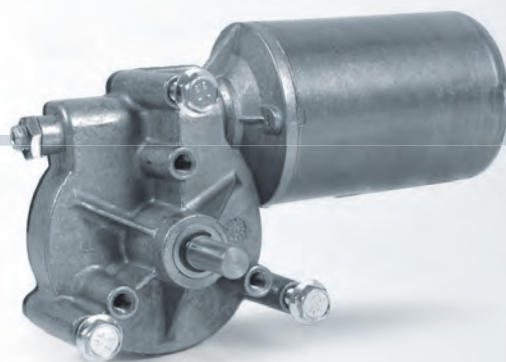
Les valeurs nominales (U_n , I_n , M_n , n) sont déterminées pour un fonctionnement continu (S1-VDE0530) en conditions ambiantes normales. Tolérance $\pm 10\%$.

Les courbes sont avec moteur froid.

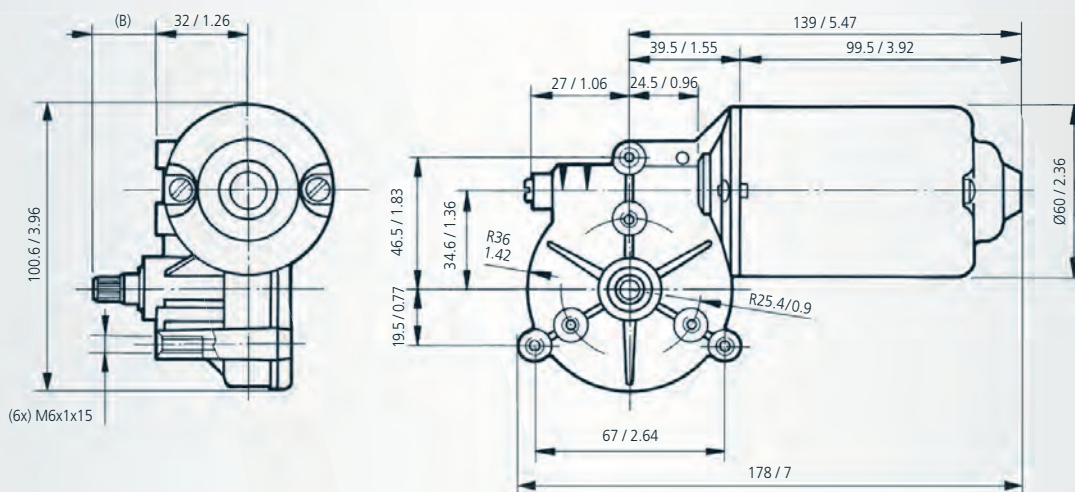
Die Werte für die Anlaufstrom und der Anzugsdrehmoment (M_a , I_a) entsprechen dem Drehmoment und der Strom des Motors in kaltem Zustand mit blockierter Abgangswelle.

Die Nominalwerte (U_n , I_n , M_n , n) werden ermittelt bei Dauerbetrieb (S1-VDE0530) unter normalen Umgebungsbedingungen. Toleranz $\pm 10\%$.

Die Kurven beziehen sich auf den Motor in kaltem Zustand.

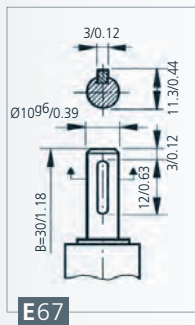
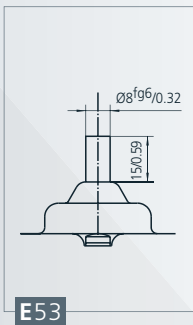
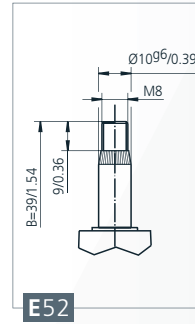
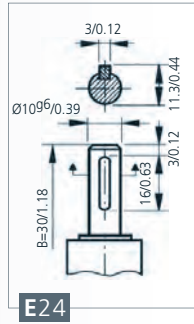
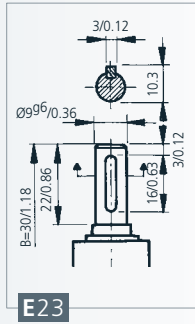
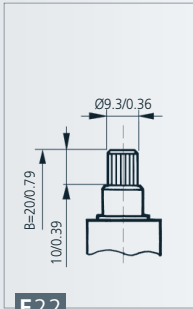


REFERENCIA REFERENCE NUMBER REFERENZNUMMERN	TENSIÓN NOMINAL NOMINAL VOLTAGE TENSION NOMINALE NENNSPANNUNG	PAR NOMINAL NOMINAL TORQUE COUPLE NOMINAL DREHMOMENT NOMINAL	VELOCIDAD NOMINAL NOMINAL SPEED VITESSE NOMINALE GESCHWINDIGKEIT NOMINAL	CORRIENTE NOMINAL NOMINAL CURRENT COURANT NOMINAL NOMINALSTROM	PAR DE ARRANQUE STARTING TORQUE COUPLE DE DEMARRAGE ANZUGSDREHMOMENT	CORRIENTE DE ARRANQUE STARTING CURRENT COURANT DE DEMARRAGE ANLAUFSTROM	EJE SHAFT ARBRE WELLE	CONEXIONES CONNECTIONS CONNEXIONS ANSCHLUSSART	ESQUEMA ELECTRICO WIRING DIAGRAM SCHEMA ELECTRIQUE SCHALTBIKD	RELACION DE REDUCCION TRANSMISSION RATIO RAPPORT DE REDUCTEUR UNTERSETZUNG	PESO APROXIMADO APPROXIMATE WEIGHT POIDS APPROXIMATIF GEWICHT (ca.)	GRADO DE ESTANQUEIDAD WATERTIGHTNESS ETANCHEITE FEUCHTIGKEITSSCHUTZKLASSE	MATERIAL RUEDA WHEEL MATERIAL MATERIAU ROUE MAT. DES SCHNECKENRADES	DISEÑO: A,B,C DESSIN: A,B,C ABBILDUNG: A,B,C	CURVA CURVE COURBE KURVE
	Un (V)	Mn (N.m./lbf.in)	nn (r.p.m.)	In (A)	Ma (N.m./lbf.in)	la (A)				i	P (kg/lb.t)	IP			
111.3711.20.00	12	5 / 44.2	40	5	25 / 221.2	25	E22	C25	EE2	62:1	1.25 / 3.34	IP53	PLA	A	1
111.3711.30.00	24	5 / 44.2	40	2.5	25 / 221.2	13	E22	C25	EE2	62:1	1.25 / 3.34	IP53	PLA	A	1
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111.3763.20.00	12	6 / 53.1	25	4	25 / 221.2	15	E23	C25	EE2	62:1	1.25 / 3.34	IP53	PLA	A	3
111.3763.30.00	24	6 / 53.1	25	2	25 / 221.2	8	E23	C25	EE2	62:1	1.25 / 3.34	IP53	PLA	A	3
111.4761.30.00	24	5 / 44.2	40	2.5	25 / 221.2	13	E23	C25	EE2	62:1	1.25 / 3.34	IP53	PLA	B	1
111.9031.20.00	12	3 / 26.5	70	6	25 / 221.2	34	E23	C25	EE2	62:1	1.25 / 3.34	IP53	PLA	A	2
111.9031.30.00	24	3 / 26.5	70	3	25 / 221.2	17	E23	C25	EE2	62:1	1.25 / 3.34	IP53	PLA	A	2
111.9039.20.00	12	1.5 / 13.2	240	8	10 / 88.5	46	E23	C26	EE1	49:4	1.25 / 3.34	IP53	PLA	A	4
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111.9041.30.00	24	5 / 44.2	40	2.5	25 / 221.2	13	E24	C25	EE2	62:1	1.30 / 3.48	IP53	BRO	A	1
111.9094.20.00	12	5 / 44.2	40	5	25 / 221.2	25	E52	C2	EE2	62:1	1.25 / 3.34	IP53	PLA	A	1
111.9107.30.00	24	1.5 / 13.2	240	4	14 / 123.9	23	E24/E53	C26	EE1	49:4	1.25 / 3.34	IP40	CEL	C	4
111.9199.20.00	12	3 / 26.5	100	6	20 / 177.01	48	E67	C26	F3	59:2	1.25 / 3.34	IP53	PLA	A	59
111.9199.30.00	24	3 / 26.5	100	3	20 / 177.01	24	E67	C26	F3	59:2	1.25 / 3.34	IP53	PLA	A	59

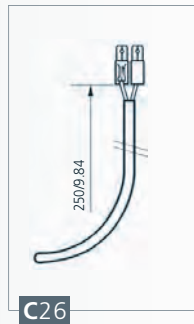
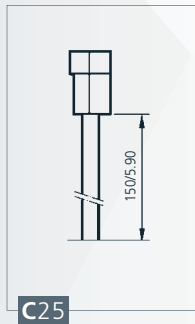
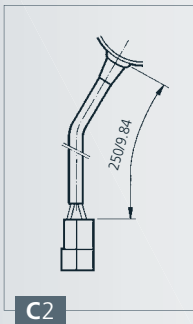


mm / inch

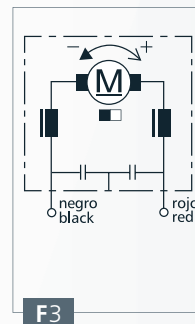
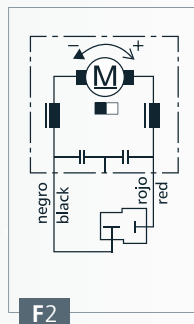
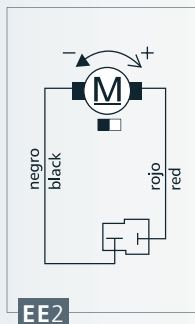
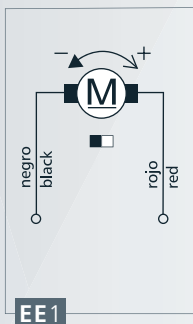
EJE SHAFT ARBRE WELLE



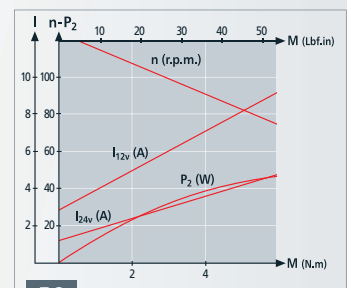
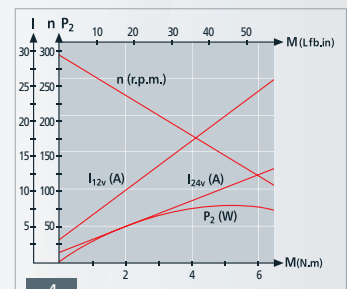
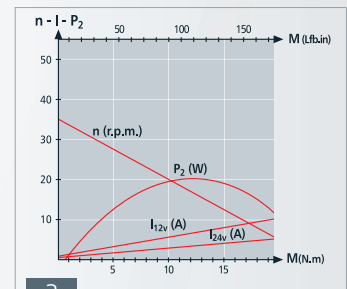
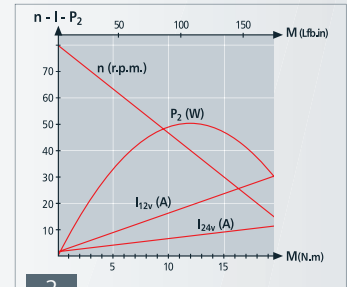
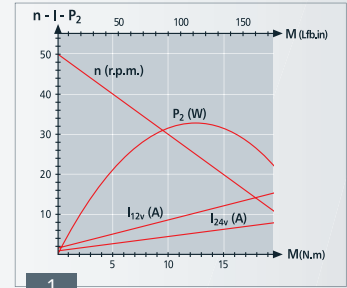
CONEXIONES CONNECTIONS CONNEXIONS ANSCHLUSSART

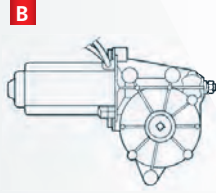
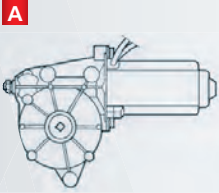
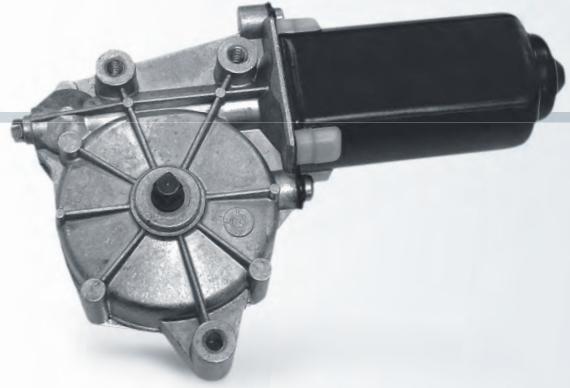


ESQUEMA ELÉCTRICO WIRING DIAGRAM SCHEMA ÉLECTRIQUE SCHALTBILD



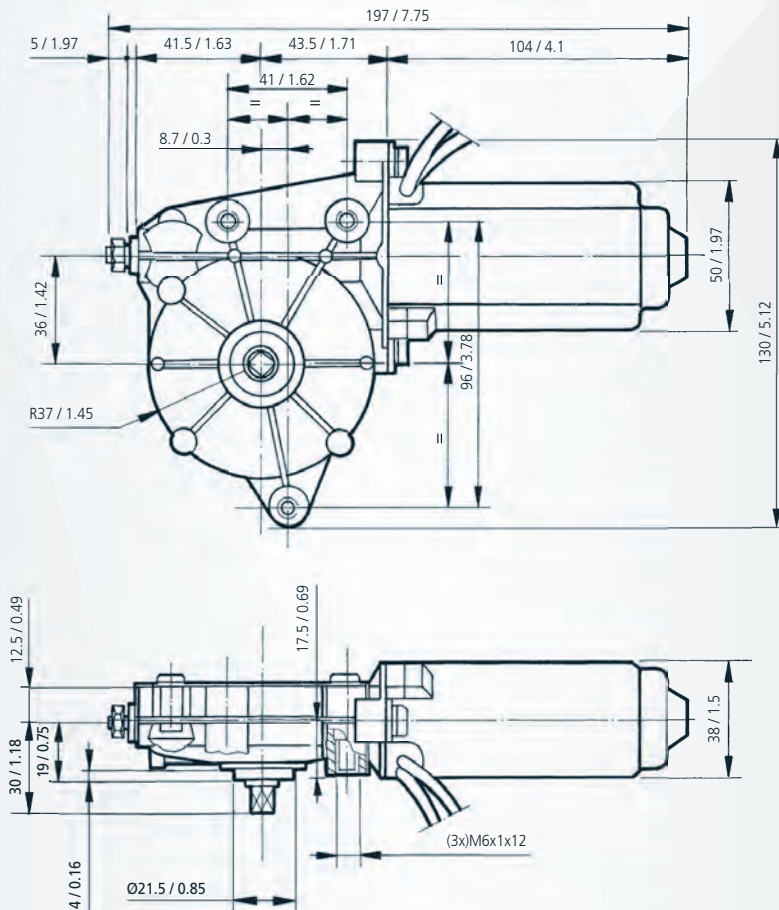
CURVAS CURVES COURBES KURVEN





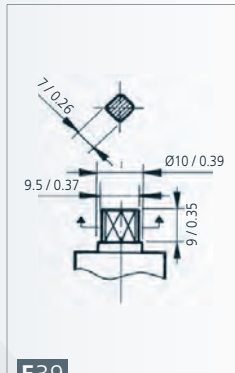
REFERENCIA REFERENCE NUMBER REFERENZNUMMERN	TENSIÓN NOMINAL NOMINAL VOLTAGE TENSION NOMINALE NENNSPANNUNG	PAR NOMINAL NOMINAL TORQUE COUPLE NOMINAL DREHMOMENT NOMINAL	VELOCIDAD NOMINAL NOMINAL SPEED VITESSE NOMINALE GESCHWINDIGKEIT NOMINAL	CORRIENTE NOMINAL NOMINAL CURRENT COURANT NOMINAL NOMINALSTROM	PAR DE ARRANQUE STARTING TORQUE COUPLE DE DÉMARRAGE ANZUGSDREHMOMENT	CORRIENTE DE ARRANQUE STARTING CURRENT COURANT DE DÉMARRAGE ANLAUFSTROM	EJE SHAFT ARBRE WELLE	CONEXIONES CONNECTIONS CONNEXIONS ANSCHLÜSSART	ESQUEMA ELÉCTRICO WIRING DIAGRAM SCHEMA ÉLECTRIQUE SCHALTBILD	RELACION DE REDUCCIÓN TRANSMISIÓN DE RATIO RAPPORT DE RÉDUCTEUR UNTERSATZUNG	PESO APROXIMADO APPROXIMATE WEIGHT POIDS APPROXIMATIF GEWICHT (ca.)	GRADO DE ESTANQUEIDAD WATERTIGHTNESS ÉTANCHÉITÉ FEUCHTIGKEITSSCHUTZKLASSE	MATERIAL RUEDA WHEEL MATERIAL MATÉRIAU ROUE MAT. DES SCHNECKENRADES	DISEÑO: A,B DESIGN: A,B DESSIN: A,B ABBILDUNG: A,B	CURVA CURVE KURVE
	Un (V)	Mn * (N.m./lbf.in)	Nn (r.p.m.)	In (A)	Ma (N.m./lbf.in)	Ia (A)				i	P (kg/lb.t)	IP			
210.0111.20.D0	12	3 / 26.5	55-75	7.5	10 / 88.5	28	E39	C20	EE16	60:1	0.95 / 2.54	IP40	PLA	A	17
210.0111.20.I0	12	3 / 26.5	55-75	7.5	10 / 88.5	28	E39	C20	EE16	60:1	0.95 / 2.54	IP40	PLA	B	17
210.0111.30.D0	24	3 / 26.5	55-75	4	10 / 88.5	14	E39	C20	EE16	60:1	0.95 / 2.54	IP40	PLA	A	17
210.0111.30.I0	24	3 / 26.5	55-75	4	10 / 88.5	14	E39	C20	EE16	60:1	0.95 / 2.54	IP40	PLA	B	17

* - (VDE 0530) S3 - 10% (10 min.)



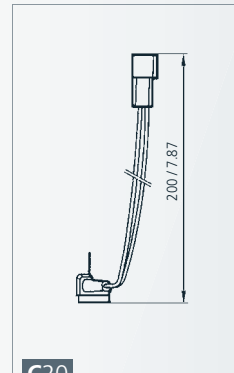
mm / inch

EJE **SHAFT** ARBRE **WELLE**



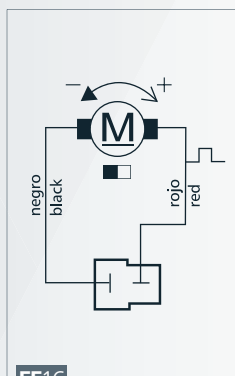
E39

CONEXIONES **CONNECTIONS** CONNEXIONS **ANSCHLUSSART**



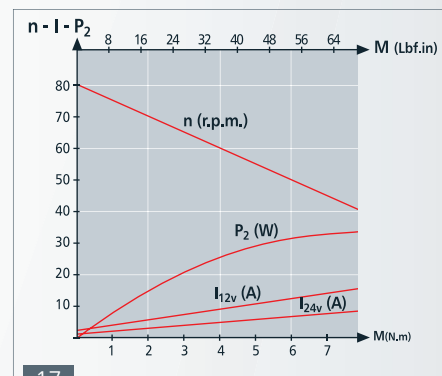
C20

ESQUEMA ELÉCTRICO **WIRING DIAGRAM** SCHÉMA ÉLECTRIQUE **SCHALTBILD**

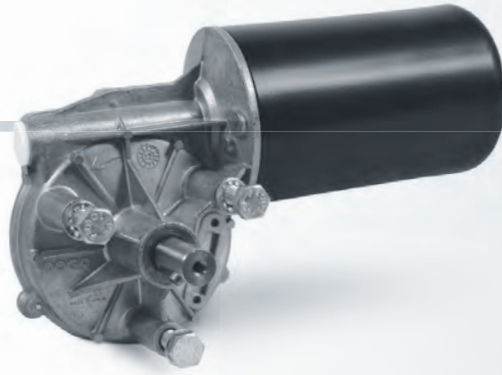


EE16

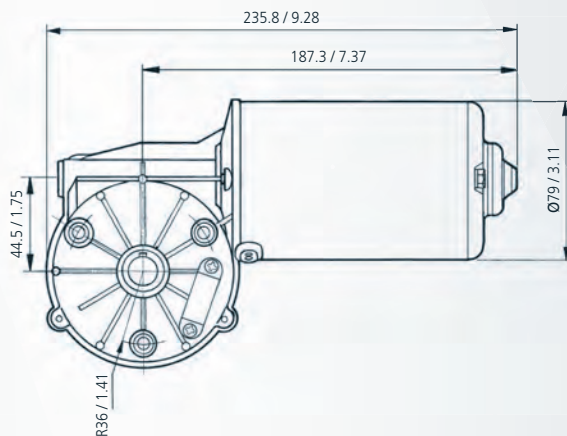
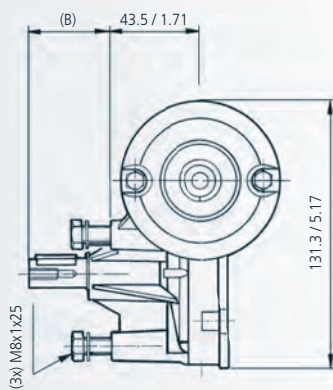
CURVAS **CURVES** COURBES **KURVEN**



17

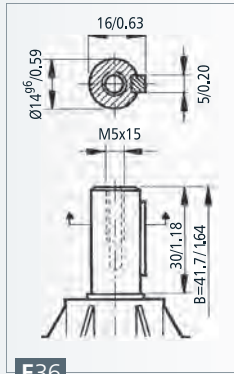


REFERENCIA REFERENCE NUMBER REFERENZNUMMERN	TENSIÓN NOMINAL NOMINAL VOLTAGE TENSION NOMINALE NENNSPANNUNG	PAR NOMINAL NOMINAL TORQUE COUPLE NOMINAL DREHMOMENT NOMINAL	VELOCIDAD NOMINAL NOMINAL SPEED VITESSE NOMINALE GESCHWINDIGKEIT NOMINAL	CORRIENTE NOMINAL NOMINAL CURRENT COURANT NOMINAL NOMINALSTROM	PAR DE ARRANQUE STARTING TORQUE COUPLE DE DÉMARRAGE ANZUGSDREHMOMENT	CORRIENTE DE ARRANQUE STARTING CURRENT COURANT DE DÉMARRAGE ANLAUFSTROM	EJE SHAFT ARBRE WELLE	CONEXIONES CONNECTIONS CONNEXIONS ANSCHLUSSART	ESQUEMA ELÉCTRICO WIRING DIAGRAM SCHEMA ÉLECTRIQUE SCHALTBILD	RELACIÓN DE REDUCCIÓN TRANSMISSION RATIO RAPPORT DE REDUCTEUR UNTERSETZUNG	PESO APROXIMADO APPROXIMATE WEIGHT POIDS APPROXIMATIF GEWICHT (ca.)	GRADO DE ESTANQUEIDAD WATERTIGHTNESS ÉTANCHÉITÉ FEUCHTIGKEITSSCHUTZKLASSE	MATERIAL RUEDA WHEEL MATERIAL MATERIAU ROUE MAT. DES SCHNECKENRADES	CURVA CURVE COURBE KURVE
	Un (V)	Mn (N.m./lbf.in)	nn (r.p.m.)	In (A)	Ma (N.m./lbf.in)	Ia (A)				i	P (kg/lb.t)	IP		
258.1710.20.00	12	15 / 133	25	10	80 / 708	42	E36	C34	F2	52:1	3.00 / 8	IP53	PLA	18
258.1710.30.00	24	15 / 133	25	5	80 / 708	21	E36	C34	F2	52:1	3.00 / 8	IP53	PLA	18
258.3710.20.00	12	15 / 133	25	10	80 / 708	42	E36	C34	EE2	52:1	3.00 / 8	IP53	PLA	18
258.3710.30.00	24	15 / 133	25	5	80 / 708	21	E36	C34	EE2	52:1	3.00 / 8	IP53	PLA	18
258.3712.20.00	12	12 / 106	40	12	80 / 708	55	E36	C34	EE2	52:1	3.00 / 8	IP53	PLA	19
258.3712.30.00	24	12 / 106	40	6	80 / 708	32	E36	C34	EE2	52:1	3.00 / 8	IP53	PLA	19
258.9026.20.00	12	12 / 106	40	12	80 / 708	55	E36	C34	EE2	52:1	3.00 / 8	IP53	CEL	19
258.9026.30.00	24	12 / 106	40	6	80 / 708	32	E36	C34	EE2	52:1	3.00 / 8	IP53	CEL	19



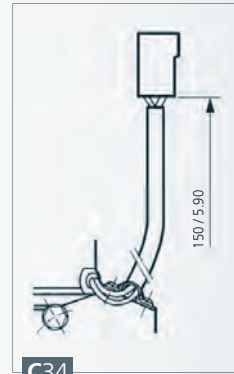
mm / inch

EJE **SHAFT** ARBRE **WELLE**



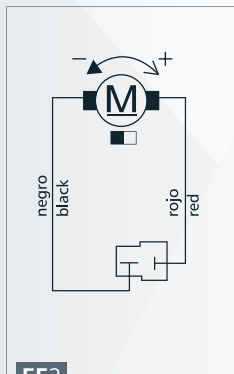
E36

CONEXIONES **CONNECTIONS** CONNEXIONS **ANSCHLUSSART**

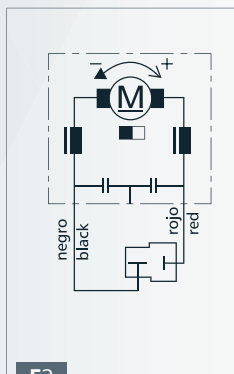


C34

ESQUEMA ELÉCTRICO **WIRING DIAGRAM** SCHEMA ÉLECTRIQUE **SCHALTBILD**

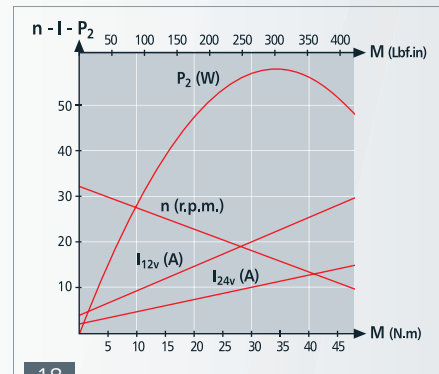


EE2

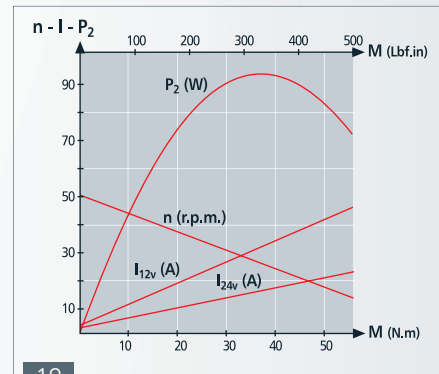


F2

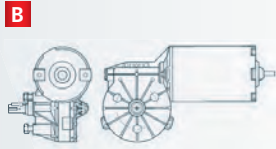
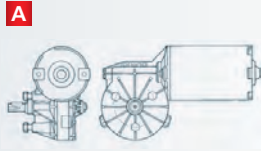
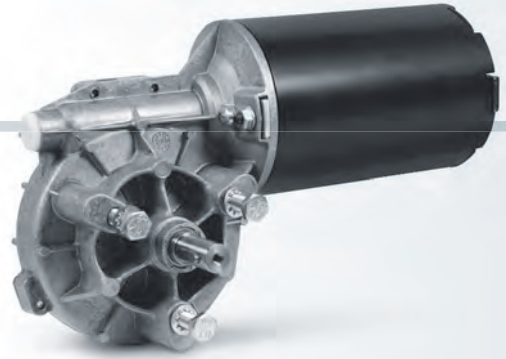
CURVAS **CURVES** COURBES **KURVEN**



18

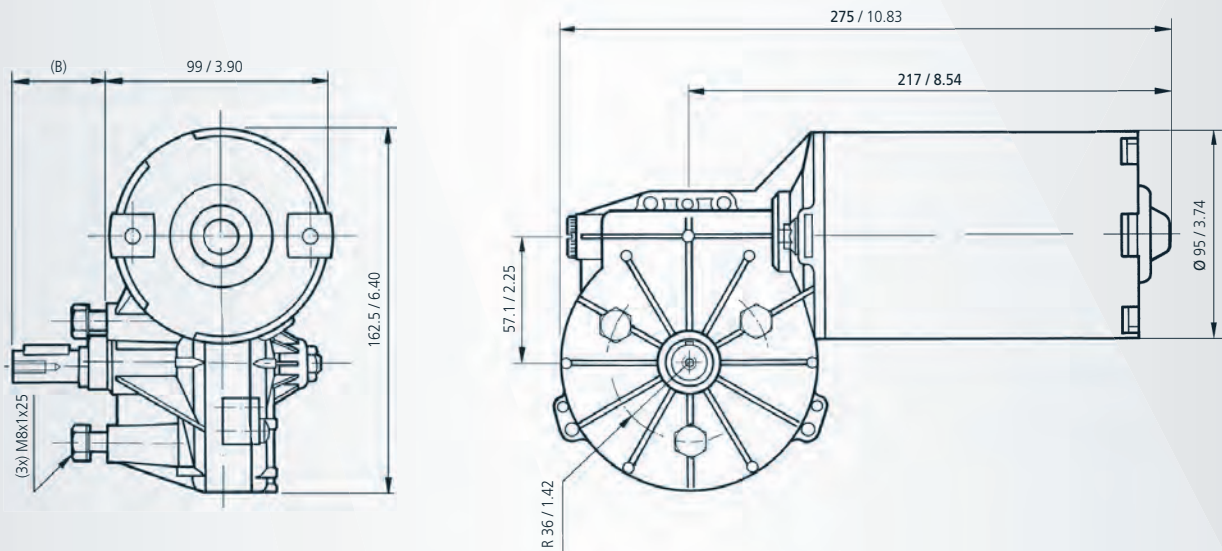


19



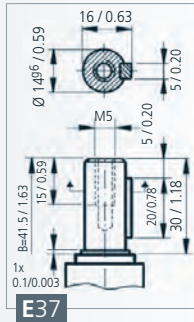
soon available IP66

REFERENCIA REFERENCE NUMBER REFERENZNUMMERN	TENSIÓN NOMINAL NOMINAL VOLTAGE TENSION NOMINALE NENNSPANNUNG	PAR NOMINAL NOMINAL TORQUE COUPLE NOMINAL DREHMOMENT NOMINAL	VELOCIDAD NOMINAL NOMINAL SPEED VITESSE NOMINALE GESCHWINDIGKEIT NOMINAL	CORRIENTE NOMINAL NOMINAL CURRENT COURANT NOMINAL NOMINALSTROM	PAR DE ARRANQUE STARTING TORQUE COUPLE DE DEMARRAGE ANZUGSDREHMOMENT	CORRIENTE DE ARRANQUE STARTING CURRENT COURANT DE DEMARRAGE ANLAUFSTROM	EJE SHAFT ARBRE WELLE	CONEXIONES CONNECTIONS CONNEXIONS ANSCHLUSSART	ESQUEMA ELÉCTRICO WIRING DIAGRAM SCHEMA ELECTRIQUE SCHALTBIID	RELACION DE REDUCCI3N TRANSMISSION RATIO RAPPORT DE REDUCTEUR UNTERSEITZUNG	PESO APROXIMADO APPROXIMATE WEIGHT POIDS APPROXIMATIF GEWICHT (ca.)	GRADO DE ESTANQUEIDAD WATER TIGHTNESS ETANCHEITE FEUCHTIGKEITSSCHUTZKLASSE	MATERIAL RUEDA WHEEL MATERIAL MATERIAU ROUE MAT. DES SCHNECKENRADES	DISEÑO: A,B,C DESIGN: A,B,C DESSIN: A,B,C ABBILDUNG: A,B,C	CURVA CURVE COURBE KURVE
	Un (V)	Mn (N.m./lbf.in)	n _n (r.p.m.)	In (A)	Ma (N.m./lbf.in)	la (A)				i	P (kg/lb.t)	IP			
259.3710.20.00	12	20 / 177	22	12	130 / 1150	60	E37	C34	EE2	50:1	5.90 / 15.80	IP53	PLA	A	20
259.3710.30.00	24	20 / 177	22	6	130 / 1150	30	E37	C34	EE2	50:1	5.90 / 15.80	IP53	PLA	A	20
259.9001.20.00	12	15 / 132.7	40	18	120 / 1062	98	E37	C34	F2	50:1	5.90 / 15.80	IP53	PLA	A	21
259.9001.30.00	24	15 / 132.7	40	9	120 / 1062	49	E37	C34	F2	50:1	5.90 / 15.80	IP53	PLA	A	21
259.9008.30.00	24	25 / 221	25	7	135 / 1195	30	E37/E51	C34	EE2	50:1	5.90 / 15.80	IP40	PLA	B	22
259.9016.30.00	24	20 / 177	22	6	130 / 1150	30	E37	C34	EE2	50:1	5.90 / 15.80	IP53	CEL	A	20

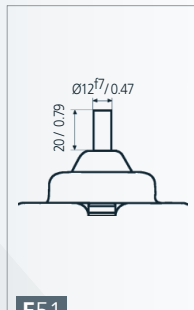


mm / inch

EJE SHAFT ARBRE WELLE

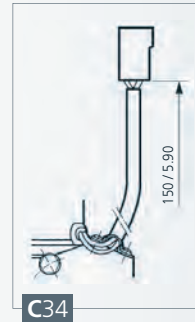


E37



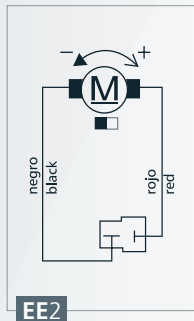
E51

CONEXIONES CONNECTIONS CONNEXIONS ANSCHLUSSART

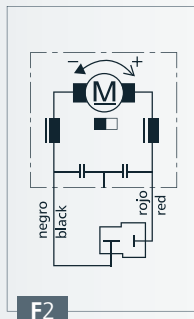


C34

ESQUEMA ELÉCTRICO WIRING DIAGRAM SCHÉMA ÉLECTRIQUE SCHALTBILD

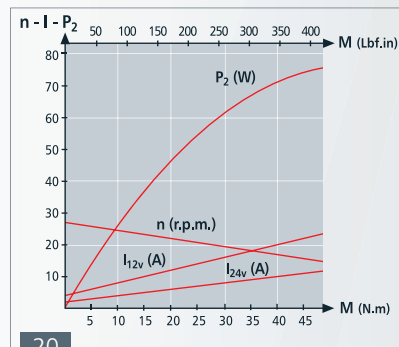


EE2

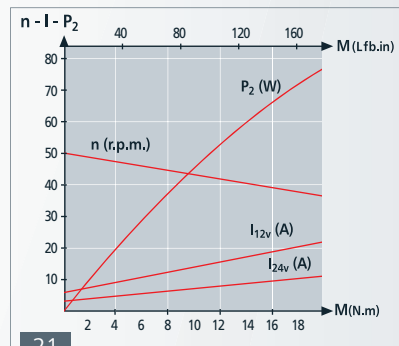


F2

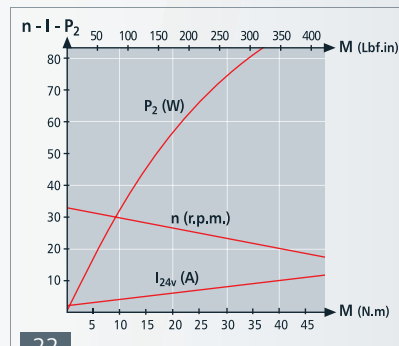
CURVAS CURVES COURBES KURVEN



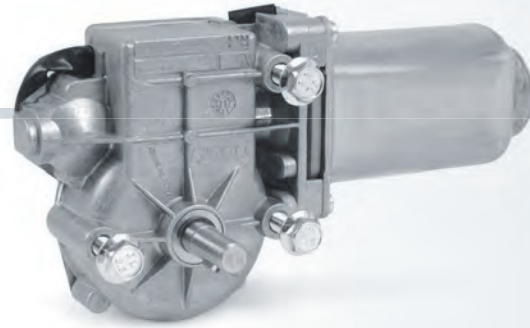
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21

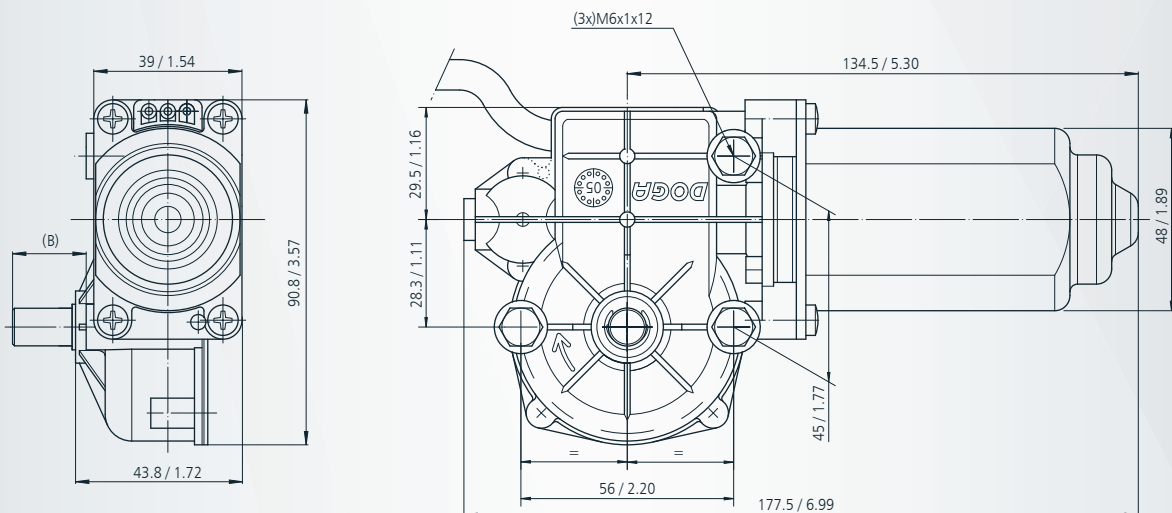


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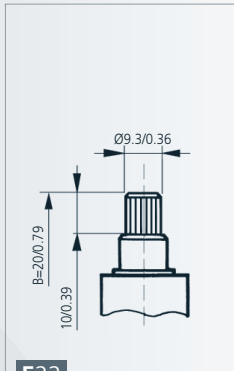
REFERENCIA REFERENCE REFERENZNUMMERN	TENSIÓN NOMINAL NOMINAL VOLTAGE TENSION NOMINALE NENNSPANNUNG	PAR NOMINAL NOMINAL TORQUE COUPLE NOMINAL DREHMOMENT NOMINAL	VELOCIDAD NOMINAL NOMINAL SPEED VITESSE NOMINALE GESCHWINDIGKEIT NOMINAL	CORRIENTE NOMINAL NOMINAL CURRENT COURANT NOMINAL NOMINAL-STROM	PAR DE ARRANQUE STARTING TORQUE COUPLE DE DÉMARRAGE ANZUGSDREHMOMENT	CORRIENTE DE ARRANQUE STARTING CURRENT COURANT DE DÉMARRAGE ANLAUFSTROM	EJE SHAFT ARBRE WELLE	CONEXIONES CONNECTIONS CONNEXIONS ANSCHLUSSART	ESQUEMA ELÉCTRICO WIRING DIAGRAM SCHEMA ÉLECTRIQUE SCHALTBIKD	RELACIÓN DE REDUCCIÓN TRANSMISSION RATIO RAPPORT DE RÉDUCTEUR UNTERSETZUNG	PESO APROXIMADO APPROXIMATE WEIGHT POIDS APPROXIMATIF GEWICHT (ca.)	GRADO DE ESTANQUEIDAD WATERTIGHTNESS ÉTANCHÉITÉ FEUCHTIGKEITSSCHUTZKLASSE	MATERIAL RUEDA WHEEL MATERIAL MATERIAU ROUE MAT. DES SCHNECKENRADES	CURVA CURVE COURBE KURVE
	Un (V)	Mn (N.m./lbf.in)	nn (r.p.m.)	In (A)	Ma (N.m./lbf.in)	Ia (A)				i	P (kg/lb.t)	IP		
316.2711.20.00	12	2 / 17.70	38	3.4	10 / 88.5	12	E22	C30	EE4	62:1	0.90/2.41	IP40	PLA	56
316.2711.30.00	24	2 / 17.70	38	1.7	10 / 88.5	6	E22	C30	EE4	62:1	0.90/2.41	IP40	PLA	56
316.2761.20.00	12	2 / 17.70	38	3.4	10 / 88.5	12	E30	C30	EE4	62:1	0.90/2.41	IP40	PLA	56
316.2761.30.00	24	2 / 17.70	38	1.7	10 / 88.5	6	E30	C30	EE4	62:1	0.90/2.41	IP40	PLA	56
316.2761.20.00E	12	2 / 17.70	38	3.4	10 / 88.5	12	E30	C30	F4	62:1	0.90/2.41	IP40	PLA	56
316.2761.30.00E	24	2 / 17.70	38	1.7	10 / 88.5	6	E30	C30	F4	62:1	0.90/2.41	IP40	PLA	56
316.9728.30.00	24	2 / 17.70	38	1.7	10 / 88.5	6	E30	C30	EE4	62:1	0.90/2.41	IP40	BRO	56
316.9731.20.00	12	*1.5/13.27	65	6.0	10 / 88.5	22	E30	C30	EE4	62:1	0.90/2.41	IP40	PLA	57
316.9731.30.00	24	*1.5/13.27	65	3.0	10 / 88.5	11	E30	C30	EE4	62:1	0.90/2.41	IP40	PLA	57

* (VDE 0530) S3 - 10% (10 min.)

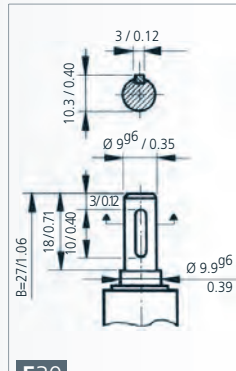


mm / inch

EJE **SHAFT** ARBRE **WELLE**

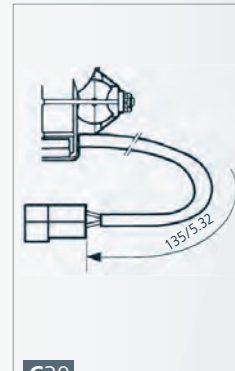


E22



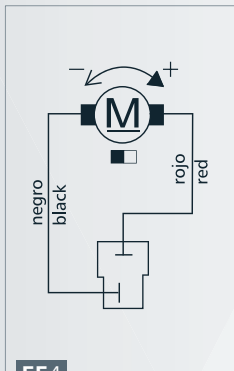
E30

CONEXIONES **CONNECTIONS** CONNEXIONS **ANSCHLUSSART**

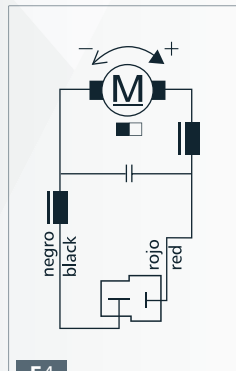


C30

ESQUEMA ELÉCTRICO **WIRING DIAGRAM** SCHÉMA ÉLECTRIQUE **SCHALTBILD**

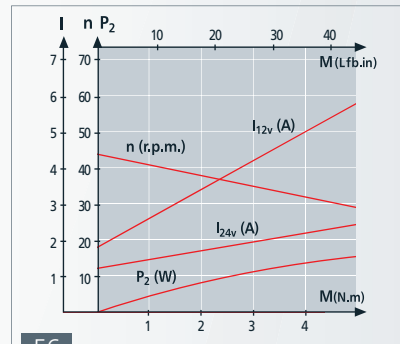


EE4

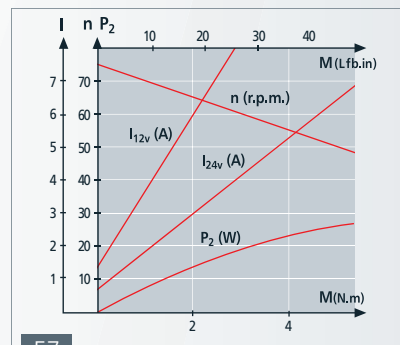


F4

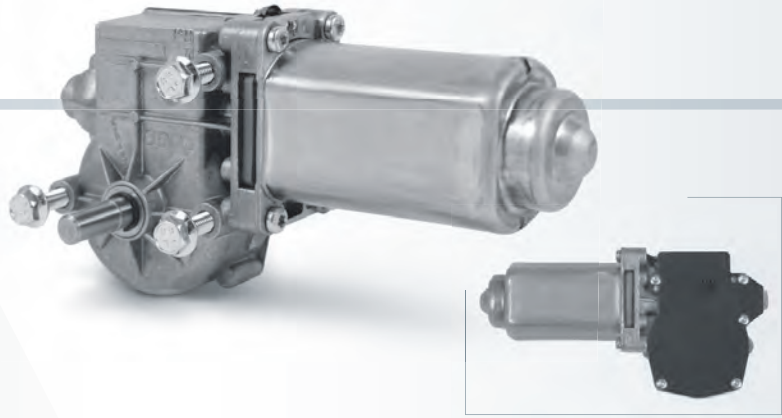
CURVAS **CURVES** COURBES **KURVEN**



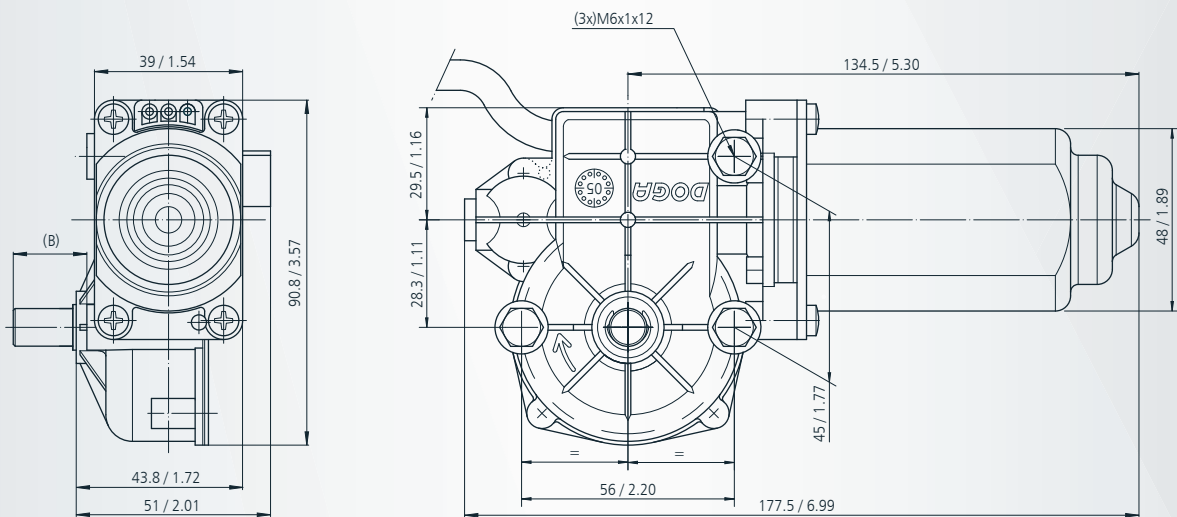
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57

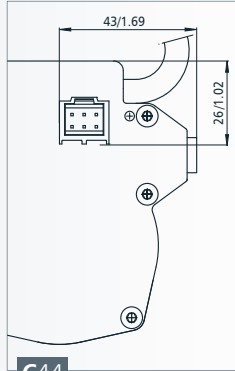
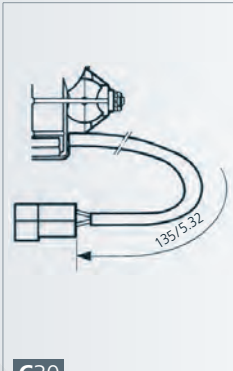


REFERENCIA REFERENCE NUMBER REFERENCE REFERENZNUMMERN	TENSIÓN NOMINAL NOMINAL VOLTAGE TENSION NOMINALE NENNSPANNUNG	PAR NOMINAL NOMINAL TORQUE COUPLE NOMINAL DREHMOMENT NOMINAL	VELOCIDAD NOMINAL NOMINAL SPEED VITESSE NOMINALE GESCHWINDIGKEIT NOMINAL	CORRIENTE NOMINAL NOMINAL CURRENT COURANT NOMINAL NOMINALSTROM	PAR DE ARRANQUE STARTING TORQUE COUPLE DE DEMARRAGE ANZUGSDREHMOMENT	CORRIENTE DE ARRANQUE STARTING CURRENT COURANT DE DEMARRAGE ANLAUFSTROM	EJE SHAFT ARBRE WELLE	CONEXIONES CONNECTIONS CONNEXIONS ANSCHLUSSART	ESQUEMA ELECTRICO WIRING DIAGRAM SCHEME ELECTRIQUE SCHALTBILO	RELACION DE REDUCCION TRANSMISSION RATIO RAPPORT DE REDUCTEUR UNTERSETZUNG	PESO APROXIMADO APPROXIMATE WEIGHT POIDS APPROXIMATIF GEWICHT (ca.)	GRADO DE ESTANQUEIDAD WATERTIGHTNESS ETANCHETE FEUCHTIGKEITSSCHUTZKLASSE	MATERIAL RUEDA WHEEL MATERIAL MATERIAU ROUE MAT. DES SCHNECKENRADES	CURVA CURVE COURBE KURVE	Nº PULSOS PULSES NUM. NUN. PULSES IMPULSANZAHL
	Un (V)	Mn (N.m./lbf.in)	nn (r.p.m.)	In (A)	Ma (N.m./lbf.in)	Ia (A)				i	P (kg/lb.t)	IP			
316.9747.20.00	12	1.5 / 13.27	65	6.0	10 / 88.5	22	E30	C30/C44	F5	62:1	0.90/2.41	IP40	PLA	57	310
316.9747.30.00	24	1.5 / 13.27	65	3.0	10 / 88.5	11	E30	C30/C44	F5	62:1	0.90/2.41	IP40	PLA	57	310
316.9751.20.00	12	2 / 17.70	38	3.4	10 / 88.5	12	E30	C30/C44	F5	62:1	0.90/2.41	IP40	PLA	56	310
316.9751.30.00	24	2 / 17.70	38	1.7	10 / 88.5	6	E30	C30/C44	F5	62:1	0.90/2.41	IP40	PLA	56	310



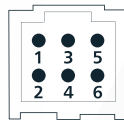
mm / inch

CONEXIONES **CONNECTIONS** CONNEXIONS **ANSCHLUSSART**

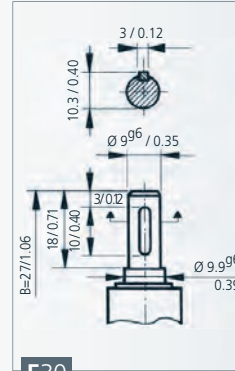


PIN FUNCTION - FUNCIÓN

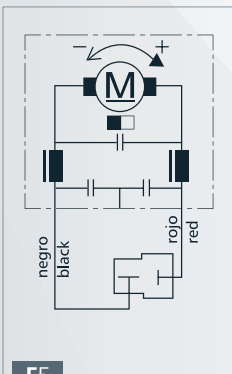
1	-
2	OUT A
3	OUT B
4	-
5	GND
6	VCC



EJE **SHAFT** ARBRE **WELLE**

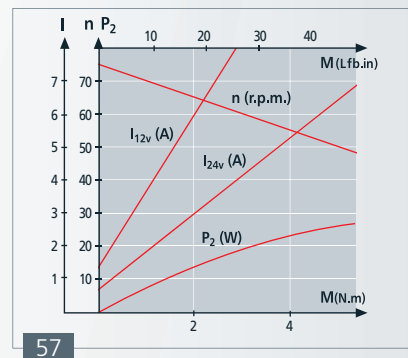
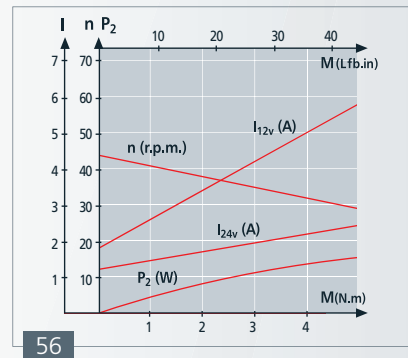


ESQUEMA ELÉCTRICO **WIRING DIAGRAM** SCHEMA ÉLECTRIQUE **SCHALTBILD**

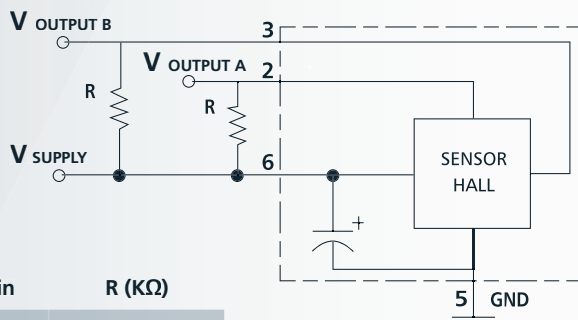


TERMINAL A	TERMINAL B	ROTATION DIRECTION
GND	VCC	↻
VCC	GND	↻

CURVAS **CURVES** COURBES **KURVEN**



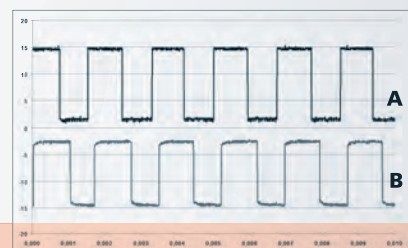
ESQUEMA SENSOR HALL **SENSOR HALL**
 SCHEMA SENSOR HALL **SCHALTBILD HALLSENSOR**

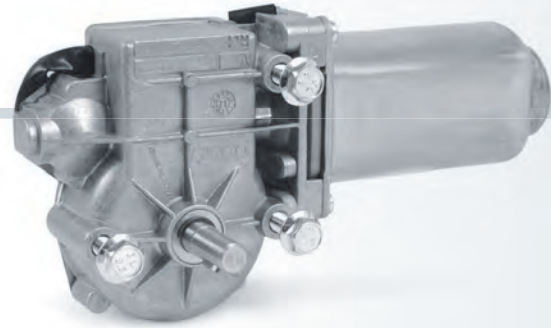


Vout = Vin R (KΩ)

5V	0.5
12V	1.2
24V	2.4

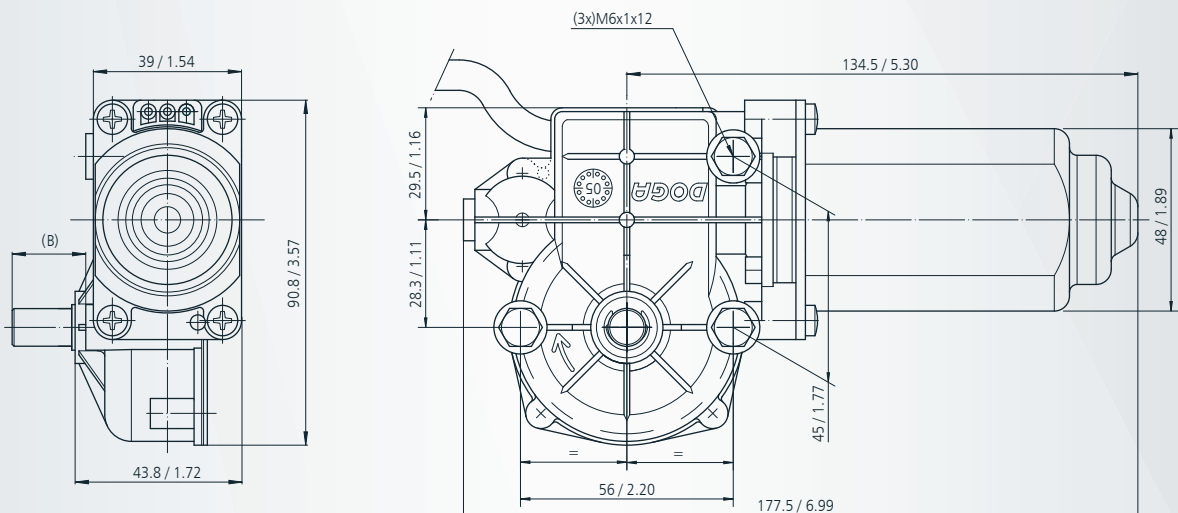
SEÑAL SALIDA **OUTPUT SIGNAL**
 SIGNALISATION DE SORTIE **AUSGANGSSIGNAL**





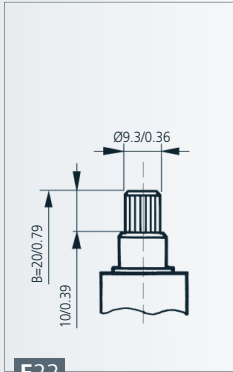
REFERENCIA REFERENCE NUMBER REFERENZNUMMERN	TENSIÓN NOMINAL NOMINAL VOLTAGE TENSION NOMINALE NENNSPANNUNG	PAR NOMINAL NOMINAL TORQUE COUPLE NOMINAL DREHMOMENT NOMINAL	VELOCIDAD NOMINAL NOMINAL SPEED VITESSE NOMINALE GESCHWINDIGKEIT NOMINAL	CORRIENTE NOMINAL NOMINAL CURRENT COURANT NOMINAL NOMINALSTROM	PAR DE ARRANQUE STARTING TORQUE COUPLE DE DÉMARRAGE ANZUGSDREHMOMENT	CORRIENTE DE ARRANQUE STARTING CURRENT COURANT DE DÉMARRAGE ANLAUFSTROM	EJE SHAFT ARBRE WELLE	CONEXIONES CONNECTIONS CONNEXIONS ANSCHLUSSART	ESQUEMA ELÉCTRICO WIRING DIAGRAM SCHEMA ÉLECTRIQUE SCHALTBIKD	RELACIÓN DE REDUCCIÓN TRANSMISSION RATIO RAPPORT DE RÉDUCTEUR UNTERSETZUNG	PESO APROXIMADO APPROXIMATE WEIGHT POIDS APPROXIMATIF GEWICHT (ca.)	GRADO DE ESTANQUEIDAD WATER TIGHTNESS ÉTANCHÉITÉ FEUCHTIGKEITSSCHUTZKLASSE	MATERIAL RUEDA WHEEL MATERIAL MATERIAU ROUE MAT. DES SCHNECKENRADES	CURVA CURVE COURBE KURVE
	Un (V)	Mn (N.m./lbf.in)	nn (r.p.m.)	In (A)	Ma (N.m./lbf.in)	Ia (A)				i	P (kg/lb.t)	IP		
317.2711.20.00	12	4 / 35	25	2.5	12 / 106	8	E22	C30	EE4	62:1	1.15/3.08	IP40	PLA	64
317.2711.30.00	24	4 / 35	25	1.1	12 / 106	4	E22	C30	EE4	62:1	1.15/3.08	IP40	PLA	64
317.2761.20.00	12	4 / 35	25	2.5	12 / 106	8	E30	C30	EE4	62:1	1.15/3.08	IP40	PLA	64
317.2761.30.00	24	4 / 35	25	1.1	12 / 106	4	E30	C30	EE4	62:1	1.15/3.08	IP40	PLA	64
317.2761.20.00E	12	4 / 35	25	2.5	12 / 106	8	E30	C30	F4	62:1	1.15/3.08	IP40	PLA	64
317.2761.30.00E	24	4 / 35	25	1.1	12 / 106	4	E30	C30	F4	62:1	1.15/3.08	IP40	PLA	64
317.9704.20.00	12	* 3.5 / 31	65	4	12 / 106	8	E65	C30	EE5	62:1	1.15/3.08	IP40	BRO	68

* (VDE 0530) S3 - 10% (10 min.)

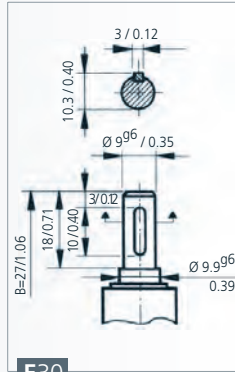


mm / inch

EJE **SHAFT** ARBRE **WELLE**

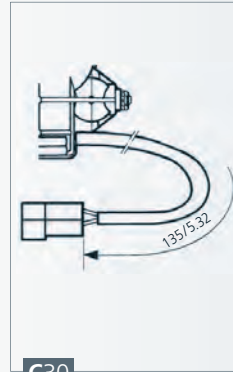


E22

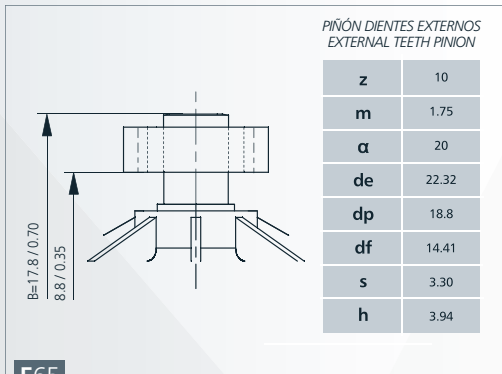


E30

CONEXIONES **CONNECTIONS** CONNEXIONS **ANSCHLUSSART**



C30

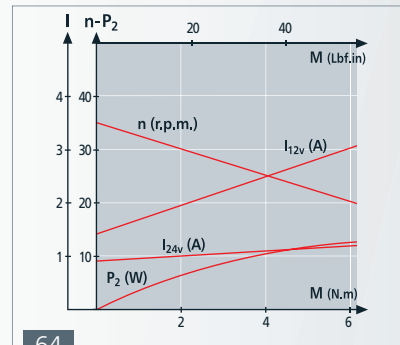


PIÑÓN DIENTES EXTERNOS
 EXTERNAL TEETH PINION

z	10
m	1.75
α	20
de	22.32
dp	18.8
df	14.41
s	3.30
h	3.94

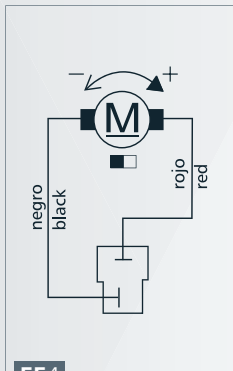
E65

CURVAS **CURVES** COURBES **KURVEN**

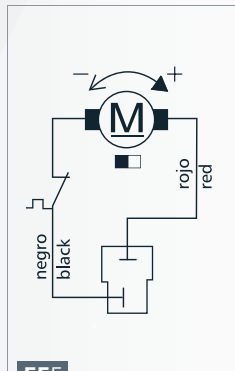


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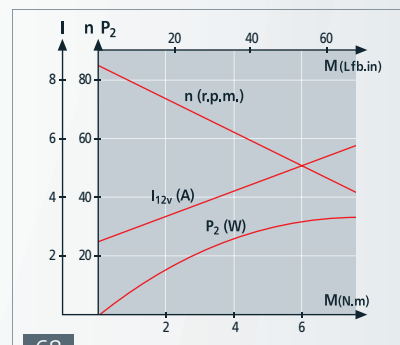
ESQUEMA ELÉCTRICO **WIRING DIAGRAM** SCHEMA ÉLECTRIQUE **SCHALTBILD**



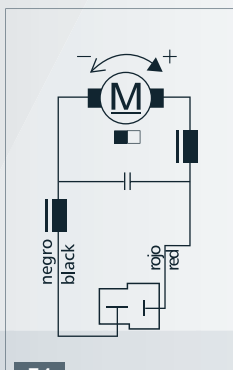
EE4



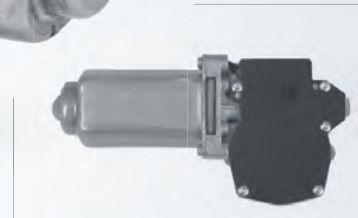
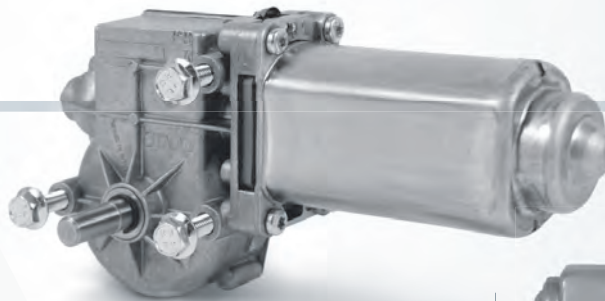
EE5



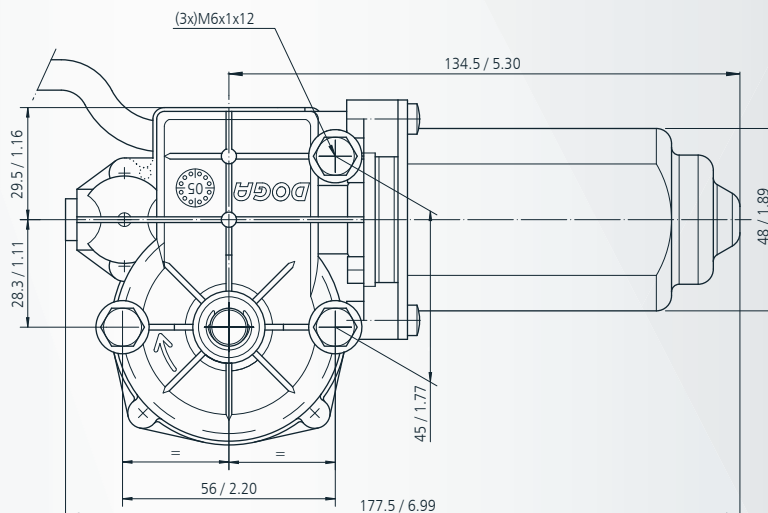
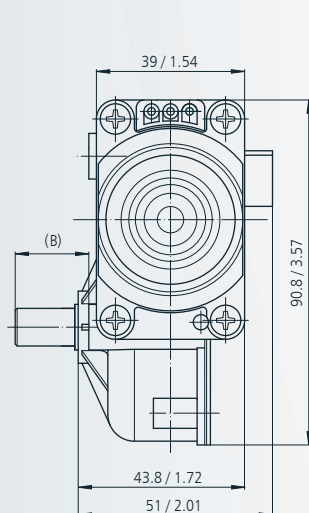
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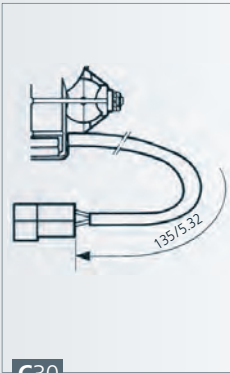
F4



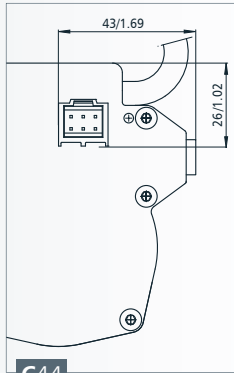
REFERENCIA REFERENCE NUMBER REFERENZNUMMERN	TENSIÓN NOMINAL NOMINAL VOLTAGE TENSION NOMINALE NENNSPANNUNG	PAR NOMINAL NOMINAL TORQUE COUPLE NOMINAL DREHMOMENT NOMINAL	VELOCIDAD NOMINAL NOMINAL SPEED VITESSE NOMINALE GESCHWINDIGKEIT NOMINAL	CORRIENTE NOMINAL NOMINAL CURRENT COURANT NOMINAL NOMINALSTROM	PAR DE ARRANQUE STARTING TORQUE COUPLE DE DEMARRAGE ANZUGSDREHMOMENT	CORRIENTE DE ARRANQUE STARTING CURRENT COURANT DE DEMARRAGE ANLAUFSTROM	EJE SHAFT ARBRE WELLE	CONEXIONES CONNECTIONS CONNEXIONS ANSCHLUSSART	ESQUEMA ELECTRICO WIRING DIAGRAM SCHEME ELECTRIQUE SCHALTBILD	RELACION DE REDUCCION TRANSMISSION RATIO RAPPORT DE REDUCTEUR UNTERSETZUNG	PESO APROXIMADO APPROXIMATE WEIGHT POIDS APPROXIMATIF GEWICHT (ca.)	GRADO DE ESTANQUEIDAD WATERTIGHTNESS ETANCHEITE FEUCHTIGKEITSSCHUTZKLASSE	MATERIAL RUEDA WHEEL MATERIAL MATERIAU ROUE MAT DES SCHNECKENRADES	CURVA CURVE COURBE KURVE	Nº PULSOS NUM. PULSES IMPULSANZAHL
	Un (V)	Mn (N.m./lbf.in)	nn (r.p.m.)	In (A)	Ma (N.m./lbf.in)	Ia (A)				i	P (kg/lb.t)	IP			
317.9706.20.00	12	4 / 35	25	2.5	12 / 106	8	E30	C30/C44	F5	62:1	1.15/3.08	IP40	PLA	64	310
317.9706.30.00	24	4 / 35	25	1.1	12 / 106	4	E30	C30/C44	F5	62:1	1.15/3.08	IP40	PLA	64	310



CONEXIONES CONNECTIONS CONNEXIONS ANSCHLUSSART



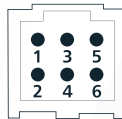
C30



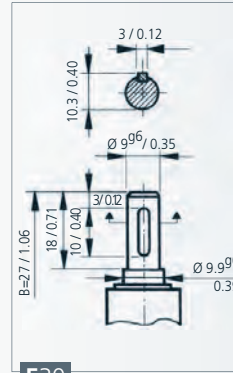
C44

PIN FUNCTION - FUNCIÓN

1	-
2	OUT A
3	OUT B
4	-
5	GND
6	VCC

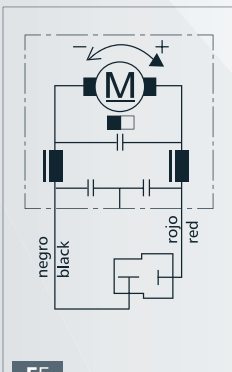


EJE SHAFT ARBRE WELLE



E30

ESQUEMA ELÉCTRICO WIRING DIAGRAM SCHEMA ÉLECTRIQUE SCHALTBIKD

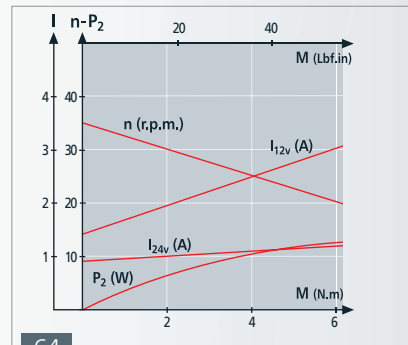


F5

TERMINAL A TERMINAL B ROTATION DIRECTION

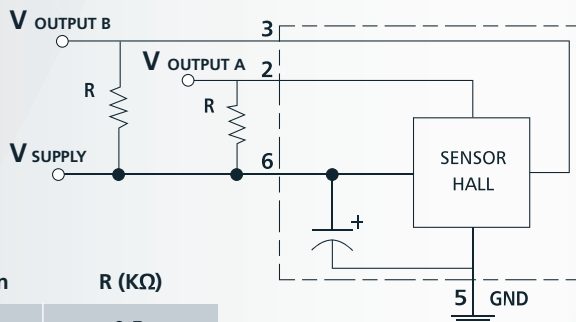
GND	VCC	↻
VCC	GND	↻

CURVAS CURVES COURBES KURVEN



64

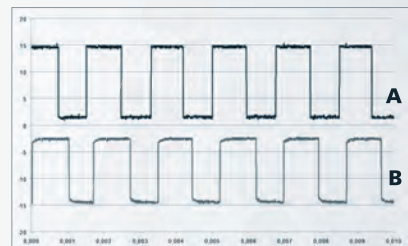
ESQUEMA SENSOR HALL SENSOR HALL
 SCHEMA SENSOR HALL SCHALTBIKD HALLSENSOR

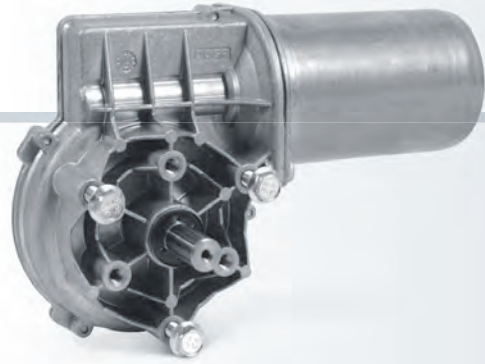
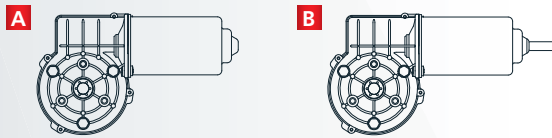


$V_{out} = V_{in}$ R (KΩ)

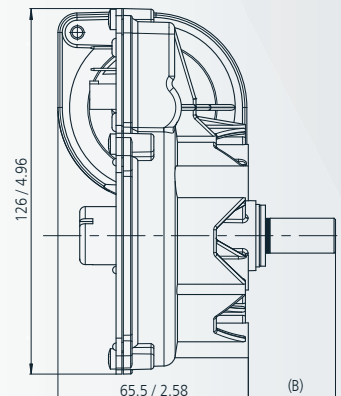
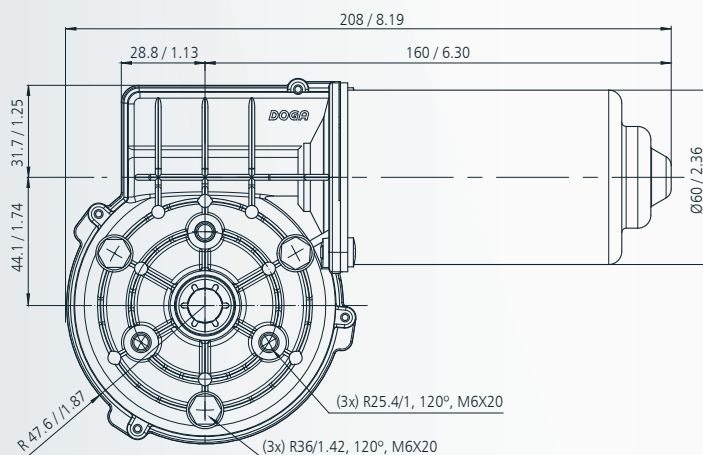
5V	0.5
12V	1.2
24V	2.4

SEÑAL SALIDA OUTPUT SIGNAL
 SIGNALISATION DE SORTIE AUSGANGSSIGNAL



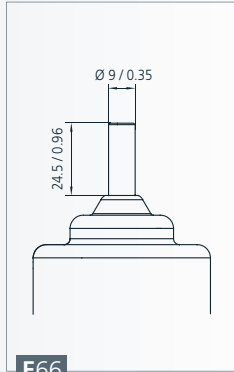
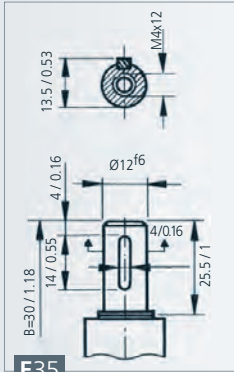


REFERENCIA REFERENCE NUMBER REFERENZNUMMERN	TENSION NOMINAL NOMINAL VOLTAGE TENSION NOMINALE NENNSPANNUNG	PAR NOMINAL NOMINAL TORQUE COUPLE NOMINAL DREHMOMENT NOMINAL	VELOCIDAD NOMINAL NOMINAL SPEED VITESSE NOMINALE GESCHWINDIGKEIT NOMINAL	CORRIENTE NOMINAL NOMINAL CURRENT COURANT NOMINAL NOMINALSTROM	PAR DE ARRANQUE STARTING TORQUE COUPLE DE DEMARRAGE ANZUGSDREHMOMENT	CORRIENTE DE ARRANQUE STARTING CURRENT COURANT DE DEMARRAGE ANLAUFSTROM	EJE SHAFT ARBRE WELLE	CONEXIONES CONNECTIONS CONNEXIONS ANSCHLUSSART	ESQUEMA ELECTRICO WIRING DIAGRAM SCHEME ELECTRIQUE SCHALTBIELD	RELACION DE REDUCCION TRANSMISSION RATIO RAPPORT DE REDUCTEUR UNTERSETZUNG	PESO APROXIMADO APPROXIMATE WEIGHT POIDS APPROXIMATIF GEWICHT (ca.)	GRADO DE ESTANQUEIDAD WATERTIGHTNESS ETANCHÉITÉ FEUCHTIGKEITSSCHUTZKASSE	MATERIAL RUEDA WHEEL MATERIAL MATERIAU ROUE MAT. DES SCHNECKENRADES	DISEÑO: A,B,C DESIGN: A,B,C DESSIN: A,B,C ABBILDUNG: A,B,C	CURVA CURVE COURBE KURVE
	Un (V)	Mn (N.m./lbf.in)	nn (r.p.m.)	In (A)	Ma (N.m./lbf.in)	Ia (A)				i	P (kg/lb.t)	IP			
319.1846.20.00	12	4 / 35	85	7	40 / 354	60	E35	C37	F5	78:2	1.7 / 4.55	IP65	PLA	A	62
319.1846.30.00	24	4 / 35	85	3.5	40 / 354	30	E35	C37	F5	78:2	1.7 / 4.55	IP65	PLA	A	62
319.1860.20.00	12	9 / 79.6	30	7	50 / 442	28	E35	C37	F5	81:1	1.7 / 4.55	IP65	PLA	A	58
319.1860.30.00	24	9 / 79.6	30	3	50 / 442	15	E35	C37	F5	81:1	1.7 / 4.55	IP65	PLA	A	58
319.1862.20.00	12	8 / 70.8	45	6	50 / 442	50	E35	C37	F5	81:1	1.7 / 4.55	IP65	PLA	A	60
319.1862.30.00	24	9 / 79.6	45	3	60 / 531	25	E35	C37	F5	81:1	1.7 / 4.55	IP65	PLA	A	61
319.3820.20.00	12	9 / 79.6	30	7	50 / 442	28	E35	C37	EE4	81:1	1.7 / 4.55	IP65	BRO	A	58
319.3820.30.00	24	9 / 79.6	30	3	50 / 442	15	E35	C37	EE4	81:1	1.7 / 4.55	IP65	BRO	A	58
319.3822.20.00	12	8 / 70.8	45	6	50 / 442	50	E35	C37	EE4	81:1	1.7 / 4.55	IP65	BRO	A	60
319.3822.30.00	24	9 / 79.6	45	3	60 / 531	25	E35	C37	EE4	81:1	1.7 / 4.55	IP65	BRO	A	61
319.3845.20.00	12	6 / 53.1	65	8	35 / 309	40	E35	C37	EE4	78:2	1.7 / 4.55	IP65	PLA	A	67
319.3845.30.00	24	6 / 53.1	65	4	40 / 354	25	E35	C37	EE4	78:2	1.7 / 4.55	IP65	PLA	A	67
319.3846.20.00	12	4 / 35	85	7	40 / 354	60	E35	C37	EE4	78:2	1.7 / 4.55	IP65	PLA	A	62
319.3846.30.00	24	4 / 35	85	3.5	40 / 354	30	E35	C37	EE4	78:2	1.7 / 4.55	IP65	PLA	A	62
319.3860.20.00	12	9 / 79.6	30	7	50 / 442	28	E35	C37	EE4	81:1	1.7 / 4.55	IP65	PLA	A	58
319.3860.30.00	24	9 / 79.6	30	3	50 / 442	15	E35	C37	EE4	81:1	1.7 / 4.55	IP65	PLA	A	58
319.3862.20.00	12	8 / 70.8	45	6	50 / 442	50	E35	C37	EE4	81:1	1.7 / 4.55	IP65	PLA	A	60
319.3862.30.00	24	9 / 79.6	45	3	60 / 531	25	E35	C37	EE4	81:1	1.7 / 4.55	IP65	PLA	A	61
319.9059.30.00	24	2.2 / 19.47	230	4	20 / 177	36	E35	C37	EE4	68:4	1.7 / 4.55	IP65	PLA	A	65
319.9128.30.00	24	2.2 / 19.47	230	4	20 / 177	36	E35/E66	C38	EE4	68:4	1.7 / 4.55	IP40	PLA	B	65
319.9137.20.00	12	2 / 17.7	155	8	20 / 177	60	E35	C38	EE4	68:4	1.7 / 4.55	IP65	PLA	A	66
319.9137.30.00	24	2 / 17.7	175	4	20 / 177	30	E35	C38	EE4	68:4	1.7 / 4.55	IP65	PLA	A	66



mm / inch

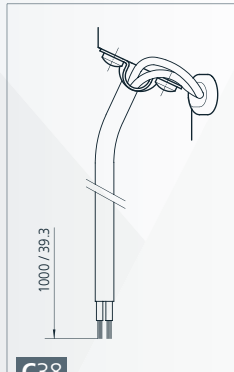
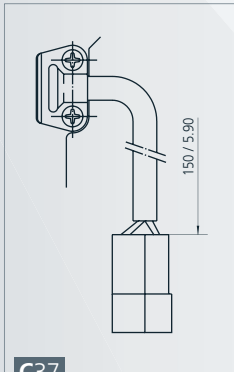
EJE SHAFT ARBRE WELLE



E35

E66

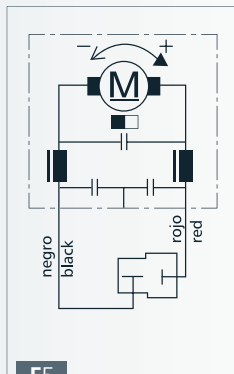
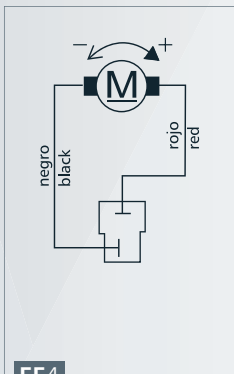
CONEXIONES CONNECTIONS
 CONNEXIONS ANSCHLUSSART



C37

C38

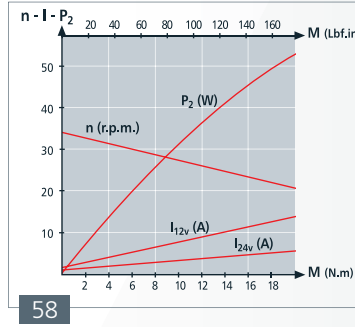
ESQUEMA ELÉCTRICO WIRING DIAGRAM
 SCHÉMA ÉLECTRIQUE SCHALTBILD



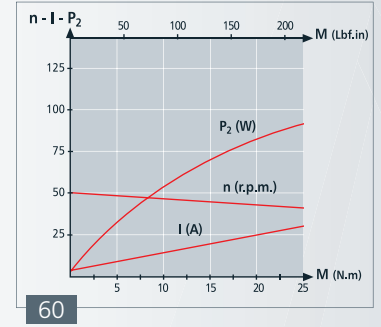
EE4

F5

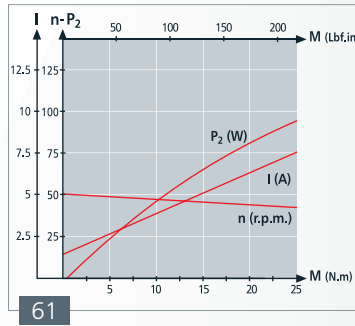
CURVAS CURVES COURBES KURVEN



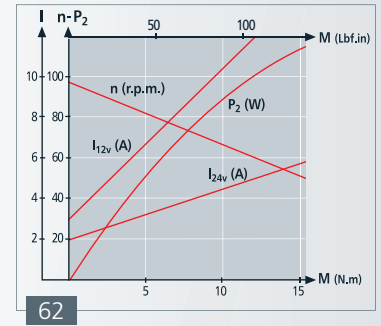
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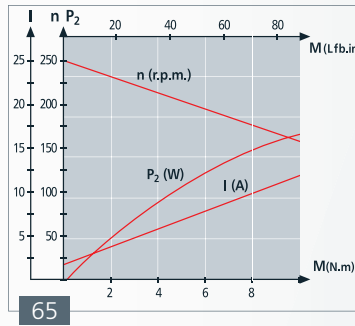
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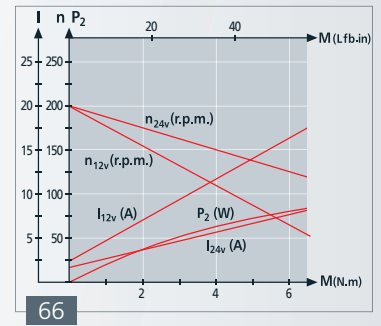
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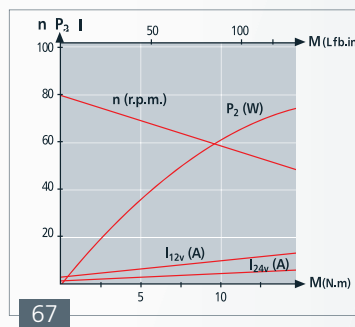
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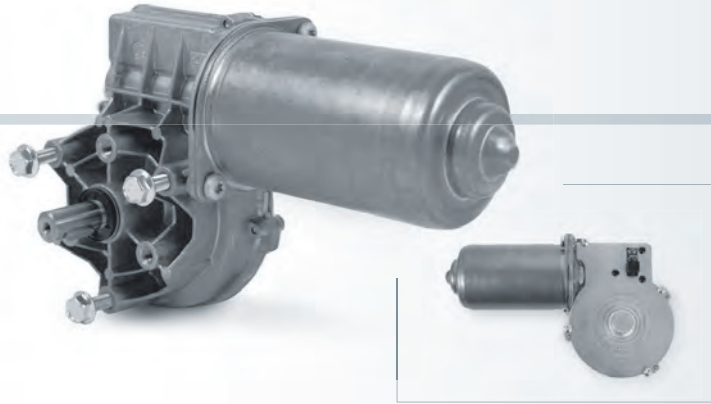
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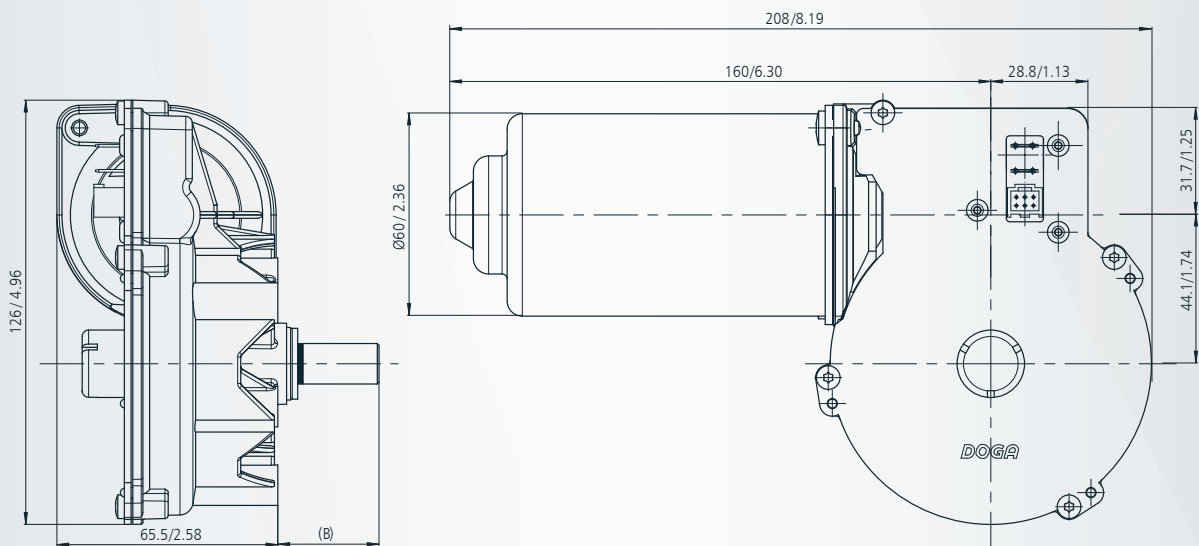
66



67

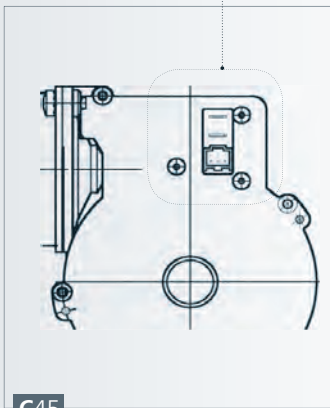


REFERENCIA REFERENCE NUMBER REFERENZ NUMMERN	TENSIÓN NOMINAL NOMINAL VOLTAGE TENSION NOMINALE NENNSPANNUNG	PAR NOMINAL NOMINAL TORQUE COUPLE NOMINAL DREHMOMENT NOMINAL	VELOCIDAD NOMINAL NOMINAL SPEED VITESSE NOMINALE GESCHWINDIGKEIT NOMINAL	CORRIENTE NOMINAL NOMINAL CURRENT COURANT NOMINAL NOMINALSTROM	PAR DE ARRANQUE STARTING TORQUE COUPLE DE DEMARRAGE ANZUGSDREHMOMENT	CORRIENTE DE ARRANQUE STARTING CURRENT COURANT DE DEMARRAGE ANLAUFSTROM	EJE SHAFT ARBRE WELLE	CONEXIONES CONNECTIONS CONNEXIONS ANSCHLUSSART	ESQUEMA ELECTRICO WIRING DIAGRAM SCHEME ELECTRIQUE SCHALTBIKD	RELACION DE REDUCCION TRANSMISSION RATIO RAPPORT DE REDUCTEUR UNTERSETZUNG	PESO APROXIMADO APPROXIMATE WEIGHT POIDS APPROXIMATIF GEWICHT (gr.)	GRADO DE ESTANQUEIDAD WATERTIGHTNESS ETANCHEITE FEUCHTIGKEITSSCHUTZKLASSE	MATERIAL RUEDA WHEEL MATERIAL MATERIAU ROUE MAT. DES SCHNECKENRADES	CURVA CURVE COURBE KURVE	Nº PULSOS PULSES NUM. NUM. POISES IMPULSANZAHL
	Un (V)	Mn (N.m./lbf.in)	nn (r.p.m.)	In (A)	Ma (N.m./lbf.in)	Ia (A)				i	P (kg/lb.t)	IP			
319.4846.20.00	12	4 / 35	85	6	40 / 354	60	E35	C45	F6	78:2	1.7 / 4.55	IP40	PLA	62	468
319.4846.30.00	24	4 / 35	85	3	40 / 354	30	E35	C45	F6	78:2	1.7 / 4.55	IP40	PLA	62	468
319.4860.20.00	12	9 / 79.6	30	7	50 / 442	28	E35	C45	F6	81:1	1.7 / 4.55	IP40	PLA	58	972
319.4860.30.00	24	9 / 79.6	30	3	50 / 442	15	E35	C45	F6	81:1	1.7 / 4.55	IP40	PLA	58	972
319.4862.20.00	12	8 / 70.8	45	6	50 / 442	50	E35	C45	F6	81:1	1.7 / 4.55	IP40	PLA	60	972
319.4862.30.00	24	9 / 79.6	45	3	60 / 531	25	E35	C45	F6	81:1	1.7 / 4.55	IP40	PLA	61	972

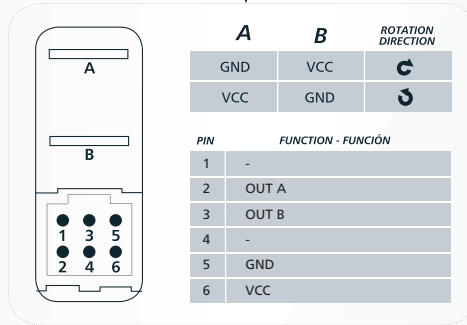


mm / inch

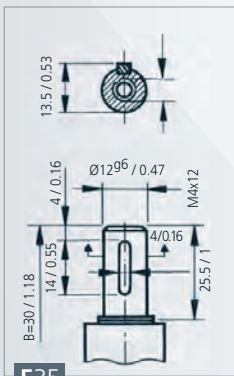
CONEXIONES **CONNECTIONS** CONNEXIONS **ANSCHLUSSART**



C45

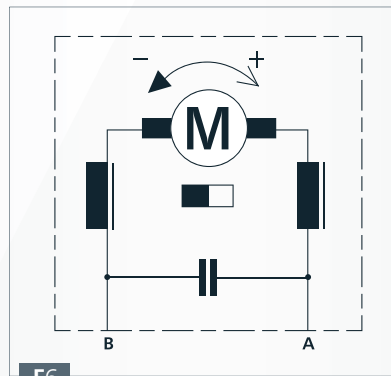


EJE **SHAFT** ARBRE **WELLE**



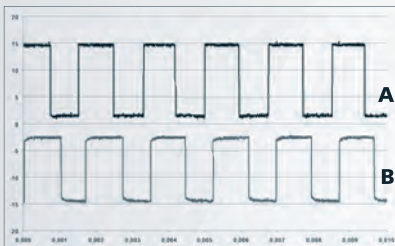
E35

ESQUEMA ELÉCTRICO **WIRING DIAGRAM**
 SCHÉMA ÉLECTRIQUE **SCHALTBIKD**



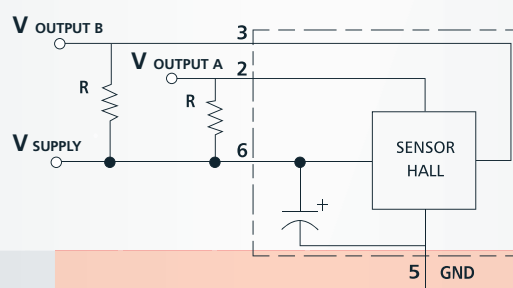
F6

SEÑAL SALIDA **OUTPUT SIGNAL**
 SIGNALISATION DE SORTIE **AUSGANGSSIGNAL**

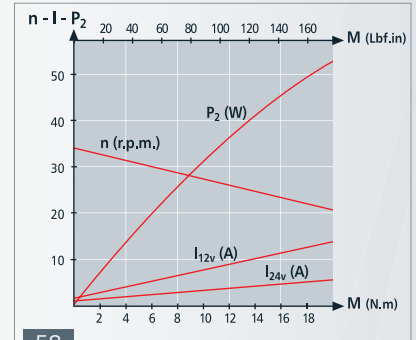


ESQUEMA SENSOR HALL **SENSOR HALL**
 SCHÉMA SENSOR HALL **SCHALTBIKD HALLSENSOR**

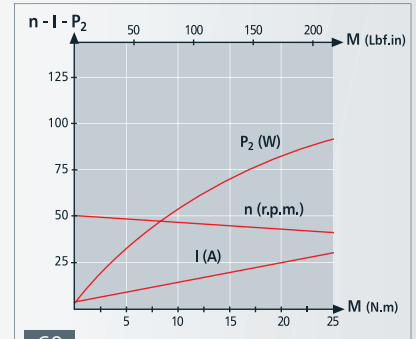
Vout = Vin	R (KΩ)
5V	0.5
12V	1.2
24V	2.4



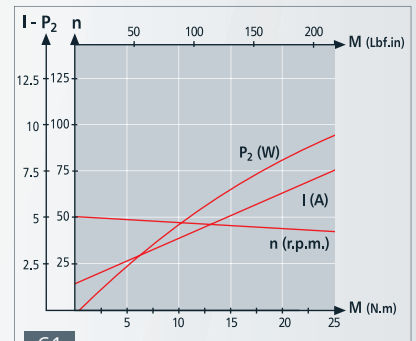
CURVAS **CURVES** COURBES **KURVEN**



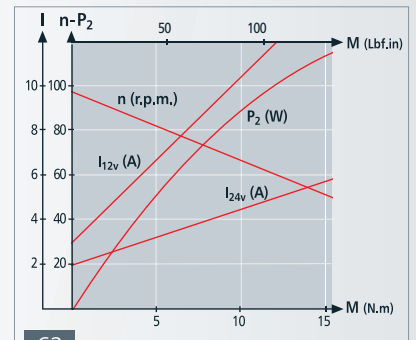
58



60



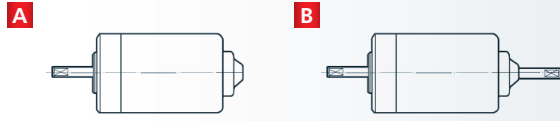
61



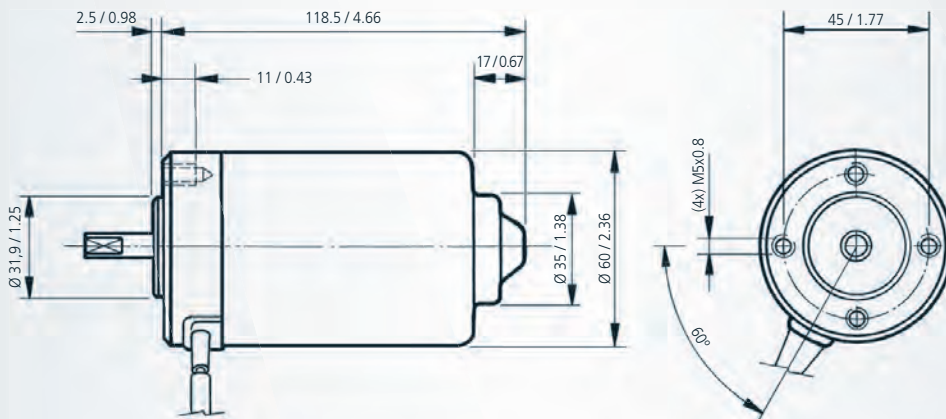
62

PLANETARY GEAR

- REDUCTORES PLANETARIOS: combinables con la serie 162. Ver sección especial en catálogo.
- PLANETARY GEARS: combinable with 162 series. See special section in catalogue.
- REDUCTEURS PLANETAIRES: combinables avec la série 162. Consultez section spécial du catalogue.
- PLANETENGETRIEBE: Mit der Reihe 162 kombinierbar. Sehen Sie Sonderabschnitt im Katalog.

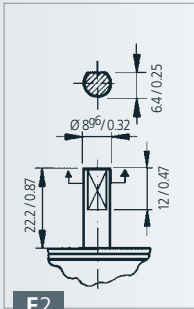


REFERENCIA REFERENCE NUMBER REFERENZNUMMERN	TENSION NOMINAL NOMINAL VOLTAGE TENSION NOMINALE NENNSPANNUNG	PAR NOMINAL NOMINAL TORQUE COUPLE NOMINAL DREHMOMENT NOMINAL	VELOCIDAD NOMINAL NOMINALS SPEED VITESSE NOMINALE GESCHWINDIGKEIT NOMINAL	CORRIENTE NOMINAL NOMINAL CURRENT COURANT NOMINAL NOMINALSTROM	PAR DE ARRANQUE STARTING TORQUE COUPLE DE DÉMARRAGE ANZUGSDREHMOMENT	CORRIENTE DE ARRANQUE STARTING CURRENT COURANT DE DÉMARRAGE ANLAUFSTROM	EJE SHAFT ARBRE WELLE	CONEXIONES CONNECTIONS CONNEXIONS ANSCHLUSSART	ESQUEMA ELECTRICO WIRING DIAGRAM SCHEMA ELECTRIQUE SCHALTBIID	PESO APROXIMADO APPROXIMATE WEIGHT POIDS APPROXIMATIF GEWICHT (ca.)	GRADO DE ESTANQUEIDAD WATERTIGHTNESS ÉTANCHEITE FEUCHTIGKEITSSCHUTZKLASSE	DISEÑO: A, B DESIGN: A, B DESSIN: A, B ABBILDUNG: A, B	CURVA CURVE COURBE KURVE
	Un (V)	Mn (N.m./lbf.in)	n _n (r.p.m.)	In (A)	Ma (N.m./lbf.in)	Ia (A)				P (kg/lb.t)	IP		
162.4101.20.00	12	0.18 / 1.59	2800	7.5	1.0 / 8.85	33	E2	C2	EE2	1.1 / 2.95	IP53	A	32
162.4101.30.00	24	0.20 / 1.77	3000	4	1.0 / 8.85	18	E2	C2	EE2	1.1 / 2.95	IP53	A	33
162.4102.20.00	12	0.20 / 1.77	2000	6	1.0 / 8.85	24	E2	C3	EE2	1.1 / 2.95	IP53	A	34
162.4102.30.00	24	0.20 / 1.77	2000	3	1.0 / 8.85	12	E2	C3	EE2	1.1 / 2.95	IP53	A	34
162.4106.20.00	12	0.18 / 1.59	2800	7.5	1.0 / 8.85	33	E4	C2	EE2	1.1 / 2.95	IP53	A	32
162.4106.30.00	24	0.20 / 1.77	3000	4	1.0 / 8.85	18	E4	C2	EE2	1.1 / 2.95	IP53	A	33
162.4107.30.00E	24	0.20 / 1.77	2000	3	1.0 / 8.85	12	E5	C5	F3	1.1 / 2.95	IP53	A	34
162.4108.20.00	12	0.18 / 1.59	1500	5	0.8 / 7.08	17	E2	C3	EE2	1.1 / 2.95	IP53	A	35
162.4108.30.00	24	0.18 / 1.59	1500	2.5	0.8 / 7.08	8.5	E2	C3	EE2	1.1 / 2.95	IP53	A	35
162.4109.30.00	24	0.18 / 1.59	1500	2.5	0.8 / 7.08	8.5	E38	C35	EE3	1.1 / 2.95	IP53	A	35
162.4109.50.00	48	0.18 / 1.59	1500	1,3	0.8 / 7.08	4,5	E38	C35	EE3	1.1 / 2.95	IP53	A	35
162.4113.30.00	24	0.12 / 1.06	3000	2.5	1.0 / 8.85	15	E3	C4	F3	1.1 / 2.95	IP40	A	36
162.4116.30.00	24	0.20 / 1.77	3000	4	1.0 / 8.85	18	E58/E57	C2	EE2	1.1 / 2.95	IP40	B	33

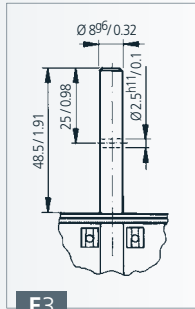


mm / inch

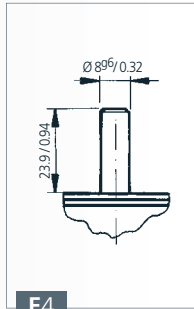
EJE SHAFT ARBRE WELLE



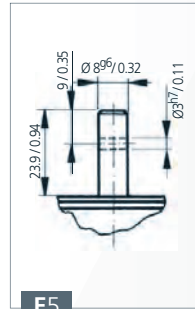
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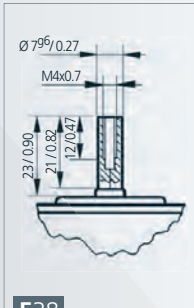
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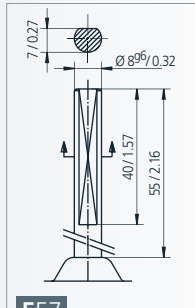
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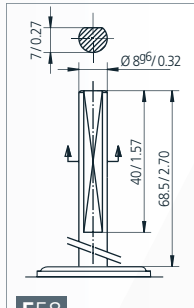
E5



E38

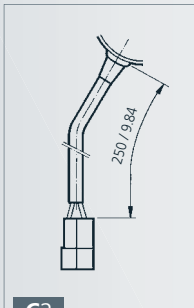


E57

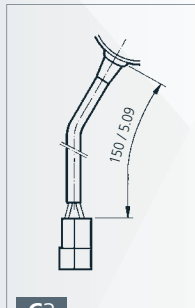


E58

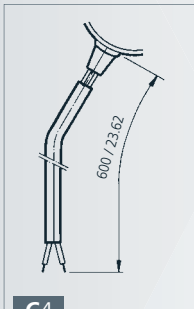
CONEXIONES CONNECTIONS
CONNEXIONS ANSCHLUSSART



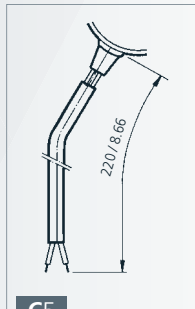
C2



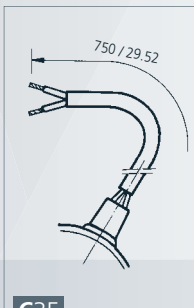
C3



C4

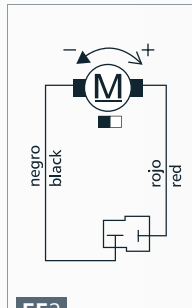


C5

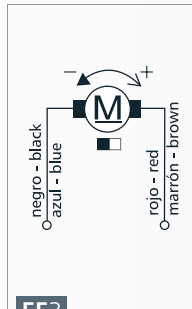


C35

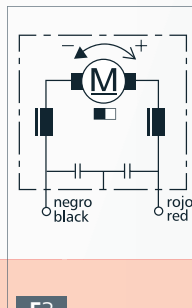
ESQUEMA ELÉCTRICO WIRING DIAGRAM
SCHEMA ÉLECTRIQUE SCHALTBIKD



EE2

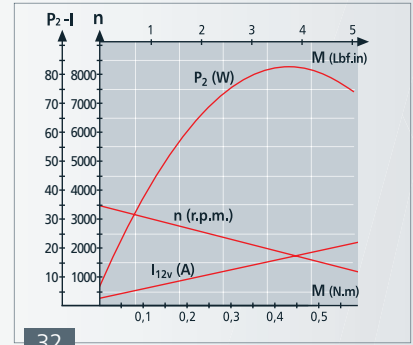


EE3

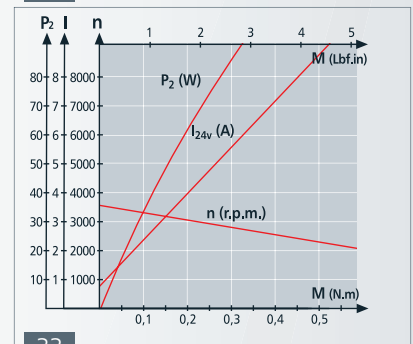


F3

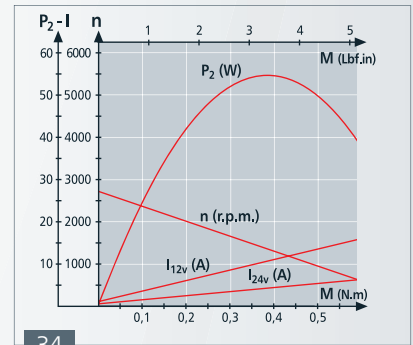
CURVAS CURVES COURBES KURVEN



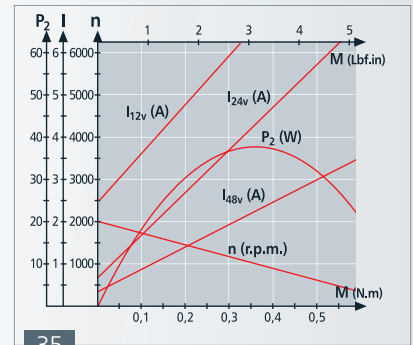
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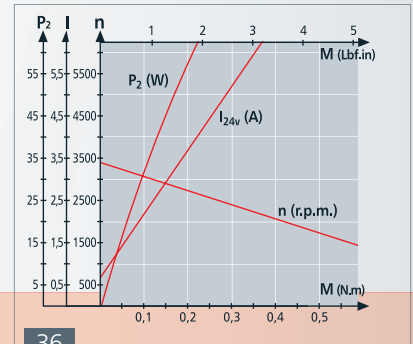
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34



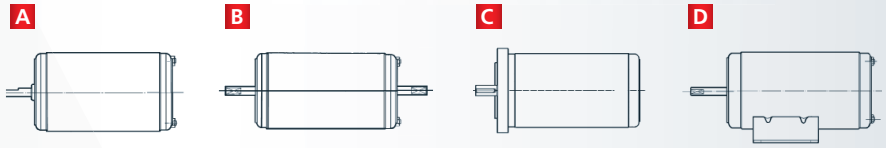
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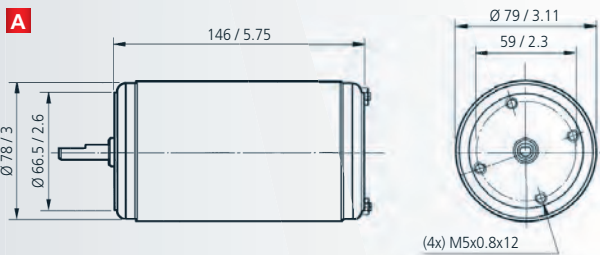
36

PLANETARY GEAR

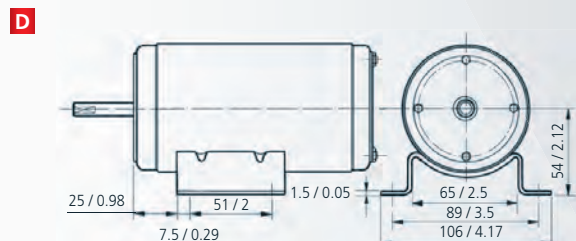
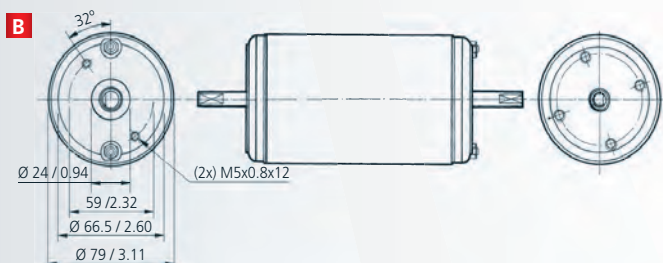
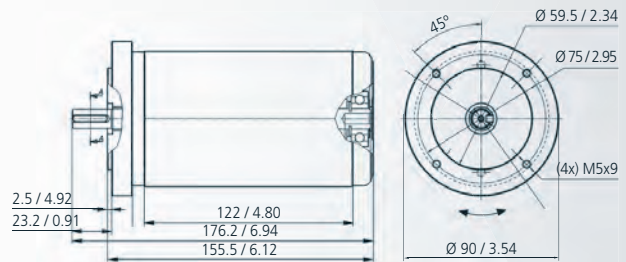
- REDUCTORES PLANETARIOS: combinables con la serie 168. Ver sección especial en catálogo.
- PLANETARY GEARS: combinable with 168 series. See special section in catalogue.
- REDUCTEURS PLANETAIRES: combinables avec la série 168. Consultez section spécial du catalogue.
- PLANETENGETRIEBE: Mit der Reihe 168 kombinierbar. Sehen Sie Sonderabschnitt im Katalog.



REFERENCIA REFERENCE REFERENZNUMMERN	TENSIÓN NOMINAL NOMINAL VOLTAGE NENNSPANNUNG	PAR NOMINAL NOMINAL TORQUE COUPLE NOMINAL DREHMOMENT NOMINAL	VELOCIDAD NOMINAL NOMINAL SPEED VITESSE NOMINALE GESCHWINDIGKEIT NOMINAL	CORRIENTE NOMINAL NOMINAL CURRENT COURANT NOMINAL NOMINALSTROM	PAR DE ARRANQUE STARTING TORQUE COUPLE DE DÉMARRAGE ANZUGSDREHMOMENT	CORRIENTE DE ARRANQUE STARTING CURRENT COURANT DE DÉMARRAGE ANLAUFSTROM	EJE SHAFT ARBRE WELLE	CONEXIONES CONNECTIONS CONNEXIONS ANSCHLUSSART	ESQUEMA ELÉCTRICO WIRING DIAGRAM SCHEMA ELECTRIQUE SCHALTBIID	PESO APROXIMADO APPROXIMATE WEIGHT POIDS APPROXIMATIF GEWICHT (ca)	GRADO DE ESTANQUEIDAD WATERTIGHTNESS ÉTANCHÉITÉ FEUCHTIGKEITSSCHUTZKLASSE	DISEÑO: A-B DESIGN: A-B DESSIN: A-B ABBILDUNG: A-B	CURVA CURVE COURBE KURVE
	Un (V)	Mn (N.m./lbf.in)	Pn (r.p.m.)	In (A)	Ma (N.m./lbf.in)	Ia (A)				P (kg/lb.t)	IP		
168.4105.20.04	12	0.50 / 4.42	1900	14	3.0 / 26.5	64	E8	C8	EE1	2.6 / 6.9	IP40	A	37
168.4105.30.04	24	0.50 / 4.42	1900	7	3.0 / 26.5	32	E8	C8	EE1	2.6 / 6.9	IP40	A	37
168.4108.20.04	12	0.45 / 3.98	2800	19	3.0 / 26.5	100	E9	C9	EE4	2.6 / 6.9	IP40	A	39
168.4108.30.04	24	0.45 / 3.98	2800	10	3.0 / 26.5	52	E9	C9	EE4	2.6 / 6.9	IP40	A	39
168.4111.20.04	12	0.75 / 6.64	1000	11	2.8 / 24.8	36	E11	C9	EE2	2.6 / 6.9	IP40	A	40
168.4111.30.04	24	0.75 / 6.64	1000	5.5	2.8 / 24.8	18	E11	C9	EE2	2.6 / 6.9	IP40	A	40
168.4112.20.04	12	0.70 / 6.19	1500	14	3.0 / 26.5	56	E12	C11	EE2	2.6 / 6.9	IP40	A	42
168.4112.30.04	24	0.70 / 6.19	1500	7	3.0 / 26.5	28	E12	C11	EE2	2.6 / 6.9	IP40	A	42
168.4115.30.04	24	0.50 / 4.42	3000	11	3.0 / 26.5	70	E13/E41	C13	EE2	2.6 / 6.9	IP40	A	41
168.4116.20.04	12	0.50 / 4.42	1900	14	3.0 / 26.5	64	E8	C8	EE1	2.6 / 6.9	IP40	D	37
168.4116.30.04	24	0.50 / 4.42	1900	7	3.0 / 26.5	32	E8	C8	EE1	2.6 / 6.9	IP40	D	37
168.4121.30.04E	24	0.50 / 4.42	3000	11	3.0 / 26.5	70	E11/E11	C13	F2	2.6 / 6.9	IP40	B	41
168.4122.30.04	24	0.75 / 6.64	1000	5.5	2.8 / 24.8	18	E13/E41	C13	EE2	2.6 / 6.9	IP40	A	40
168.4123.20.04	12	0.50 / 4.42	2100	16	3.0 / 26.5	76	E13/E41	C13	EE2	2.6 / 6.9	IP40	A	43
168.4123.30.04	24	0.50 / 4.42	2100	8	3.0 / 26.5	38	E13/E41	C13	EE2	2.6 / 6.9	IP40	A	43
168.4134.30.04	24	0.30 / 2.65	750	1.5	1.5 / 13.3	7	E59	C9	EE2	2.6 / 6.9	IP40	A	44
168.4136.30.00E	24	0.75 / 6.64	1000	5.5	2.8 / 24.8	18	E63	C42	F2	2.6 / 6.9	IP40	C	40

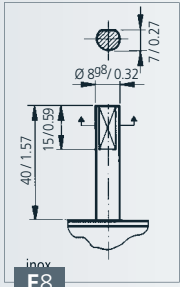


C Flange according to IEC 63 B14 - Puntos de anclaje según IEC 63 B14

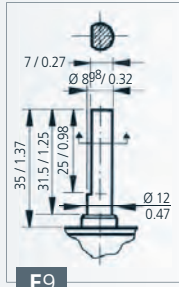


mm / inch

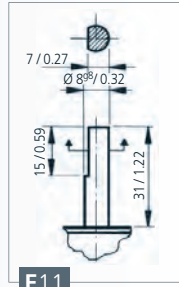
EJE SHAFT ARBRE WELLE



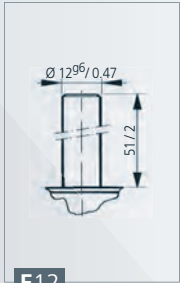
E8



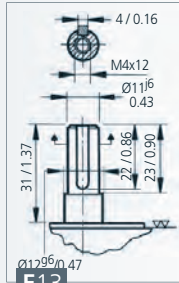
E9



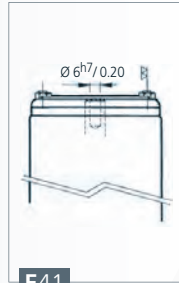
E11



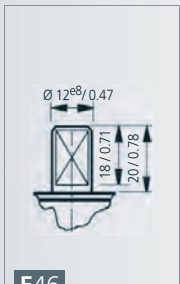
E12



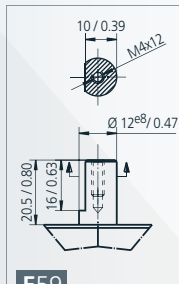
E13



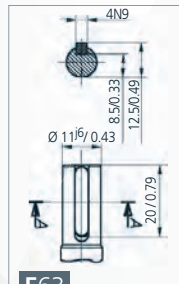
E41



E46

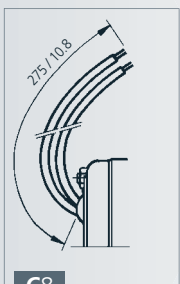


E59

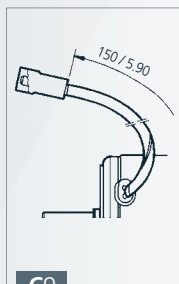


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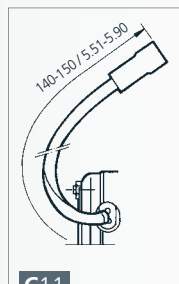
**ESQUEMA ELÉCTRICO WIRING DIAGRAM
SCHÉMA ÉLECTRIQUE SCHALTBLD**



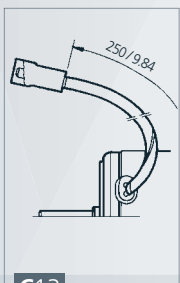
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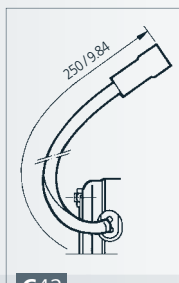
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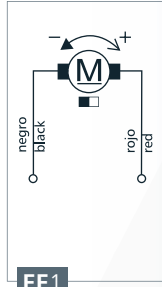


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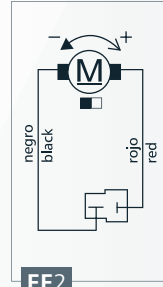


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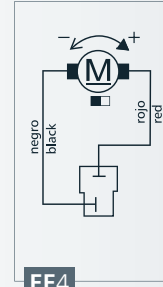
CONEXIONES CONNECTIONS CONNEXIONS ANSCHLUSSART



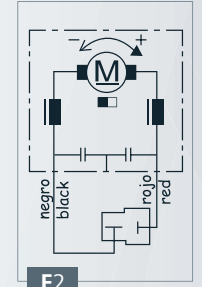
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EE2

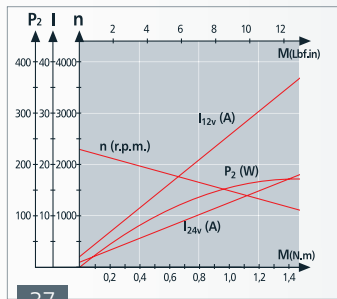


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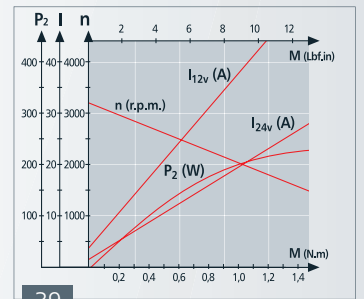


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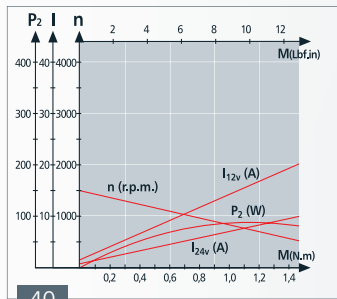
CURVAS CURVES COURBES KURVEN



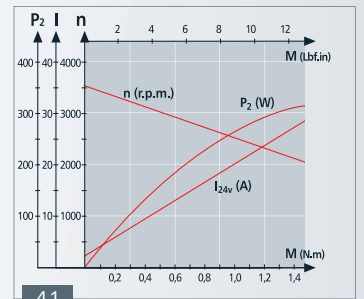
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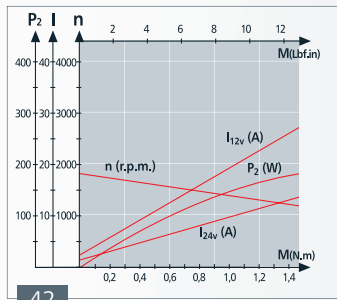
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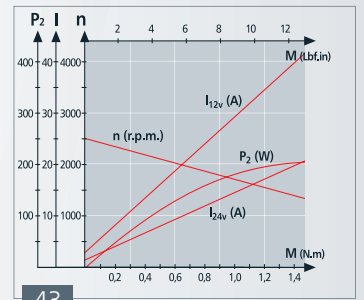
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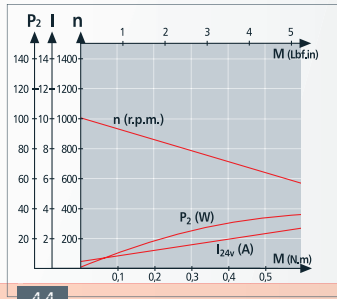
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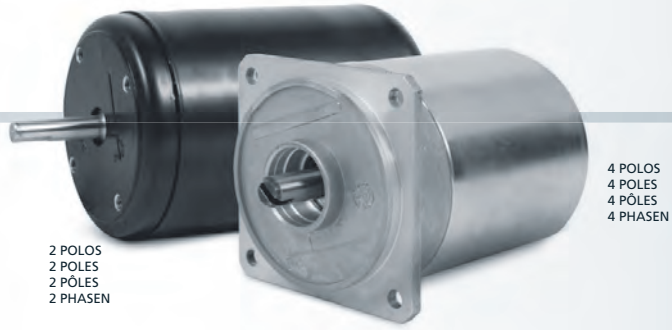
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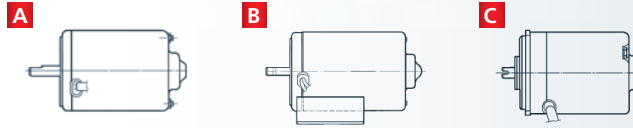
PLANETARY GEAR

- REDUCTORES PLANETARIOS: combinables con la serie 169. Ver sección especial en catálogo.
- PLANETARY GEARS: combinable with 169 series. See special section in catalogue.
- REDUCTEURS PLANETAIRES: combinables avec la série 169. Consultez section spécial du catalogue.
- PLANETENGETRIEBE: Mit der Reihe 169 kombinierbar. Sehen Sie Sonderabschnitt im Katalog.

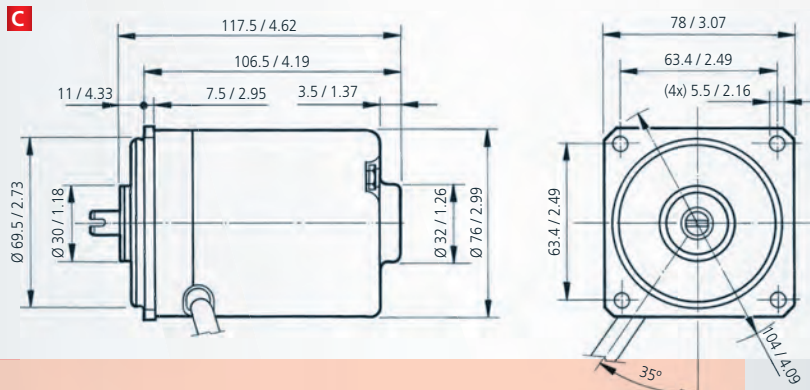
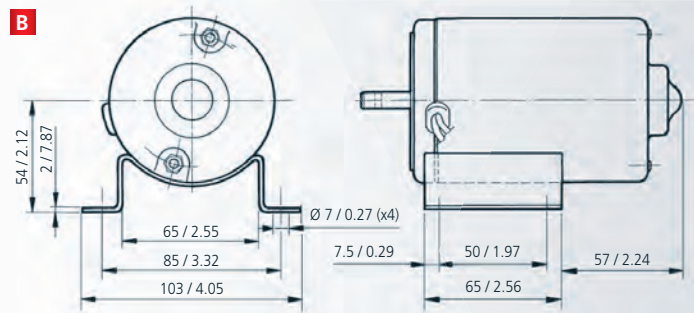
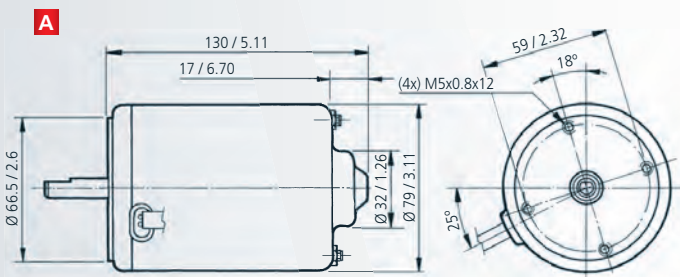


2 POLOS
2 POLES
2 PÔLES
2 PHASEN

4 POLOS
4 POLES
4 PÔLES
4 PHASEN

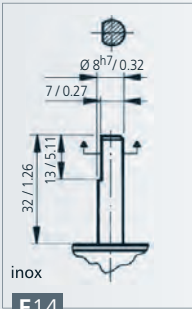


REFERENCIA REFERENCE NUMBER REFERENZNUMMERN	TENSION NOMINAL NOMINAL VOLTAGE TENSION NOMINALE NENNSPANNUNG	PAR NOMINAL NOMINAL TORQUE COUPLE NOMINAL DREHMOMENT NOMINAL	VELOCIDAD NOMINAL NOMINAL SPEED VITESSE NOMINALE GESCHWINDIGKEIT NOMINAL	CORRIENTE NOMINAL NOMINAL CURRENT COURANT NOMINAL NOMINALSTROM	PAR DE ARRANQUE STARTING TORQUE COUPLE DE DÉMARRAGE ANZUGSDREHMOMENT	CORRIENTE DE ARRANQUE STARTING CURRENT COURANT DE DÉMARRAGE ANLAUFSTROM	EJE SHAFT ARBRE WELLE	CONEXIONES CONNECTIONS CONNEXIONS ANSCHLUSSE	ESQUEMA ELÉCTRICO WIRING DIAGRAM SCHEMA ÉLECTRIQUE SCHALTBILD	PESO APROXIMADO APPROXIMATE WEIGHT POIDS APPROXIMATIF GEWICHT (ca.)	GRADO DE ESTANQUEIDAD WATERTIGHTNESS ÉTANCHEITE FEUCHTIGKEITSSCHUTZKLASSE	DISEÑO: A, B DESIGN: A, B DESSIN: A, B ABBILDUNG: A, B	CURVA CURVE COURBE KURVE
	Un (V)	Mn (N.m./lbf.in)	n _n (r.p.m.)	I _n (A)	Ma (N.m./lbf.in)	I _a (A)				P (kg/lb.t)	IP		
169.4106.20.04	12	0.40 / 3.54	1900	11	2.0 / 17.7	46	E14	C14	EE2	2.0 / 5.35	IP53	A	45
169.4106.30.04	24	0.40 / 3.54	1900	5.5	2.0 / 17.7	23	E14	C14	EE2	2.0 / 5.35	IP53	A	45
169.4107.20.04	12	0.40 / 3.54	2900	16	2.2 / 19.4	100	E15	C15	EE2	2.0 / 5.35	IP53	A	46
169.4107.30.04	24	0.40 / 3.54	2900	8	2.2 / 19.4	50	E15	C15	EE2	2.0 / 5.35	IP53	A	46
169.4110.20.04	12	0.40 / 3.54	1500	9	2.0 / 17.7	38	E16	C16	EE6	2.0 / 5.35	IP53	A	47
169.4110.30.04	24	0.40 / 3.54	1500	4.5	2.0 / 17.7	19	E16	C16	EE6	2.0 / 5.35	IP53	A	47
169.4113.20.09	12	0.40 / 3.54	3200	16	2.2 / 19.4	85	E18	C18	EE8	1.37 / 3.67	IP53	C	48
169.4113.30.09	24	0.40 / 3.54	3200	8	2.2 / 19.4	43	E18	C18	EE8	1.37 / 3.67	IP53	C	48
169.4122.20.09	12	0.30 / 2.65	4600	16	1.8 / 15.9	100	E18	C18	EE8	1.37 / 3.67	IP53	C	49
169.4124.20.04	12	0.40 / 3.54	1900	11	2.0 / 17.7	46	E60	C14	EE2	2.0 / 5.35	IP53	B	45
169.4124.30.04	24	0.40 / 3.54	1900	5.5	2.0 / 17.7	23	E60	C14	EE2	2.0 / 5.35	IP53	B	45
169.4128.20.04	12	0.40 / 3.54	1500	9	2.0 / 17.7	38	E64	C26	EE1	2.0 / 5.35	IP53	B	47

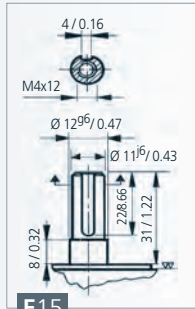


mm / inch

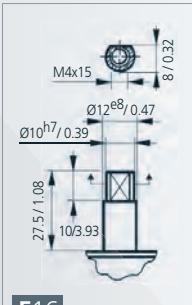
EJE SHAFT ARBRE WELLE



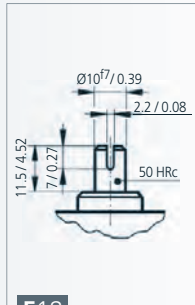
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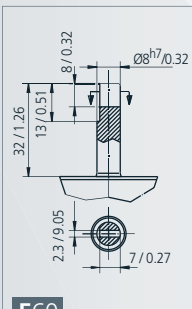
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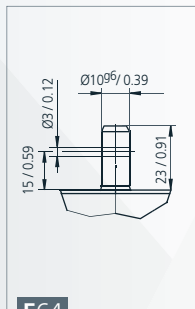
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E18

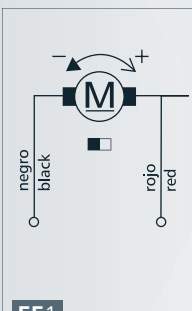


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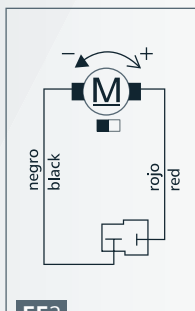


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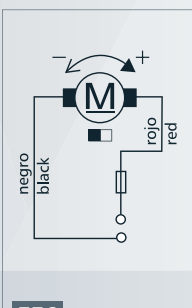
ESQUEMA ELÉCTRICO WIRING DIAGRAM
SCHEMA ÉLECTRIQUE SCHALTBIKD



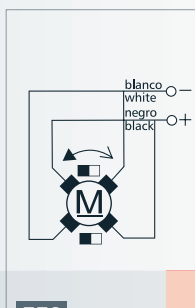
EE1



EE2

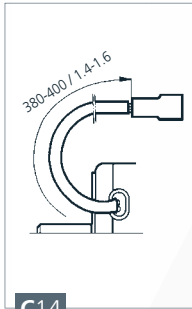


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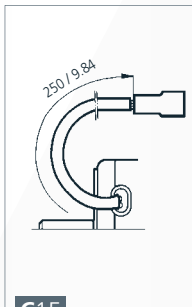


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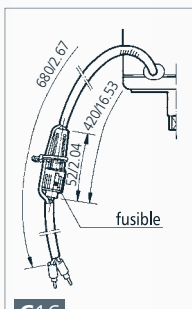
CONEXIONES CONNECTIONS
CONNEXIONS ANSCHLUSSART



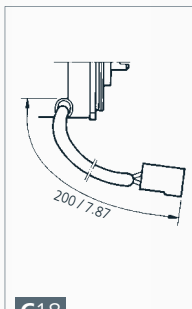
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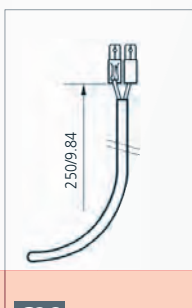
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C16

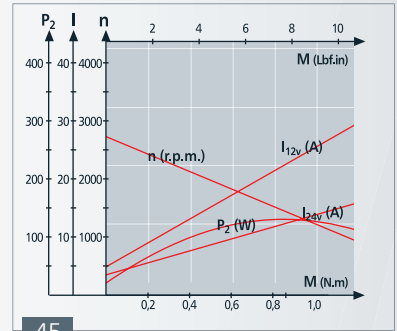


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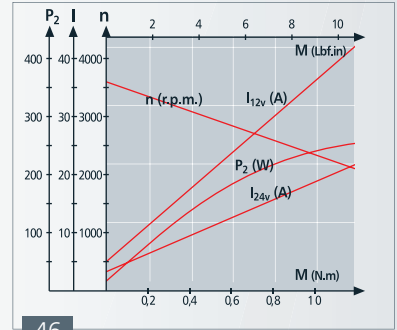


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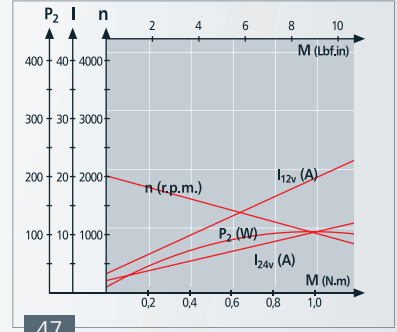
CURVAS CURVES COURBES KURVEN



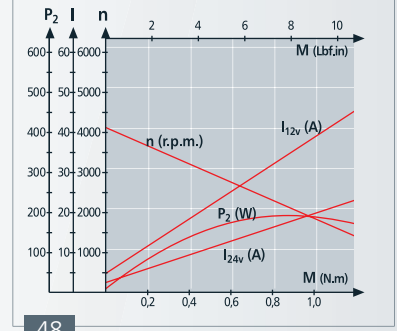
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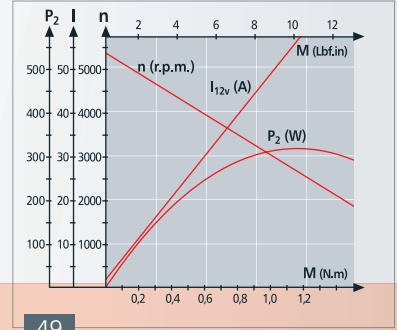
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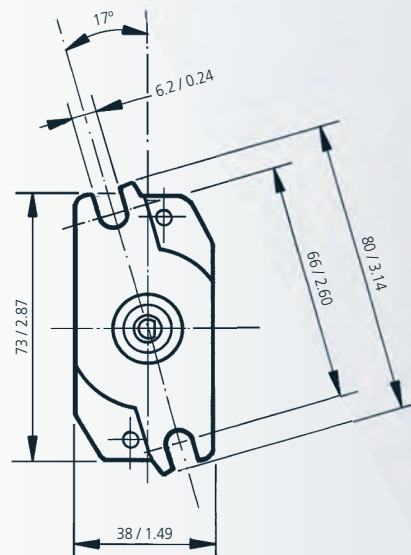
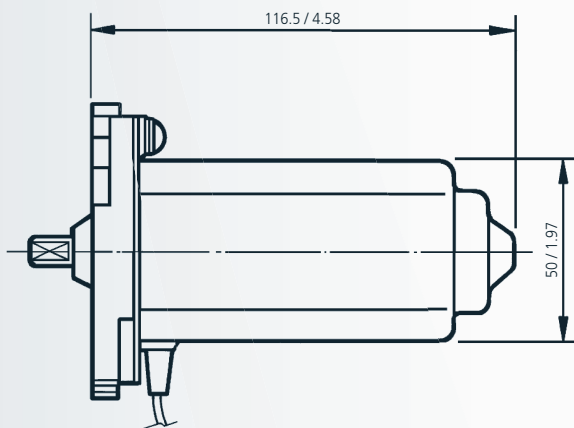
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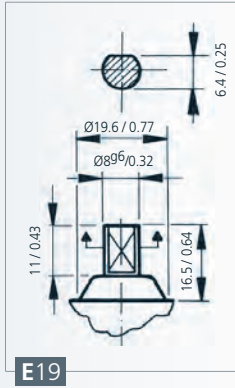


REFERENCIA REFERENCE NUMBER REFERENZNUMMERN	TENSIÓN NOMINAL NOMINAL VOLTAGE NENNSPANNUNG	PAR NOMINAL NOMINAL TORQUE COUPLE NOMINAL DREHMOMENT NOMINAL	VELOCIDAD NOMINAL NOMINAL SPEED VITESSE NOMINALE GESCHWINDIGKEIT NOMINAL	CORRIENTE NOMINAL NOMINAL CURRENT COURANT NOMINAL NOMINALSTROM	PAR DE ARRANQUE STARTING TORQUE COUPLE DE DÉMARRAGE ANZUGSDREHMOMENT	CORRIENTE DE ARRANQUE STARTING CURRENT COURANT DE DÉMARRAGE ANLAUFSTROM	EJE SHAFT ARBRE WELLE	CONEXIONES CONNECTIONS CONNEXIONS ANSCHLUSSART	ESQUEMA ELÉCTRICO WIRING DIAGRAM SCHEMA ELECTRIQUE SCHALTBIKD	PESO APROXIMADO APPROXIMATE WEIGHT POIDS APPROXIMATIF GEWICHT (ca.)	GRADO DE ESTANQUEIDAD WATER TIGHTNESS ÉTANCHÉITÉ FEUCHTIGKEITSSCHUTZKASSE	CURVA CURVE COURBE KURVE
	Un (V)	Mn (N.m./lbf.in)	nn (r.p.m.)	In (A)	Ma (N.m./lbf.in)	Ia (A)				P (kg/lb.t)	IP	
260.0107.30.00	24	0.08 / 0.70	4000	3	0.4 / 3.54	12	E19	C19	EE9	0.7 / 1.87	IP40	51
260.0108.20.00	12	0.08 / 0.70	4000	6	0.4 / 3.54	24	E19	C20	EE9	0.7 / 1.87	IP40	51
260.0111.20.04	12	0.08 / 0.70	3000	5	0.4 / 3.54	22	E19	C21	EE2	0.7 / 1.87	IP40	50
260.0111.30.04	24	0.08 / 0.70	3000	2.5	0.4 / 3.54	11	E19	C21	EE2	0.7 / 1.87	IP40	50

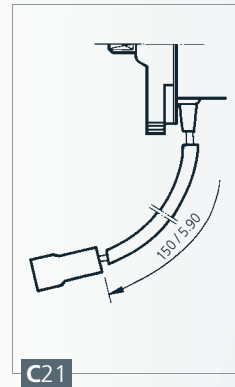
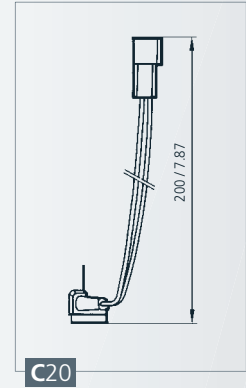
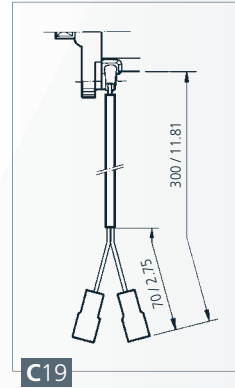


mm / inch

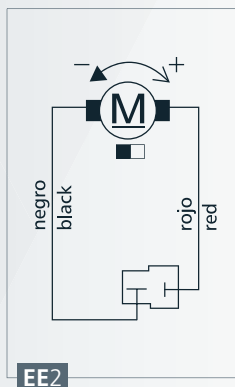
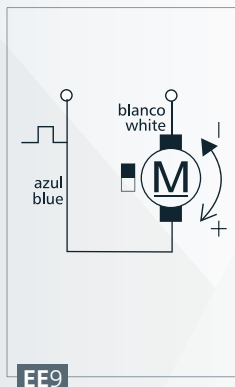
EJE SHAFT ARBRE WELLE



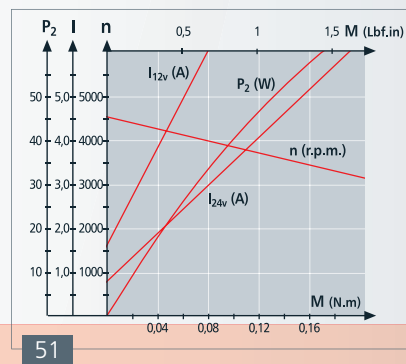
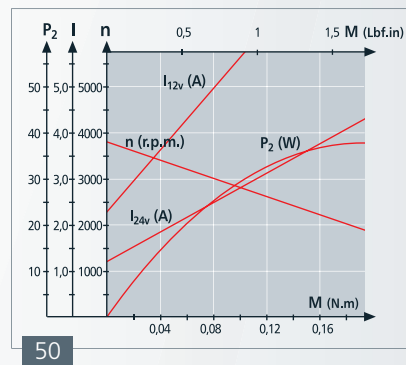
CONEXIONES CONNECTIONS CONNEXIONS ANSCHLUSSART



ESQUEMA ELÉCTRICO WIRING DIAGRAM SCHEMA ÉLECTRIQUE SCHALTBILD

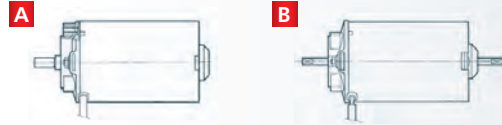


CURVAS CURVES COURBES KURVEN

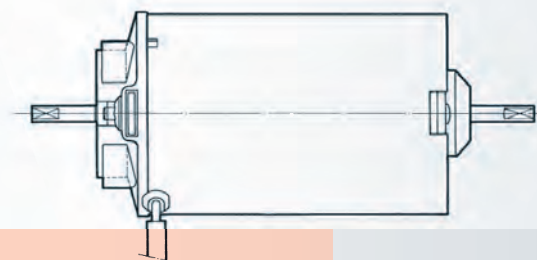
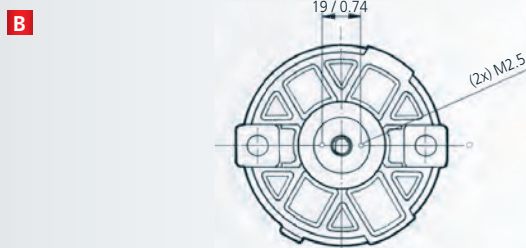
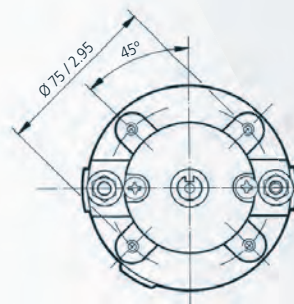
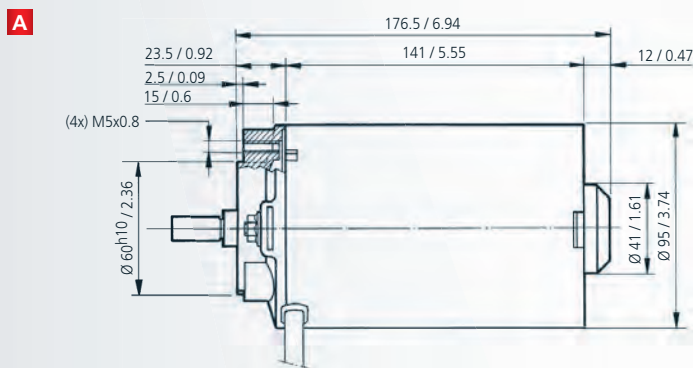


PLANETARY GEAR

- REDUCTORES PLANETARIOS: combinables con la serie 269. Ver sección especial en catálogo.
- PLANETARY GEARS: combinable with 269 series. See special section in catalogue.
- REDUCTEURS PLANETAIRES: combinables avec la série 269. Consultez section spécial du catalogue.
- PLANETENGETRIEBE: Mit der Reihe 269 kombinierbar. Sehen Sie Sonderabschnitt im Katalog.

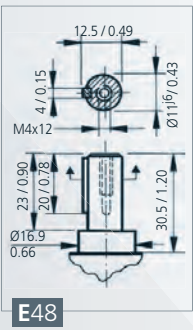
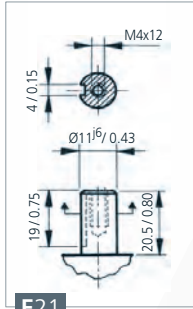
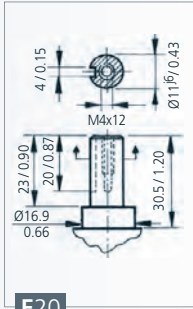
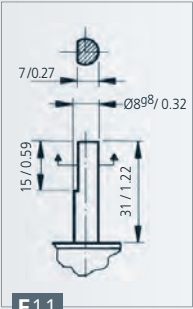


REFERENCIA REFERENCE NUMBER REFERENZNUMMERN	TENSION NOMINAL NOMINAL VOLTAGE TENSION NOMINALE NENNSPANNUNG	PAR NOMINAL NOMINAL TORQUE COUPLE NOMINAL DREHMOMENT NOMINAL	VELOCIDAD NOMINAL NOMINAL SPEED VITESSE NOMINALE GESCHWINDIGKEIT NOMINAL	CORRIENTE NOMINAL NOMINAL CURRENT COURANT NOMINAL NOMINALSTROM	PAR DE ARRANQUE STARTING TORQUE COUPLE DE DÉMARRAGE ANZUGSDREHMOMENT	CORRIENTE DE ARRANQUE STARTING CURRENT COURANT DE DÉMARRAGE ANLAUFSTROM	EJE SHAFT ARBRE WELLE	CONEXIONES CONNECTIONS CONNEXIONS ANSCHLUSSART	ESQUEMA ELÉCTRICO WIRING DIAGRAM SCHEMA ELECTRIQUE SCHALTBILD	PESO APROXIMADO APPROXIMATE WEIGHT POIDS APPROXIMATIF GEWICHT (ca.)	GRADO DE ESTANQUEIDAD WATERTIGHTNESS ÉTANCHÉITÉ FEUCHTIGKEITSSCHUTZKLASSE	DISEÑO: A,B DESIGN: A,B DESSIN: A,B ABBILDUNG: A,B	CURVA CURVE COURBE KURVE
	Un (V)	Mn (N.m./lbf.in)	Pn (r.p.m.)	In (A)	Ma (N.m./lbf.in)	Ia (A)				P (kg/lb.t)	IP		
269.4102.20.04	12	0.50 / 4.42	3000	20	4 / 35.4	140	E20	C22	EE2	3.8 / 10.18	IP53	A	52
269.4102.30.04	24	0.75 / 6.63	3000	15	4 / 35.4	120	E20	C22	EE2	3.8 / 10.18	IP53	A	53
269.4103.20.04	12	0.50 / 4.42	3000	20	4 / 35.4	140	E21	C23	EE2	3.8 / 10.18	IP53	A	52
269.4103.30.04	24	0.75 / 6.63	3000	15	4 / 35.4	120	E21	C23	EE2	3.8 / 10.18	IP53	A	53
269.4104.20.04	12	0.80 / 7.08	1800	20	4 / 35.4	100	E48	C24	EE2	3.8 / 10.18	IP53	A	54
269.4104.30.04	24	0.80 / 7.08	1800	10	4 / 35.4	50	E48	C24	EE2	3.8 / 10.18	IP53	A	54
269.4106.20.04	12	0.80 / 7.08	1800	20	4 / 35.4	100	E21	C23	EE2	3.8 / 10.18	IP53	A	54
269.4106.30.04	24	0.80 / 7.08	1800	10	4 / 35.4	50	E21	C23	EE2	3.8 / 10.18	IP53	A	54
269.4107.30.04E	24	0.75 / 6.63	3000	15	4 / 35.4	120	E48/E11	C22	F2	3.8 / 10.18	IP40	B	53
269.4108.20.04E	12	0.80 / 7.08	1800	20	4 / 35.4	100	E48/E11	C24	F2	3.8 / 10.18	IP40	B	54
269.4113.30.04	24	0.50 / 4.42	675	2.25	2.7 / 23.8	12	E48	C24	EE2	3.8 / 10.18	IP53	A	55

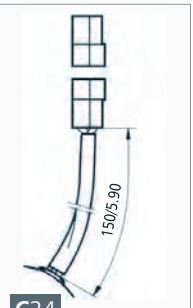
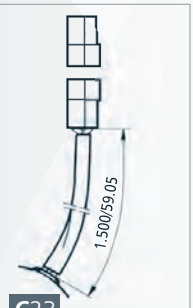
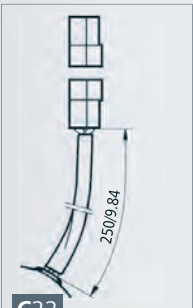


mm / inch

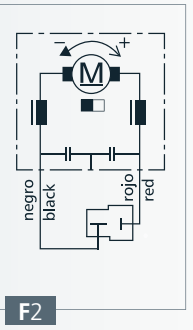
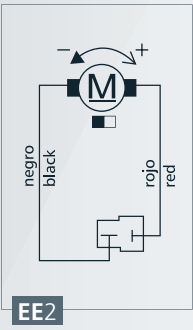
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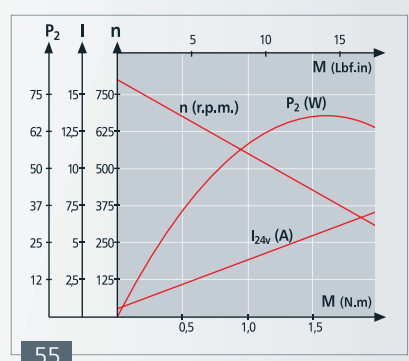
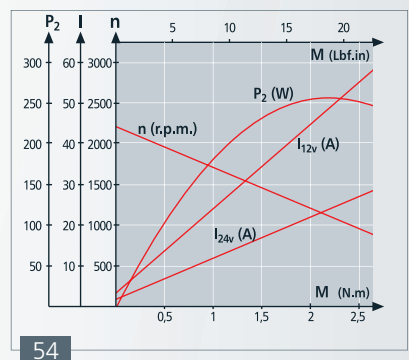
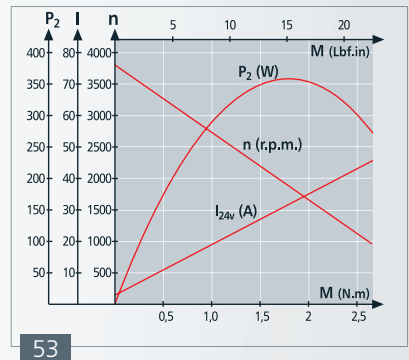
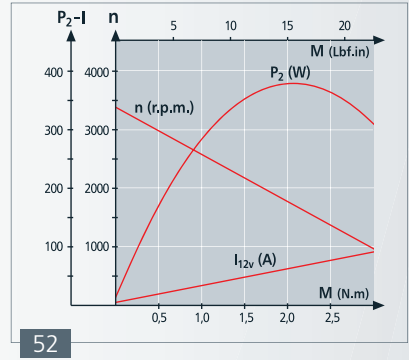
CONEXIONES CONNECTIONS CONNEXIONS ANSCHLUSSART



ESQUEMA ELÉCTRICO WIRING DIAGRAM SCHEMA ÉLECTRIQUE SCHALTBILD



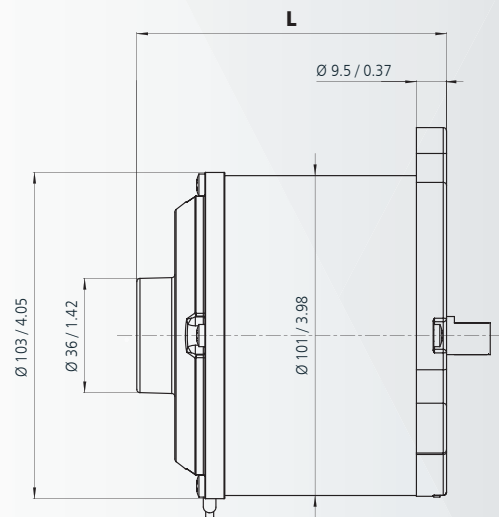
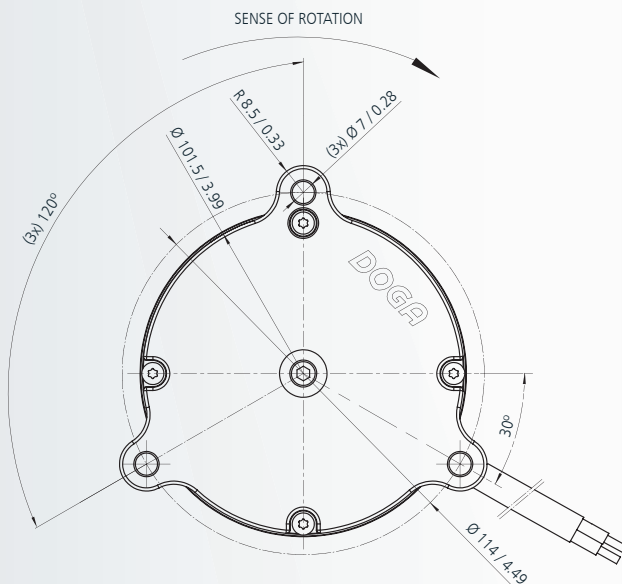
CURVAS CURVES COURBES KURVEN



e-mobility motor

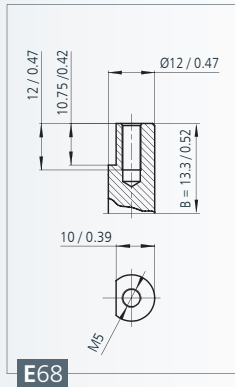


REFERENCIA REFERENCE NUMBER REFERENZNUMMERN	TENSIÓN NOMINAL NOMINAL VOLTAGE TENSION NOMINALE NENNSPANNUNG	PAR NOMINAL NOMINAL TORQUE COUPLE NOMINAL DREHMOMENT NOMINAL	VELOCIDAD NOMINAL NOMINAL SPEED VITESSE NOMINALE GESCHWINDIGKEIT NOMINAL	CORRIENTE NOMINAL NOMINAL CURRENT COURANT NOMINAL NOMINALSTROM	PAR DE ARRANQUE STARTING TORQUE COUPLE DE DEMARRAGE ANZUGSDREHMOMENT	CORRIENTE DE ARRANQUE STARTING CURRENT COURANT DE DEMARRAGE ANLAUFSTROM	EJE SHAFT ARBBE WELLE	CONEXIONES CONNECTIONS CONNEXIONS ANSCHLUSSART	ESQUEMA ELÉCTRICO WIRING DIAGRAM SCHEMA ÉLECTRIQUE SCHALTBIID	PESO APROXIMADO APPROXIMATE WEIGHT POIDS APPROXIMATIF GEWICHT (ca.)	GRADO DE ESTANQUEIDAD WATERTIGHTNESS ÉTANCHÉITÉ FEUCHTIGKEITSSCHUTZKLASSE	L	CURVA CURVE COURBE KURVE
	Un (V)	Mn (N.m./lbf.in)	n _n (r.p.m.)	In (A)Ma	(N.m./lbf.in)	Ia (A)				P (kg/lb.t)	IP	(mm/inch)	
321.1000.30.09	24	1.9/17	2700	27	19/168	250	E68	C46	EE17	2.6/7.0	IP69K	98/3.86	69
321.2000.40.09	36	2.7/24	2700	28	22/195	270	E68	C46	EE17	3.1/8.3	IP69K	108/4.25	70



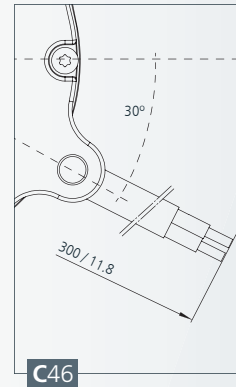
mm / inch

EJE SHAFT ARBRE WELLE



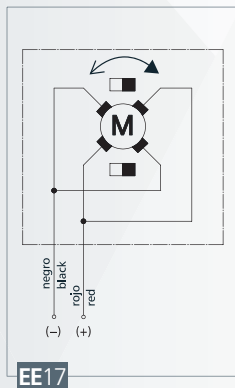
E68

CONEXIONES CONNECTIONS CONNEXIONS ANSCHLUSSART



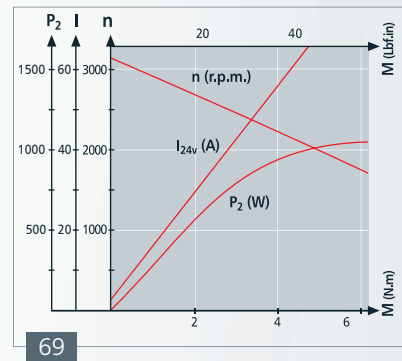
C46

ESQUEMA ELÉCTRICO WIRING DIAGRAM SCHÉMA ÉLECTRIQUE SCHALTBILD

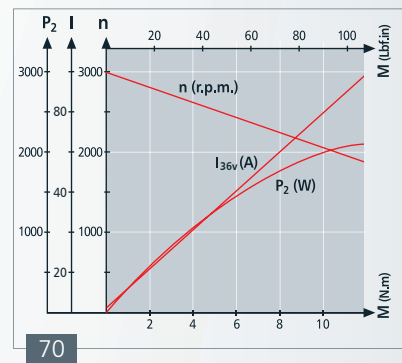


EE17

CURVAS CURVES COURBES KURVEN








69



70

MOTORES CON REDUCTOR PLANETARIO **PLANETARY GEAR DC MOTORS**
MOTEURS À CC AVEC RÉDUCTEUR PLANETAIRE GLEICHSTROMPLANETENGETRIEBEMOTOREN

		motor ⁽¹⁾ 162	motor ⁽¹⁾ 168	motor ⁽¹⁾ 169	motor ⁽¹⁾ 269	
TENSIÓN VOLTAGE TENSION SPANNUNG		12V standard 24V standard <72V customised	12V standard 24V standard <72V customised	12V standard 24V standard <72V customised	12V standard 24V standard <72V customised	
POTENCIA EN SERVICIO CONTÍNUO CONTINUOUS POWER PUISSANCE EN SERVICE CONTINU DAUERLEISTUNG	<i>W</i>	63	158	122	236	
	<i>H.P.</i>	0.08	0.21	0.16	0.32	
PAR NOMINAL NOMINAL TORQUE COUPLE NOMINAL NENNDREHMOMENT	<i>N.m.</i>	0.2	0.5	0.4	0.75	
	<i>lbf.in</i>	1.77	4.42	3.54	6.63	
PAR DE BLOQUEO STALL TORQUE COUPLE DE BLOCAGE ANLAUFDREHMOMENT	<i>N.m.</i>	1.0	3.0	2.2	4.0	
	<i>lbf.in</i>	8.85	26.50	19.40	35.4	
DIÁMETRO DIAMETER DIAMÈTRE DURCHMESSER	<i>mm</i>	60	79	79	95	
	<i>in</i>	2.36	3.11	3.11	3.74	

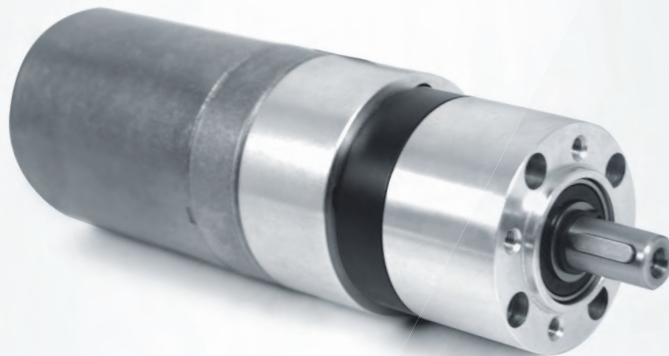
		Ø 52 mm				Ø 62 mm			Ø 72 mm			Ø 81 mm			
		Ø 2.05 in				Ø 2.44 in			Ø 2.83 in			Ø 3.19 in			
TRANSMISIÓN TRANSMISSIONS TRANSMISSION GETRIEBE		i = (4, 5, 7, 14, 16, 18, 19, 22, 25, 27, 29, 35, 46, 51, 59, 68, 71, 79, 93, 95, 100, 107, 115, 124, 130, 139, 150, 169, 181, 195, 236, 308) : 1													
(2) PAR EN SERVICIO CONTINUO CONTINUOUS TORQUE COUPLE EN SERVICE CONTINU NENNDREHMOMENT	<i>max N.m.</i>	4	12	25	8	25	50	14	42	84	20	60	120		
	<i>lbf.in</i>	35	106	221	71	221	442	124	372	743	177	531	1062		
	STAGES ▶	1	2	3	1	2	3	1	2	3	1	2	3		
(3) RENDIMIENTO % EFFICIENCY LEVEL % RENDEMENT % WIRKUNGSGRAD %		80%			75%			70%							
ETAPAS STAGES ÉTAGES DE RÉDUCTION STUFE		1			2			3							

- (1) En cada serie de motores disponemos de distintas combinaciones de potencia. Ver hojas de características de los motores en el este catálogo.
 (2) La capacidad de par será precisado para cada combinación de motor y reductor y aplicación. Los valores están indicados para 1, 2 o 3 etapas respectivamente. En ciertas condiciones los pares indicados pueden ser excedidos.
 (3) Valores aproximados para cada n° de etapas de reducción.

- (1) Dans chaque série de moteurs nous offrons différentes puissances. Voir page de caractéristiques des moteurs.
 (2) La capacité de couple sera définie pour chaque combinaison de moteur et réducteur ainsi que pour chaque application. Les valeurs sont indiquées pour 1, 2 et 3 étages respectivement. Dans certaines conditions de fonctionnement les valeurs de couple indiquées peuvent être excédées.
 (3) Valeurs approximatives pour chaque n° d'étages.

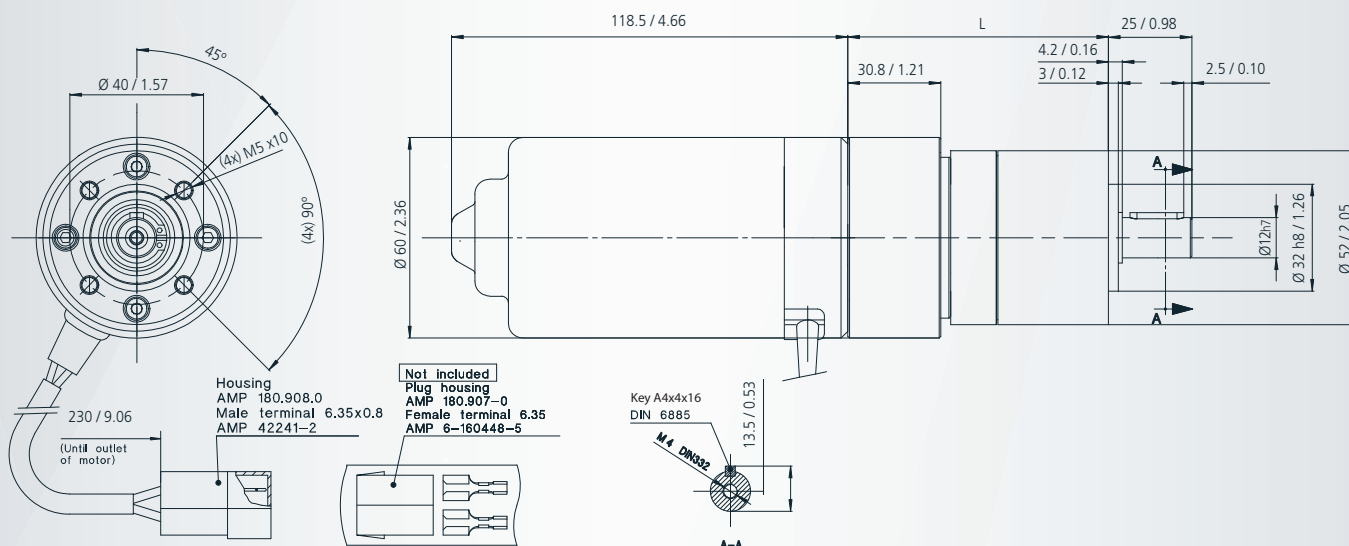
- (1) In each motor series we have different power configurations. Here we show one of them. See motor catalogue for others
 (2) The Torque capacity will be precisely defined for each motor and gear combination and for each application. Values indicated per 1, 2 & 3 stages respectively. In certain conditions the mentioned torque can be exceeded.
 (3) Approximate values for each nr. of stages combination.

- (1) Für jede Motorreihe gibt es verschiedene Leistungsvarianten. Hier zeigen wir einige von diesen, für andere Sehen Sie die Motorsektion des Katalogs.
 (2) Das Drehmoment wird genau definiert für jede Motor- und Getriebekombination und für jede Anwendung. Werte für jeweils 1, 2 und 3 Stufen. Unter manche Bedingungen kann das erwähnte Drehmoment überschritten werden.
 (3) Näherungswerte für jede Stufenkombination.

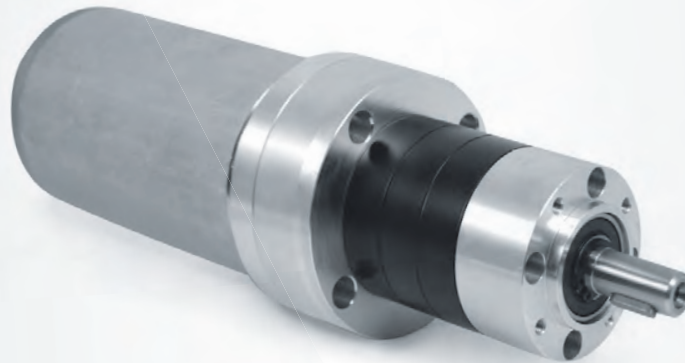


MOTOR					GEAR		
REFERENCIA REFERENCE NUMBER REFERENZNUMMERN	REFERENCIA REFERENCE NUMBER REFERENZNUMMERN	TENSIÓN NOMINAL NOMINAL VOLTAGE TENSION NOMINALE NENNSPANNUNG	VELOCIDAD EN VACÍO NO LOAD SPEED VITESSE À VIDE GESCHWINDIGKEIT IM LEERLAUF	CURBA CURVE COURBE KURVE	RELACIÓN DE REDUCCIÓN TRANSMISSION RATIO RAPPORT DE RÉDUCTEUR UNTERSATZUNG	ETAPAS STAGES ÉTAGES STUFEN	L (mm/inch)
	base motor nr. (*)	Un (V)	n0 (r.p.m.)		i		
162.9003.20.00	162.4101.20.00	12	3500	32	4:1	1	81 / 3.19
162.9003.30.00	162.4101.30.00	24	3500	33	4:1	1	81 / 3.19
162.9004.20.00	162.4101.20.00	12	3500	32	16:1	2	95 / 3.74
162.9004.30.00	162.4101.30.00	24	3500	33	16:1	2	95 / 3.74
162.9005.20.00	162.4101.20.00	12	3500	32	35:1	2	95 / 3.74
162.9005.30.00	162.4101.30.00	24	3500	33	35:1	2	95 / 3.74
162.9006.20.00	162.4101.20.00	12	3500	32	169:1	3	109 / 4.29
162.9006.30.00	162.4101.30.00	24	3500	33	169:1	3	109 / 4.29

(*) página - page - Seite: 28



mm / inch

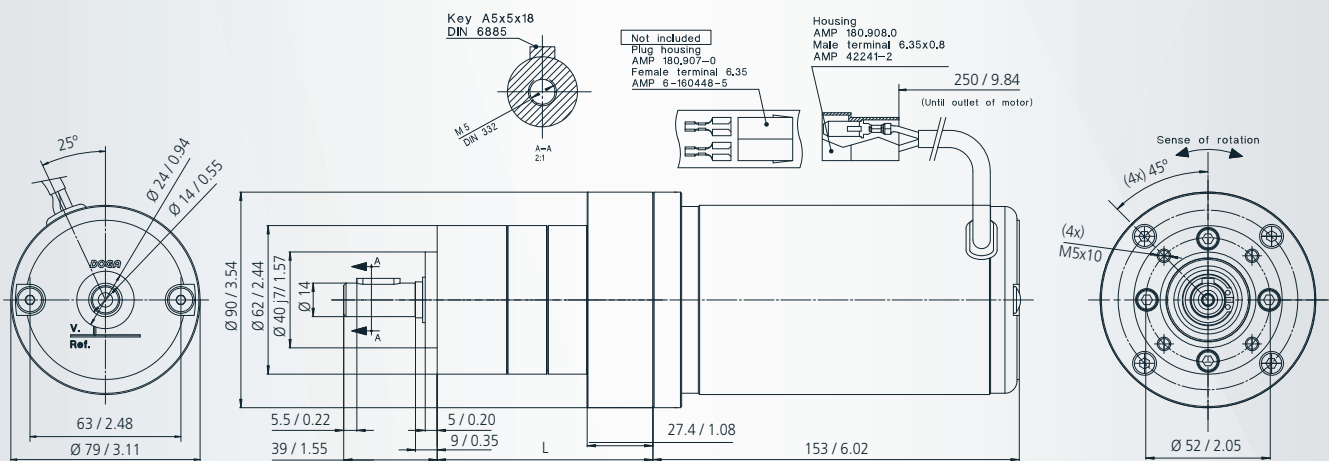


MOTOR

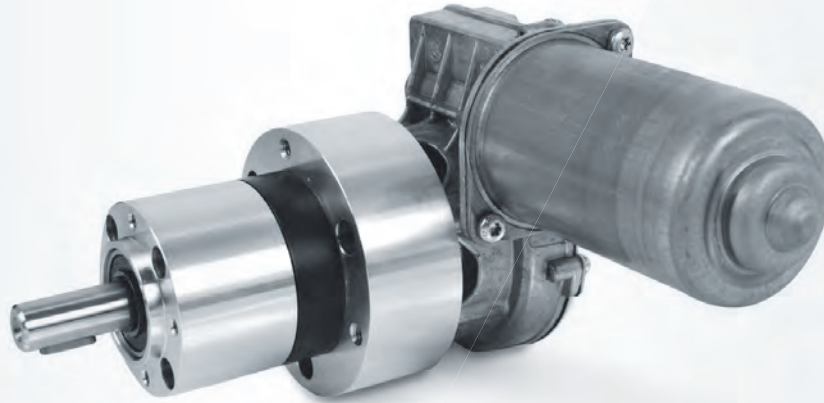
GEAR

REFERENCIA REFERENCE NUMBER REFERENZNUMMERN	REFERENCIA REFERENCE NUMBER REFERENZNUMMERN	TENSIÓN NOMINAL NOMINAL VOLTAGE NENNSPANNUNG	VELOCIDAD EN VACÍO NO LOAD SPEED VITESSE À VIDE GESCHWINDIGKEIT IM LEERLAUF	CURVA CURVE KURVE	RELACIÓN DE REDUCCIÓN TRANSMISSION RATIO RAPPORT DE REDUCTEUR UNTERSATZUNG	ETAPAS STAGES STUFEN	(mm/inch)
	base motor nr. (*)	Un (V)	n0 (r.p.m.)		i		
168.4143.20.00	168.4108.20.04	12	3200	39	4:1	1	73.2/2.88
168.4143.30.00	168.4108.30.04	24	3200	39	4:1	1	73.2/2.88
168.4144.20.00	168.4108.20.04	12	3200	39	25:1	2	90.1/3.55
168.4144.30.00	168.4108.30.04	24	3200	39	25:1	2	90.1/3.55
168.4145.20.00	168.4108.20.04	12	3200	39	71:1	3	106.9/4.21
168.4145.30.00	168.4108.30.04	24	3200	39	71:1	3	106.9/4.21

(*) página - page - Seite: 30

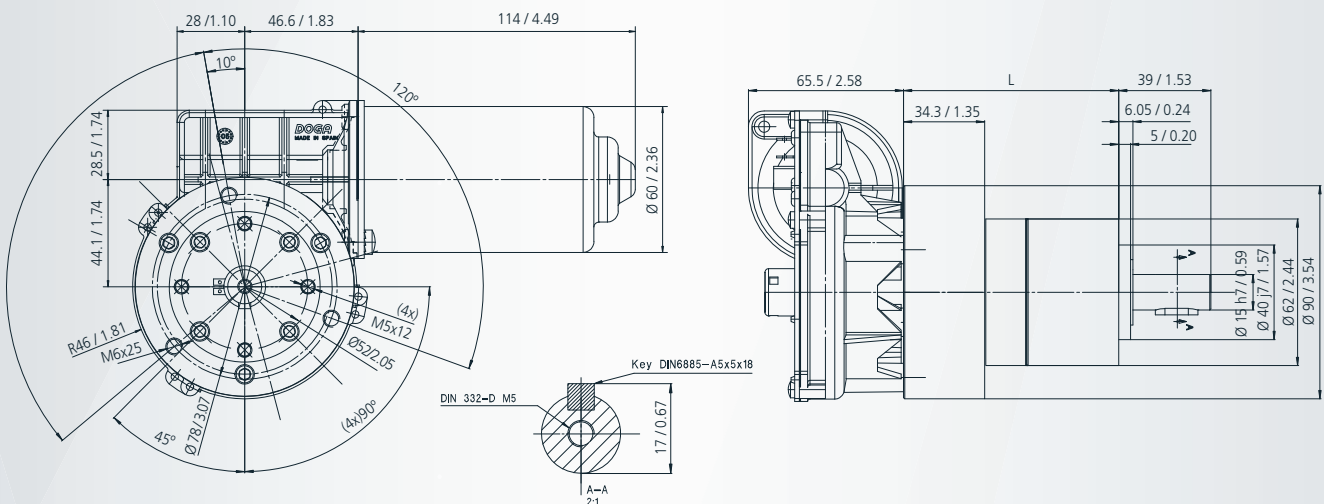


mm / inch



MOTOR					GEAR		
REFERENCIA REFERENCE NUMBER REFERENZNUMMERN	base motor nr. (*)	TENSIÓN NOMINAL NOMINAL VOLTAGE TENSION NOMINALE NENNSPANNUNG	VELOCIDAD EN VACÍO NO LOAD SPEED VITESSE À VIDE GESCHWINDIGKEIT IM LEERLAUF	CURVA CURVE COURBE KURVE	RELACIÓN DE REDUCCIÓN TRANSMISSION RATIO RAPPORT DE REDUCTEUR UNTERSETZUNG	ETAPAS STAGES ÉTAGES STUFEN	L (mm/inch)
319.9701.20.00	319.3860.20.00	12	35	58	7:1	1	90.9/3.58
319.9701.30.00	319.3860.30.00	24	35	58	7:1	1	90.9/3.58

(*) página - page - Seite: 24

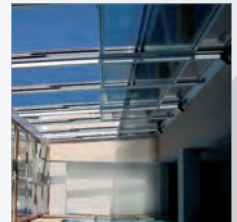
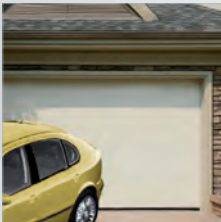


mm / inch

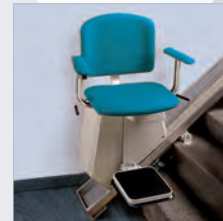
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ACCESO Y EDIFICIOS ACCESS & BUILDING ACCES ET EDIFICES ZUGANG UND GEBÄUDE



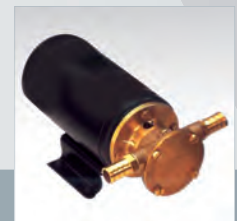
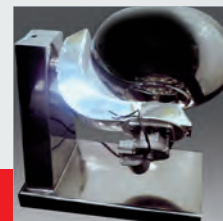
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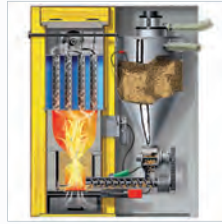
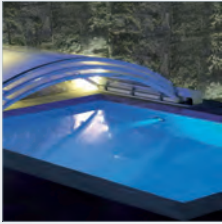
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**STANDARD
SPECIAL
CUSTOMIZED**

applications pour moteurs anwendungsfälle für motoren

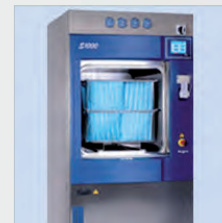
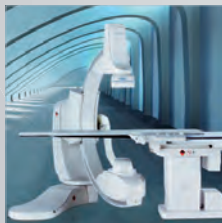
HOGAR HOME MAISON HEIM



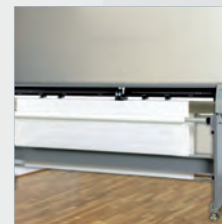
MARINA MARINE MARIN WASSERSPORT



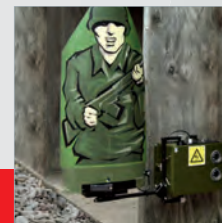
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Y MUCHOS MÁS AND MANY MORE ET PLUS ENCORE UND VIELE MEHR





DOGA S.A.

Autovía A-2, km. 583
08630 ABRERA - BARCELONA - (SPAIN)
Tel. +34 93 770 46 00
Fax +34 93 770 23 52
e-mail: doga@dog.es
www.doga.es

EUROPE

AUSTRIA

ELRA Antriebstechnik Vertriebs GmbH

Schönngasse 15-17
A-1020 WIEN
Tel. +43 1 2141785 0
Fax +43 1 2163834
e-mail: info@elra.at
www.elra.at

BELGIUM

Act in Time

Mr. Luc Van Hoylandt
Satenrozen, 20
B - 2550 KONTICH
Tel. +32 23660606
Fax +32 23663680
e-mail: info@actintime.be
www.actintime.be

FINLAND

OEM Automatic OY

Mr. Juhani Lehtinen
PL 9
FI-20101 TURKU
Tel. +358-(0)403 412 447
Fax +358 2 07 499 456
e-mail: juhani.lehtinen@oem.fi
www.oem.fi

FRANCE

MDP

21 Porte du Grand Lyon-Neyron
F-01707 MIRIBEL CEDEX
Tel. +33 (04) 72018300
Fax +33 (04) 72018309
e-mail: contact@mdp.fr
www.mdp.fr

GERMANY

EPH Elektronik Produktions- und Handelsgesellschaft mbH

Rudolf-Diesel-Strasse, 18
D-74354 BESIGHEIM-OTTMARSHEIM
Tel. +49 7143 8152-0
Fax +49 7143 8152-50
e-mail: info@eph-elektronik.de
www.eph-elektronik.de

GREAT BRITAIN

OEM Automatic Ltd

Whiteacres, Cambridge RD, Whetstone
Leicestershire LE8 6ZG
Tel. +44 (0116) 2849900
Fax +44 (0116) 2841721
e-mail: motors@uk.oem.se
www.oem.co.uk

HUNGARY

CONTRADEX Kereskedelmi Kft.

Mr. Tibor Nardai
Olaj u. 80
8000 SZEKESFEHERVAR
Tel. +36 1 8148801
Fax +36 1 8148813
e-mail: t.nardai@contradex.hu
www.contradex.hu

ITALY

Megadyne SpA

Mr. Flavio Sereno Regis
Via Trieste, 16
I-10075 MATHI - TORINO
Tel. +39 011 92 68 052
Fax +39 011 92 68 487
e-mail: flavio.regis@megadynegroup.com
www.megadynegroup.com

NETHERLANDS

Eriks Aandrijftechniek / Elmeq

Mr. René Boere
Broekweg 25
NL-2871 RM SCHOONHOVEN
Tel. +31 (0182) 303453
Fax +31 (0182) 386920
e-mail: info.schoonhoven@eriks-at.nl
www.eriks-at.nl

POLAND

OEM Automatic Sp.z.o.o.

Mr. Wojciech Drabik
ul. Działkowa 121A,
02-234 WARSZAWA
Tel. +48 022 863 27 22
Fax +48 022 863 27 24
e-mail: wojciech.drabik@pl.oem.se
www.oemautomatic.com.pl

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Ariston Electrónica, S.A.

C/ Les Planes, 1, H - P.I. Font Santa
SANT JOAN DESPÍ
Tel. +34 93 452 51 07
Fax +34 93 477 50 55
e-mail: fidel@ariston.es
www.ariston.es

RUSSIA

Microprivod Ltd.

PO box 474 Moscow 111141
56 (bldg.32) Shosse Enthusiastov
MOSCOW, 111123
Tel. +7 495 221 4052
Fax +7 495 221 4052
e-mail: info@microprivod.ru
www.microprivod.ru



SPAIN

Ariston Electrónica, S.A.

C/ Les Planes, 1, H - P.I. Font Santa
SANT JOAN DESPI
Tel. +34 93 452 51 07
Fax +34 93 477 50 55
e-mail: fidel@ariston.es
www.ariston.es

SWEDEN

OEM Motor AB

Frederiksbergsgatan 2
S-573 92 TRANÅS
Tel. +46 75-24 24 400
Fax +46 75-24 24 449
e-mail: info@motor.oem.se
www.oemmotor.se

SWITZERLAND

EPH Elektronik Produktions- und Handelsgesellschaft mbH

Rudolf-Diesel-Strasse, 18
D-74354 BESIGHEIM-OTTMARSHEIM
Tel. +49 7143 8152-0
Fax +49 7143 8152-50
e-mail: info@eph-elektronik.de
www.eph-elektronik.de

NORTH AMERICA

USA NORTH- EAST

(ME, NM, MA, VT, NY, NJ, CT, RI)

Group Six LLC

Mr. Ed Crofton

15 Hunting Ridge Drive
SIMSBURY, CT 06070
Tel. +1 860 651 3434
Tel. +1 800 433 3434
Fax +1 860 651 4178
Fax +1 800 200 6963
e-mail: info@grp6.com
www.grp6.com

USA SOUTH- EAST

(FL, GA, SC, NC, VA, TN, AL)

Jake Rudisill Associates, Inc.

Mr. William Rudisill

PO Box 36248
CHARLOTTE, NC 28236-6248
Tool Free. +1 800 888 6788
Tel. +1 704 377 6901
Fax +1 704 377 5253
e-mail: info@jakerudisill.com
www.jakerudisill.com

USA SOUTH- WEST

(AZ, CA, NV)

Foxco Equipment Sales, Inc.

7071 Warner Avenue #F751
PO Box 2148
Office - 714 596 3600
Toll free fax - 800 428 9857
e-mail: foxcoinfo@foxcoequipment.com
www.foxcoequipment.com

USA - CANADA

DOGA USA, Corp.

Mr. Cesar Paredes

12060 Raymond Court
HUNTLEY - IL - 60142
Tel. +1 847 669 8529
Fax +1 847 669 8694
e-mail: dogausa@dogausa.com
www.doga.es

SOUTH AMERICA

DOGA do Brasil, Ltda.

Mrs. Gislene Nogueira

Rua Ibaiti, 111 / Vila Pernetá / Cond. Portal da Serra
83325-060 PINHAIS - PARANÁ
Tel. +55 41 3668 65 98
Fax +55 41 3668 1988
e-mail: dogabrasil@dogacom.br
www.doga.com.br

REST OF THE WORLD

DOGA, S.A.
(HEAD QUARTERS)



EUROPE

DOGA, S.A. (headquarters)

Autovía A-2, Km. 583
08630 ABRERA
BARCELONA - (SPAIN)
Tel. +34 93 770 46 00
Fax +34 93 770 23 52
e-mail: doga@dog.es

DOGA Italia, S.R.L.

Regione Opessina, 44
14040 CASTELNUOVO CALCEA (AT) - (ITALY)
Tel. +39 0141 963000
Fax +39 0141 963001
e-mail: dogaitalia@dogaitalia.com

DOGA Parts, S.L.U.

Enclusa, 75
08292 ESPARREGUERA
BARCELONA - (SPAIN)
Tel. +34 93 777 88 55
Fax +34 93 777 88 54
e-mail: info@dogaparts.es
www.dogaparts.es

AZPIARAN DOGA POLSKA SP Z O O

Ul. Wroclawska, 36
55-020 Wojkowice Zórawina
(POLAND)
Tel. (+48) 717 224 221
Fax: (+48) 717 224 224

AMERICA

DOGA do Brasil, Ltda.

Rua Ibaiti, 111 - Vila Pernetá - Cond. Portal da Serra
83325-060 PINHAIS - PARANÁ - (BRAZIL)
Tel. +55 41 3668 1513
Fax +55 41 3668 1988
e-mail: dogabrasil@dog.com.br

DOGA INMESA COMPONENTES DE MÉXICO

Avda. Hércules 301-C, Bodega 8
Col. Polígono Industrial Santa Rosa
Km 21 Ctra. Querétaro a San Luis Potosí
Edo. Querétaro CP 76220 - (MÉXICO)
Tel. +52 (442) 291 14 24
e-mail: comercial@dogainmesa.com

DOGA USA, Corp.

12060 Raymond Court
Huntley - IL - 60142 - (USA)
Tel. +1 847 669 8529
Fax +1 847 669 8694
e-mail: dogausa@dogausa.com

ASIA

DOGA India, S.R.L.

#13, SNS Chambers 239
Sankey Road
BANGALORE 560 080 - (INDIA)
Phone 91-80-23614625 - 23615264
Fax 91-80-23610504
e-mail: dogaindia@dogaindia.com

DOGA NanTong Auto Parts Co., Ltd.

1 Xindong Road
NanTong Economic & Technology Development Area
226016 NANTONG - JIANGSU - (PR.CHINA)
Tel. +86 513 8517 5166 - Fax +86 513 8517 5160
e-mail: doganantong@doganantong.com

道佳 (南通) 汽车零部件有限公司
中国江苏省南通经济技术开发区新东路1号 邮编:226016
电话:+86 513 8517 5166 - 传真:+86 513 8517 5160
电子邮件: doganantong@dog.es

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