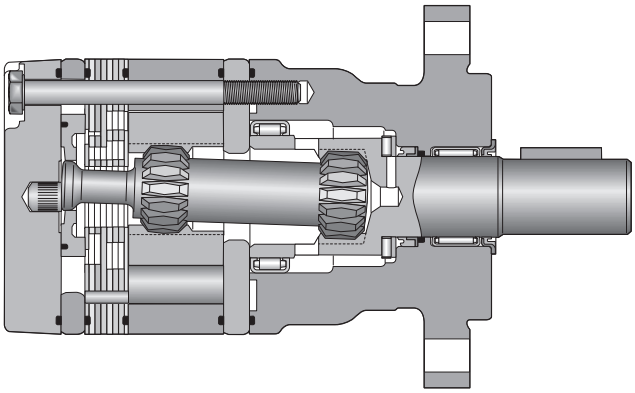
Features / Merkmale / Charactèristique / Carratteristiche

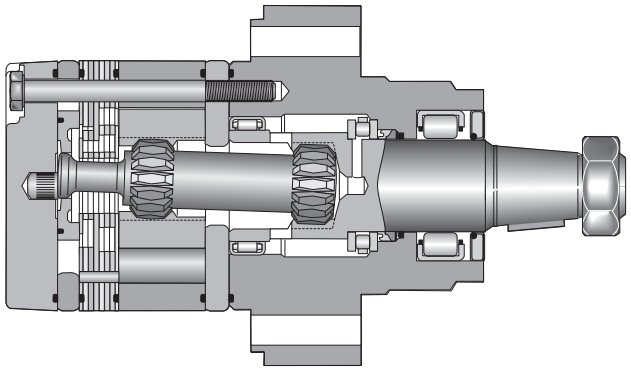
Series TE



- **Langsamlaufender Gerotor-Motor**
- **Spezielle Orbital-Steuerung**
  Geringe interne Leckage
  Hoher volumetrischer Wirkungsgrad
- **Rollen im Rotorsatz**
  Reduzierte Reibung
  Lange Lebensdauer
- **Patentierte Hochdruckwellendichtung**
  Keine Leckölleitung
  Keine Rückschlagventile
- **Vielzahl von Varianten**
  Großer Einsatzbereich

- **Moteur lent système Gerotor**
- **Une distribution orbitale particulière assure**
  fuites internes minimales
  rendements volumétriques élevés
- **Le rotor à rouleaux**
  réduit les frottements
  augmente la durée de vie
- **Par l`utilisation de joints d`arbre haute pression brevetés**
  pas de conduite de drainage
  pas de clapets anti-retour
- **Grâce à de nombreuses variantes**
  larges domaines d`applications

Series TJ

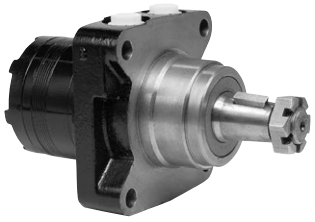


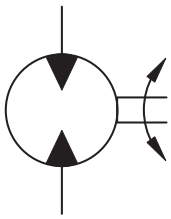
- **Low Speed Gerotor Motor**
- **Zero leak commutation valve**
  For greater, more consistent
  Volumetric efficiency
- **Roller vane rotor set**
  Reduces friction and internal leakage
  Maintaining efficiency throughout the life of the motor
- **Patented high-pressure shaft seal**
  No check valves needed
  No extra plumbing
- **Wide choice of displacement range, flange and shaft options**
  Greater efficiency in systems design
  to suit your application

- **Motore orbitale a bassa velocità**
- **Una particolare distribuzione orbitale assicura**
  trafilamento ridotto elevato rendimento volumetrico
- **Con lo statore a rullo**
  si riduce l`attrito interno
  si mantiene nel tempo l`efficienza del motore
- **Una guarnizione di tenuta ad alta pressione brevettata elimina la necessità**
  di una linea di drenaggio esterna e di valvole non ritorno
- **Un`ampia gamma di cilindrate, flangiature ed alberi**
  consentono scelte adeguate ad ogni esigenza costruttiva

Performance / Kenndaten / Puissance / Prestazioni

Drehzahl Speed Vitesse de rotation Velocità di rotazione	max. 1160 rev/min
Schluckstrom Oil flow Débit d`huile Portata	max. 75 l/min
Eingangsdruck Supply pressure Pression entrée Pressione in entrata	max. 200 bar
Torque Couple Coppia	max. 648 Nm
Seitenlast Side load Charges latérales Carico radiale	TE = 7.000 N TJ = 14.000 N See page 16





Series TJ



Series TE

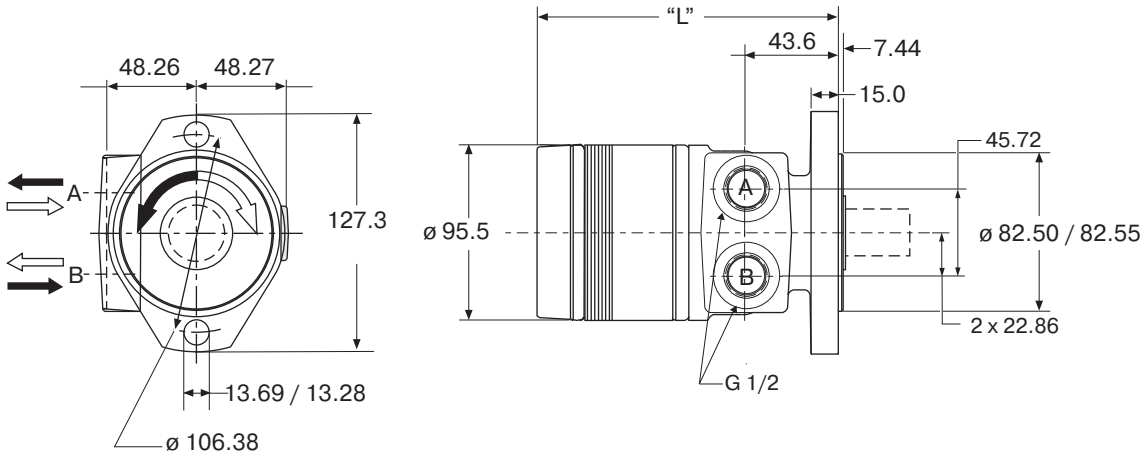
Motor series TE / TJ	Geom. Schluckvolumen Geometric displacement Cylindrée Cilindrata [cm³/U] [cm³/rev]	Max. Drehzahl Max. speed Vitesse de rotation maxi Velocità di rotazione max cont / int* [U/min] [rev/min]	Max. Schluckstrom Max. oil flow Débit d`huile maxi Portata max cont / int* [l/min]	Max. Druckdifferenz ** Max. differential pressure ** Chute de pression maxi ** Caduta di pressione max ** cont / int* [bar]	Max. Eingangsdruck Max. supply pressure Pression maxi entrée Pressione max in entrata max [bar]	Max. Drehmoment Max. torque Couple maxi Coppia max cont / int* [Nm]	Max. Leistungabgabe Max. performance Puissance de sortie maxi Potenza meccanica max cont / int* [KW]	Min. Anlaufmoment Min. starting torque Couple min. fourni au dé manrage Coppia min. di spunto cont / int* [Nm]
TE/TJ 36	36	930/1160	35/40	140/190	200	55/71	9	44/52
TE/TJ 45	41	810/1024	35/41	140/190	200	70/100	10	44/64
TE/TJ 50	50	725/1020	35/50	140/190	200	90/127	13	72/98
TE/TJ 65	66	705/940	45/60	140/190	200	125/176	15	100/137
TE/TJ 80	82	560/750	45/60	140/190	200	160/220	17	128/171
TE/TJ 100	98	470/630	45/60	140/190	200	190/264	17	152/205
TE/TJ 130	130	350/470	45/60	140/190	200	255/352	17	204/274
TE/TJ 165	163	280/375	45/60	140/190	200	310/436	17	248/338
TE/TJ 195	196	235/315	45/60	140/190	200	390/528	17	312/411
TE/TJ 230	228	265/330	60/75	120/165	200	380/514	18	304/411
TE/TJ 260	261	230/290	60/75	110/155	200	400/550	17	320/449
TE/TJ 295	293	200/255	60/75	100/145	200	428/582	16	328/445
TE/TJ 330	326	185/235	60/75	100/135	200	443/600	15	344/453
TE/TJ 365	370	150/200	60/75	95/125	200	467/648	14	373/477
TE/TJ 390	392	152/190	60/75	85/120	200	445/628	13	348/462

*int. =
Intermittierende Werte maximal: 10% von jeder Betriebsminute.
Intermittent operation rating applies to 10% of every minute.
Fonctionnement interm.: 10% max. de chaque minute d`utilisation.
Servizio intermittente: 10% max di ogni minuto di utilizzazione.

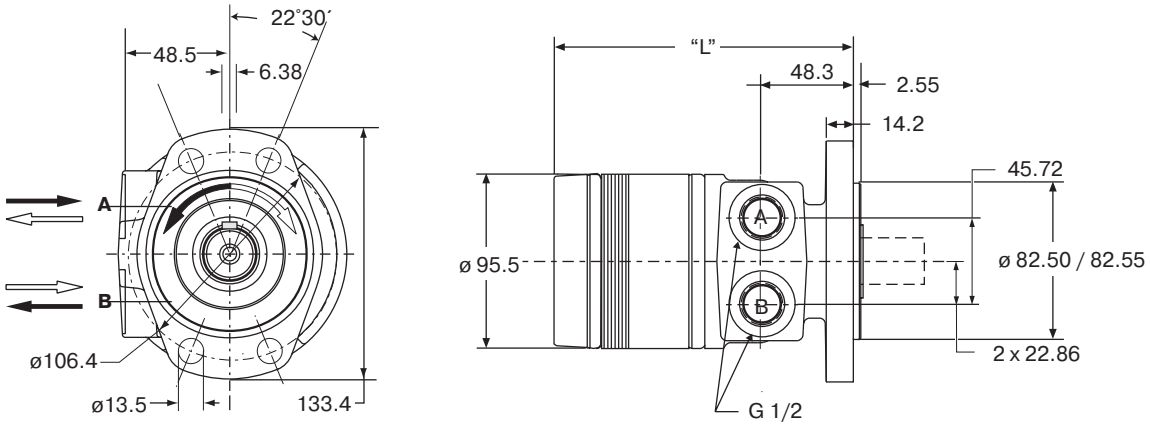
** Druckdifferenz Δp zwischen Ein- und Ausgang
** Pressure difference is Δp between input and output
** La différence de pression est Δp entre l'entrée et la sortie
** La differenza di pressione corrisponde al Δp tra ingresso e uscita

Housing / Gehäuse / Carter / Corpo

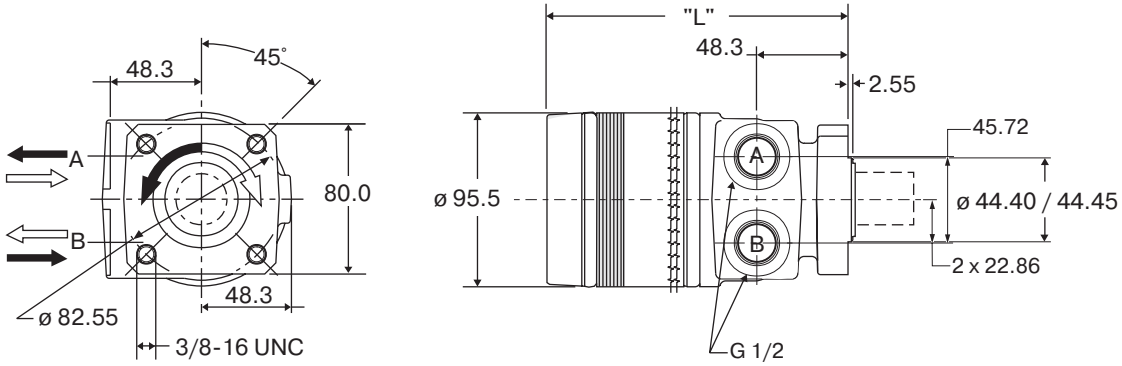
Code C



Code M

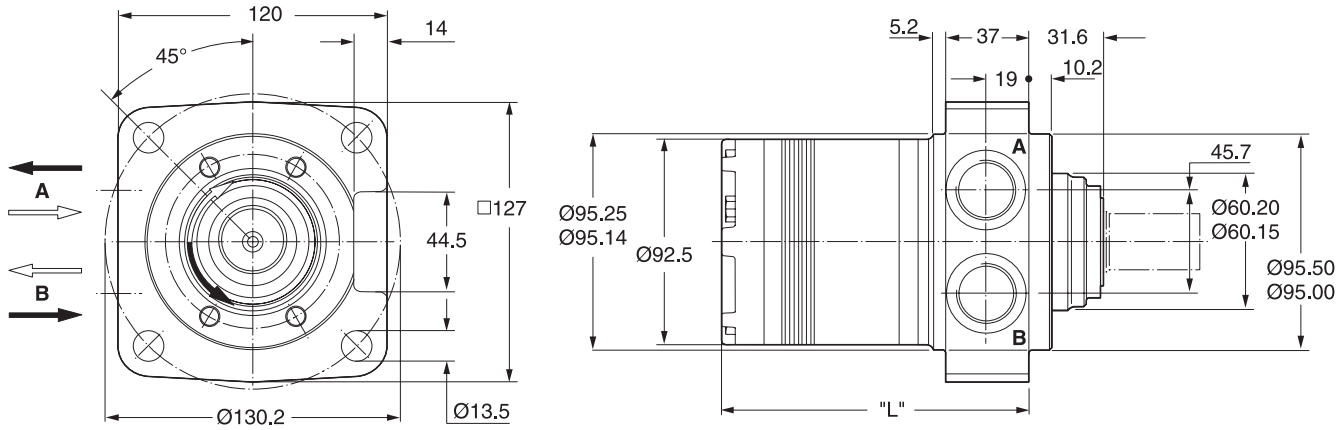


Code D

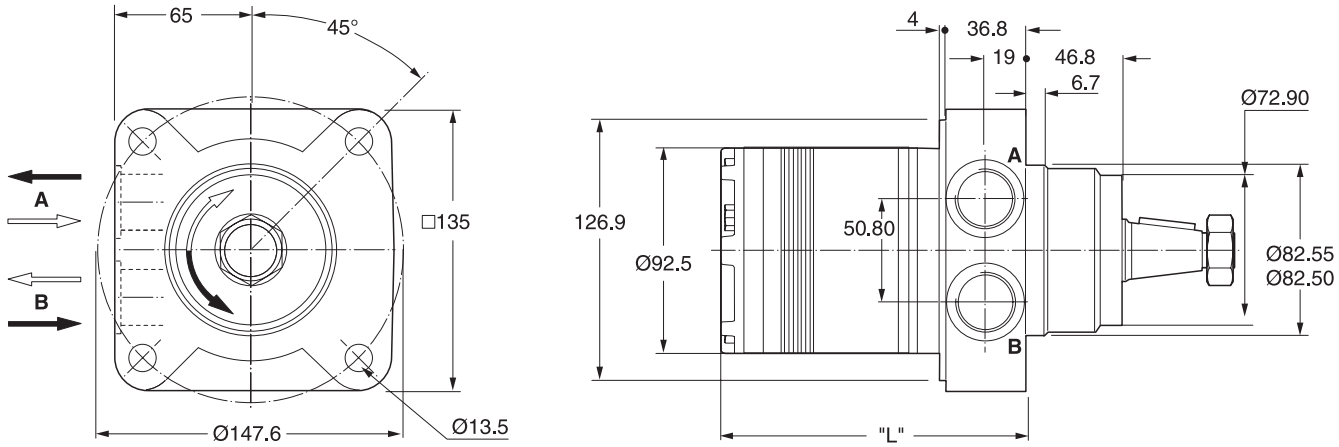


		Series TE														
		36	45	50	65	80	100	130	165	195	230	260	295	330	365	390
Gewicht / Weight Poids / Peso [kg]		5.8	6.3	6.5	6.6	6.7	6.8	7.1	7.4	7.7	7.9	8.2	8.3	8.7	9.0	9.2
Code C	„L“[mm]	128	131	133	136	140	143	149	155	162	168	174	181	187	195	200
Code M, D	"L"[mm]	134	136	138	141	144	147	153	160	166	173	179	185	192	200	205

Code L



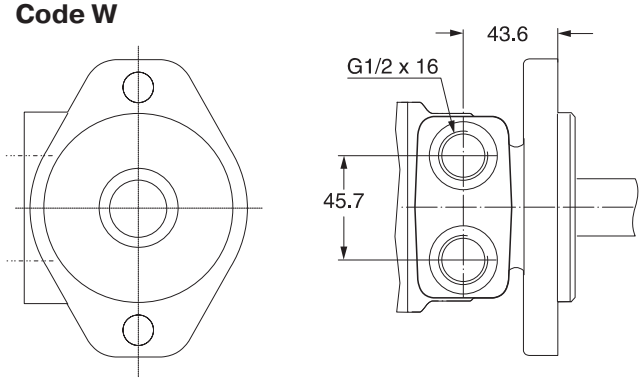
Code U

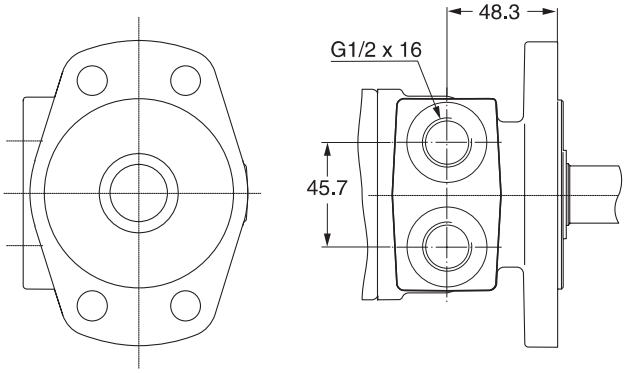


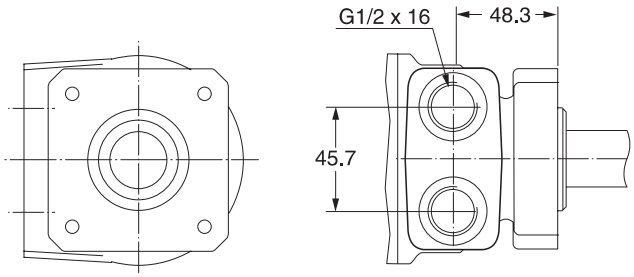
		Series TJ														
		36	**45**	**50**	**65**	**80**	**100**	**130**	**165**	**195**	**230**	**260**	**295**	**330**	**365**	**390**
Gewicht / Weight Poids / Peso [kg]		6.7	6.8	6.9	7.0	7.1	7.2	7.6	7.8	8.1	8.3	8.6	8.8	9.1	9.4	9.6
Code L, U	"L"[mm]	103	106	109	112	115	118	124	131	137	143	150	156	162	171	175

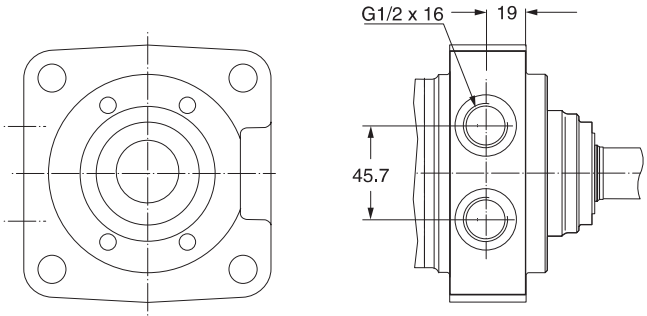
Front Ports / Anschlüsse vorn / Orifices avant / Connessioni anteriori

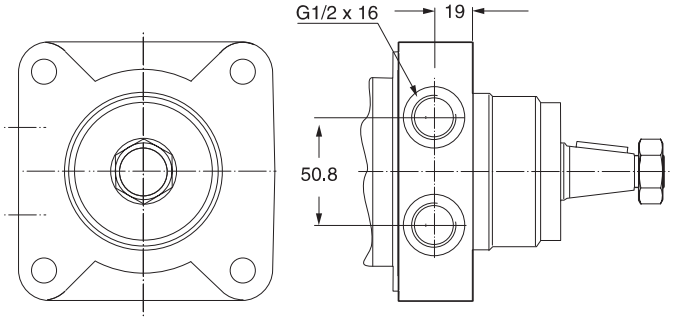
Code W



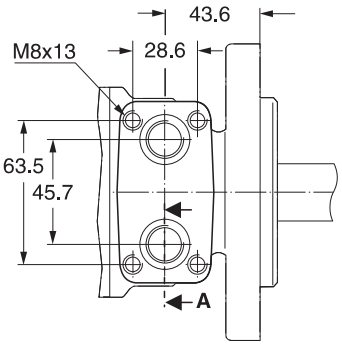


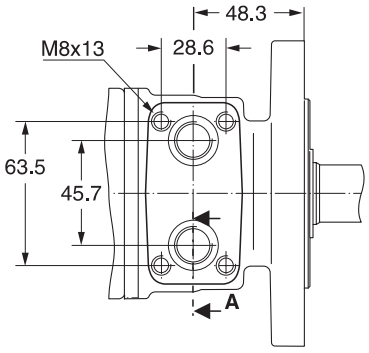


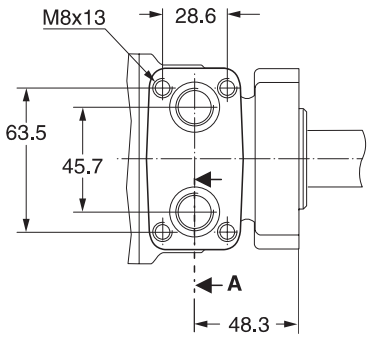




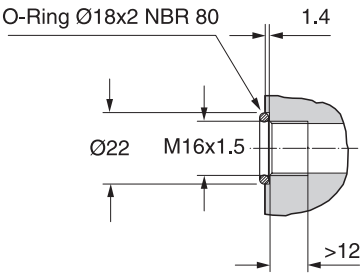
Code N







Section A



Zum Motor mit Universalanschluss werden 2 O-Ringe geliefert.

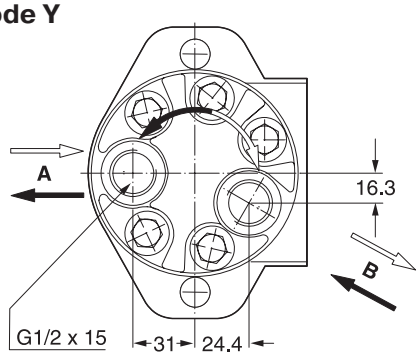
Motor with manifold mount is supplied with 2 O-rings.

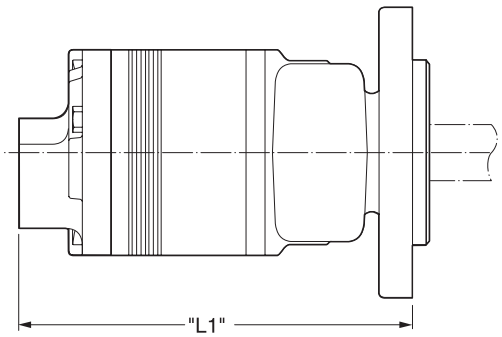
Deux joints toriques sont livrés avec les moteurs au plan de raccordement universel.

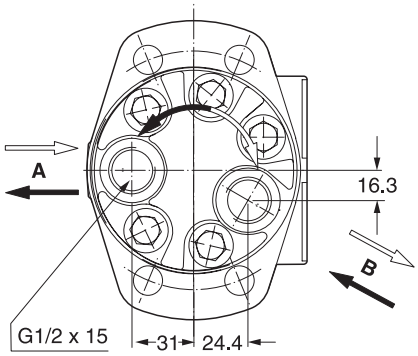
Il blocchetto connessioni è corredato da 2 OR.

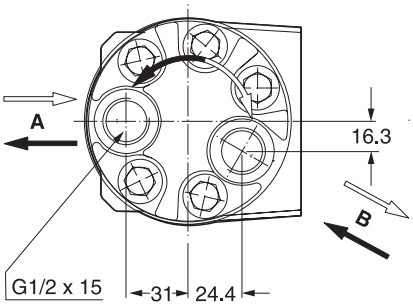
Rear Ports / Anschlüsse hinten / orifices arrière/ Connessioni posteriori

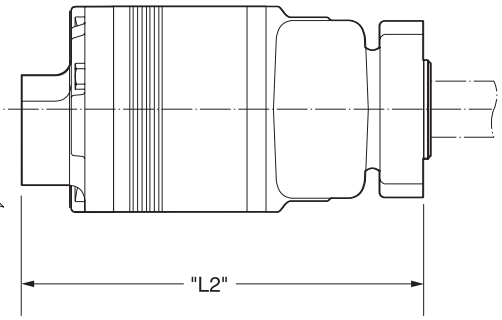
Code Y

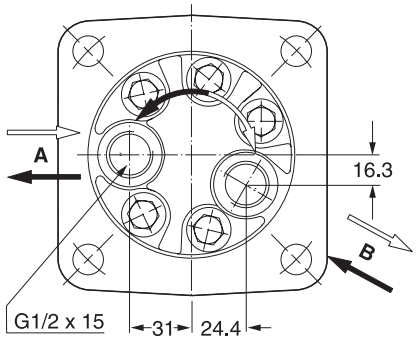


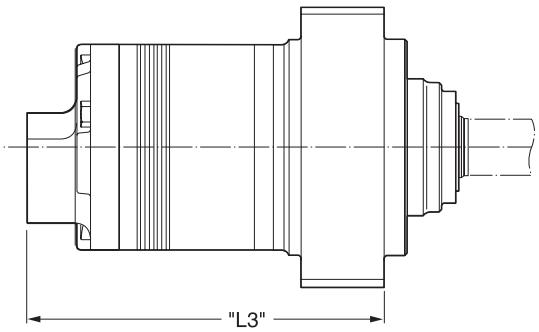








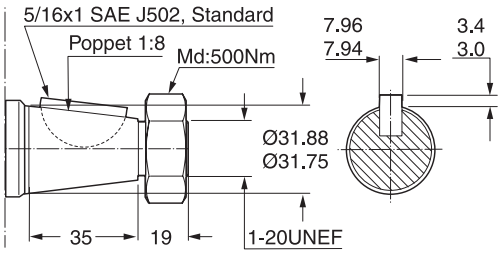




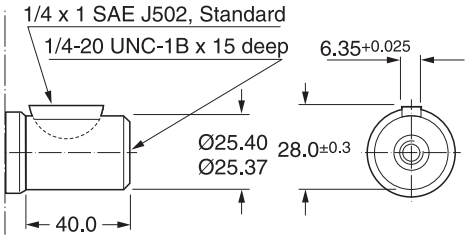
		Series TE														
		36	45	50	65	80	100	130	165	195	230	260	295	330	365	390
Gewicht / Weight Poids / Peso [kg]		7.2	7.3	7.4	7.5	7.6	7.7	8.1	8.3	8.6	8.8	9.1	9.3	9.6	9.9	10.1
Code Y	"L1"[mm]	151	152	154	157	160	164	170	177	183	189	196	202	208	215.5	221
	„L2“[mm]	155	156	158	161	165	168	174	181	187	193	200	206	212	220	225
	„L3“[mm]	127	128	130	132	136	139	145	152	158	164	171	177	183	191	196

Coupling shaft / Abtriebswelle / Arbre / Alberi

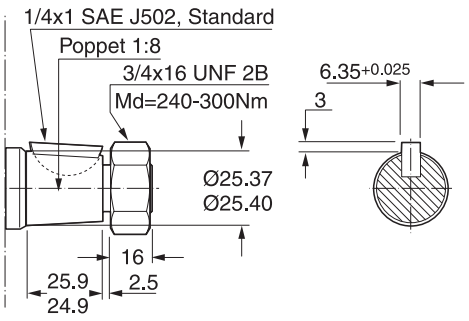
Code 08



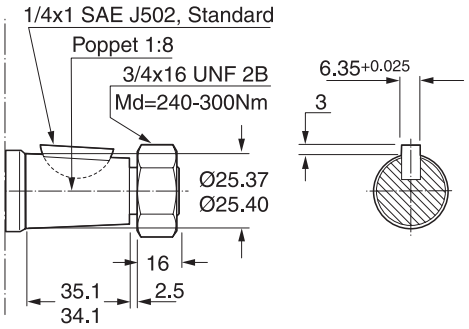
Code 10 [3]



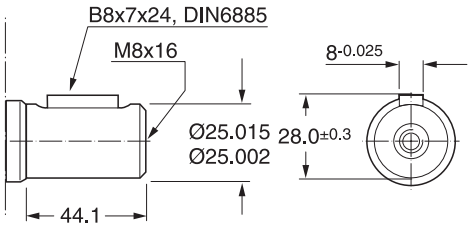
Code 12



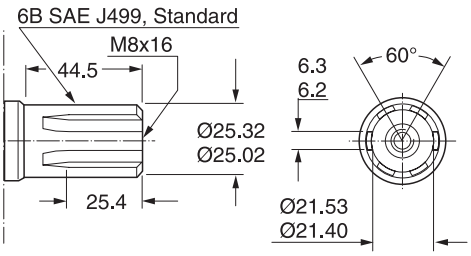
Code 25



Code 26 [2]

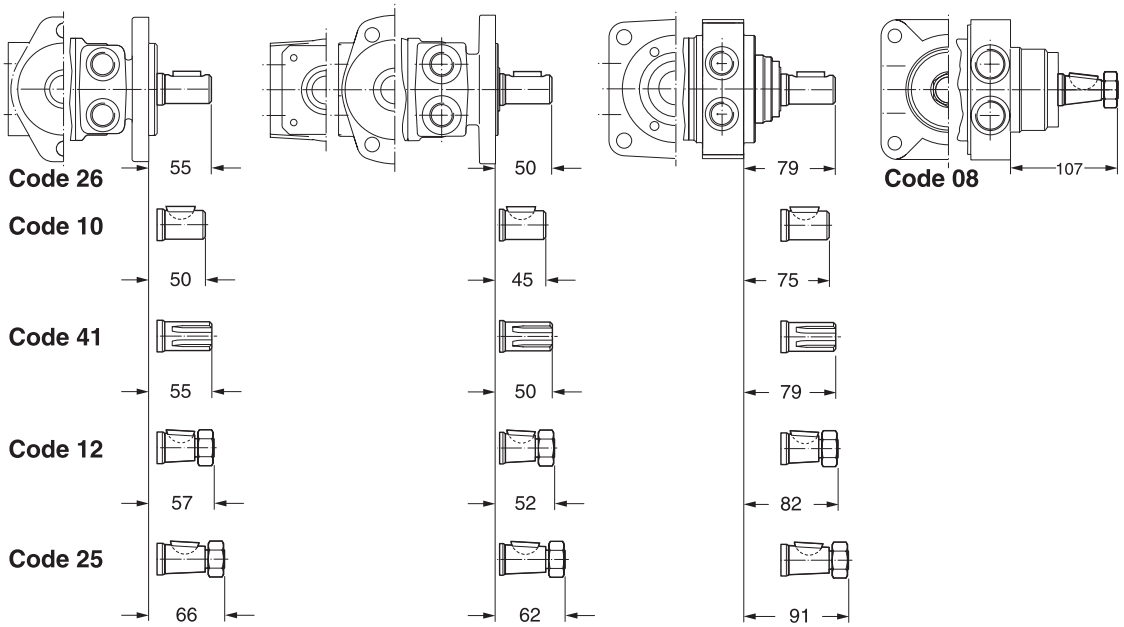


Code 41



[2]) **Code 69** = Rostfreie Ausführung
Stainless steel version
Version en acier inoxydable
Versione in acciaio inossidabile
230 Nm (2100lb in) Max. Drehmomentt/
Max Torque/ Couple maxi/ Coppia max

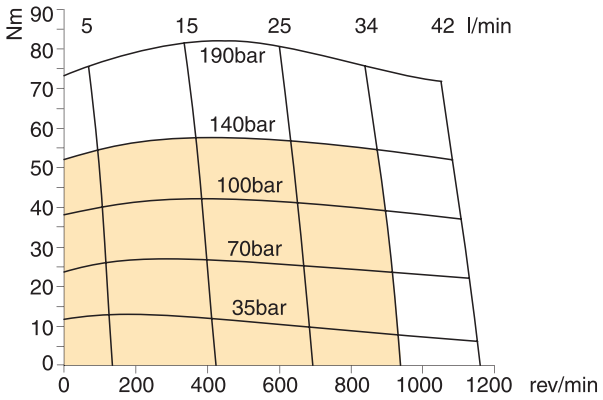
[3]) **Code 70** = 25,4 mm - Rostfreie Ausführung
25,4 mm - Stainless steel version
25,4 mm - Version en acier inoxydable
25,4 mm - Versione in acciaio inossidabile
230 Nm (2100lb in) Max. Drehmomentt/
Max Torque/ Couple maxi/ Coppia max



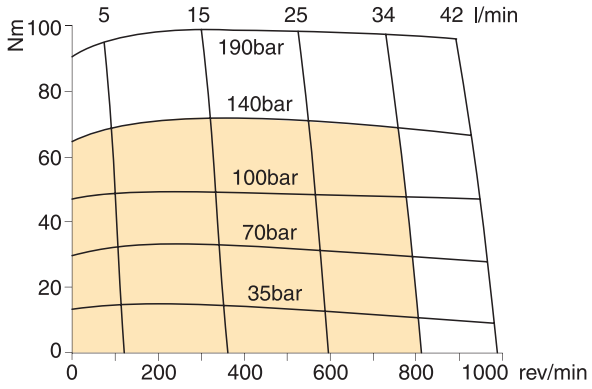
Parker Hannifin
Pump & Motor Division Europe
Chemnitz, Germany

Diagrams / Diagramme / Diagrammes / Diagrammi

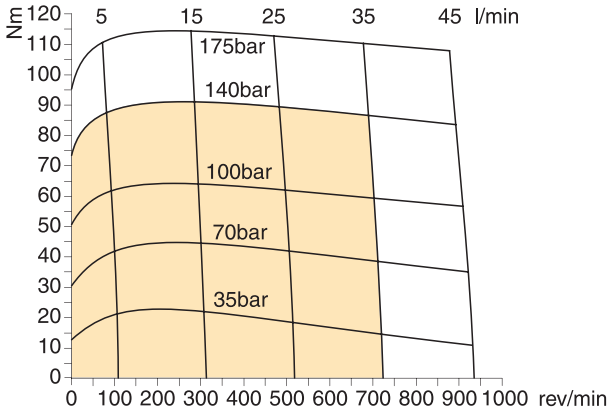
TE/TJ 36



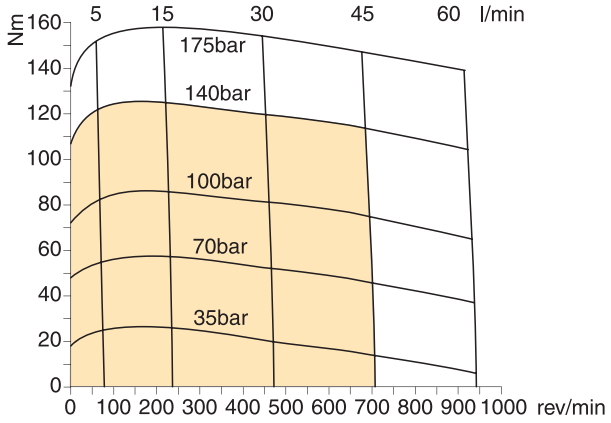
TE/TJ 45



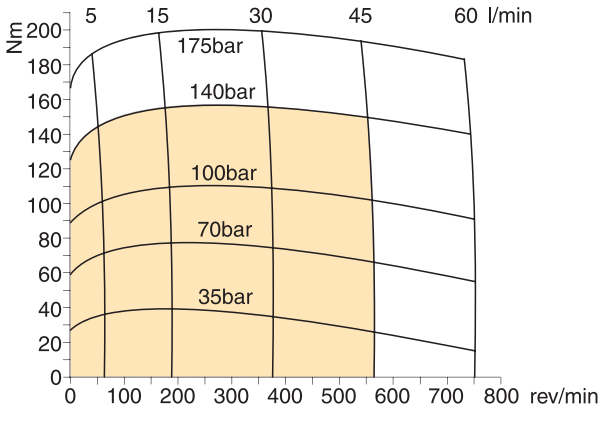
TE/TJ 50



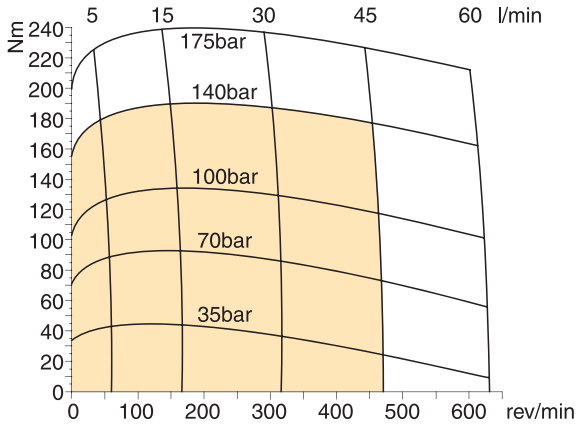
TE/TJ 65



TE/TJ 80



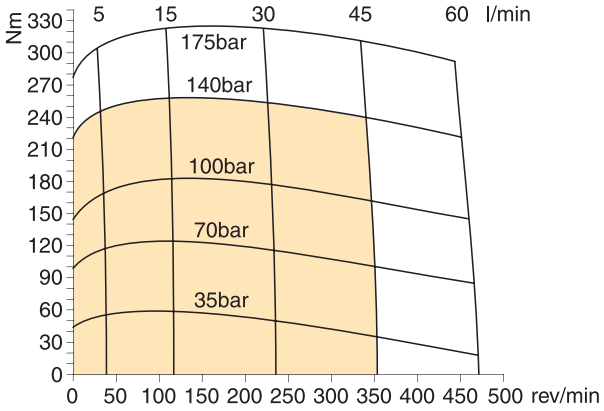
TE/TJ 100



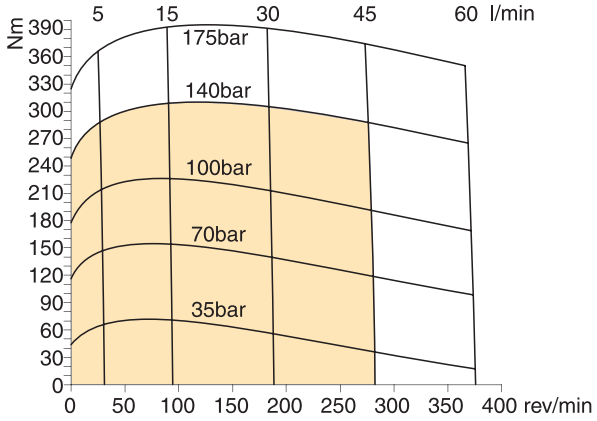
Cont. Int.

int. =
Intermittierende Werte maximal 10% von jeder Betriebsminute.
Fonctionnement interm. 10% max. de chaque minute d`utilisation.
Intermittent operation rating applies to 10% of every minute.
Servizio intermittente 10% max di ogni minuto di utilizzazione.

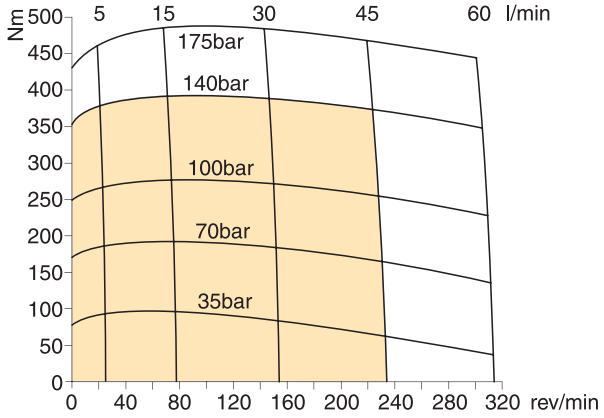
TE/TJ 130



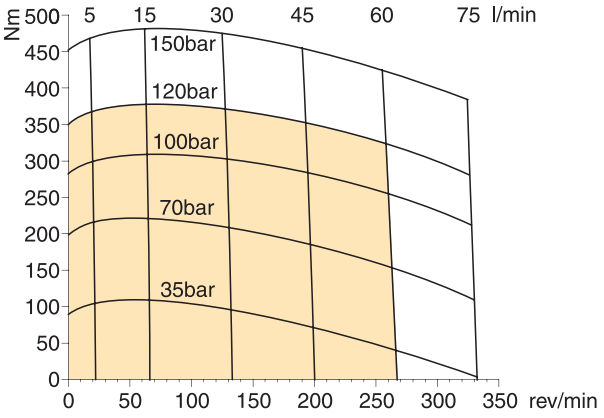
TE/TJ 165



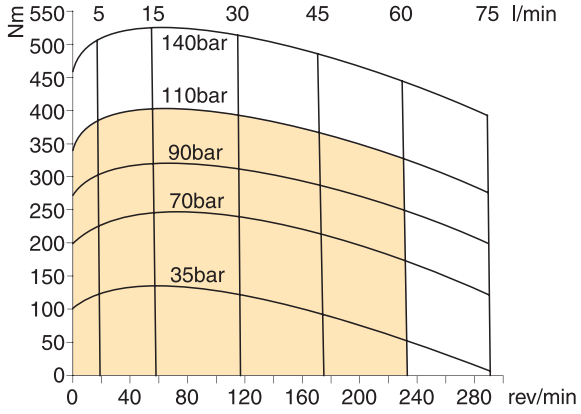
TE/TJ 195



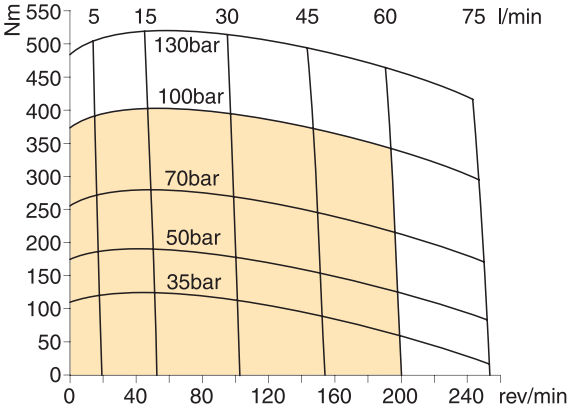
TE/TJ 230



TE/TJ 260



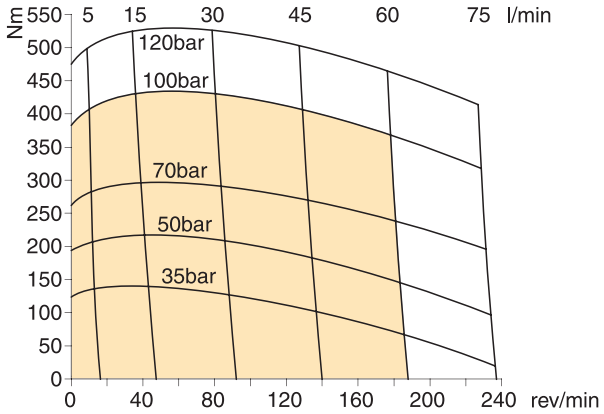
TE/TJ 295



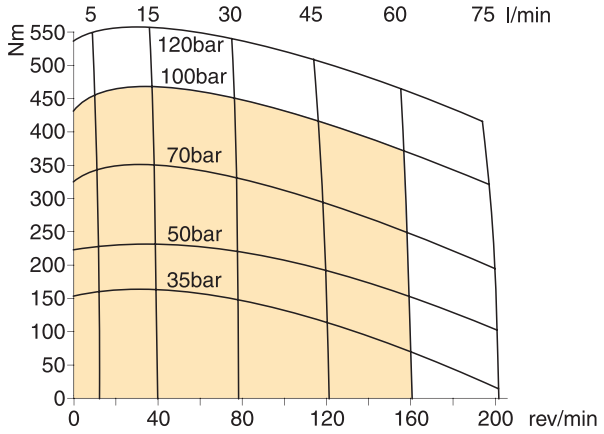
Cont. Int.

int. =
Intermittierende Werte maximal 10% von jeder Betriebsminute.
Fonctionnement interm. 10% max. de chaque minute d`utilisation.
Intermittent operation rating applies to 10% of every minute.
Servizio intermittente 10% max di ogni minuto di utilizzazione.

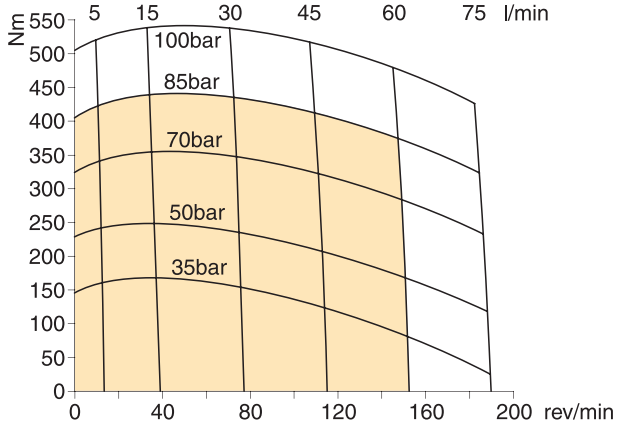
TE/TJ 330



TE/TJ 365



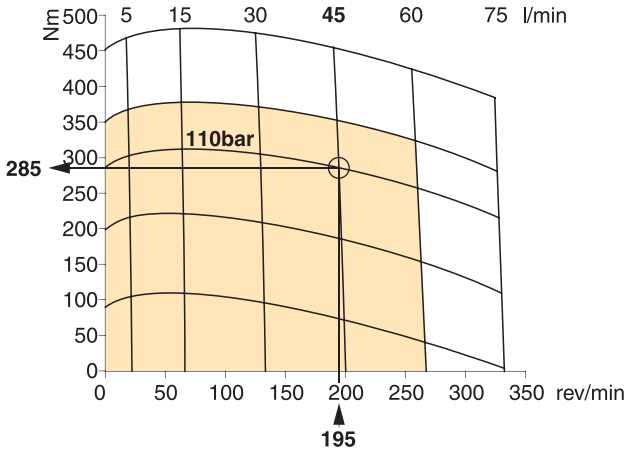
TE/TJ 390



☐ Cont. ☐ Int.

int. =
Intermittierende Werte maximal 10% von jeder Betriebsminute.
Fonctionnement interm. 10% max. de chaque minute d`utilisation.
Intermittent operation rating applies to 10% of every minute.
Servizio intermittente 10% max di ogni minuto di utilizzazione.

Beispiel / Example Series TE / TJ230



Md = 285 Nm V = 229.4 cm^3/rev
n = 195 rev/min Q = 45 l/min
Δp = 110 bar

Volumetrischer Wirkungsgrad (η_{vol})
Volumetric efficiency
Rendement volumétrique
Rendimento volumetrico

$$\eta_{vol} = \frac{n \cdot V}{Q \cdot 10^3} = \frac{195 \cdot 229.4}{45 \cdot 10^3}$$
$$\eta_{vol} = 0.99$$

Hydraulisch-mechanischer Wirkungsgrad (η_{hm})
Hydraulic-mechanical efficiency
Rendement hydro-mécanique
Rendimento idro-meccanico

$$\eta_{hm} \quad \frac{Md \cdot 20 \cdot \pi}{\Delta p \cdot V} = \frac{285 \cdot 20 \cdot \pi}{110 \cdot 229.4}$$
$$\eta_{hm} = 0.71$$

Gesamtwirkungsgrad (η_{ges})
Overall efficiency
Rendement global
Rendimento totale

$$\eta_{ges} = \eta_{vol} \cdot \eta_{hm} = 0{,}99 \cdot 0{,}71$$
$$\eta_{ges} = 0.70$$

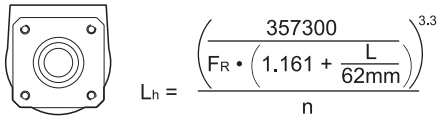
Leistung P (kW)
Power P
Puissance P
Potenza P

$$P = \frac{Md \cdot n \cdot \pi}{10^4 \cdot 3} = \frac{285 \cdot 195 \cdot \pi}{10^4 \cdot 3}$$
$$P = 5.8 \text{ kW}$$

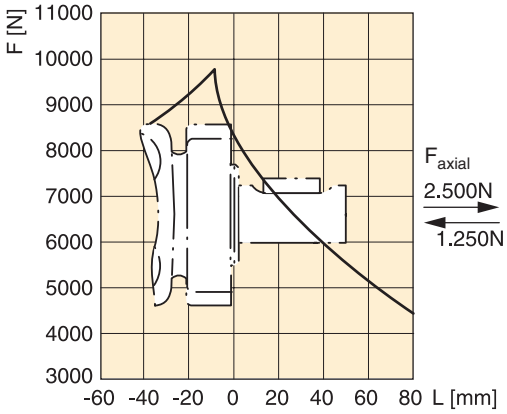
Parker Hannifin
Pump & Motor Division Europe
Chemnitz, Germany

Life Time / Lebensdauer / Durèe de vie / Durata

TE Code D

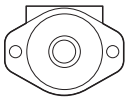


$$L_h = \frac{\left(\frac{357300}{F_R \cdot \left(1.161 + \frac{L}{62mm}\right)}\right)^{3.3}}{n}$$

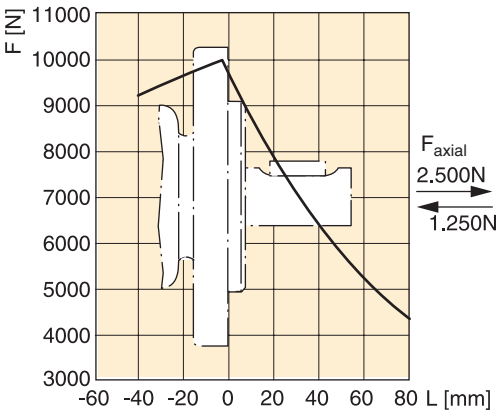


F_{Radial} [N]

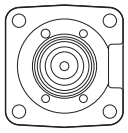
TE Code C



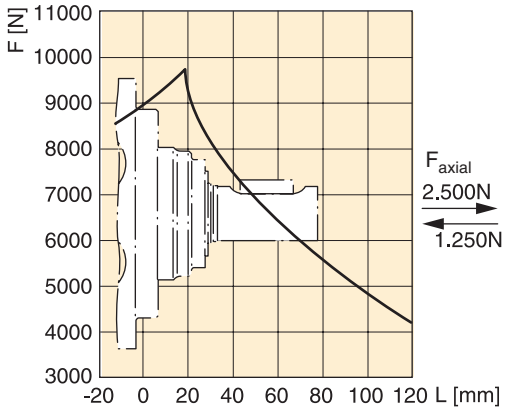
$$L_h = \frac{\left(\frac{357300}{F_R \cdot \left(1.076 + \frac{L}{62mm}\right)}\right)^{3.3}}{n}$$



TE Code L

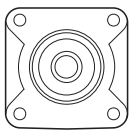


$$L_h = \frac{\left(\frac{357300}{F_R \cdot \left(0.69 + \frac{L}{62mm}\right)}\right)^{3.3}}{n}$$

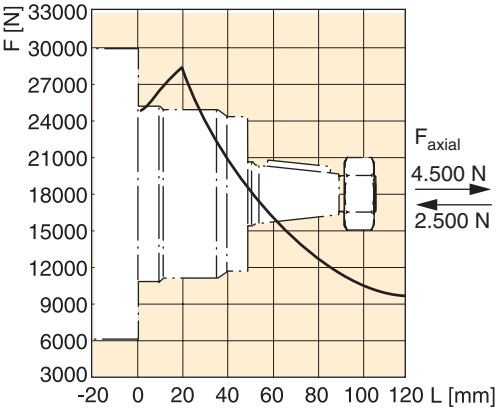


F_{Radial} [N]

TJ Code U



$$L_h = \frac{\left(\frac{840000}{F_R \cdot \left(0.57 + \frac{L}{71mm}\right)}\right)^{3.3}}{n}$$



Die Lebensdauer der Radiallager (L_h in Stunden) lässt sich nach folgender Formel berechnen. Die Größe F_R ist durch die mechanische Festigkeit der Abtriebswelle begrenzt (siehe Diagramm). Das Maß "L" ist das Längenmaß vom Gehäuseflansch bis zum Angriffspunkt der Radialkraft F_R .

Life time (L_h in hours) of the radial bearings can be calculated with the following formula. The value F_R is limited by the mechanical strength of the shaft (see diagram). The measurement "L" is the length from the housing flange up to the point of impact of the radial force F_R .

La durée de vie des roulements radiaux (L_h en heures) peut être calculée par les formules suivantes. La grandeur F_R est limitée par les résistances mécaniques de l`arbre de sortie (voir diagramme). La cote "L" est la longueur entre la bride du carter jusqu`au point d`appui de l`effort radial F_R .

La durata dei cuscinetti (L_h in ore) può essere calcolata con la seguente formula. Il valore F_R è limitato dalla resistenza meccanica dell`albero (vedi diagramma). La quota "L" è la distanza tra la flangia del corpo ed il punto di applicazione della forza radiale F_R .

Vorstehende Formeln gelten für eine B10-Lebensdauer.
The preceding formulas are valid for a B10 duration of life.
Les formules précédentes sont valables pour une durée de vie B10.
Le formule precedenti sono valide per una durata della vita B10.

L_h = [h]
L = [mm]
n = [rev/min]

TE

Series

Schluckvolumen
Displacement
Cylindrée
Cilindrata

Gehäuse
Housing
Carter
Scatola motore

Anschluss
Ports
Plan de raccordement
Connessioni

Welle
Shaft
Arbre
Albero

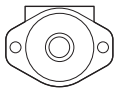
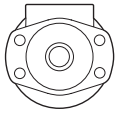
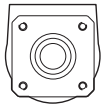
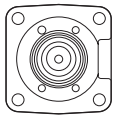
Drehrichtung
Direction of rotation
Direction de rotation
Direzione di rotazione

Option

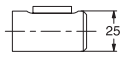
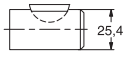
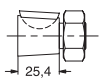
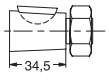
Code	cm^3/rev
0036	36
0045	41
0050	50
0065	66
0080	82
0100	98
0130	130
0165	163
0195	196
0230	228
0260	261
0295	293
0330	326
0365	370
0390	392

Code	Option
AAAB	standard
HAAP	external relief valve 100 bar
HAAU	external relief valve 140 bar

Code	Direction
0	B A Standard
1	B A

Code	Housing
C	
M	
D	
L	

Code	Port
W	G 1/2
N [1]	universal port M8x13
Y	rear port G 1/2 axial

Code	Shaft
26 69[3]	
10 70[3]	
41	
12	
25	

[1] Nicht verfügbar für Gehäuse L
Not availble for housing code L
Pas disponible pour carter code L
Non Disponibile per Alloggiamento codice L

[3] 230 Nm (2100lb in) Max. Drehmoment/
Max Torque/ Couple maxi/ Coppia max

TJ

Series

Schluckvolumen
Displacement
Cylindrée
Cilindrata

Gehäuse
Housing
Carter
Scatola motore

Anschluss
Ports
Plan de raccordement
Connessioni

Welle
Shaft
Arbre
Albero

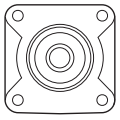
Drehrichtung
Direction of rotation
Direction de rotation
Direzione di rotazione

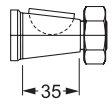
Option

Code	cm^3/rev
0036	36
0045	41
0050	50
0065	66
0080	82
0100	98
0130	130
0165	163
0195	196
0230	228
0260	261
0295	293
0330	326
0365	370
0390	392

Code	Option
AAAB	Standard

Code	Direction
0	 Standard
1	

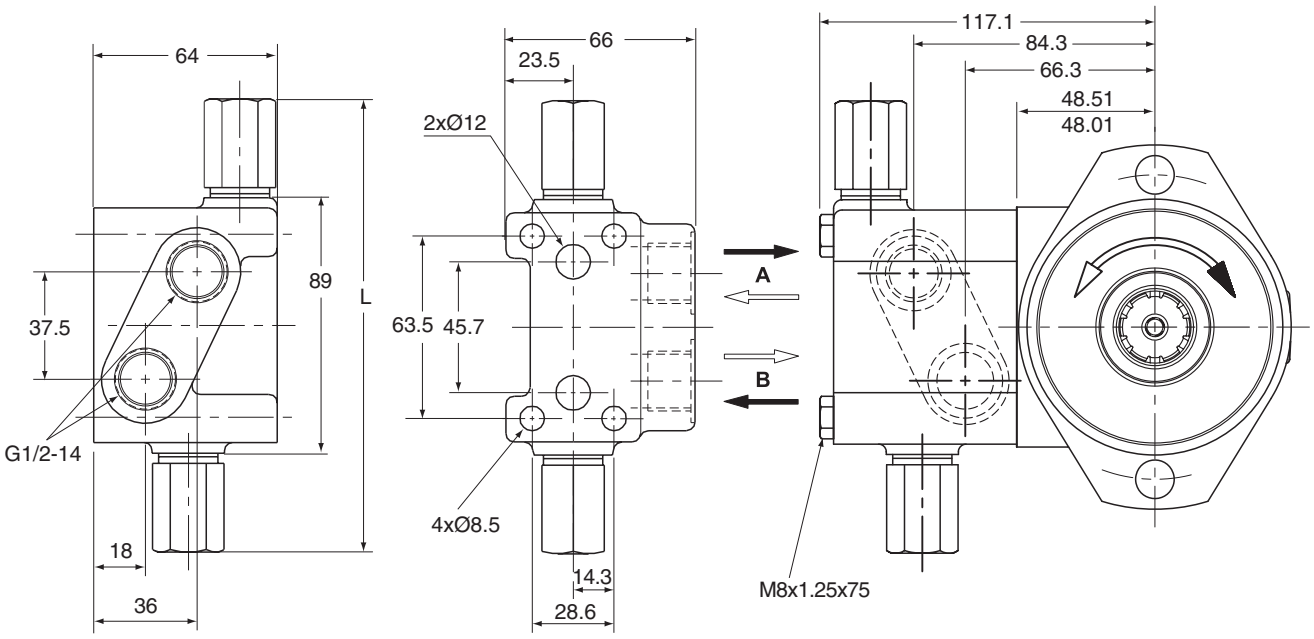
Code	Housing
U	

Code	Shaft
08	

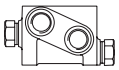
Code	Port
W	G 1/2

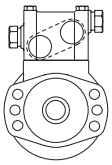
Schockventil / Relief valve / Soupape sécurité / Regolatrice pressione

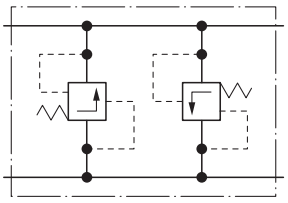
Extern / external



Bestellschlüssel / Ordering code / Système de commande / Sistema di ordinazione

Option code	Shift pressure	Single valve 	Single part order no.
HAAP	100 bar	**Zubehör / Fixtures** 4 x M8 x 75 mm 2 x O Ring	410017-100
HAAU	140 bar		410017-140

Option code		Length "L"
HAAP		158 mm
HAAU		158 mm



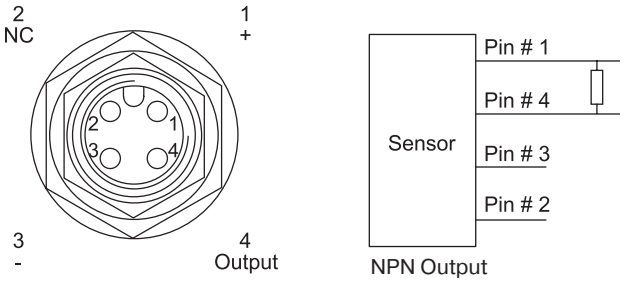
Speed Sensor / Drehzahlsensor / Compte-tours / Contagiri

Dieser robuste, wetterfeste Drehzahlaufnehmer arbeitet nach dem Halleffekt. Es werden 30 Rechteckimpulse pro Abtriebswellenumdrehung erzeugt. Durch Erfassung der positiven und negativen Wellenflanken sind 60 Impulse pro Umdrehung möglich. Der Sensor führt zu keiner Leistungsbeschränkung des Motors. Die volle Radiallastkapazität bleibt erhalten.

This rugged, weather resistant speed sensor is a Hall effect device. When externally powered, 30 square wave digital pulses per output shaft revolution are produced. By signal multiplication, 60 pulses per revolution can be obtained. The installation of this economical sensor does not affect the torque or side load capability of the motor into which it is installed.

Un capteur économique pour mesure de la vitesse. Ce capteur robuste et résistant aux intempéries est a effet Hall. Alimenté par une source externe, il fournit 30 impulsions carrées par tour. Par multiplication électronique, on obtient 60 impulsions par tour. Son montage ne modifie pas le couple ni la charge radiale du moteur qui le reçoit.

Sensore di velocità ad effetto Hall, estremamente robusto e resistente alle condizioni ambientali. Genera 30 impulsi al giro, con uscita digitale ad onda quadra. Il numero di impulsi può essere elettronicamente raddoppiato. L'utilizzo di questo sensore, non influisce sulle caratteristiche di coppia o di potenza del motore idraulico.





Versorgungsspannung Operating voltage range Courant d`alimentaion Tensione di alimentazione	4.5...24 V (DC)
Arbeitstemperatur Operating temperature Température Temperatura di funzionamento	-30°...100° C
Arbeitsfrequenz Operating frequency range Fréquence d`utilisation Frequenza di lavoro	0...10 KHZ
Erforderlicher Laststrom Sink current Courant depeau Corrente di alimentazione	0...20 mA (max.)
Anschluss Connection Raccordement Connessione elettrica	4 Pin (12mm) DIN Standard

Formel Pullup-Widerstand	(0.25 Watt, Tol. 5%)
Formula pull-up resistor value	(0.25 Watt, 5% tol.)
Formule valeur pull-up resistor	(0.25 Watt, tol. 5%)
Calcolo resistenza di carico	(0.25 Watt, toll. 5%)

Spannung/Voltage
Courant/Tensione — 4.5...24 V
Laststrom/Sink current
Courant/Corrente — 0...20 mA
= Widerstand / Resistor / Résistance / Resistenze — k Ohm

Status: aus/State: off
Courant: off/Condizione: off
(95% +V)

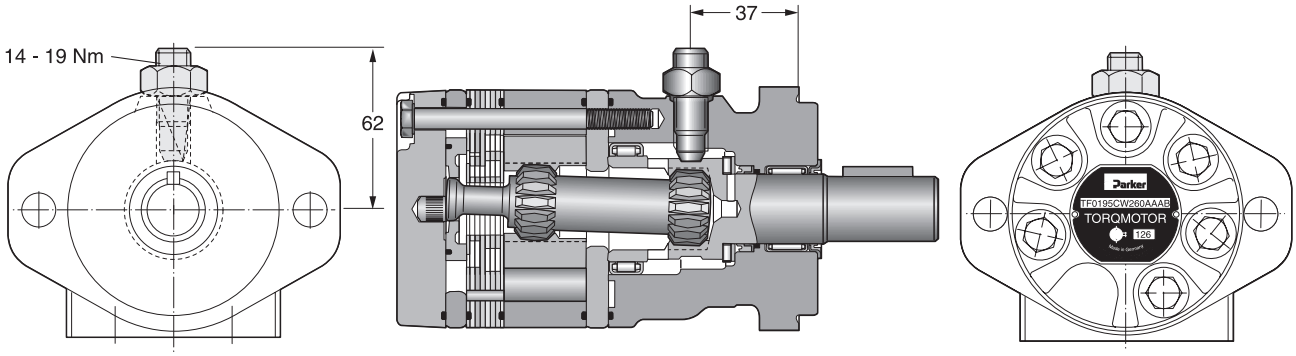
+ V

Status: ein/State: on
Courant: on/Condizione: on
(max. 0.4 V DC)

0 V

Parker Hannifin
Pump & Motor Division Europe
Chemnitz, Germany

Option FSAB



Der Sensor ist gegen Verpolung der Versorgungsspannung, jedoch nicht gegen Kurzschluss geschützt.

The sensor has reverse polarity protection but no short circuit protection.

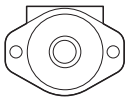
Le capteur est protégé contre l`inversion de polarité de la tension d`alimentation, mais pas contre les courts circuits.

Il sensore è protetto contro l' inversione della polarità della tensione di alimentazione, ma non contro il corto circuito.

Ordering code / Bestellschlüssel / Système d. commande / Sistema di ordinazione

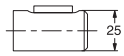
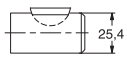
TE										F	S	A	B
Series	Schluckvolumen Displacement Cylindrée Cilindrata				Gehäuse Housing Carter Scatola motore	Anschluss Ports Plan de raccordement Connessioni	Welle Shaft Arbre Albero		Drehrichtung Direction of rotation Direction de rotation Direzione di rotazione	Option			

Code	cm^3/rev
0036	36
0045	41
0050	50
0065	66
0080	82
0100	98
0130	130
0165	163
0195	196
0230	228
0260	261
0295	293
0330	326
0365	370
0390	392

Code	Housing
C	

Code	Port
W	G 1/2
N	universal port M8x13
Y	rear port G 1/2 axial

Code	Direction
0	 Standard
1	

Code	Shaft
26	
10	
41	