

*ELMOT AG Veliko Tarnovo wurde im Jahr 1967 gegründet.
Für kurze Zeit wurde das Unternehmen weltweit der größte Hersteller von
asynchronen Elektromotoren mit konischem Rotor und eingebauter Bremse.*

Die Produktionspalette der ELMOT AG umfasst folgende Artikel:

- Seilelektrozüge
- eintourige und zweitourige Elektromotoren mit eingebauter Bremse - Leistung bis 45 kW
- Getriebemotorgruppen in Standard- und Ex-Ausführung
- Lastbegrenzer
- Karren und **Kopfträger** für Kräne

*ELMOT JSC is created in 1967. In short time it became
the biggest manufacturer of asynchronous electric motors
with conical rotors and built-in brake in the world.*

Now ELMOT manufactures:

- Electric wire rope hoists
- Single and double speed electric motors with built-in brake with power up to 45 kW
- Geared motors-normal and explosion-proof execution
- Rope load limiter
- Trolleys and end carriages for cranes





CERTIFICATE OF APPROVAL

This is to certify that the Quality Management System of:

ELMOT JSC
73 Nikola Gabrovski Str., 5002 Veliko Tarnovo
Bulgaria

has been approved by Lloyd's Register Quality Assurance
to the following Quality Management System Standards:

BS EN ISO 9001:2008 EN ISO 9001:2008 ISO 9001:2008

The Quality Management System is applicable to:

Design, manufacture and servicing of asynchronous single and three phase electric motors with cone rotors and built-in brakes for lifting and driving mechanisms; electric rope hoists; geared motors, crane and crane components; elastic clutches for driving systems; load limiters; electric asynchronous motors with cylindrical rotors and their components.

Approval
Certificate No: SOF0206765

Original Approval: 08th June 1998

Current Certificate: 23rd May 2013

Certificate Expiry: 28th April 2016

Issued by: Lloyd's Register EMEA branch for and on behalf
of Lloyd's Register Quality Assurance Limited



This document is subject to the provision on the reverse
81A Bulgaria Blvd., 1404 Sofia, Registration number 121726037
For and on behalf of 71 Fenchurch Street, London EC3M 4BS United Kingdom, Registration number 1879370
This approval is limited to the activities of the UKAS assessment and certification procedures and monitored by UKAS.
The use of the UKAS Accredited Mark indicates Accreditation in respect of those activities covered by the Accreditation Certificate Number 001

СИСТЕМА СЕРТИФИКАЦИИ ГОСТ Р

ФЕДЕРАЛЬНОЕ АГЕНТСТВО ПО ТЕХНИЧЕСКОМУ РЕГУЛИРОВАНИЮ И МЕТРОЛОГИИ



СЕРТИФИКАТ СООТВЕТСТВИЯ

№ РОСС BG1605.B04151

Срок действия с 21.12.2012 г. по 21.12.2015 г.

№ 0959273

ОРГАН ПО СЕРТИФИКАЦИИ РОСС RU.0001.1ПБ05
НАЦИОНАЛЬНЫЙ ЦЕНТР ПО СЕРТИФИКАЦИИ ВЗРЫВОЗАЩИЩЕННОГО
И РУДНИЧНОГО ЭЛЕКТРООБОРУДОВАНИЯ
115230, г. Москва, Электролитный проезд, д. 1, корп. 4, комната № 9, НАЦИОНАЛЬНЫЙ ЦЕНТР "ЦСВЭ",
тел./факс: +7 (495) 554-2494, 554-1238, 554-1257, 554-0150, 554-5042, 557-8244, 558-8353, 558-8141, 971-6830.
www.ccvv.ru

ПРОДУКЦИЯ
Моторредукторы взрывозащищенные ТР...Ех и ТР1...Ех
с маркировкой взрывозащиты II Gb с ПВ/ПС Т5 Х и маркировкой
взрывозащиты комплектующих электродвигателей
IExdПВ/ПСТ4,Т5, 2ExdeПСТ5.
Серийный выпуск.

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ НОРМАТИВНЫХ ДОКУМЕНТОВ

ГОСТ Р ЕН 13463-1-2009; ГОСТ Р ЕН 13463-5-2009;
ГОСТ Р 51330.0-99 (МЭК 60079-0-98);
ГОСТ Р 51330.1-99 (МЭК 60079-1-98);
ГОСТ Р 51330.8-99.

ИЗГОТОВИТЕЛЬ

Фирма «ЕЛМОТ» АД,
ул. Никола Габровски, 73, г. Велико Тырново, Р. Болгария.

СЕРТИФИКАТ ВЫДАН

Фирме «ЕЛМОТ» АД,
ул. Никола Габровски, 73, г. Велико Тырново, Р. Болгария.
Телефон: 00359 62 64 19 63; факс: 00359 62 64 48 61.

НА ОСНОВАНИИ

Протокола испытаний № 529.2012-И от 28.11.2012 г. ИЛ ЦСВЭ
(рег. № РОСС RU.0001.21ПБ04).
Акта инспекционной проверки производства сертифицированной продукции
№ 808-И от 28.08.2012 г. ОС ЦСВЭ (рег. № РОСС RU.0001.1ПБ05).

ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ

Сертификация по схеме За.
Сертификат действителен с приложением на 3-х листах.
Инспекционный контроль - 2013 г., 2014 г.

Руководитель органа
Эксперт

А.С. Залогин

С.В. Серов

Сертификат имеет юридическую силу на всей территории Российской Федерации



Physical Technical Testing Institute
Ostrava-Radvanice



QUALITY ASSURANCE NOTIFICATION

- (1) Equipment or Protective Systems or Components Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC
- (2) Notification number
FTZÚ 11 ATEX Q 008
- (3) Group of products
Electrical motors and hoists with type of protection: Flameproof enclosure "d"
- (4) Applicant: **ELMOT JSC, 73 Nikola Gabrovski str., 5000 Veliko Tarnovo, Bulgaria**
- (5) Manufacturer: **ELMOT JSC, 73 Nikola Gabrovski str., 5000 Veliko Tarnovo, Bulgaria**
- (6) The Physical Technical Testing Institute, notified body number 1026 for Annexes IV and VII in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, notifies to the applicant that the actual manufacturer has a quality system which complies with Annex IV and VII of the Directive.
- (7) This notification is based upon Audit Report No. FTZÚ 11/ATEX/008 issued the 20th September 2011.
This notification can be withdrawn if the manufacturer no longer satisfies the requirements of Annex IV and VII.
Results of periodical re-assessment of the quality system are part of this notification.
- (8) This notification is valid until **15 October 2014** and can be withdrawn if manufacturer does not satisfy the quality assurance re-assessment.
- (9) According to Article 10(1) of the Directive 94/9/EC the CE marking shall be followed by the identification number 1026 identifying the FTZÚ as notified body involved in the production control stage.

Responsible person:

Dipl. Ing. Jaroslav Šindler
Head of Certification Body



Date of issue: 20th October, 2011

Number of pages: 1/2

This notification may only be reproduced in its entirety and without any changes.

Fyzikálně-technický zkušební ústav, s.p., Pítkovská 7, 716 07 Ostrava-Radvanice,
tel.: +420 595 223 111, fax: +420 596 232 672, e-mail: ftzu@ftzu.cz



Declaration of conformity ELMOT JSC

24 "Academic M. Popov" str. 4 floor region "Izgrev" Sofia Bulgaria
73 "Nikola Gabrovski" str. Veliko Tarnovo Bulgaria
tel. +359 62 647-837, +359 626 41-951,
fax +359 62 644-861, e-mail: elmot1@elmotbg.com

DECLARES FULL AND SOLE RESPONSIBILITY THAT THE PRODUCT: GEARED MOTORS SERIES TP 1

CONFORM TO THE REQUIREMENTS OF THE FOLLOWING EC DIRECTIVES:

Machinery Directive 2006/42/EC;
Low Voltage Equipment 2006/95/EC;
Electromagnetic compatibility 2004/108/EC

AND THE REQUIREMENTS OF THE HARMONIZED STANDARDS:

EN ISO 12100-1 Safety of machinery - Basic concepts, general principles for design;
Part 1: Basic terminology, methodology;
EN ISO 12100-2 Safety of machinery. Part 2: Technical principles;
EN 60204-1 Safety of machinery - Electrical equipment of machines.
General requirements;

AND THE REQUIREMENTS OF STANDARDS AND SPECIFICATIONS:

DIN 15020 "Lifting appliances; Principles relating to rope drives.
Calculation and Construction";
FEM 9.681 "Bases for calculation of serial lifting mechanisms. Selection of travel motors";
FEM 9.683 "Selection of electric motors for main lifting mechanisms and for traveling".

Certificate of Conformity in accordance with Canadian Standards /CSA/
No. MC222581/2010.

The above products are manufactured under the requirements of the
EN ISO 9001:2008 with Certificate No. 0206765/2010;
ISO 14001:2004 with Certificate No. 0206765/A-2010;
BS OHSAS 18001:2007 with Certificate No. 0206765/B-2010.

January 3th 2012



Elisaveta Nikolaova
Managing Director

Reduktoren und Getriebemotorgruppen, Serie TP

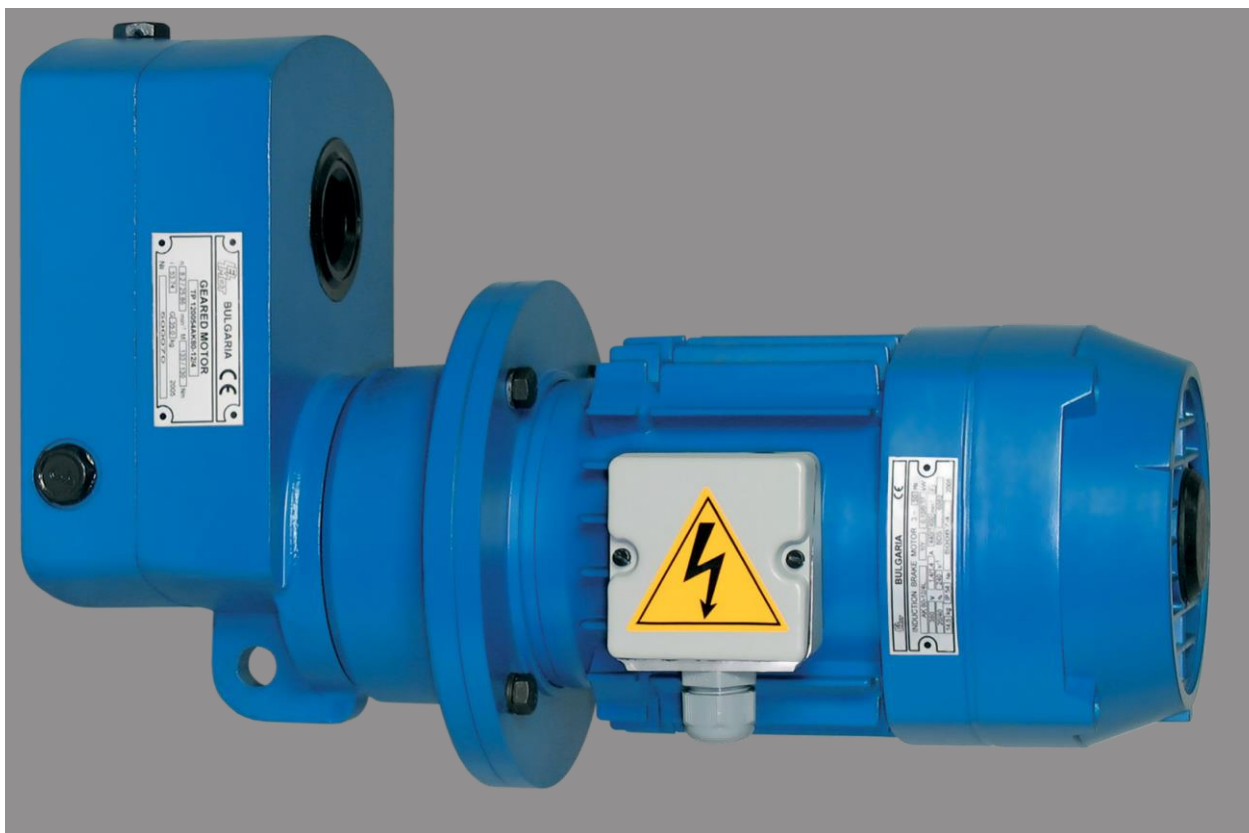
- Getriebemotoren mit Asynchronmotoren, konischen Rotor und eingebauter Bremse
- breite Gamma Ausgangsumlauf und Drehmomenten, laut Kundenforderungen
- IP54, IP22 der Bremse (EN60529)
- Flanschanschluss-IM B5 (EN60034-7)
- Möglichkeit fuer Thermoschutz-oder Ex Ausfuehrung
- Variante ,von Motorleistung abhaengig
- Speisespannungsmodifikationen

Anwendung: Antrieb der Krananlage
und andere Hubwerke

Reducers and geared motors TP series

- Geared motor groups including asynchronous brake motors with conical rotor
- Wide range of output speeds and output torques according to client requirements
- IP 54, brake protection IP 22 (EN 60529)
- Flange joining-IM B5 (EN 60034-7)
- Optional thermal or explosion-proof protection
- Modifications by electric motor power
- Different supply voltages on request

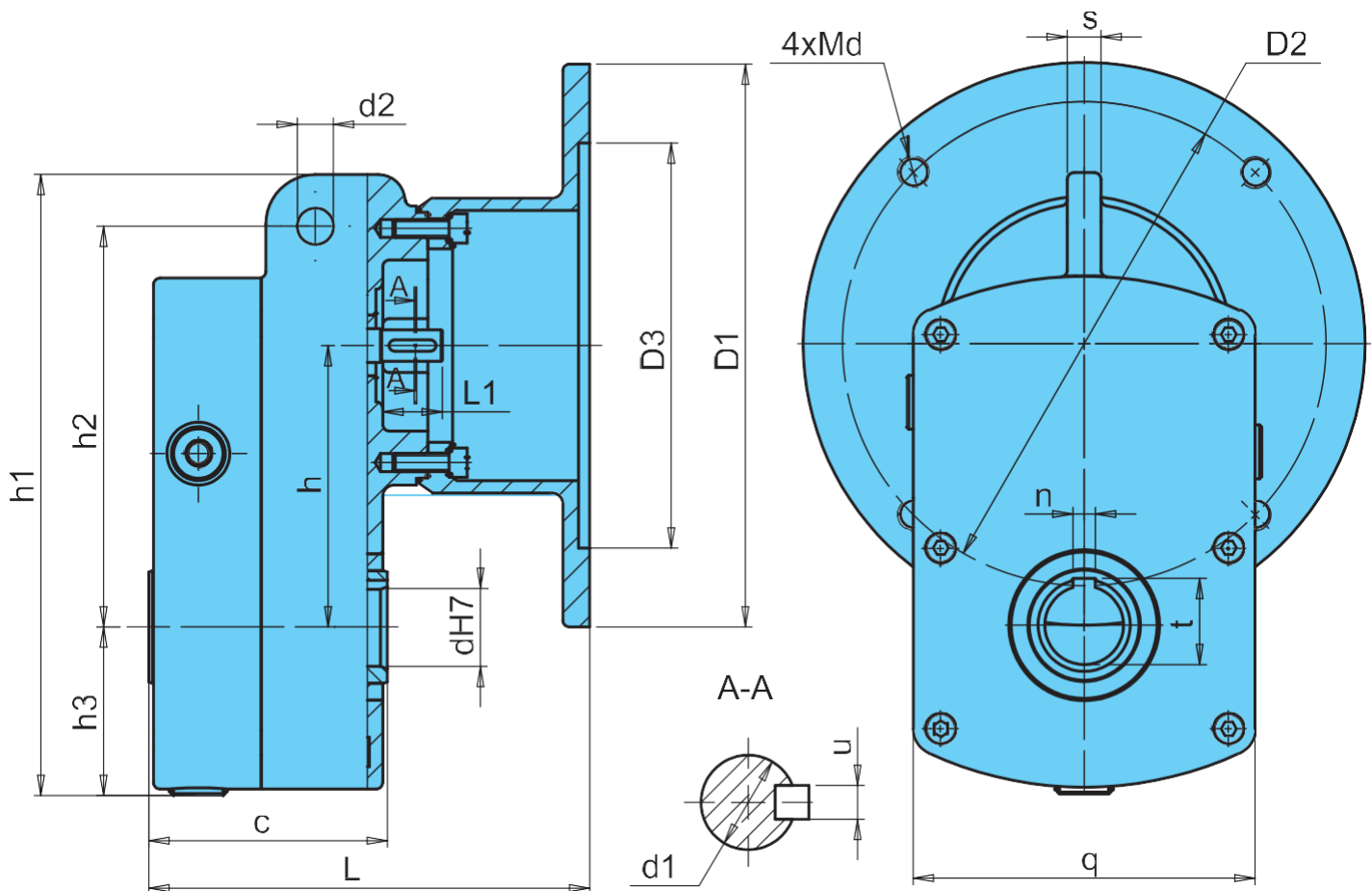
Applications: For travelling mechanisms
of cranes and other lifting systems



Reduktor mit Flansch / Reducer with flange

Reduktor Typ - Zusammensetzung:
Reducer designation:

TP	160	36
Typ Type	Baugroesse Dimension	Uebersetzungszahl Transmission ratio

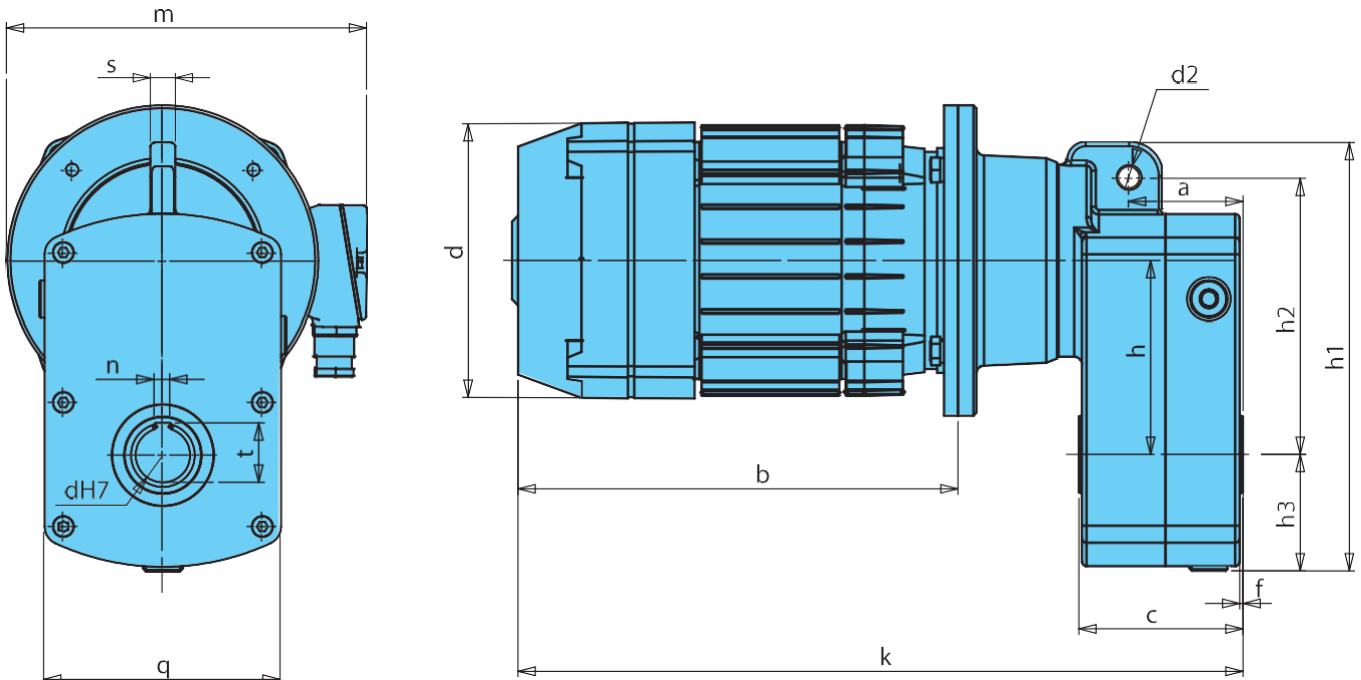


Anschlussmasse / Overall dimensions

Reduktor Typ Reducer type	fuer Motoren Typ for motor type	c	L	L1	d2	h	h1	h2	h3	dH7	4xMd	D1	D2	D3	d1	n	n	t	s	q
TP 160	AK 71	97	150.5	22	16	100	243	150	70	30	4xM8	160	130	110	11	4	8	33.3	14	132
	AK 80		170.5								200	165	130							
	AK 90		180.5								200	165	130							
TP 200	AK 71	106	164	27	16	125	280	178	79	35	4xM8	160	130	110	14	5	10	38.3	16	152
	AK 80		184								4xM10	200	165	130						
	AK 90		196								4xM12	250	215	180						
	AK 100										4xM12	250	215	180						
TP 250	AK 80	118	198	27	18	145	335	207	95	40	4xM10	200	165	130	16	5	12	43.3	18	180
	AK 90		210								4xM12	250	215	180						
	AK 100		210								4xM12	250	215	180						
TP 315	AK 90	142	221	29	22	174	386	244	109	50	4xM10	200	165	130	19	6	14	53.8	16	210
	AK 100		233								4xM12	250	215	180						

Geared motor

Getriebemotor / Geared motor

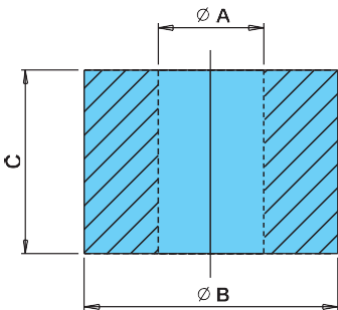


Anschlussmasse / Overall dimensions

Typ/Type	a	b	c	d	f	k	m	q	s	d2	h	h1	h2	h3	dH7	n	t
TP1160 AK 71	67.5	255	97	140	1.5	406	195	132	14	16	100	243	150	70	30	8	33.3
TP1160 AK 80		272		160		443	220										
TP1160 AK 90		290		178		471	230										
TP1160 AK 90P		320		178		501	230										
TP1200 AK 71	74	255	106	140	2	419	195	152	16	16	125	280	178	79	35	10	38.3
TP1200 AK 80		272		160		456	220										
TP1200 AK 80P		272		160		456	220										
TP1200 AK 90		290		178		474	230										
TP1200 AK 90P		320		178		504	230										
TP1200 AK 100		356		200		552	261										
TP1200 AK 100P	78	386	118	200	2	582	261	180	18	18	145	335	207	95	40	12	43.3
TP1250 AK 80P		272		160		470	220										
TP1250 AK 90		290		178		488	230										
TP1250 AK 90P		320		178		518	230										
TP1250 AK 100		356		200		566	261										
TP1250 AK 100P		386		200		596	261										
TP1315 AK 90P	98	320	142	178	2	541	230	210	16	22	174	386	244	109	50	14	53.8
TP1315 AK 100		356		200		589	261										
TP1315 AK 100P		386		200		619	261										

ABDICHTUNG / SEAL

Anschlussmasse / Overall dimensions



Reduktor Typ Reducer type	Ø A	Ø B	C
	mm	mm	mm
TP 160/TP 160L	14	41	30
TP 200/TP 200L			
TP 250/TP 250L	17	50	40
TP 315	21	55	40

Getriebemotor / Geared motor

TP 1160	Mmax-250Nm		Nenndaten / Rated data		
2p = 8/2 - 660/2700 min ⁻¹ ; 2p = 12/4 - 455/1420 min ⁻¹ ; 2p = 4 - 1420 min ⁻¹					
Typ Type	Leistung	Uebersetzungszahl	Start Umdrehung	Startmoment	Ansnutzung Faktor
	Power	Transmission ratio	Output Speed	Output Torque	Service Factor
	<i>kW</i>	-	<i>min⁻¹</i>	<i>Nm</i>	<i>f_s</i>
TP1160 79 AK71B4	0.25	79.08	16.44	137.83	1.81
TP1160 79 AK71B8/2	0.06/0.25		8.34/34.14	65.15/77.90	3.84/3.21
TP1160 79 AK71-8/2	0.06/0.30		8.34/34.14	65.15/93.48	3.84/2.67
TP1160 79 AK80B12/4	0.08/0.25		5.69/17.70	127.41/127.98	1.96/1.95
TP1160 70 AK71B4	0.25	69.89	18.60	121.80	2.05
TP1160 70 AK71B8/2	0.06/0.25		9.44/38.63	57.58/68.85	4.34/3.63
TP1160 70 AK71-8/2	0.06/0.30		9.44/38.63	57.58/70.38	4.34/3.55
TP1160 70 AK80B12/4	0.08/0.25		6.44/20.03	112.61/113.11	2.22/2.21
TP1160 64 AK71B4	0.25	63.72*	20.40	111.05	2.25
TP1160 64 AK71B8/2	0.06/0.25		10.35/42.37	52.50/62.77	4.76/3.98
TP1160 64 AK71-8/2	0.06/0.30		10.35/42.37	52.50/75.32	4.76/3.32
TP1160 64 AK80B12/4	0.08/0.25		7.06/21.97	102.66/103.13	2.43/2.42
TP1160 56 AK71-4	0.37	56.31	23.08	145.25	1.72
TP1160 56 AK80-12/4	0.12/0.37		7.81/24.68	139.18/135.84	1.80/1.84
TP1160 48 AK71-4	0.37	48.69	26.69	125.57	1.99
TP1160 48 AK80-12/4	0.12/0.37		9.04/28.55	120.35/117.46	2.08/2.13
TP1160 47 AK71-4	0.37	46.63	27.88	120.26	2.08
TP1160 47 AK80-12/4	0.12/0.37		9.44/29.81	115.25/112.49	2.17/2.22
TP1160 43 AK71- 4	0.37	43.41*	29.95	111.95	2.23
TP1160 43 AK80-12/4	0.12/0.37		10.14/32.02	107.30/104.72	2.33/2.39
TP1160 39 AK80-4	0.55	39.23	34.41	144.85	1.7
TP1160 39 AK80P12/4	0.18/0.55		11.22/35.69	145.45/139.68	1.72/1.79
TP1160 36 AK80-4	0.55	35.95*	37.55	132.74	1.88
TP1160 36 AK80P12/4	0.18/0.55		12.24/38.94	133.29/128	1.87/1.95
TP1160 33 AK80-4	0.55	33.04	40.86	121.99	2.05
TP1160 33 AK80P12/4	0.18/0.55		13.32/42.37	122.50/117.64	2.04/2.12
TP1160 30 AK80-4	0.55	30.25	44.63	111.69	2.24
TP1160 30 AK80P12/4	0.18/0.55		14.38/46.28	112.15/107.70	2.23/2.32
TP1160 29 AK90-12/4	0.25/0.75	28.66*	15.00/49.20	151.00/138.16	1.66/1.81
TP1160 28 AK90-12/4	0.25/0.75	27.87*	15.43/50.59	146.85/134.35	1.70/1.86
TP1160 22 AK90-12/4	0.25/0.75	22.09	19.46/63.83	116.40/106.49	2.15/2.35
TP1160 20 AK90-4	1.1	20.19	68.85	144.80	1.73
TP1160 20 AK90P12/4	0.37/1.1		20.80/69.84	161.19/142.75	1.55/1.75
TP1160 16 AK90-4	1.1	16.26	85.49	116.62	2.14
TP1160 16 AK90P12/4	0.37/1.1		25.83/86.72	129.82/114.96	1.92/2.17
TP1160 13 AK90P4	1.5	12.54	110.84	122.64	2.04

* Empfehlungsebersetzungszahl / recommended transmission ratios



Getriebemotor / Geared motor

TP 1200		M _{max} = 500Nm		Nenndaten / Rated data	
2p = 8/2 - 660/2700 min ⁻¹ ; 2p = 12/4 - 455/1420 min ⁻¹ ; 2p = 4 - 1420 min ⁻¹					
Typ Type	Leistung	Uebersetzungszahl	Start Umdrehung	Startmoment	Ansnutzung Faktor
	Power	Transmission ratio	Output Speed	Output Torque	Service Factor
	<i>kW</i>	-	<i>min⁻¹</i>	<i>Nm</i>	<i>f_s</i>
TP1200 84 AK71-4	0.37	84.40*	15.99	212.07	2.36
TP1200 84 AK80-12/4	0.12/0.37		5.21/16.47	211.03/205.97	2.37/2.43
TP1200 70 AK80P12/4	0.18/0.55	69.56	6.32/20.13	260.88/250.53	1.92/1.99
TP1200 57 AK80P 4	0.75	57.29	23.74	289.65	1.73
TP1200 57 AK90-12/ 4	0.25/0.75		7.50/24.61	305.37/279.38	1.64/1.79
TP1200 54 AK80P 4	0.75	53.74*	25.30	271.70	1.84
TP1200 54 AK90-12/ 4	0.25/0.75		8.00/26.24	286.45/262.07	1.75/1.91
TP1200 50 AK80P 4	0.75	49.65	27.39	251.02	1.99
TP1200 50 AK90-12/ 4	0.25/0.75		8.66/28.40	264.65/242.12	1.89/2.06
TP1200 50 AK90PB12/4	0.3/0.9		8.46/28.40	325.14/290.55	1.54/1.72
TP1200 44 AK80P 4	0.75	44.29*	30.71	223.92	2.23
TP1200 44 AK90-12/ 4	0.25/0.75		9.71/31.84	236.08/215.98	2.12/2.31
TP1200 44 AK90PB12/4	0.3/0.9		9.48/31.84	290.04/259.18	1.79/2.00
TP1200 43 AK80P 4	0.75	42.70	31.85	215.89	2.32
TP1200 43 AK90-12/ 4	0.25/0.75		10.07/33.02	227.60/208.23	2.20/2.40
TP1200 43AK90PB12/4	0.3/0.9		9.84/33.02	279.62/249.88	1.79/2.00
TP1200 41 AK80P 4	0.75	40.92	33.24	206.89	2.42
TP1200 41 AK90-12/ 4	0.25/0.75		10.51/34.46	218.11/199.55	2.29/2.50
TP1200 41 AK90PB12/4	0.3/0.9		10.26/34.46	267.97/239.46	1.86/2.09
TP1200 40 AK90- 4	1.1	39.72	34.74	290.27	1.72
TP1200 40 AK90PB12/4	0.3/0.9		10.57/35.50	260.11/232.44	1.92/2.15
TP1200 40 AK90P12/4	0.37/1.1		10.57/35.50	320.80/284.09	1.56/1.76
TP1200 35 AK90- 4	1.1	35.19*	39.26	256.87	1.95
TP1200 35 AK90PB12/4	0.3/0.9		11.95/40.11	230.18/205.69	2.17/2.43
TP1200 35 AK90P12/4	0.37/1.1		11.95/40.11	283.89/251.40	1.76/1.99
TP1200 32 AK90- 4	1.1	32.27*	42.76	235.82	2.12
TP1200 32 AK90PB12/4	0.3/0.9		13.01/43.69	260.63/230.81	1.92/2.17
TP1200 32 AK90P12/4	0.37/1.1		13.01/43.69	211.32/188.84	2.37/2.65
TP1200 27 AK90P4	1.5	26.60*	53.00	259.44	1.93
TP1200 27 AK100- 12/4	0.5/1.5		15.79/53.00	290.32/259.44	1.72/1.93
TP1200 25 AK90P4	1.5	24.82	56.81	242.07	2.06
TP1200 25 AK100-12/4	0.5/1.5		16.92/56.81	270.89/242.07	1.84/2.06
TP1200 22 AK90P 4	1.5	21.84*	64.56	213.01	2.35
TP1200 22 AK100-12/4	0.5/1.5		19.23/64.56	238.37/213.01	2.09/2.35
TP1200 18 AK100- 4	2.2	18*	76.67	263.08	1.90
TP1200 18 AK100P12/4	0.75/2.2		23.33/78.33	294.68/257.48	1.70/1.94

* Empfehlungsebersetzungszahl / recommended transmission ratios

Geared motor Getriebemotor / Geared motor

TP 1250	$M_{max} = 800Nm$	Nenndaten / Rated data
2p = 8/2 - 660/2700 min ⁻¹ ; 2p = 12/4 - 455/1420 min ⁻¹ ; 2p = 4 - 1420 min ⁻¹		

Typ Type	Leistung	Uebersetzungszahl	Start Umdrehung	Startmoment	Ansnutzung Faktor
	Power	Transmission ratio	Output Speed	Output Torque	Service Factor
	<i>kW</i>	-	<i>min⁻¹</i>	<i>Nm</i>	<i>f_s</i>
TP1250 88AK90-12/4	0.25/0.75	87.53	4.91/16.11	461/422	1.73/1.9
TP1250 72AK90-12/4	0.25/0.75	72.30*	5.95/19.50	381/348	2.10/2.3
TP1250 66AK90-12/4	0.25/0.75	65.82	6.53/21.42	347/317	2.30/2.52
TP1250 61AK90-4	1.1	60.87	22.67	440	1.82
TP1250 61AK90P12/4	0.37/1.1		6.90/23.16	486/430	1.65/1.86
TP1250 54AK90-4	1.1	54.37*	25.38	393	2.04
TP1250 54AK90P12/4	0.37/1.1		7.72/25.93	434/384	1.84/2.08
TP1250 52AK90-4	1.1	51.99	26.54	376	2.13
TP1250 52AK90P12/4	0.37/1.1		8.08/27.12	415/368	1.93/2.18
TP1250 48AK90-4	1.1	48.24	28.61	348	2.30
TP1250 48AK90P12/4	0.37/1.1		8.71/29.23	385/341	2.08/2.35
TP1250 46AK90P4	1.5	45.78*	30.14	451	1.77
TP1250 46 AK100-12/4	0.5/1.5		8.74/30.58	519/444	1.54/1.80
TP1250 39AK90P4	1.5	39.09	35.30	385	2.08
TP1250 39 AK100-12/4	0.5/1.5		10.23/35.81	443/380	1.80/2.10
TP1250 36AK90P4	1.5	36.28*	38	357	2.24
TP1250 36 AK100-12/4	0.5/1.5		11.02/38.59	411/352	1.95/2.27
TP1250 27AK100-4	2.2	26.59*	51.90	384	2.08
TP1250 27AK100P12/4	0.75/2.2		15.04/52.65	452/379	1.77/2.11
TP1250 20AK100P4	3.0	20.00	69.50	391	2.05
TP1250 16AK100P4	3.0	15.71	88.48	307	2.60
TP 1315	M _{max} = 1200Nm		Nennndaten / Rated data		
2p = 8/2 - 660/2700 min ⁻¹ ; 2p = 12/4 - 455/1420 min ⁻¹ ; 2p = 4 - 1420 min ⁻¹					
TP1315 86 AK90P12/4	0.37/1.1	86.03	4.88/16.39	680.6/602.5	1.76/1.77
TP1315 78 AK90P12/4	0.37/1.1	77.86	5.39/18.11	616.2/545.3	1.94/2.2
TP1315 71 AK90P4	1.5	70.56*	19.56	695.12	1.73
TP1315 71 AK100-12/4	0.5/1.5		5.95/19.98	754.4/673.9	1.59/1.78
TP1315 65 AK90P4	1.5	65.07	21.21	641.0	1.87
TP1315 65 AK100-12/4	0.5/1.5		6.45/21.67	695.9/621.4	1.72/1.93
TP1315 60 AK90P4	1.5	59.83	23.07	589.39	2.04
TP1315 60 AK100-12/4	0.5/1.5		7.02/23.57	639.4/571.3	1.88/2.10
TP1315 58 AK90P4	1.5	58.89*	23.43	580.15	2.07
TP1315 58 AK100-12/4	0.5/1.5		7.13/23.94	629.5/562.5	1.91/2.13
TP1315 54 AK90P4	1.5	54.15	25.48	533.46	2.25
TP1315 54 AK100-12/4	0.5/1.5		7.76/26.04	578.4/517.1	2.07/2.32
TP1315 51 AK90P4	1.5	51.10	27.01	503.41	2.38
TP1315 51 AK100-12/4	0.5/1.5		8.22/27.59	546.0/488.0	2.2/2.46
TP1315 46 AK100-4	2.2	46.24	29.84	668.8	1.79
TP1315 46 AK100P12/4	0.75/2.2		9.08/30.49	741.5/647.7	1.62/1.85
TP1315 45 AK100-4	2.2	44.98*	30.68	650.56	1.84
TP1315 45 AK100P12/4	0.75/2.2		9.34/31.35	720.85/630.0	1.66/1.90
TP1315 41 AK100-4	2.2	41.35*	33.37	598.06	2.01
TP1315 41 AK100P12/4	0.75/2.2		10.16/34.10	662.7/579.2	1.81/2.07
TP1315 35 AK100P4	3.0	35.32*	39.35	684.4	1.75
TP1315 35 AK100P12/4	0.75/2.2		11.89/39.92	566.25/494.7	2.12/2.42
TP1315 30 AK100P4	3.0	29.60	46.96	573.5	2.09
TP1315 30 AK100P12/4	0.75/2.2		14.19/47.64	474.5/414.6	2.53/2.89
TP1315 27 AK100P4	3.0	26.79*	51.88	519.1	2.31
TP1315 27 AK100P12/4	0.75/2.2		15.68/52.63	429.4/375.2	2.79/3.20
TP1315 20 AK100P4	3.0	20.46	67.94	396.4	3.03
TP1315 20 AK100P12/4	0.75/2.2		20.53/68.91	327.9/286.6	3.66/4.19

* Empfehlungszuebersetzungszahl / recommended transmission ratios

**Asynchronmotoren, Serie AK mit eingebauter
Bremse fuer Getriebemotoren**

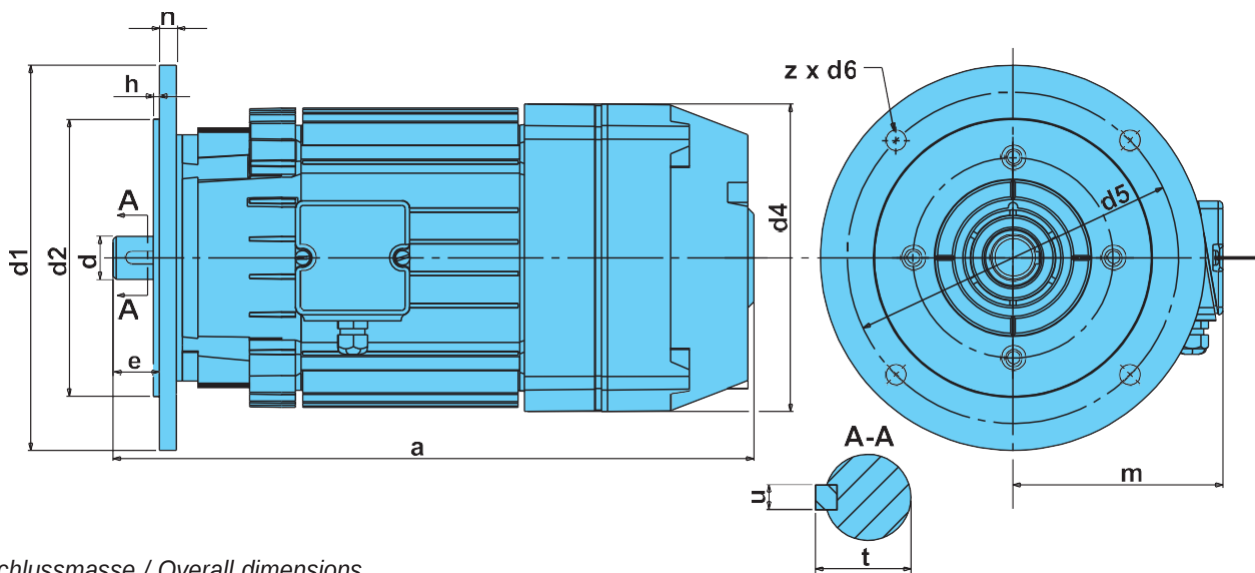
- Modifikationen Spannung nach, 50 Hz / 60 Hz
- Isolierklasse F
- Wellenaxialgang $0,5 \div 1,0$ mm
- IP 54, IP22 der Bremse (EN60529)
- Flanschausfuehrung-IM B5 (EN 60034-7)
- Moeglichkeit um Thermoschutz einzubauen

**Asynchronous electric motors AK series
with built-in brake for geared motors**

- Voltage modifications, 50 Hz / 60 Hz
- Insulation class F
- Axial shaft run $0,5 \div 1,0$ mm
- IP 54, brake protection IP 22 (EN 60529)
- Flange joining-IM B5 (EN 60034-7)
- Optional overheat protection



Leistung Power	Typ Type	Drehzahl Speed of revolution	Spannung Voltage	Arbeitsregime Duty cycle		Strom Current	Startmoment Starting torque	Startmoment Braking torque	Gewicht Weight
				CD	SF				
kW	-	min ⁻¹	V	%	sw/h	A	Nm	Nm	kg
0,06/0,25	AK 71B 8/2	660/2700	400	15/25	180	1,2/0,75	2,6/2,6	1,25	11
0,06/0,3	AK 71 8/2					1,2/1,2		1,5	
0,25	AK 71B 4	1350	400/230	40	240	0,85/1,5	5,0	1,3-1,9	11
0,37	AK 71-4					1,3/2,3	6,5	2,2-3,0	
0,08/0,25	AK 80B12/4	450/1400	400	20/40	240	0,9/0,85	3,2/3,2	1,3 - 1,6	14,5
0,12/0,37	AK 80-12/4	440/1390		20/40	240	1,3/1,3	4,5/4,0	2,4 - 2,8	
0,13/0,55	AK 80-8/2	550/2550		15/25	160/80	1,4/1,8	4,3/4,3	1,6 - 2,0	
0,12/0,37	AK 80PD12/4	440/1400		25/50	300	1,4/1,3	6,0/5,4	2,4 - 2,8	15
0,18/0,55	AK 80P12/4	440/1400		20/40	240	1,8/1,7	7,2/7,2	3,6 - 4,1	
0,18/0,37	AK 80P12/6	440/900		20/40	240	1,9/1,6	7,2/6,5	3,6 - 4,1	
0,6	AK 80-2	2800	400/230	40	240	1,7/3,0	7,0	1,6 - 2,0	14
0,55	AK 80-4	1350				1,8/3,1	10,0	3,6-4,1	
0,75	AK 80P4	1360				2,1/3,6	14,0	4,4-5,2	15
0,55	AK 80P6	940				2,2/3,8	13,0	4,4 - 5,2	
0,18/0,55	AK 90D12/4	430/1410	400	25/50	300	1,6/1,5	7,0/7,0	3,2-3,8	21
0,25/0,75	AK 90-12/4	430/1410		20/40	240	2,4/2,0	9,0/9,0	4,9-5,7	
0,25/0,75	AK 90PD12/4	420/1410		25/50	300	2,0/1,9	8,0/8,0	4,9-5,7	24
0,3/0,9	AK 90PB12/4	420/1410		25/50	300	2,4/2,4	11,0/11,0	6,8-7,8	
0,37/1,1	AK 90P12/4	420/1410	400/230	20/40	240	3,4/3,4	13,5/13,5	6,8-7,8	21
1,5	AK 90-2	2620		40	240	3,9/6,8	11,5	6,8 - 7,8	
1,1	AK 90-4	1380				2,7/4,7	15,0	6,8 - 7,8	24
1,5	AK 90P4	1380				4,1/7,1	30,0	9,0 - 10,0	
1,1	AK 90P6	890				4,0/6,9	28,0	9,0 - 10,0	32
0,37/1,1	AK 100D12/4	390/1390	400	25/50	300	3,2/3,4	12,0/18,0	5,4-6,4	
0,5/1,5	AK 100-12/4	420/1410		20/40	240	4,5/4,3	17,0/23,0	6,8-7,8	36,5
0,5/1,5	AK 100PD 12/4	390/1400		25/50	300	4,2/5,1	17,0/23,0	6,8-7,8	
0,75/2,2	AK 100P12/4	420/1410		20/40	240	6,4/6,8	25,0/33,0	9,3-10,7	32
2,2	AK 100-4	1380	400/230	40	240	5,2/9,0	35,0	9,3 - 10,7	
1,5	AK 100-6	910				5,5/9,5	36,0	9,3 - 10,7	
3,0	AK 100P4	1380				6,6/11,5	46,0	13,5-15,5	
2,2	AK 100P6	920				7,0/12,2	41,0	13,5-15,5	



Anschlussmasse / Overall dimensions

Typ Type	Abmessungen / Dimensions										Welle / Shaft		
	a	m	e	h	n	d1	d2	d4	d5	z x d6	d	t	u
AK 71	285	115	30	3.5	9	160	110	140	130	4x9	14	16	5
AK 80/AK 80 P	312	120	40	3.5	10	200	130	160	165	4x11	19	21.5	6
AK 90/AK 90 P	340/370	130	50	3.5	10	200	130	178	165	4x11	24	27	8
AK 100/AK 100 P	416/446	136	60	4.0	11	250	180	200	215	4x13	28	31	8

Elastische Kupplungen

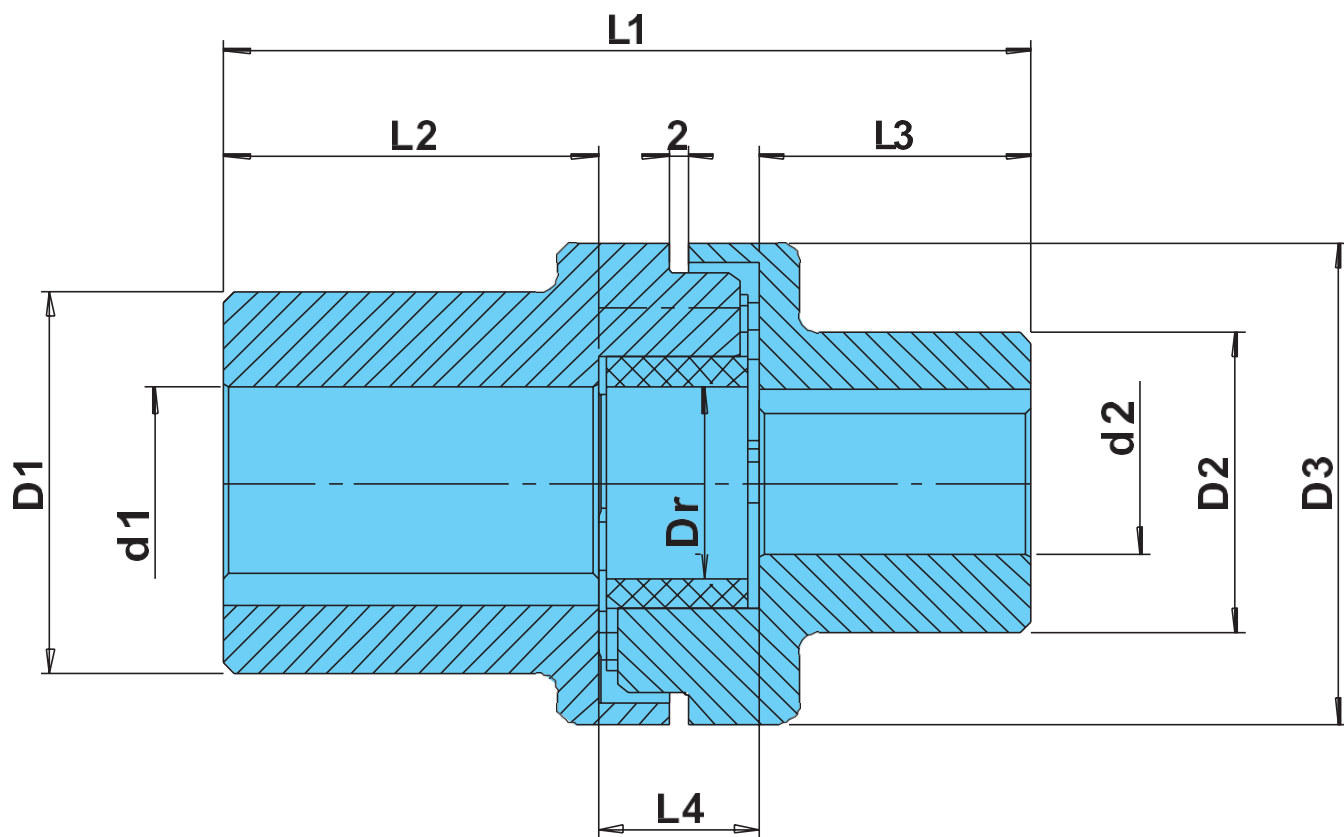
Die elastische Kupplungen sind Elemente, aus Antriebssystem der Maschinen, die zur Verbindung der Wellen vorgesehen sind. Sie arbeiten bei einer mittleren Belastung, mittlerem oder hohem Arbeitsregime oder Einschaltungszeit pro Stunde. Sie sind aus Aluminiumlegierung hergestellt und der elastische Element ist aus Oelfestvulkanisat

Elastic Couplings

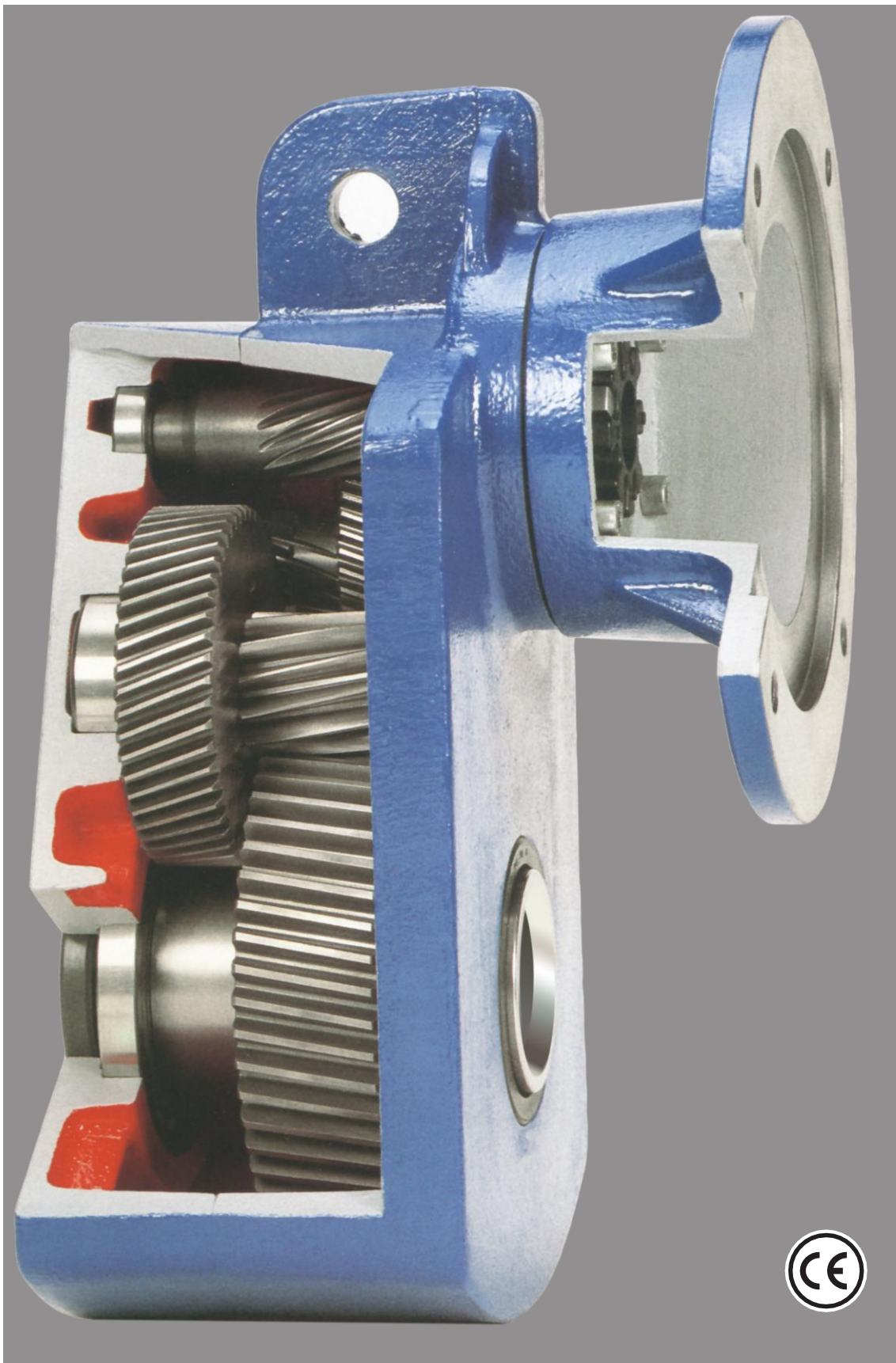
The elastic couplings are elements of the machine operating system, which are designed for shaft coupling. The couplings operate at medium load and at medium or high motor service factor or frequent motor switches. The couplings are made of aluminum alloy and the elastic component is made of oil resistant vulcanizate.



Elastische Kupplungen / Elastic Couplings



Typ / Type	Ausgangs-moment Maximum torque M _{max}	G.D ² .10 ⁻⁴	Abmessungen / Dimensions										Gewicht Weight
			d1	d2	L1	L2	L3	L4	D1	D2	D3	Dr	
	N.m	kg.m ²	mm										kg
TP 160.71	250	0.35	14	11	55	20.0	19.0	16	30	30	48	19	0.115
TP 160.80	375	0.60	19	11	76	41.0	19.0	16	38	30	48	19	0.175
TP 200.71	250	0.35	14	14	60	22.0	22.0	16	30	30	48	19	0.180
TP 200.80	375	0.60	19	14	80	37.0	27.0	16	38	30	48	19	0.210
TP 200.90	745	2.00	24	14	80	41.5	20.5	18	48	34	65	29	0.310
TP 250.80	375	1.50	19	16	80	41.5	20.5	18	42	34	65	29	0.270
TP 250.90	745	2.00	24	16	80	41.5	20.5	18	48	34	65	29	0.320
TP 250.100	1556	3.30	28	16	90	51.5	20.5	18	58	34	65	29	0.400
TP 315.90	745	2.00	24	19	80	41.5	20.5	18	48	42	65	29	0.310
TP 315.100	1556	3.30	28	19	90	51.5	20.5	18	58	42	65	29	0.420



Komponenten / Components

Parts Teile		TP 160/TP 160L	TP 200/TP 200L	TP 250/TP 250L	TP 315
1.	Coupling Kuplung	71-80	71-80-90	80-90-100	90-100
2.	Flange Flansch	Ø 160-200	Ø 160-200	Ø 200-250	Ø 200-250
3.	Feather DIN 6885 Passfeder DIN 6885	4x4x18	5x5x20	5x5x20	6x6x25
4.	Seal DIN 3760 Dichtung DIN 3760	12x24x7	15x27x7	17x30x7	20x32x7
5.	Ball bearing SKF Lager SKF	6201	6202	6203	6004
6.	Corpus Korpus	2092926/2886896	2092753/2092250	2092774/2092989	2092711
7.	Seal Dichtung DIN 3760				
8.	Lid Deckel	2092947/2886880	2092769/2092245	2092780/2092973	2092727
9.	Input shaft Eingangswelle				
10.	Ball bearing SKF Lager SKF	6001	6202	6202	6202
11.	Ball bearing SKF Lager SKF	6201	6302	6303	6204
12.	Shaft I Welle I				
13.	Gear II Zahnrad II				
14.	Ball bearing SKF Lager SKF	6201	6302	6304	6305
15.	Shaft II Welle II				
16.	Output shaft Ausgangswelle				
17.	Seal DIN 3760 Dichtung DIN 3760	45x60x7	50x65x8	60x80x8	70x90x10
18.	Ball bearing SKF Lager SKF	16009	16010	16012	16014
19.	Screw DIN 912 Schraube DIN 912	M 8x50	M 8x55	M 8x55	M 8x70
20.	Stopper Verschlusschraube	M 18x1.5	M 18x1.5	M 18x1.5	M 18x1.5
21.	Pin Stift	8x30	8x30	8x30	8x30
22.	Feather Passfeder	-	-	2210784	2210632
23.	Gear III Zahnrad III				
24.	Ball bearing SKF Lager SKF	6202	6204	6304	6305
25.	Gear I Zahnrad I				
26.	Ball bearing SKF Lager SKF	6001	6202	6203	6204
27.	Screw DIN 912 Schraube DIN 912	M 8x20	M 8x25	M 8x25	M 8x25

