

Dry installed Chopperpump

Here you will find technical documentation for Landia Chopperpump in the form of schematic drawing, service instructions and more.

Please click on the links below "table of contents" to get the information needed.

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MPTK-I and MPTKR-I

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[Principal measurements](#)

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Oil-/Conversion table

[Oil table](#)

[Conversion table](#)



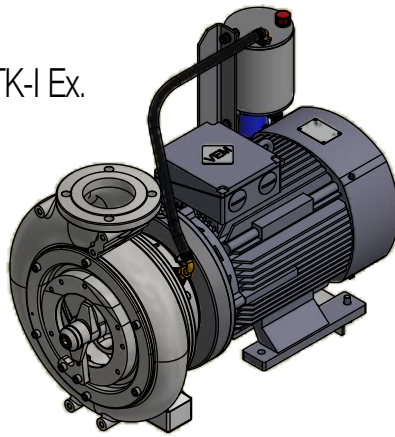
Elektric data

[Elektric data 400V-50 Hz IE1](#)

[Elektric data 400V-50 Hz IE2](#)

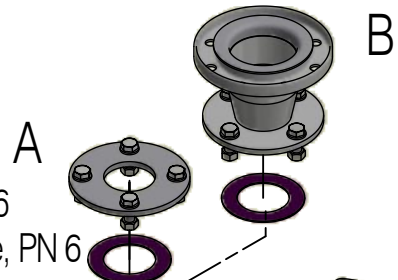
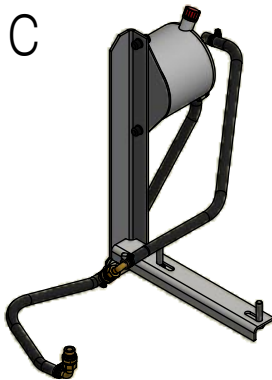
[Elektric data 400V-50 Hz IE3](#)

MPTK-I Ex.



Overgang fra PN 6 til DN flange
Connection from PN 6 to DN flange

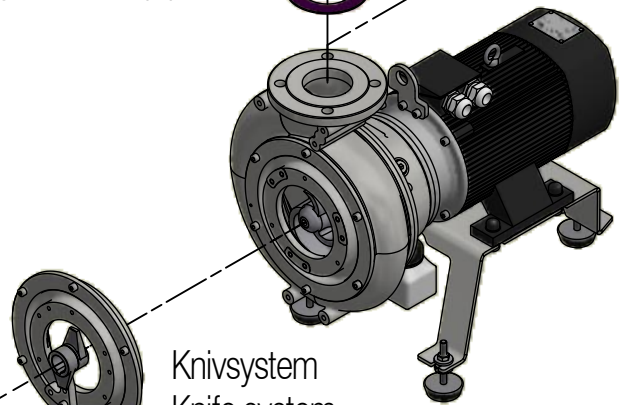
Oliebeholder incl. beslag
Oil container w/bracket



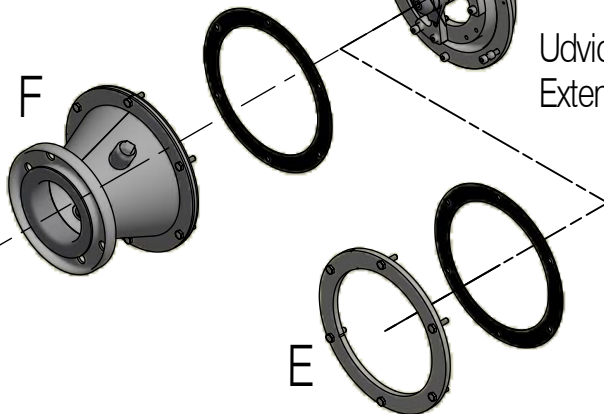
Svejsseflange for st lr r, PN 6
Welding flange for steel pipe, PN 6

A

Overgang til DN flange
Connection to DN flange

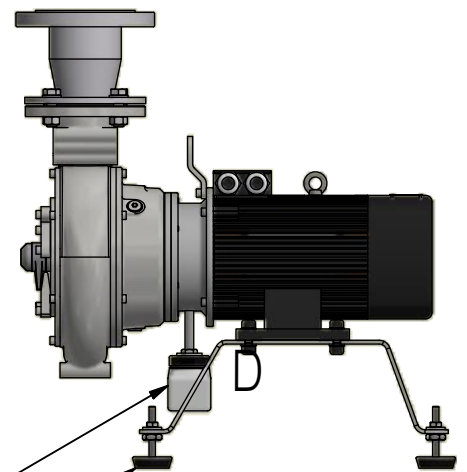


Knivsystem
Knife system



Udvidet knivsystem
Extended knife system

Svejsseflange for st lr r, indugning
Welding flange for steel pipe, inlet



Plastbeholder for olieopsamling
Plastic container for oil collecting

Maskinsko / Machine foot

Styret dokument

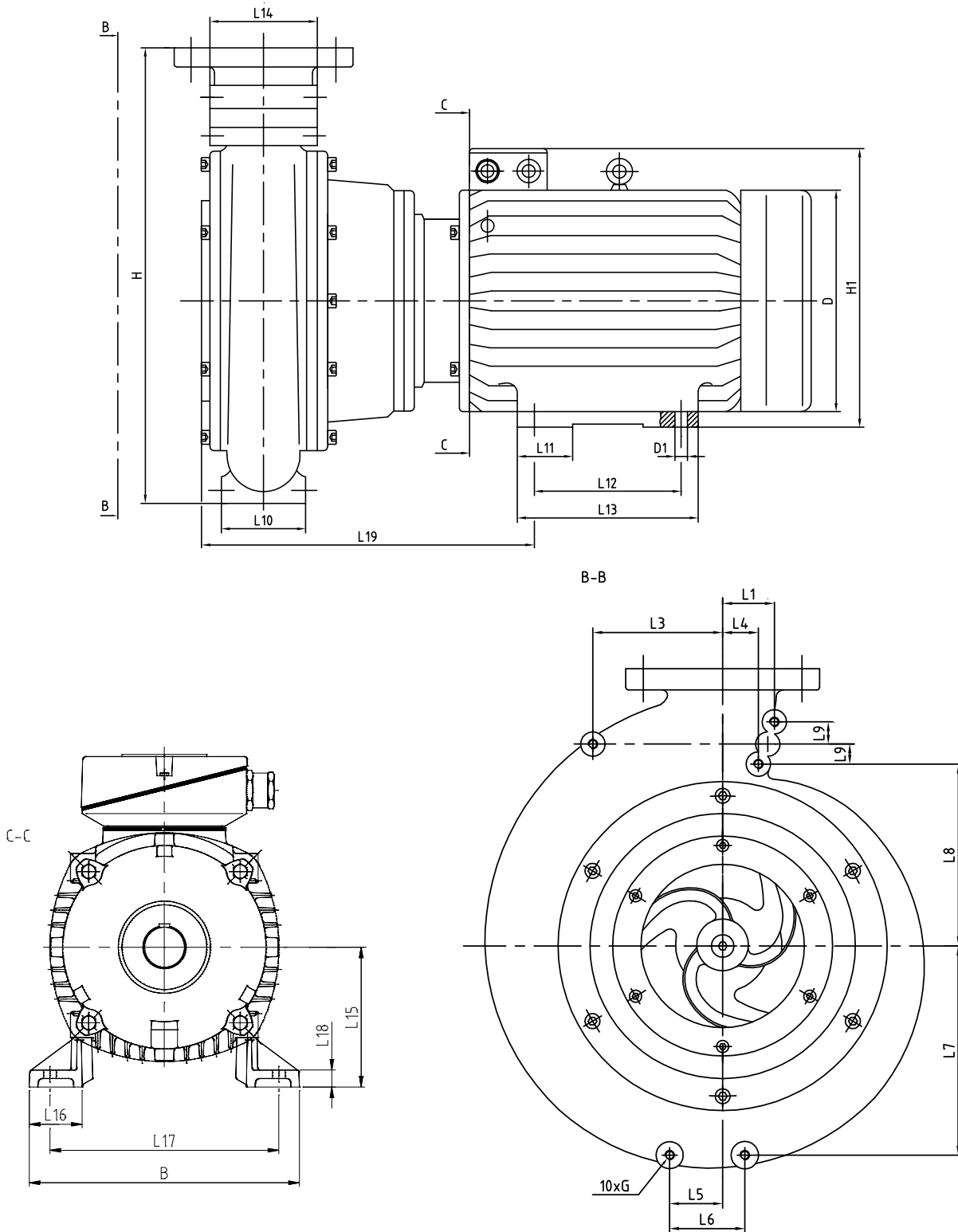
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MPTK-I / MPTKR-I / MPTK-I Ex.
Med udstyr. With equipment
Principtegning - Schematic drawing

Scale: 1 : 12	Sign.: HL SL	Date: 13-05-1998
Dwg.no.:		3740627
Revision date: 22-06-2020		

Motorpumpe / Motor pump / Motorpumpe / Motopompe
Type MPTK-I 50 - 105



Ret til tekniske ændringer forbeholdes - We reserve the right to make technical alterations.
 Technische und maßliche Änderungen vorbehalten - Sous réserve de modifications techniques.

Motorpumpe / Motor pump / Motorpumpe / Motopompe Type MPTK-I 50 - 105

Mellemtryk - Mittlerer Druck - Medium pressure - Moyenne pression.

Varenr./ Article no./ Artikel Nr./ Code no.	Type/ Typ	Effekt/ Power/ Leist./ Puiss.	B	D	D1	G	H	H1	L1	L3	L4	L5
(400V)		[kW]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
2514196	MPTK-I 50	0,55	170	Ø138	ø10	M6	290	190	33	81	25	55
2514197	MPTK-I 50	0,75	170	Ø138	ø10	M6	290	190	33	81	25	55
2514798	MPTK-I 65	1,1	178	Ø157	ø10	M10	371	211	32,5	99,5	18,5	43
2514701	MPTK-I 65	1,5	178	Ø157	ø10	M10	371	211	32,5	99,5	18,5	43
2514702	MPTK-I 65	2,2	192	Ø177	ø12	M10	371	223	32,5	99,5	18,5	43
2514803	MPTK-I 80	3,0	188	Ø196	ø12	M10	432	238	36,5	106	18	52,5
2514804	MPTK-I 80	4,0	224	Ø196	ø12	M10	432	250	36,5	106	18	52,5
2514805	MPTK-I 80	5,5	256	Ø217	ø12	M10	432	310	36,5	106	18	52,5
2514907	MPTK-I 105	7,5	256	Ø258	ø12	M12	534	332	45	132	18	61
2514911	MPTK-I 105	11,0	296	Ø258	ø15	M12	534	360	45	132	18	61
2514915	MPTK-I 105	15,0	296	Ø313	ø15	M12	534	402	45	132	18	61
2514918	MPTK-I 105	18,5	328	Ø313	ø15	M12	534	422	45	132	18	61

Varenr./ Article no./ Artikel Nr./ Code no.	L6	L7	L8	L9	L10	L11	L12	L13	L14	L15	L16	L17	L18	L19
(400V)	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
2514196	90	121	107,5	19	28	34	100	125	33	80	39	125	10	183,5
2514197	90	121	107,5	19	28	34	100	125	33	80	39	125	10	183,5
2514798	66	154,5	136	15,5	64	-	100	130	86	90	40	140	14	251
2514701	66	154,5	136	15,5	64	-	125	155	86	90	40	140	14	247
2514702	66	154,5	136	15,5	64	-	140	175	86	100	45	160	15	257
2514803	80	179,5	158,5	17,5	80	-	140	171	102	100	33	160	11	291
2514804	80	179,5	158,5	17,5	80	-	140	180	102	112	50	190	18	297
2514805	80	179,5	158,5	17,5	80	55	140	180	102	132	50	216	16	307
2514907	90	223	195	25	100	55	178	218	126	132	50	216	16	322
2514911	90	223	195	25	100	60	210	257	126	160	55	254	18	342
2514915	90	223	195	25	100	60	254	301	126	160	55	254	18	304
2514918	90	223	195	25	100	65	241	288	126	180	62	279	20	314

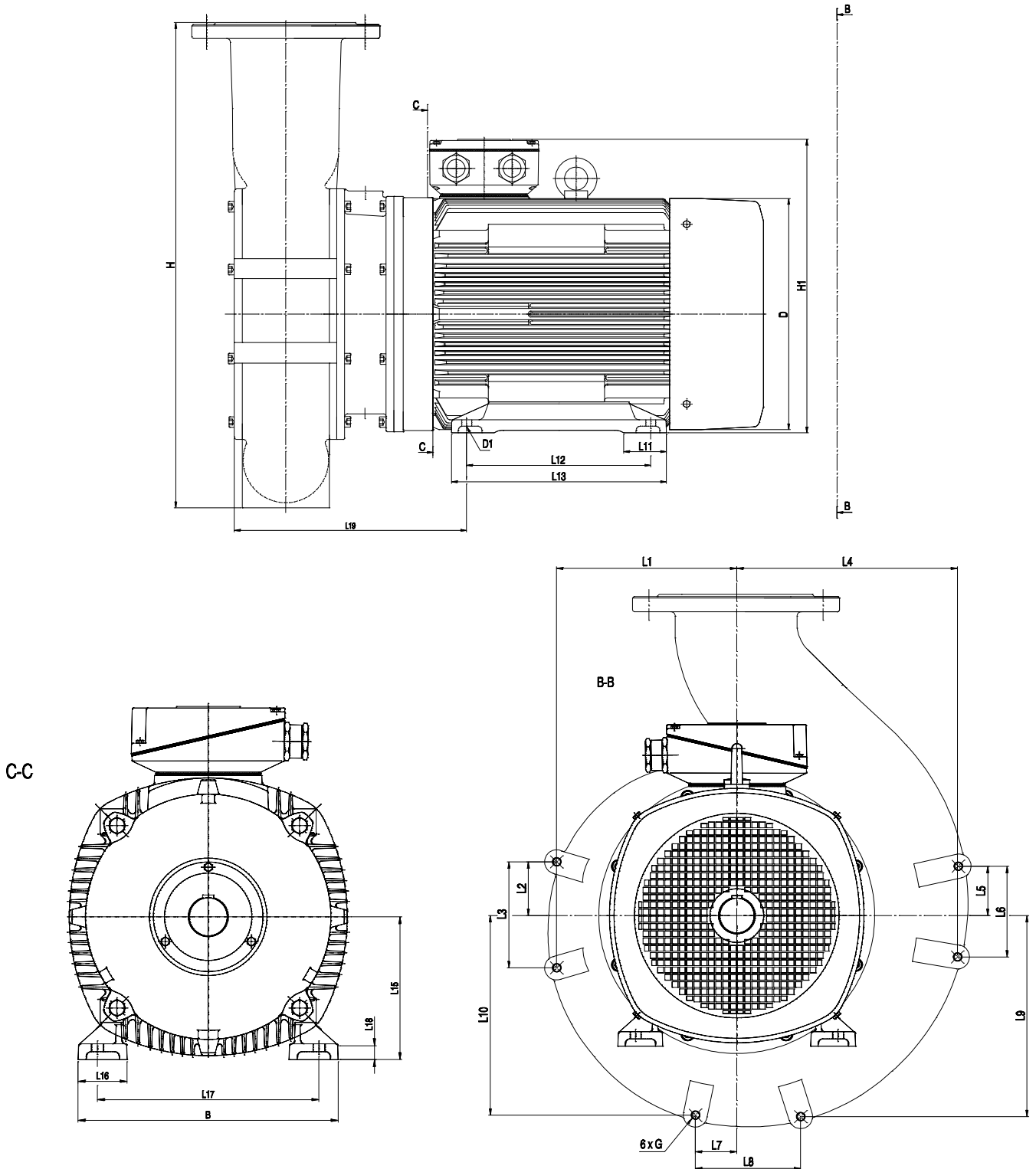
Motorpumpe / Motor pump / Motorpumpe / Motopompe Type MPTK-I 50 / 65 / 80

Højtryk – Hochdruck - High pressure - Haute pression.

Varenr./ Article no./ Artikel Nr./ Code no. (400V)	Type/ Typ	Effekt/ Power/ Leist./ Puiss. [kW]	B [mm]	D [mm]	D1 [mm]	G [mm]	H [mm]	H1 [mm]	L1 [mm]	L3 [mm]	L4 [mm]	L5 [mm]
2512102	MPTK-I 50	2,2	178	Ø157	Ø10	M6	290	210	33	81	25	55
2512103	MPTK-I 50	3,0	192	Ø177	Ø12	M6	290	227	33	81	25	55
2512104	MPTK-I 50	4,0	224	Ø196	Ø12	M6	290	249	33	81	25	55
2512105	MPTK-I 50	5,5	192	Ø177	Ø12	M6	290	227	33	81	25	55
2512707	MPTK-I 65	7,5	256	Ø217	Ø12	M10	371	310	32,5	99,5	18,5	43
2512711	MPTK-I 65	11,0	296	Ø258	Ø15	M10	371	360	32,5	99,5	18,5	43
2512715	MPTK-I 65	15,0	296	Ø313	Ø15	M10	371	402	32,5	99,5	18,5	43
2512718	MPTK-I 65	18,5	296	Ø313	Ø15	M10	371	402	32,5	99,5	18,5	43
2512815	MPTK-I 80	15,0	296	Ø313	Ø15	M10	432	402	36,5	106	18	52,5
2512818	MPTK-I 80	18,5	296	Ø313	Ø15	M10	432	402	36,5	106	18	52,5
2512822	MPTK-I 80	22,0	328	Ø351	Ø15	M10	432	441	36,5	106	18	52,5
2512830	MPTK-I 80	30,0	372	Ø351	Ø19	M10	432	461	36,5	106	18	52,5

Varenr./ Article no./ Artikel Nr./ Code no. (400V)	L6 [mm]	L7 [mm]	L8 [mm]	L9 [mm]	L10 [mm]	L11 [mm]	L12 [mm]	L13 [mm]	L14 [mm]	L15 [mm]	L16 [mm]	L17 [mm]	L18 [mm]	L19 [mm]
2512102	90	121	107,5	19	28	-	125	155	33	90	40	140	14	247
2512103	90	121	107,5	19	28	-	140	175	33	100	45	160	15	243
2512104	90	121	107,5	19	28	-	140	180	33	112	50	190	18	271
2512105	90	121	107,5	19	28	-	140	175	33	100	45	160	15	263
2512707	66	154,5	136	15,5	64	55	140	180	86	132	50	216	16	253
2512711	66	154,5	136	15,5	64	60	210	257	86	160	55	254	18	273
2512715	66	154,5	136	15,5	64	60	210	257	86	160	55	254	18	269
2512718	66	154,5	136	15,5	64	60	254	301	86	160	55	254	18	279
2512815	80	179,5	158,5	17,5	80	60	210	257	102	160	55	254	18	290
2512818	80	179,5	158,5	17,5	80	60	254	301	102	160	55	254	18	290
2512822	80	179,5	158,5	17,5	80	65	241	288	102	180	62	279	20	316
2512830	80	179,5	158,5	17,5	80	70	305	360	102	200	70	318	22	316

Motorpumpe / Motor pump / Motorpumpe / Motopompe
Type MPTK-I 150



**Motorpumpe / Motor pump / Motorpumpe / Motopompe
Type MPTK-I 150**

Mellemtryk - Mittlerer Druck - Medium pressure - Moyenne pression.

Varenr./ Article no./ Artikel Nr./ Code no. (400V)	Type/ Typ	Effekt/ Power/ Leist./ Puiss. [kW]	B [mm]	D [mm]	D1 [mm]	G [mm]	H [mm]	H1 [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]
2514618	MPTK-I 150	18,5	328	ø313	ø15	M12	740	422	248	74	146	305
2514622	MPTK-I 150	22,0	328	ø351	ø15	M12	740	441	248	74	146	305
2514630	MPTK-I 150	30,0	372	ø351	ø15	M12	740	441	248	74	146	305

Varenr./ Article no./ Artikel Nr./ Code no. (400V)	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	L9 [mm]	L10 [mm]	L11 [mm]	L12 [mm]	L13 [mm]	L15 [mm]	L16 [mm]	L17 [mm]	L18 [mm]	L19 [mm]
2514618	68	125	57	145	277	275	65	241	288	180	62	279	20	352
2514622	68	125	57	145	277	275	65	279	326	180	62	279	20	352
2514630	68	125	57	145	277	275	65	305	360	200	62	318	20	352

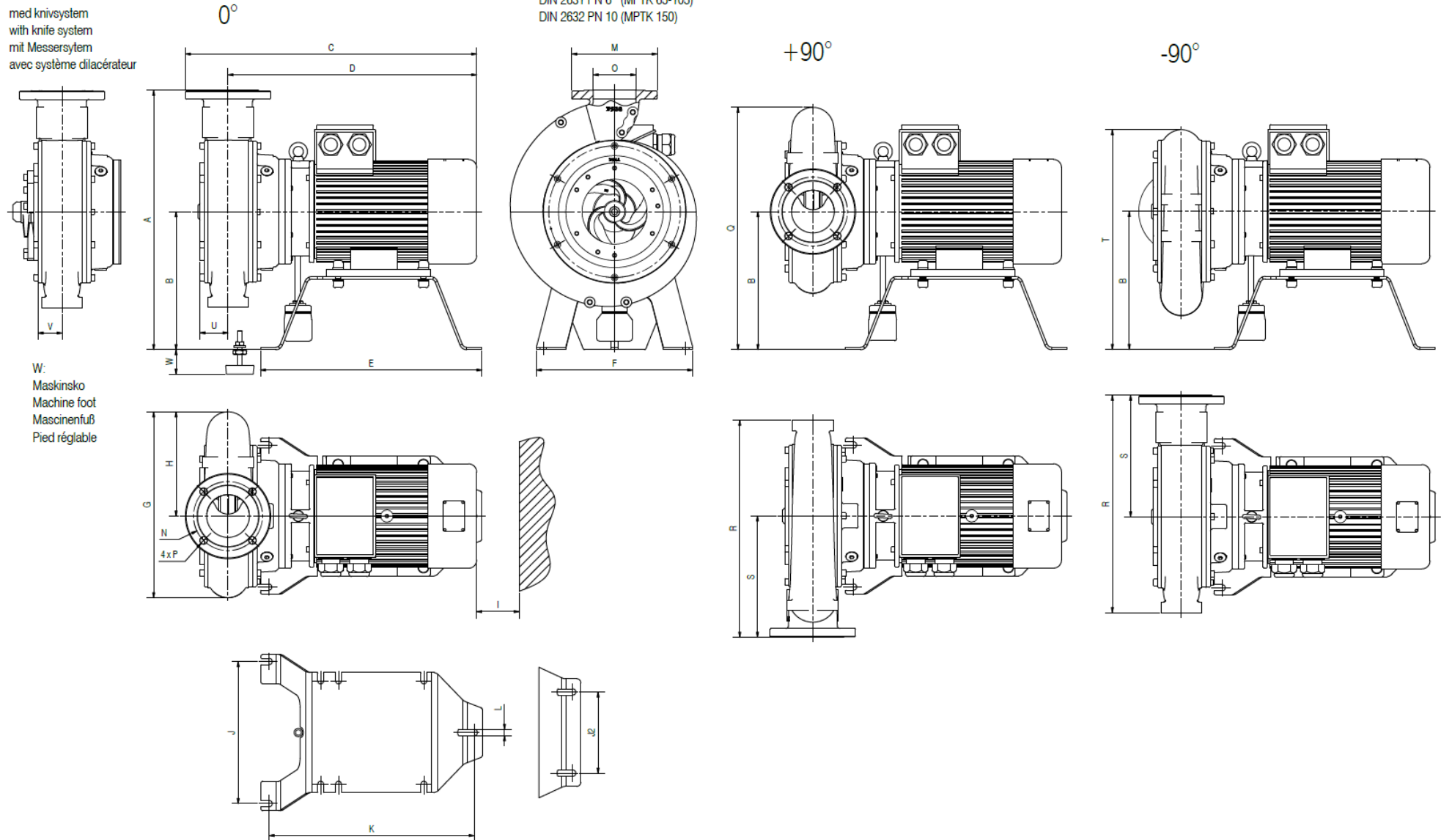
Ret til tekniske ændringer forbeholdes - We reserve the right to make technical alterations.

Technische und maßliche Änderungen vorbehalten - Sous réserve de modifications techniques.

MPTK-I IE1

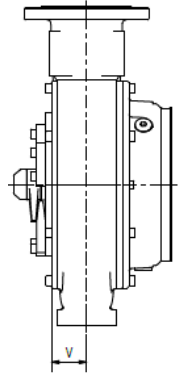
med knivsystem
with knife system
mit Messersystem
avec système dilacérateur

DIN 2631 PN 6 (MPTK 65-105)
DIN 2632 PN 10 (MPTK 150)

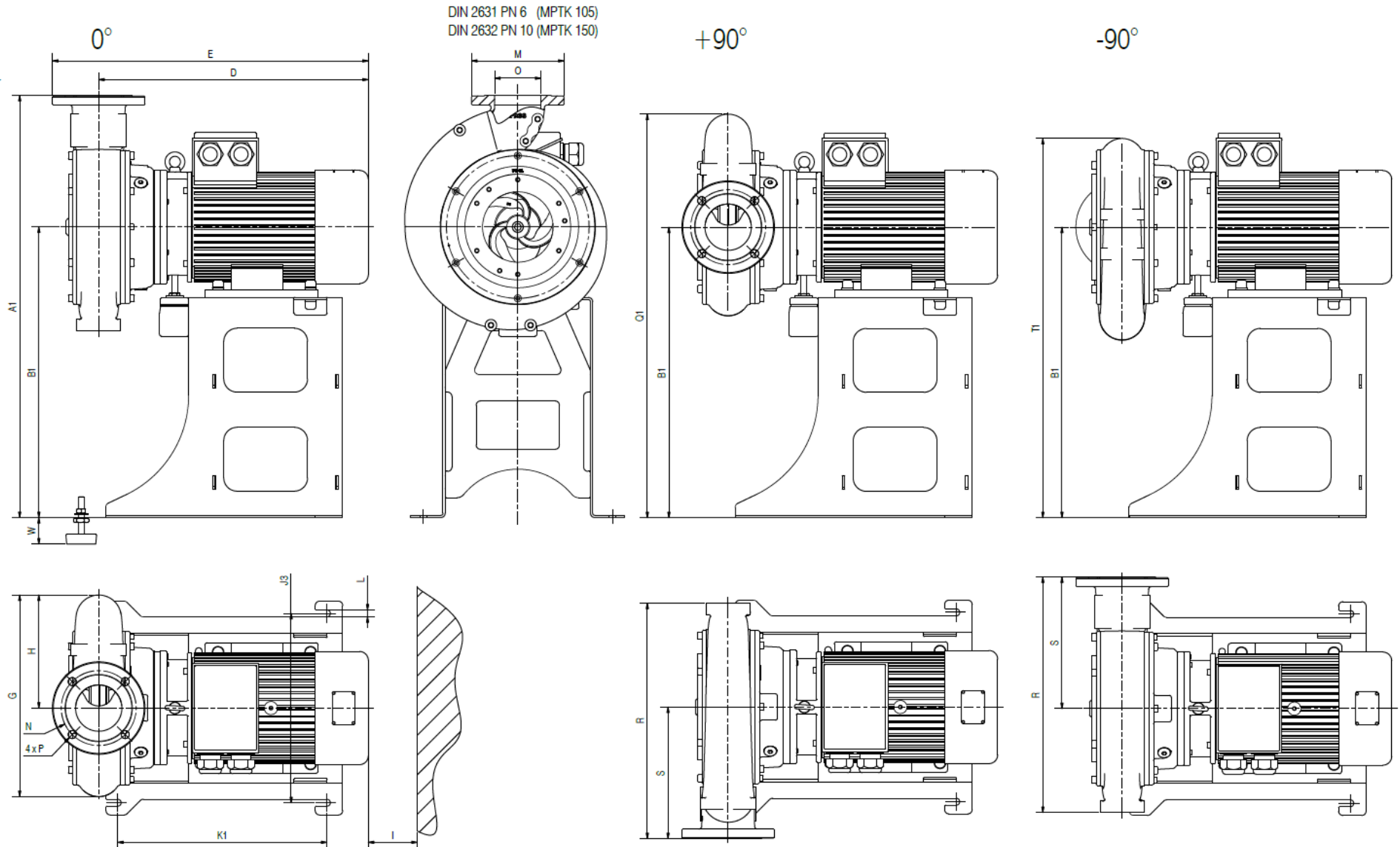


MPTK-I IE1

med knivsystem
with knife system
mit Messersystem
avec système dilacérateur



W:
Maskinsko
Machine foot
Maschinenfuß
Pied réglable



MPTK-I IE1
Mellemtryk - Medium pressure - Mittlerer Druck - Moyenne pression

Varenr. Article no. Artikel Nr. Code no. (400V)	Effekt Power Leist. Puiss. [kW]	Type Typ	Dimensioner – Dimensions – Dimensionen – Dimensions [mm]																							Justerbar Adjustable Justierbar Réglable W [mm]
			A	B	C	D	E	F	G	H	I	J	J2	K	L	M	N	O	P	Q	R	S	T	U	V	
2514197	0,75	50	295	135	360	305	330	200	250	135		175		230	12	Ø110	Ø90	Ø50	4xØ10	270	290	160	250	42	36	27 - 41
2514798	1,1	65	455	250	455	375	420	310	320	175	16	270	390	15,5	Ø160	Ø130	Ø67	4xØ14	425	371	205	395	46	39	30 - 77	
2514701	1,5				480	400																				
2514702	2,2				490	410																				
2514803	3,0	80	522	280	570	475	490	340	370	205	20	300	460	Ø190	Ø150	Ø80	4xØ18	485	432	242	445	54,5	48			
2514804	4,0				605	510																				
2514805	5,5				635	540																				
2514907	7,5	105	640	340	670	565	545	390	460	250	35	350	515	15,5	Ø210	Ø170	Ø105	4xØ18	590	534	300	545	69	59	35 - 85	
2514911	11,0				720	615																				
2514915	15,0				730	625																				
2514918	18,5				795	690																				
2514922	22,0				795	690																				
2514622	22,0	150	822	380	600	725	600	450	580	320	380	200	560	Ø285	Ø240	Ø150	8xØ22	700	740	442	640	72,6	76			
2514630	30,0				630																					

MPTK-I IE1
Mellemtryk - Medium pressure - Mittlerer Druck - Moyenne pression

Varenr. Article no. Artikel Nr. Code no. (400V)	Effekt Power Leist. Puiss. [kW]	Type Typ	Dimensioner – Dimensions – Dimensionen – Dimensions [mm]																							Justerbar Adjustable Justierbar Réglable W [mm]
			A1	B1	C	D	E1	F1	G	H	I	J	J3	K1	L	M	N	O	P	Q1	R	S	T1	U	V	
2514907	7,5	105	932	632	670	565	485	445	460	250	35	-	390	15,5	Ø210	Ø170	Ø105	4xØ18	882	534	300	837	69	59	35 - 85	
2514911	11,0		720	615	538	485	430	515					910						865							
2514915	15,0		960	660	730	625	565	515					930						885							
2514918	18,5		980	680	795	690	565	515					930						885							
2514922	22,0		980	680	795	690	565	515					930						885							
2514622	22,0	150	1122	700	870	725	605	515	580	320	460	560	Ø285	Ø240	Ø150	8xØ22	1000	740	442	940	72,6	76				
2514630	30,0		1142		605	515						580					320			580			1020	960		

MPTK-I IE1
Højtryk - High pressure - Hochdruck - Haute pression

Varenr. Article no. Artikel Nr. Code no. (400V)	Effekt Power Leist. Puiss. [kW]	Type Typ	Dimensioner – Dimensions – Dimensionen – Dimensions [mm]																							Justerbar Adjustable Justierbar Réglable W [mm]																		
			A	B	C	D	E	F	G	H	I	J	J2	K	L	M	N	O	P	Q	R	S	T	U	V																			
2512102	2,2	50	410	250	450	395	420	310	250	135	16	270	390	15,5	Ø110	Ø90	Ø50	4xØ10	385	290	160	365	42	36	30 - 77																			
2512103	3,0		465	410	420	310	18	460			415								395																									
2512104	4,0		440	280	510	455	490	340			20								300			390				455	385	365																
2512105	5,5		410	250	545	490	420	310			18								270			460				425	485	46	39															
2512707	7,5	65	485	280	605	525	490	340	320	175	35	300	15,5	Ø160	Ø130	Ø67	4xØ14	455	371	205	425	46	39	35 - 85																				
2512711	11,0		545	340	650	570	545	390				600						450			370					205	380	200	Ø190	Ø150	Ø80	4xØ18	515	432	242	505	54,5	48						
2512715	15,0				655	575																											600			450			370	205	380	550	545	505
2512718	18,5				695	615																											600			450			370	205	380	560	585	545
2512815	15,0	80	622	380	681	586	600	450	370	205	35	-	15,5	Ø190	Ø150	Ø80	4xØ18	545	432	242	505	54,5	48																					
2512818	18,5				719	624												600			450					370	205	380	560	585	545													
2512822	22,0				759	664												600			450				370	205	380	560	585	545														
2512830	30,0				805	710												630			450				370	205	380	580	585	545														

MPTK-I IE1
Højtryk - High pressure - Hochdruck - Haute pression

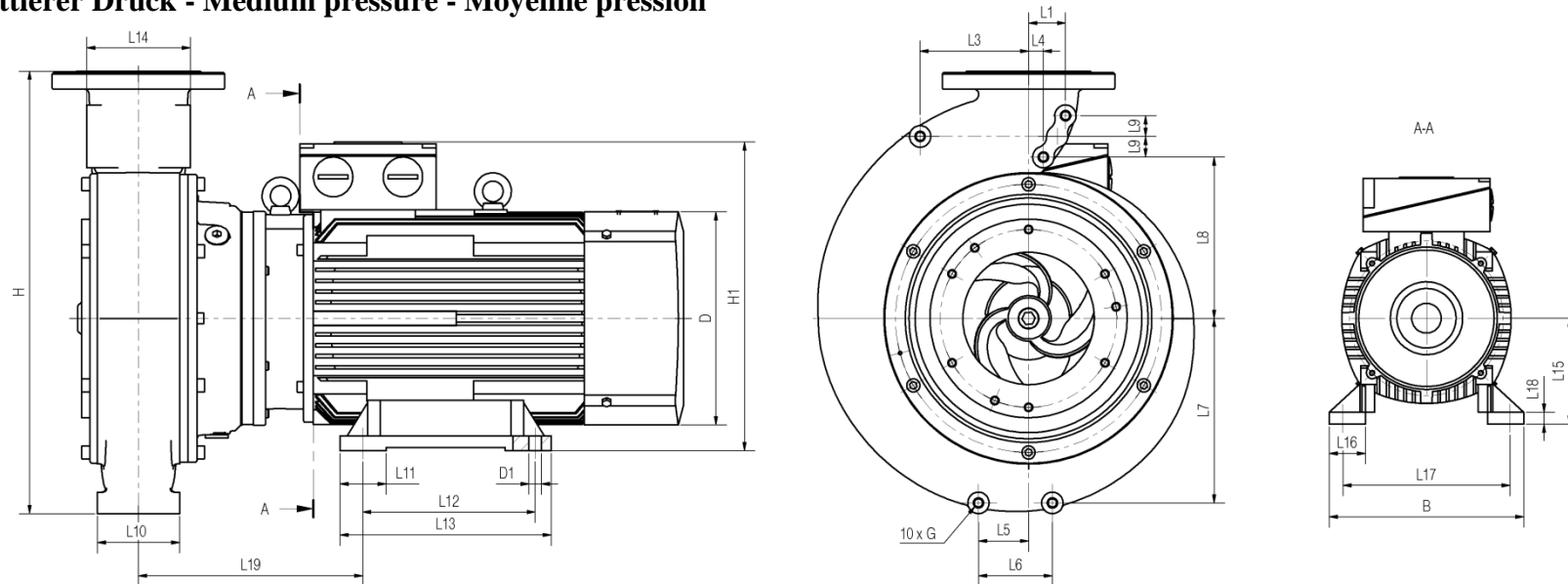
Varenr. Article no. Artikel Nr. Code no. (400V)	Effekt Power Leist. Puiss. [kW]	Type Typ	Dimensioner – Dimensions – Dimensionen – Dimensions [mm]																							Justerbar Adjustable Justierbar Réglable W [mm]					
			A1	B1	C	D	E1	F1	G	H	I	J	J3	K1	L	M	N	O	P	Q1	R	S	T1	U	V						
2512815	15,0	80	902	660	681	586	538	485	370	205	35	-	430	15,5	Ø190	Ø150	Ø80	4xØ18	825	432	242	785	54,5	48	35 - 85						
2512818	18,5				719	624													600			450				370	205	380	505	885	785
2512822	22,0				922	680													759			664				565	515	460	505	885	845
2512830	30,0				942	700													805			710				605	515	460	540	1005	865

Ret til tekniske ændringer forbeholdes - We reserve the right to make technical alterations - Technische und maßliche Änderungen vorbehalten - Sous réserve de modifications techniques.

Hovedmål – Principal measurements – Hauptmaße - Encombremts

MPTK-I / MPTKR-I 50-105 IE2

Mellemtryk - Mittlerer Druck - Medium pressure - Moyenne pression



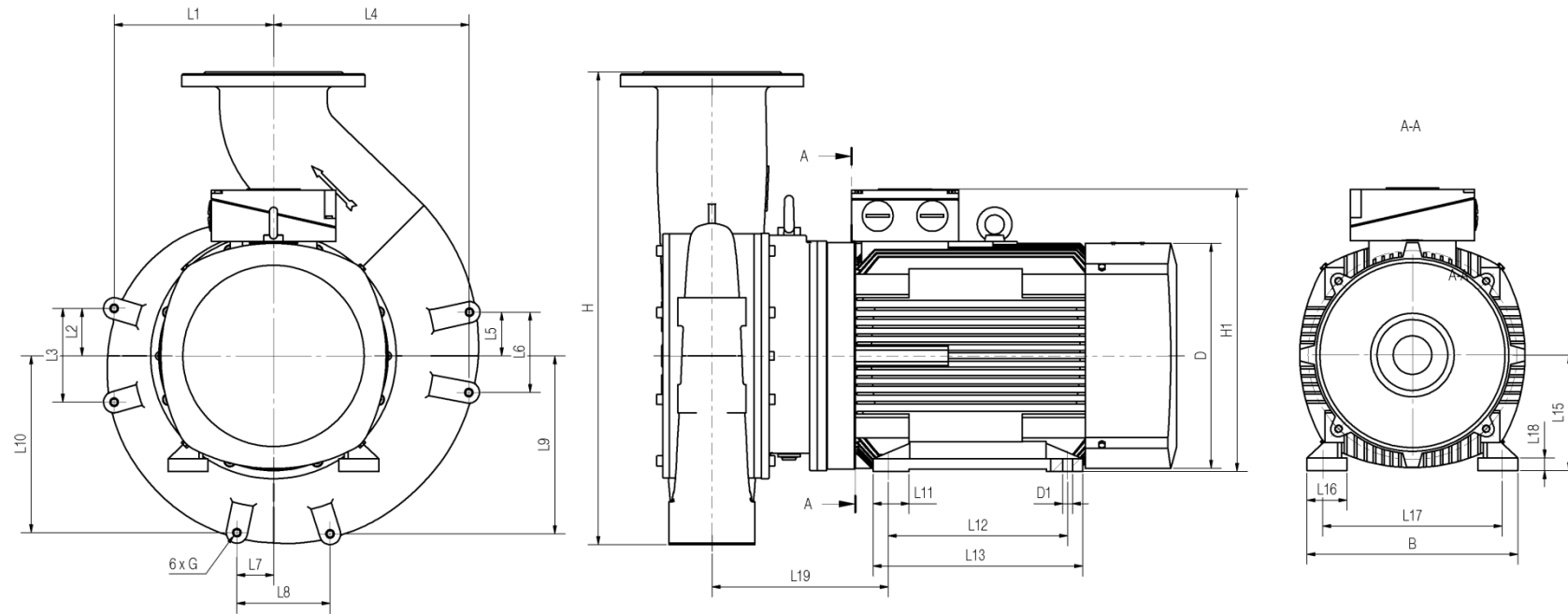
Varenr. Article no. Artikel Nr. Code no. (400V)	Varenr. Article no. Artikel Nr. Code no. (400V)	Effekt Power Leist. Puiss. [kW]	Type Typ	Dimensioner – Dimensions – Dimensionen – Dimensions [mm]																							
				B	D	D1	G	H	H1	L1	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14	L15	L16	L17	L18	L19
2534197	-	0,75	50	152	157	ø10	M6	290	200	33	81	25	55	90	121	107,5	19	28	-	100	146	33	80	26	125	9	138,5
2534702	-	2,2/1,1	65	193	196	ø12	M10	371	236	32,5	99,5	18,5	43	66	154,5	136	15,5	64	-	140	175	86	100	42	160	13	198
2534805	2534205	5,5/3,0	80	256	217			432	310	36,5	106	18	52,5	80	179,5	158,5	17,5	80	55		180	102	132	50	216	16	251
2534911	2534211	11,0/7,5	105	296	258	ø15	M12	534	374	45	132		61	90	223	195	25	100	60	210	257	126	160	55	254	18	273
2534918	2534218	18,5/15,0		328	351	ø15x20		534	441			65							241	288	180		62	279	20	242,5	
2534922	2534222	22,0				ø15x20		279	326																		

Ret til tekniske ændringer forbeholdes - We reserve the right to make technical alterations.
 Technische und maßliche Änderungen vorbehalten - Sous réserve de modifications techniques.

Hovedmål – Principal measurements – Hauptmaße - Encombremments

MPTK-I 150 IE2

Mellemtryk - Mittlerer Druck - Medium pressure - Moyenne pression



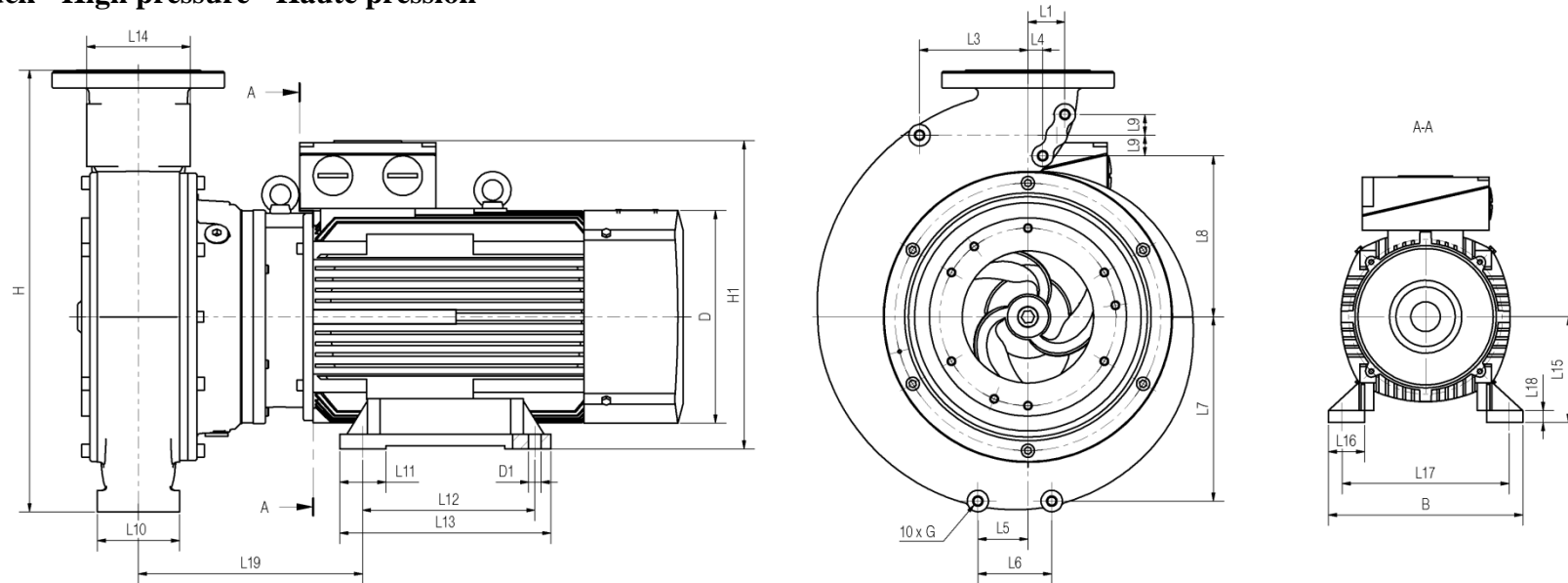
Varenr. Article no. Artikel Nr. Code no. (400V)	Varenr. Article no. Artikel Nr. Code no. (400V)	Effekt Power Leist. Puiss. [kW]	Type Typ	Dimensioner – Dimensions – Dimensionen – Dimensions [mm]																							
				B	D	D1	G	H	H1	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L15	L16	L17	L18	L19
2534622	-	22,0	150	328	351	ø15x20	M12	740	441	248	74	146	305	68	125	57	145	277	275	65	279	326	180	62	279	20	274,5
2534630	-	30,0		372	390	ø19x25	M12		500											70	305	360	200	70	318	22	310,5

Ret til tekniske ændringer forbeholdes - We reserve the right to make technical alterations.
 Technische und maßliche Änderungen vorbehalten - Sous réserve de modifications technique.

Hovedmål – Principal measurements – Hauptmaße - Encombremnts

MPTK-I / MPTKR-I IE2

Højtryk – Hochdruck - High pressure - Haute pression



Varenr. Article no. Artikel Nr. Code no. (400V)	Varenr. Article no. Artikel Nr. Code no. (400V)	Effekt Power Leist. Puiss. [kW]	Type Typ	Dimensioner – Dimensions – Dimensionen – Dimensions [mm]																															
				B	D	D1	G	H	H1	L1	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14	L15	L16	L17	L18	L19								
2532105	-	5,5/2,2	50	256	217	ø12	M6	290	310	33	81	25	55	90	121	107,5	19	28	55	140	180	33	132	50	216	16	236								
2532711	-	11,0/7,5	65	296	313	ø15x20	M10	371	402	32,5	99,5	18,5	43	66	154,5	136	15,5	64	60	210	257	86	160	55	254	18	223								
2532718	-	18,5/15,0																		254	301														
2532818	2532218	18,5/15,0	80	328	351	ø19x25	M10	432	441	36,5	106	18	52,5	80	179,5	158,5	17,5	80	65	241	288	102	180	62	279	20	263								
2532822	2532222	22,0																										70	305	360	200	70	318	22	275
2532830	2532230	30,0																										372	351	ø19x25	461	461	36,5	106	18

Ret til tekniske ændringer forbeholdes - We reserve the right to make technical alterations.
 Technische und maßliche Änderungen vorbehalten - Sous réserve de modifications techniques.

MPTK-I / MPTKR-I IE2

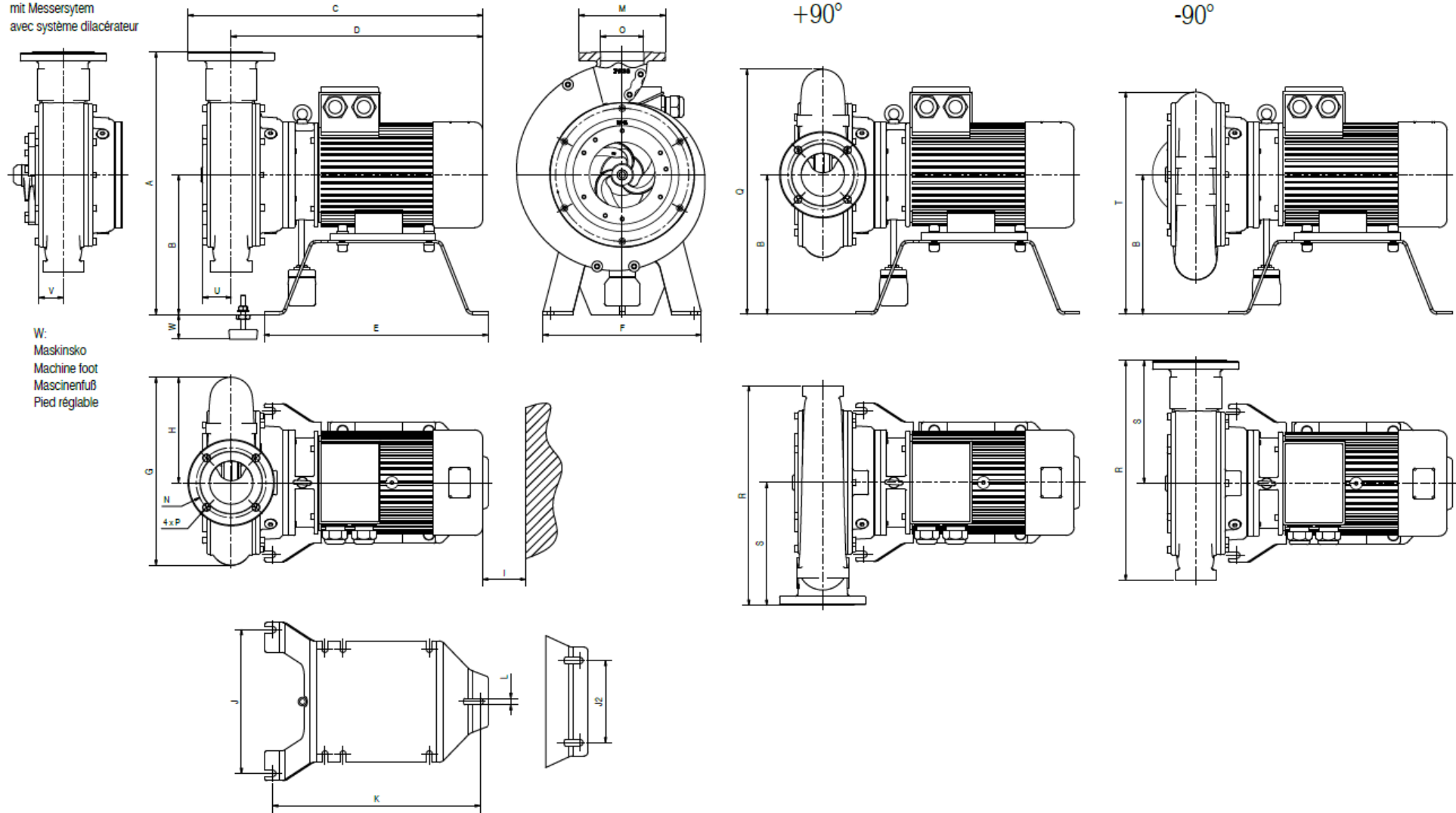
med knivsystem
with knife system
mit Messersystem
avec système dilacérateur

0°

DIN 2631 PN 6 (MPTK 65-105)
DIN 2632 PN 10 (MPTK 150)

+90°

-90°

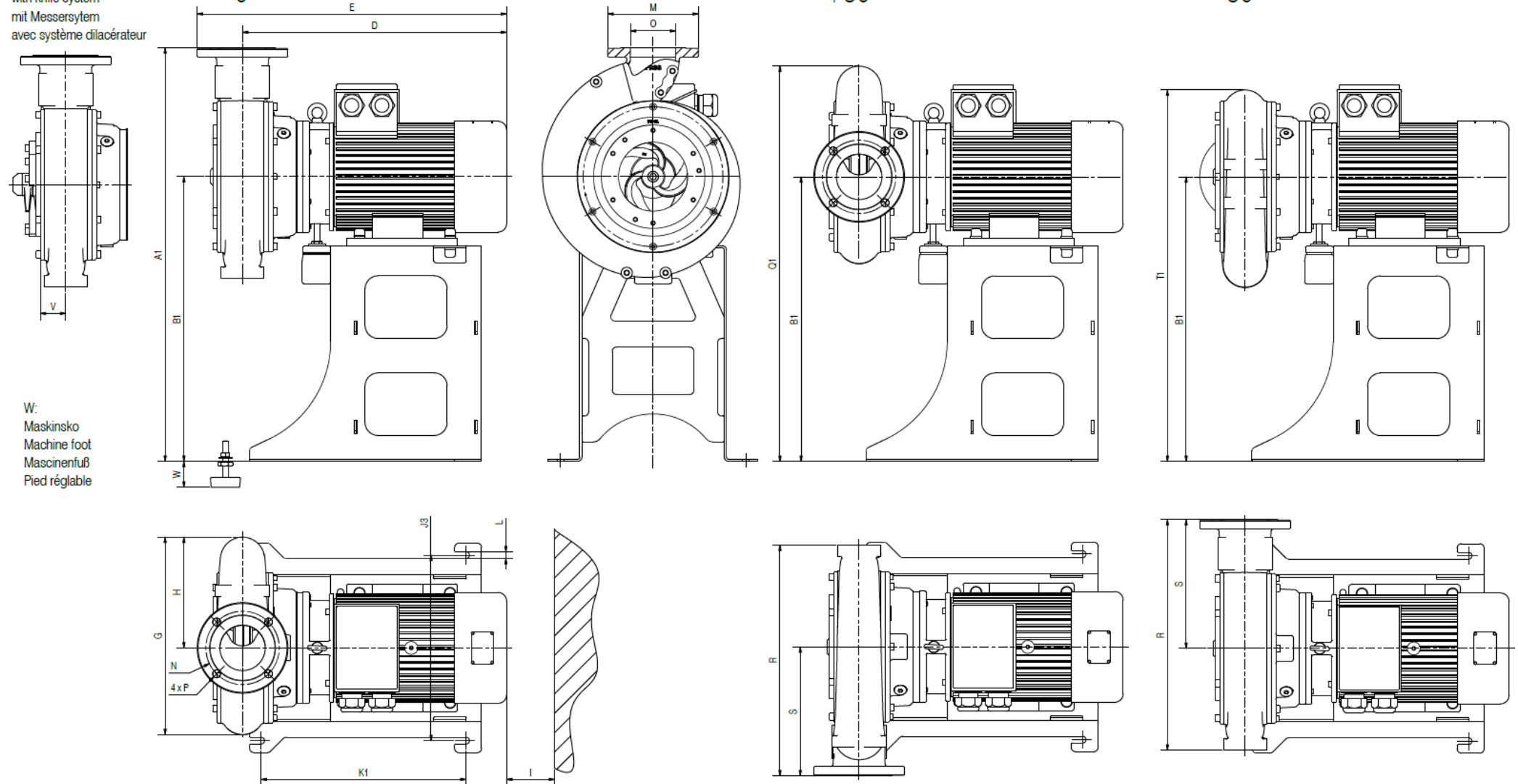


W:
Maskinsko
Machine foot
Maschinenfuß
Pied réglable

MPTK-I / MPTKR-I IE2

med knivsystem
with knife system
mit Messersystem
avec système dilacérateur

DIN 2631 PN 6 (MPTK 105)
DIN 2632 PN 10 (MPTK 150)



W:
Maskinsko
Machine foot
Mascinenfuß
Pied réglable

MPTK-I / MPTKR-I IE2
Mellemtryk - Mittlerer Druck - Medium pressure - Moyenne pression

Varenr. Article no. Artikel Nr. Code no. (400V)	Varenr. Article no. Artikel Nr. Code no. (400V)	Effekt Power Leist. Puiss. [kW]	Type Typ	Dimensioner – Dimensions – Dimensionen – Dimensions [mm]																				Justerbar Adjustable Justierbarem Réglable W			
				A	B	C	D	E	F	G	H	I	J	J2	K	L	M	N	O	P	Q	R	S		T	U	V
2534197	-	0,75	50	295	135	390	335	262	200	250	135	16	175		230	∅12	∅110	∅90	∅50	4x∅10	270	290	160	250	42	36	27 - 41
2534702	-	2,2/1,1	65	455	250	546	466	420	310	320	175	20	270		390		∅160	∅130	∅67	4x∅14	425	371	205	395	46	39	30 - 77
2534805	2534205	5,5/3,0	80	522	280	705	610	490	340	370	205		300		460		∅190	∅150	∅80		485	432	242	445	54,5	48	
2534911	2534211	11,0/7,5	105	640	340	769	664	545	385	460	250	35	350	-	515	∅15,5	∅210	∅170	∅105	4x∅18	590	534	300	545	69	59	35 - 85
2534918	2534218	18,5/15,0				752	647		390																		
2534922	2534222	22,0	150	822	380	797	692	590	446	580	320	380	200	550	582	∅285	∅240	∅150	8x∅22	700	740	442	640	72,6	76		
2534622	-					867	724		630																	450	
2534630	-	30,0				937	794	630	450																		

MPTK-I / MPTKR-I IE2
Mellemtryk - Mittlerer Druck - Medium pressure - Moyenne pression

Varenr. Article no. Artikel Nr. Code no. (400V)	Varenr. Article no. Artikel Nr. Code no. (400V)	Effekt Power Leist. Puiss. [kW]	Type Typ	Dimensioner – Dimensions – Dimensionen – Dimensions [mm]																				Justerbar Adjustable Justierbarem Réglable W			
				A1	B1	C	D	E1	F1	G	H	I	J	J3	K1	L	M	N	O	P	Q1	R	S		T1	U	V
2534911	2534211	11,0/7,5	105	960	660	769	664	538	485	460	250	35	-	430	475	∅15,5	∅210	∅170	∅105	4x∅18	910	534	300	865	69	59	35 - 85
2534918	2534218	18,5/15,0		980	680	752	647	565	515					460	505						930			885			
2534922	2534222	22,0	150	1122	700	797	692	590	515	580	320	460	540	∅285	∅240	∅150	8x∅22	1000	740	442	940	72,6	76				
2534622	-					1142	937		605												515			960	865		
2534630	-	30,0				937	794	605	515																		

MPTK-I / MPTKR-I IE2
Højtryk – Hochdruck - High pressure - Haute pression

Varenr. Article no. Artikel Nr. Code no. (400V)	Varenr. Article no. Artikel Nr. Code no. (400V)	Effekt Power Leist. Puiss. [kW]	Type Typ	Dimensioner – Dimensions – Dimensionen – Dimensions [mm]																				Justerbar Adjustable Justierbarem Réglable W				
				A	B	C	D	E	F	G	H	I	J	J2	K	L	M	N	O	P	Q	R	S		T	U	V	
2532105	-	5,5/2,2	50	440	280	599	544	490	340	250	135	35	300	-	460	15,5	∅110	∅90	∅50	4 x ∅10	415	290	160	395	42	36	30 - 77	
2532711	-	11,0/7,5	65	545	340	656	576	545	390	320	175		350		515		∅160	∅130	∅67	4 x ∅14	515	371	205	485	46	39		35 - 85
2532718	-	18,5/15,0				694	614		385				550															
2532818	2532218		722	627	600	450	370	205	380	200	582																	
2532822	2532222	22,0	761	666	590	446																						
2532830	2532230	30,0	80	622	380	806	711	630	450																			

MPTK-I / MPTKR-I IE2
Højtryk – Hochdruck - High pressure - Haute pression

Varenr. Article no. Artikel Nr. Code no. (400V)	Varenr. Article no. Artikel Nr. Code no. (400V)	Effekt Power Leist. Puiss. [kW]	Type Typ	Dimensioner – Dimensions – Dimensionen – Dimensions [mm]																				Justerbar Adjustable Justierbarem Réglable W			
				A1	B1	C	D	E1	F1	G	H	I	J	J3	K1	L	M	N	O	P	Q1	R	S		T1	U	V
2532818	2532218	18,5/15,0	80	902	660	722	627	538	485	370	205	35	-	430	475	15,5	∅190	∅150	∅80	4 x ∅18	825	432	242	785	54,5	48	35 - 85
2532822	2532222	22,0		922	680	761	666	565	515					460	505						885			845			
2532830	2532230	30,0		942	700	806	711	605	515					540	1005						865						

MPTK-I/MPTK-I Ex

The MPTK-I pump is a highly efficient chopper pump designed for pumping heavily contaminated liquids as well as liquids with a high dry matter content, e.g. dewatered sludge.

All MPTK-I pumps are equipped with a knife system at the inlet to the pump, which ensures problem-free operations under conditions where many other pumps have problems with clogging.

APPLICATION EXAMPLES

- Sewage treatment plants
- Pumping stations
- Biogas plants
- Food industry
- Pumping abrasive liquids or liquids with high viscosity



PUMP RPM

- 1,500 rpm
- 3,000 rpm

MATERIAL OF CONSTRUCTION

Motor housing and oil chamber	Cast iron EN-GJL-250
Pump housing	Cast iron EN-GJL-250
Pump impeller	Cast iron EN-GJL-250 Cast iron EN-GJS-700-2 (optional) W1.4408/AISI316 (optional) not available for MPTK-I 105
Pump Shaft	W1.6582/AISI4340
Bolts	A4
Sealing system	Mechanical shaft seals: silicon carbide/silicon carbide
Knife system	Hardened steel W1.0038/S235JR (*) W1.4404/AISI316 (optional) not available for MPTK-I 105
Extended knife system	Hardened steel W1.0038 (optional) W1.4404/AISI316 (optional) not available for MPTK-I 105
Oil type	15W-40 Vario HDX (with moisture detection)

(*) On the MPTK-I, the knife system is optional. The MPTK-I Ex includes the knife system

SERVICE AND MAINTENANCE

Recommended service interval/oil change	Maximum 2,000 operating hours/minimum once a year
Motor	Lifetime lubricated bearings
Oil chamber	Periodic oil change

SURFACE TREATMENT

Machinery enamel: RAL 9005 (Jet Black)	Jet Black
2-component coating: RAL 7005 (Mouse Grey) (optional)	Mouse Grey

MONITORING FUNCTIONS

Thermistor

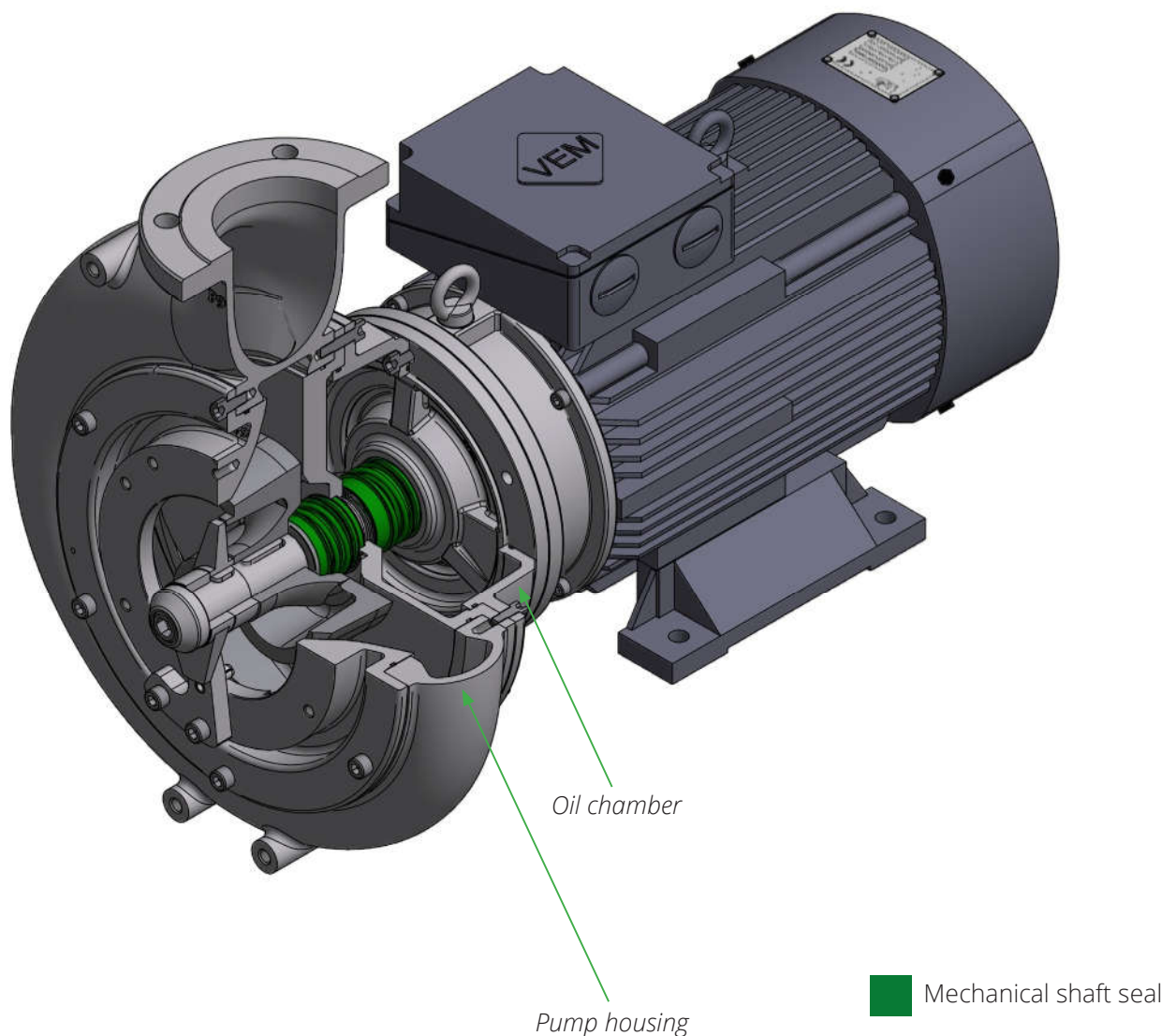
Moisture detection system (optional)

DESIGN

The open pump impeller design means that the chopper pump can pump liquids with a high viscosity. For liquids containing abrasive particles, such as sand, Landia has developed special materials so that the pump's life span is extended significantly in comparison to a standard pump.

A large part of the MPTK-I programme can be supplied in acid-proof steel for aggressive liquids with a high or low pH.

MPTK-I pumps can be equipped with a knife system at the inlet to the pump, which ensures problem-free operation under conditions where many other pumps have problems with clogging.



ELECTRICAL DATA MPTK-I

Motor type	3-phase AC motor
Nominal voltage	400 V
Minimum voltage allowed	360 V
Nominal frequency	50 Hz
Applicable for VFD operation	Yes
Ingress protection rating	IP 55
Insulation class	F

Model	Item number	Nominal power	Motor	Full load current (400 V)	Connection method	Start current (DOL)	cos phi	Efficiency
		[kW]	[rpm]	[A]	Y/Δ	[A]		[%]
Medium pressure								
MPTK-I 50 0.55 kW-1,500 rpm	2514196	0.55	1,400	1.6	Y	7	0.69	71.9
MPTK-I 50 0.75 kW-1,500 rpm	2514197	0.75	1,400	2.1	Y	10	0.70	73.6
MPTK-I 65 1.1 kW-1,500 rpm	2514798	1.1	1,410	2.6	Y	14	0.79	76.7
MPTK-I 65 1.5 kW-1,500 rpm	2514701	1.5	1,400	3.4	Y	19	0.81	78.6
MPTK-I 65 2.2 kW-1,500 rpm	2514702	2.2	1,410	5.0	Y	30	0.80	80.2
MPTK-I 80 3.0 kW-1,500 rpm	2514803	3.0	1,430	6.7	Δ	43	0.79	82.4
MPTK-I 80 4.0 kW-1,500 rpm	2514804	4.0	1,435	8.8	Δ	61	0.78	84.1
MPTK-I 80 5.5 kW-1,500 rpm	2514805	5.5	1,440	11.0	Δ	68	0.87	84.6
MPTK-I 105 7.5 kW-1,500 rpm	2514907	7.5	1,455	15.0	Δ	90	0.83	86.2
MPTK-I 105 11.0 kW-1,500 rpm	2514911	11.0	1,455	21.5	Δ	146	0.84	87.9
MPTK-I 105 15.0 kW-1,500 rpm	2514915	15.0	1,465	29.0	Δ	212	0.84	88.7
MPTK-I 105 18.5 kW-1,500 rpm	2514918	18.5	1,460	35.0	Δ	238	0.85	89.3
MPTK-I 105 22.0 kW-1,500 rpm	2514922	22.0	1,465	43.0	Δ	280	0.82	90.1
MPTK-I 150 18.5 kW-1,500 rpm	2514618	18.5	1,460	35.0	Δ	238	0.85	89.3
MPTK-I 150 22.0 kW-1,500 rpm	2514622	22.0	1,465	43.0	Δ	280	0.82	90.1
MPTK-I 150 30.0 kW-1,500 rpm	2514630	30.0	1,465	57.0	Δ	399	0.84	90.7
High pressure								
MPTK-I 50 2.2 kW-3,000 rpm	2512102	2.2	2,850	4.6	Y	34	0.85	82.1
MPTK-I 50 3.0 kW-3,000 rpm	2512103	3.0	2,865	6.2	Δ	42	0.85	82.8
MPTK-I 50 4.0 kW-3,000 rpm	2512104	4.0	2,900	8.4	Δ	59	0.81	84.9
MPTK-I 50 5.5 kW-3,000 rpm	2512105	5.5	2,860	11.0	Δ	61	0.86	84.7
MPTK-I 65 7.5 kW-3,000 rpm	2512707	7.5	2,890	15.0	Δ	99	0.85	86.1
MPTK-I 65 11.0 kW-3,000 rpm	2512711	11.0	2,905	20.5	Δ	143	0.88	87.6
MPTK-I 65 15.0 kW-3,000 rpm	2512715	15.0	2,940	27.5	Δ	195	0.89	88.7
MPTK-I 65 18.5 kW-3,000 rpm	2512718	18.5	2,925	33.0	Δ	238	0.90	89.9
MPTK-I 80 15.0 kW-3,000 rpm	2512815	15.0	2,940	27.5	Δ	195	0.89	88.7
MPTK-I 80 18.5 kW-3,000 rpm	2512818	18.5	2,925	33.0	Δ	238	0.90	89.9
MPTK-I 80 22.0 kW-3,000 rpm	2512822	22.0	2,935	39.0	Δ	265	0.90	90.5
MPTK-I 80 30.0 kW-3,000 rpm	2512830	30.0	2,940	52.5	Δ	383	0.91	90.6

Medium pressure								
MPTK-I 50 0.75 kW-1,500 rpm IE2	2534197	0.75	1,430	1.6	Y	11	0.81	79.6
MPTK-I 65 2.2/1.1 kW-1,500 rpm IE2	2534702	2.2	1,455	4.8	Y	45	0.77	84.3
MPTK-I 80 5.5/3.0 kW-1,500 rpm IE2	2534805	5.5	1,465	11.3	Δ	105	0.87	88.4
MPTK-I 105 11.0/7.5 kW-1,500 rpm IE2	2534911	11.0	1,470	22.5	Δ	176	0.78	90.3
MPTK-I 105 18.5/15.0 kW-1,500 rpm IE2	2534918	18.5	1,470	37.5	Δ	240	0.78	91.2
MPTK-I 105 22.0 kW-1,500 rpm IE2	2534922	22.0	1,475	42.0	Δ	307	0.83	91.6
MPTK-I 150 22.0 kW-1,500 rpm IE2	2534622	22.0	1,475	42.0	Δ	307	0.83	91.6
MPTK-I 150 30.0 kW-1,500 rpm IE2	2534630	30.0	1,480	58.5	Δ	423	0.8	92.3
High pressure								
MPTK-I 50 5.5/2.2 kW-3,000 rpm IE2	2532105	5.5	2,900	10.3	Δ	80	0.88	87.0
MPTK-I 65 11.0/7.5 kW-3,000 rpm IE2	2532711	11.0	2,955	20.5	Δ	160	0.86	91.1
MPTK-I 65 18.5/15.0 kW-3,000 rpm IE2	2532718	18.5	2,935	32.0	Δ	230	0.91	91.0
MPTK-I 80 18.5/15.0 kW-3,000 rpm IE2	2532818	18.5	2,935	32.0	Δ	230	0.91	91.0
MPTK-I 80 22.0 kW-3,000 rpm IE2	2532822	22.0	2,935	38.5	Δ	239	0.90	91.3
MPTK-I 80 30.0 kW-3,000 rpm IE2	2532830	30.0	2,945	52.0	Δ	359	0.91	92.0

For voltages others than 400 V/50 Hz please refer to the attached Appendix.

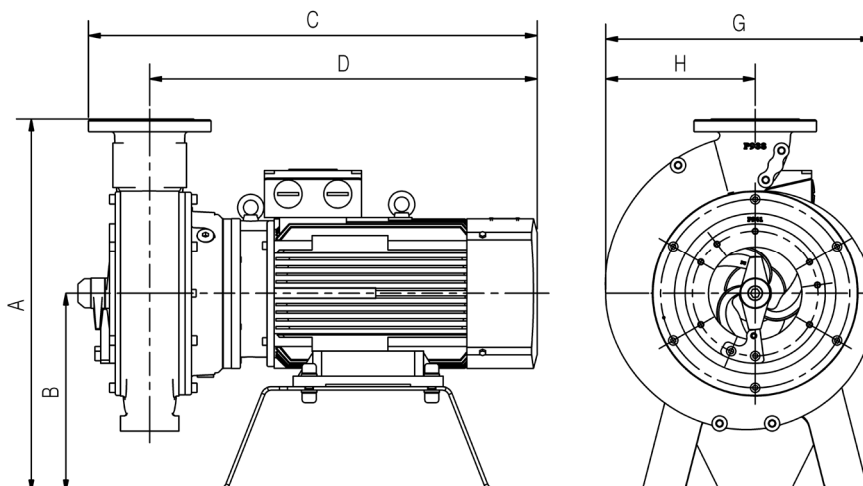
ELECTRICAL DATA MPTK-I EX

Motor type	3-phase AC motor II 3 G k T3
Nominal voltage	400 V
Minimum voltage allowed	360 V
Nominal frequency	50 Hz
Applicable for VFD operation	No
Ingress protection rating	IP 55
Insulation class	F

Model	Item number	Nominal power	Motor	Full load current (400 V)	Connection method	Start current (DOL)	cos phi	Efficiency
		[kW]	[rpm]	[A]	Y/Δ	[A]		[%]
Medium pressure								
MPTK-I 105 15.0 kW-1,500 rpm Ex IE3	2564948	15.0	1,490	28.0	Δ	294	0.83	92.8
MPTK-I 105 18.5 kW-1,500 rpm Ex IE3	2564949	18.5	1,475	34.5	Δ	238	0.84	92.7
MPTK-I 150 30.0 kW-1,500 rpm Ex IE3	2564642	30.0	1,485	54.5	Δ	381	0.85	93.6

For voltages others than 400 V/50 Hz please refer to the attached Appendix.

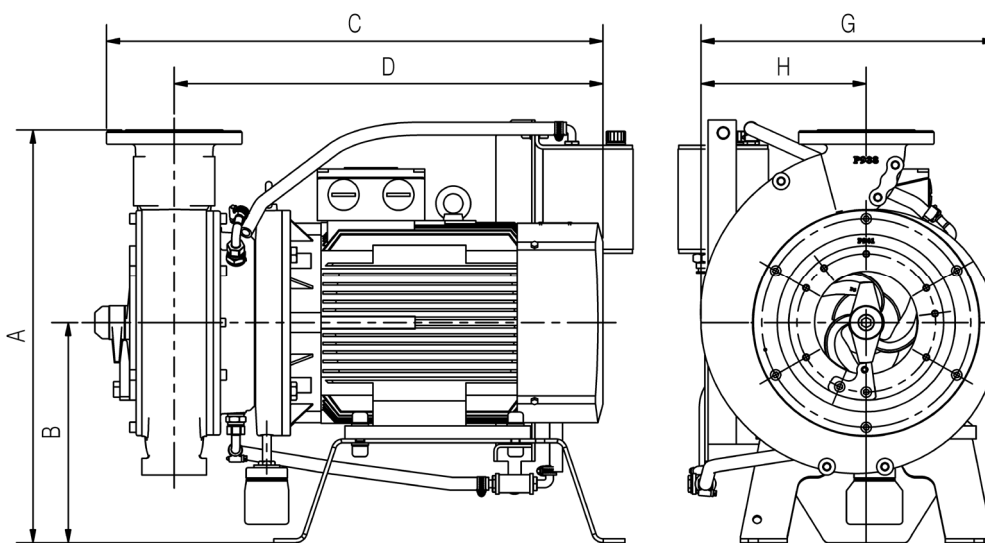
OVERALL DIMENSIONS MPTK-I



Model	Item number	A [mm]	B [mm]	C [mm]	D [mm]	G [mm]	H [mm]	Weight [kg]
Medium pressure								
MPTK-I 50 0.55 kW-1,500 rpm	2514196	295	135	360	305	250	135	25
MPTK-I 50 0.75 kW-1,500 rpm	2514197	295	135	360	305	250	135	25
MPTK-I 65 1.1 kW-1,500 rpm	2514798	455	250	455	375	320	175	45
MPTK-I 65 1.5 kW-1,500 rpm	2514701	455	250	480	400	320	175	50
MPTK-I 65 2.2 kW-1,500 rpm	2514702	455	250	490	410	320	175	55
MPTK-I 80 3.0 kW-1,500 rpm	2514803	522	280	570	475	370	205	80
MPTK-I 80 4.0 kW-1,500 rpm	2514804	522	280	605	510	370	205	85
MPTK-I 80 5.5 kW-1,500 rpm	2514805	522	280	635	540	370	205	100
MPTK-I 105 7.5 kW-1,500 rpm	2514907	640	340	670	565	460	250	140
MPTK-I 105 11.0 kW-1,500 rpm	2514911	640	340	720	615	460	250	160
MPTK-I 105 15.0 kW-1,500 rpm	2514915	640	340	730	625	460	250	200
MPTK-I 105 18.5 kW-1,500 rpm	2514918	640	340	730	625	460	250	210
MPTK-I 105 22.0 kW-1,500 rpm	2514922	640	340	795	690	460	250	310
MPTK-I 150 18.5 kW-1,500 rpm	2514618	822	380	775	630	580	320	270
MPTK-I 150 22.0 kW-1,500 rpm	2514622	822	380	870	725	580	320	330
MPTK-I 150 30.0 kW-1,500 rpm	2514630	822	380	870	725	580	320	360
High pressure								
MPTK-I 50 2.2 kW-3,000 rpm	2512102	410	250	450	395	250	135	36
MPTK-I 50 3.0 kW-3,000 rpm	2512103	410	250	465	410	250	135	41
MPTK-I 50 4.0 kW-3,000 rpm	2512104	440	280	510	455	250	135	53
MPTK-I 50 5.5 kW-3,000 rpm	2512105	410	250	545	490	250	135	61
MPTK-I 65 7.5 kW-3,000 rpm	2512707	485	280	605	525	320	175	80
MPTK-I 65 11.0 kW-3,000 rpm	2512711	545	340	650	570	320	175	105
MPTK-I 65 15.0 kW-3,000 rpm	2512715	545	340	655	575	320	175	140
MPTK-I 65 18.5 kW-3,000 rpm	2512718	545	340	695	615	320	175	155
MPTK-I 80 15.0 kW-3,000 rpm	2512815	622	380	681	586	370	205	188
MPTK-I 80 18.5 kW-3,000 rpm	2512818	622	380	719	624	370	205	205
MPTK-I 80 22.0 kW-3,000 rpm	2512822	622	380	759	664	370	205	258
MPTK-I 80 30.0 kW-3,000 rpm	2512830	622	380	805	710	370	205	305

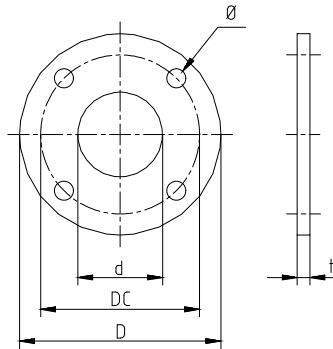
Medium pressure								
MPTK-I 50 0.75 kW-1,500 rpm IE2	2534197	295	135	390	335	250	135	35
MPTK-I 65 2.2/1.1 kW-1,500 rpm IE2	2534702	455	250	546	466	320	175	80
MPTK-I 80 5.5/3.0 kW-1,500 rpm IE2	2534805	522	280	705	610	370	205	140
MPTK-I 105 11.0/7.5 kW-1,500 rpm IE2	2534911	640	340	769	664	460	250	190
MPTK-I 105 18.5/15.0 kW-1,500 rpm IE2	2534918	640	340	752	647	460	250	270
MPTK-I 105 22.0 kW-1,500 rpm IE2	2534922	640	340	797	692	460	250	325
MPTK-I 150 22.0 kW-1,500 rpm IE2	2534622	822	380	867	724	580	320	375
MPTK-I 150 30.0 kW-1,500 rpm IE2	2534630	822	380	937	794	580	320	435
High pressure								
MPTK-I 50 5.5/2.2 kW-3,000 rpm IE2	2532105	440	280	599	544	250	135	75
MPTK-I 65 11.0/7.5 kW-3,000 rpm IE2	2532711	545	340	656	576	320	175	165
MPTK-I 65 18.5/15.0 kW-3,000 rpm IE2	2532718	545	340	694	614	320	175	200
MPTK-I 80 18.5/15.0 kW-3,000 rpm IE2	2532818	622	380	722	627	370	205	215
MPTK-I 80 22.0 kW-3,000 rpm IE2	2532822	622	380	761	666	370	205	270
MPTK-I 80 30.0 kW-3,000 rpm IE2	2532830	622	380	806	711	370	205	305

OVERALL DIMENSIONS MPTK-I EX



Model	Item number	A [mm]	B [mm]	C [mm]	D [mm]	G [mm]	H [mm]	Weight [kg]
Medium pressure								
MPTK-I 105 15.0 kW-1,500 rpm Ex IE3	2564948	640	340	820	715	460	250	228
MPTK-I 105 18.5 kW-1,500 rpm Ex IE3	2564949	640	340	820	715	460	250	228
MPTK-I 150 30.0 kW-1,500 rpm Ex IE3	2564642	822	380	1010	870	580	320	380

OVERALL DIMENSIONS WELDING FLANGE



Model/ Pump series	Article no.	Material	MPTK 50 - 65 - 80 - 105 DIN 2573 PN 6 Dim. [mm] MPTK 150 2576 PN 10 Dim. [mm]				
			D	DC	d	\varnothing	t
MPTK-I 50	7713006	W1.0038/S235JR	$\varnothing 110$	90	$\varnothing 52$	4 x $\varnothing 10$	8
MPTK-I 65	7713052	W1.0038/S235JR	$\varnothing 160$	130	$\varnothing 69$	4 x $\varnothing 14$	8
MPTK-I 80	7713053	W1.0038/S235JR	$\varnothing 192$	150/160	$\varnothing 82$	4 x $\varnothing 18$	10
MPTK-I 105	7713054	W1.0038/S235JR	$\varnothing 212$	170/180	$\varnothing 107$	4 x $\varnothing 18$	10
MPTK-I 150	7713009	W1.0038/S235JR	$\varnothing 285$	240	$\varnothing 152$	8 x $\varnothing 22$	12

We reserve the right to make technical changes.

MPTKR-I/MPTKR-I Ex

The MPTKR-I pump is a highly efficient chopper pump made entirely of acid-proof steel. It is ideal for aggressive liquids with a low or high PH value, as well as liquids with a high dry matter content.

All MPTKR-I pumps can be equipped with a knife system at the inlet to the pump, which can ensure problem-free operations under conditions where many other pumps have problems with clogging.

APPLICATION EXAMPLES

- ▶ Chemical industry
- ▶ Paper industry
- ▶ Food industry
- ▶ Biogas plants
- ▶ Pumping abrasive or aggressive liquids



PUMP RPM

- 1,500 rpm
- 3,000 rpm

MATERIAL OF CONSTRUCTION

Motor housing and oil chamber	Cast iron EN-GJL-250
Pump housing	W1.4408/AISI316
Pump impeller	W1.4408/AISI316
Pump Shaft	W.1.4404/AISI316
Bolts	A4
Sealing system	Mechanical shaft seals: silicon carbide/silicon carbide
Knife system	W1.4404/AISI316 (*)
Extended knife system	W1.4404/AISI316 (optional)
Oil type	15W-40 Vario HDX (with moisture detection)

(*) On the MPTKR-I, the knife system is optional. The MPTKR-I Ex includes the knife system.

SERVICE AND MAINTENANCE

Recommended service interval/oil change	Maximum 2,000 operating hours/minimum once a year
Motor	Lifetime lubricated bearings
Oil chamber	Periodic oil change

SURFACE TREATMENT

Machinery enamel: RAL 9005 (Jet Black)	Jet Black
2-component coating: RAL 7005 (Mouse Grey) (optional)	Mouse Grey

MONITORING FUNCTIONS

Thermistor

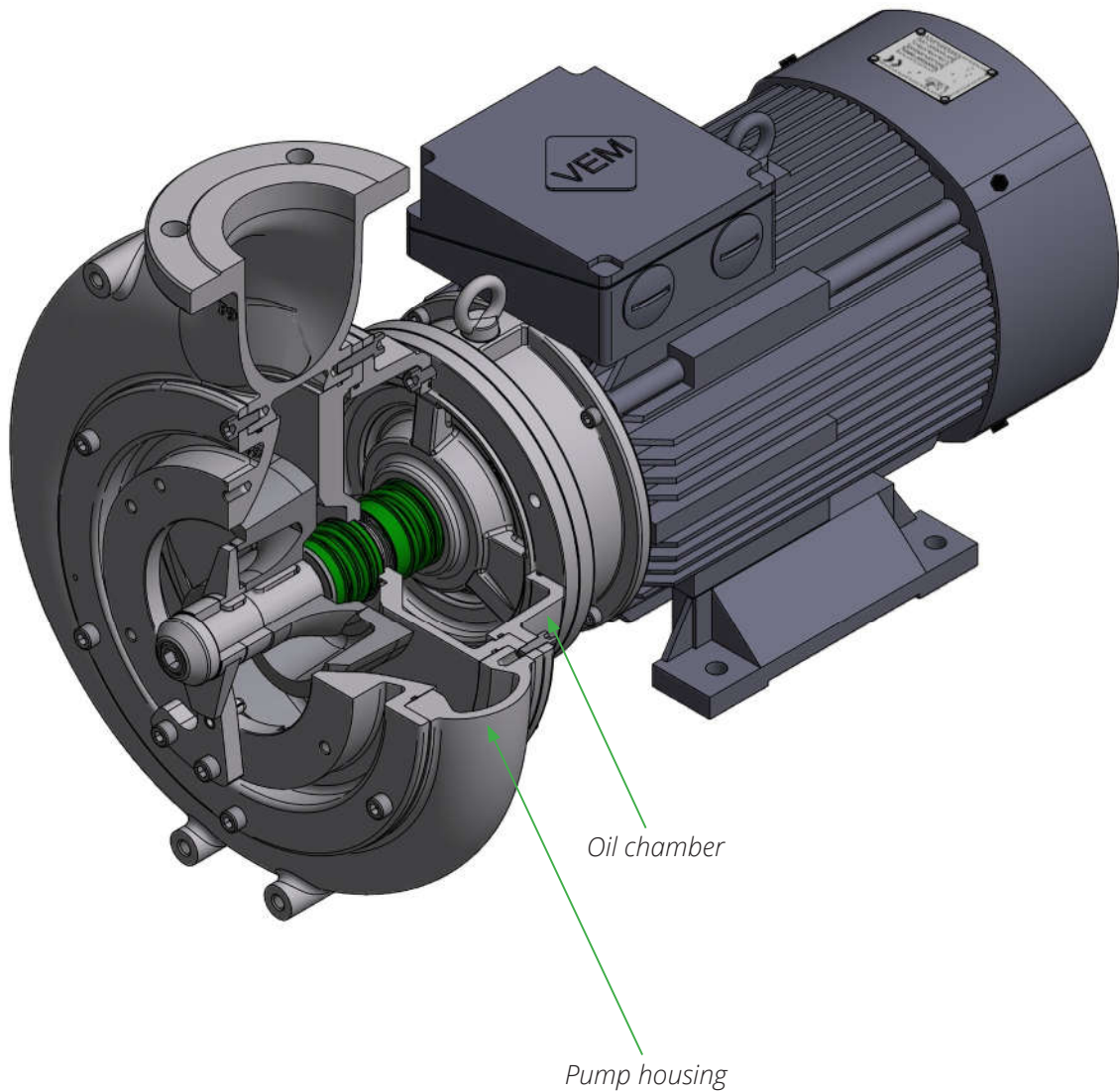
Moisture detection system (optional)

DESIGN

The open pump impeller design means that the chopper pump can pump liquids with a high viscosity. For liquids containing abrasive particles, such as sand, Landia has developed special materials so that the pump's life span is extended significantly in comparison to a standard pump.

A large part of the MPTKR-I programme can be supplied in acid-proof steel for aggressive liquids with a high or low pH.

The chopper pumps can be equipped with a knife system at the inlet to the pump, which ensure problem-free operations under conditions where many other pumps have problems with clogging.



 Mechanical shaft seal

ELECTRICAL DATA MPTKR-I

Motor type	3-phase AC motor
Nominal voltage	400 V
Minimum voltage allowed	360 V
Nominal frequency	50 Hz
Applicable for VFD operation	Yes
Ingress protection rating	IP 55
Insulation class	F

Model	Item number	Nominal power	Motor	Full load current (400 V)	Connection method	Start current (DOL)	cos phi	Efficiency
		[kW]	[rpm]	[A]	Y/Δ	[A]		[%]
Medium pressure								
MPTKR-I 65 1.1 kW-1,500 rpm	2514298	1.1	1,410	2.6	Y	14	0.79	76.7
MPTKR-I 65 1.5 kW-1,500 rpm	2514201	1.5	1,400	3.4	Y	19	0.81	78.6
MPTKR-I 65 2.2 kW-1,500 rpm	2514202	2.2	1,410	5.0	Y	30	0.80	80.2
MPTKR-I 80 3.0 kW-1,500 rpm	2514203	3.0	1,430	6.7	Δ	43	0.79	82.4
MPTKR-I 80 4.0 kW-1,500 rpm	2514204	4.0	1,435	8.8	Δ	61	0.78	84.1
MPTKR-I 80 5.5 kW-1,500 rpm	2514205	5.5	1,440	11.0	Δ	68	0.87	84.6
MPTKR-I 105 7.5 kW-1,500 rpm	2514207	7.5	1,455	15.0	Δ	90	0.83	86.2
MPTKR-I 105 11.0 kW-1,500 rpm	2514211	11.0	1,455	21.5	Δ	146	0.84	87.9
MPTKR-I 105 15.0 kW-1,500 rpm	2514215	15.0	1,465	29.0	Δ	212	0.84	88.7
MPTKR-I 105 18.5 kW-1,500 rpm	2514218	18.5	1,460	35.0	Δ	238	0.85	89.3
MPTKR-I 105 22.0 kW-1,500 rpm	2514222	22.0	1,465	43.0	Δ	280	0.82	90.1
MPTKR-I 105 30.0 kW-1,500 rpm	2514230	30.0	1,465	57.0	Δ	399	0.84	90.7
High pressure								
MPTKR-I 65 7.5 kW-3,000 rpm	2512207	7.5	2,890	15.0	Δ	99	0.85	86.1
MPTKR-I 65 11.0 kW-3,000 rpm	2512211	11.0	2,905	20.5	Δ	143	0.88	87.6
MPTKR-I 65 15.0 kW-3,000 rpm	2512212	15.0	2,940	27.5	Δ	195	0.89	88.7
MPTKR-I 65 18.5 kW-3,000 rpm	2512213	18.5	2,925	33.0	Δ	238	0.90	89.9
MPTKR-I 80 15.0 kW-3,000 rpm	2512215	15.0	2,940	27.5	Δ	195	0.89	88.7
MPTKR-I 80 18.5 kW-3,000 rpm	2512218	18.5	2,925	33.0	Δ	238	0.90	89.9
MPTKR-I 80 22.0 kW-3,000 rpm	2512222	22.0	2,935	39.0	Δ	265	0.90	90.5
MPTKR-I 80 30.0 kW-3,000 rpm	2512230	30.0	2,940	52.5	Δ	383	0.91	90.6
Medium pressure								
MPTKR-I 80 5.5/3.0 kW-1,500 rpm IE2	2534205	5.5	1465	11.3	Δ	105	0.87	88.4
MPTKR-I 105 11.0/7.5 kW-1,500 rpm IE2	2534211	11.0	1,470	22.5	Δ	190	0.78	90.3
MPTKR-I 105 18.5/15.0 kW-1,500 rpm IE2	2534218	18.5	1,470	37.5	Δ	270	0.78	91.2
MPTKR-I 105 22.0 kW-1,500 rpm IE2	2534222	22.0	1,475	42.0	Δ	325	0.83	91.6
High pressure								
MPTKR-I 80 18.5/15.0 kW-3,000 rpm IE2	2532218	18.5	2,935	32.0	Δ	230	0.91	91.0
MPTKR-I 80 22.0 kW-3,000 rpm IE2	2532222	22.0	2,935	38.5	Δ	239	0.90	91.3
MPTKR-I 80 30.0 kW-3,000 rpm IE2	2532230	30.0	2,945	52.0	Δ	359	0.91	92.0

For voltages others than 400 V/50 Hz please refer to the attached Appendix.

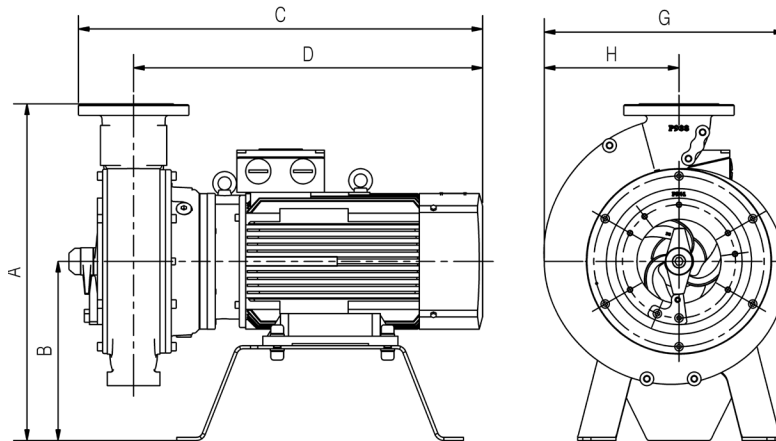
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Prepared by: BNV/GB
Approved by: KSK/TM



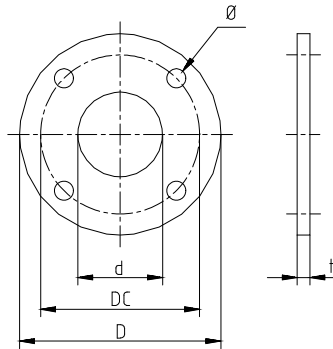
Issued on: 1 January 2018
Rev. date: 01. September 2021

OVERALL DIMENSIONS MPTKR-I



Model	Item number	A [mm]	B [mm]	C [mm]	D [mm]	G [mm]	H [mm]	Weight [kg]
Medium pressure								
MPTKR-I 65 1.1 kW-1,500 rpm	2514298	455	250	455	375	320	175	45
MPTKR-I 65 1.5 kW-1,500 rpm	2514201	455	250	480	400	320	175	50
MPTKR-I 65 2.2 kW-1,500 rpm	2514202	455	250	490	410	320	175	55
MPTKR-I 80 3.0 kW-1,500 rpm	2514203	522	280	570	475	370	205	80
MPTKR-I 80 4.0 kW-1,500 rpm	2514204	522	280	605	510	370	205	85
MPTKR-I 80 5.5 kW-1,500 rpm	2514205	522	280	635	540	370	205	100
MPTKR-I 105 7.5 kW-1,500 rpm	2514207	640	340	670	565	460	250	158
MPTKR-I 105 11.0 kW-1,500 rpm	2514211	640	340	720	615	460	250	178
MPTKR-I 105 15.0 kW-1,500 rpm	2514215	640	340	730	625	460	250	218
MPTKR-I 105 18.5 kW-1,500 rpm	2514218	640	340	730	625	460	250	228
MPTKR-I 105 22.0 kW-1,500 rpm	2514222	640	340	795	690	460	250	310
MPTKR-I 105 30.0 kW-1,500 rpm	2514230	640	340	795	690	460	250	330
High pressure								
MPTKR-I 65 7.5 kW-3,000 rpm	2512207	485	280	605	525	320	175	80
MPTKR-I 65 11.0 kW-3,000 rpm	2512211	545	340	650	570	320	175	105
MPTKR-I 65 15.0 kW-3,000 rpm	2512212	545	340	655	575	320	175	140
MPTKR-I 65 18.5 kW-3,000 rpm	2512213	545	340	695	615	320	175	155
MPTKR-I 80 15.0 kW-3,000 rpm	2512215	622	380	681	586	370	205	188
MPTKR-I 80 18.5 kW-3,000 rpm	2512218	622	380	719	624	370	205	205
MPTKR-I 80 22.0 kW-3,000 rpm	2512222	622	380	759	664	370	205	258
MPTKR-I 80 30.0 kW-3,000 rpm	2512230	622	380	805	710	370	205	305
Medium pressure IE2								
MPTKR-I 80 5.5/3.0 kW-1,500 rpm IE2	2534205	522	280	705	610	370	205	140
MPTKR-I 105 11.0/7.5 kW-1,500 rpm IE2	2534211	640	340	769	664	460	250	190
MPTKR-I 105 18.5/15.0 kW-1,500 rpm IE2	2534218	640	340	752	647	460	250	270
MPTKR-I 105 22.0 kW-1,500 rpm IE2	2534222	640	340	797	692	460	250	325
High pressure IE2								
MPTKR-I 80 18.5/15.0 kW-3,000 rpm IE2	2532218	622	380	722	627	370	205	215
MPTKR-I 80 22.0 kW-3,000 rpm IE2	2532222	622	380	761	666	370	205	270
MPTKR-I 80 30.0 kW-3,000 rpm IE2	2532230	622	380	806	711	370	205	315

OVERALL DIMENSIONS WELDING FLANGE



Model/ Pump series	Article no.	Material	MPTK 50 - 65 - 80 - 105 DIN 2573 PN 6 Dim. [mm] MPTK 150 2576 PN 10 Dim. [mm]				
			D	DC	d	\varnothing	t
MPTK-I 50	7115021	W1.4404/AISI316	$\varnothing 110$	90	$\varnothing 52$	4 x $\varnothing 10$	8
MPTK-I 65	7715004	W1.4404/AISI316	$\varnothing 160$	130	$\varnothing 69$	4 x $\varnothing 14$	8
MPTK-I 80	7715005	W1.4404/AISI316	$\varnothing 192$	150/160	$\varnothing 82$	4 x $\varnothing 18$	10
MPTK-I 105	7715006	W1.4404/AISI316	$\varnothing 212$	170/180	$\varnothing 107$	4 x $\varnothing 18$	10
MPTK-I 150	7715025	W1.4404/AISI316	$\varnothing 285$	240	$\varnothing 152$	8 x $\varnothing 22$	12

We reserve the right to make technical changes.

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Introduction

MPTK-I is a dry installed pump.

By means of different equipment a great number of different pumping requirements can be met. The pumping takes place by means of an electric motor; a pump casing with an impeller is installed on the motor. The oil filled oil chamber between motor and impeller provides cooling and lubrication of the mechanical seals. The sealing system consists of two mechanical seals. The exterior seal separates the medium from the oil chamber, the interior seal separates the oil from the motor casing.

Application

This dry installed pump is to be applied for pumping of liquids with a high or a low dry matter content, like e.g. thick manure and highly polluted wastewater. The pump is only to be applied dry installed in connection with application at e.g. effluent treatment plants, in industry and in agriculture. If the pump is to be applied for other purposes, contact Landia A/S for advice.

Important

Please note the following points:

- Only a certified electrician is allowed to connect the unit.
- Prior to installation and start-up ensure that the equipment, such as hoses, pipes and pipe branches, is installed correctly and fixed to the pump.
- Prior to the first start of the pump, the pump shaft must be rotated manually. This also applies if the pump has not been in operation for a longer period.
- The pump must be dry installed but can be placed outside without protection as the motor is splash proof. The motor is not to be wrapped in plastic film etc.
- Prior to service/repair of the pump it is always to be ensured that the electrical connection of the pump is switched off or locked.
- Prior to disassembling the pump, the sluice valve on the pressure and on the suction side must be completely closed.

Service/repair

To maintain a high operating safety and a long service life without unnecessary and expensive repair, it is important from the beginning to execute regular and preventive service. Maintenance should be executed according to the intervals stated in the manual. Always follow the instruction carefully and only apply the parts described by Landia A/S in the spare parts list.

If you do not want to execute the service yourself, we can offer you a service agreement - please call for further information.

Please note

If spare parts not identical to the recommended are applied at service/repair, the guarantee from Landia A/S will be annulled. Spare parts can be ordered at Landia A/S or your local distributor.

For major repairs at a special workshop please contact:

Head Office:
LANDIA A/S
Industrivej 2
DK-6940 Lem St.
Tel.: +45 97 341244
info@landia.dk
www.landia.dk

UK subsidiary:
Landia (UK) Ltd.
Waymills Industrial Estate,
Whitchurch,
Shropshire SY13 1TT
Tel: + 44 01948 661 200
info@landia.co.uk
www.landia.co.uk

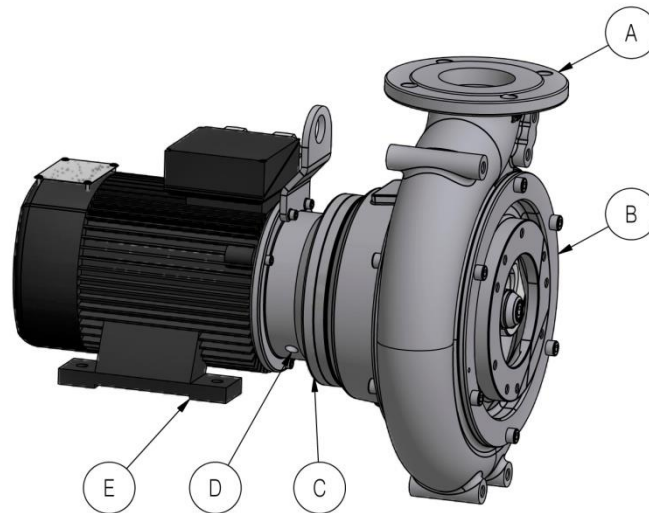
Landia A/S is represented by local distributors worldwide, please call for further information.

Installation

At installation, it must be ensured that the pump can be removed from the pipe system in case of breakdown, service etc. Therefore, block valves must be installed on the pressure and on the inlet side of the pump, unless the pipe system can be emptied in another way. Besides, it must be ensured at fixing to the concrete foundation that the pump can be lifted in service situations. By means of a motor support foot, the console of the pump is relieved, pos. E. At pump installations in piping systems compensators must be applied since vibrations and temperature fluctuations will influence the piping system.

At installation the drainage hole, pos. C, in the receiver and the condensate hole, pos. D, in the motor must turn downwards.

- A. Pressure side
- B. Suction side
- C. Draining hole
- D. Condensate hole
- E. Motor base



Rating plate

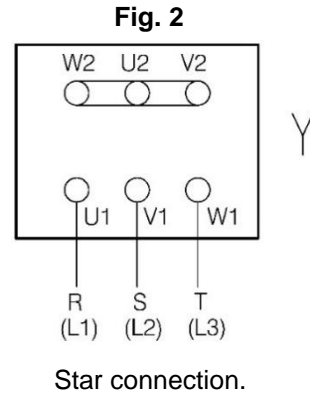
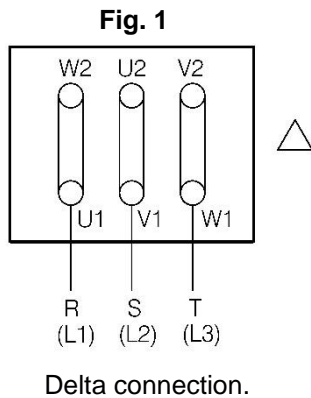
		VEM motors GmbH Thurm			
IM	IP	IF	3-Mot	kg	
50Hz	60Hz				
kW		kW			
V		V			
min ⁻¹		min ⁻¹			
50 Hz	V	/	A
60 Hz	V	/	A

IP: Cage class
 F: Insulation class F
 3~mot.nr.: 3 phased motor
 IM: Building form
 cos φ: Power factor
 Kg: Weight of motor without pump
 kW: Max. shaft power
 V: Mains voltage
 A: Nominal power consumption
 min: Motor revolutions per minute
 kW,V,A and min⁻¹ for 50 Hz and 60 Hz respectively.
 The final two lines state the allowed voltage intervals with power consumption at 50 Hz and 60 Hz resp.

Power connection

Every pump is equipped with the above mentioned rating plate with technical motor data. The motor is connected according to Fig. 1 or 2. It must be ensured that the other electrical parts correspond to the motor data. For each pump there is an electrical diagram. A protective motor switch must be applied at connection of the pump to the mains.

Only a certified electrician is allowed to connect the unit.



Capacity

The capacity of the pump will always depend on the consistency of the medium.

To obtain the highest capacity possible with as low motor power as possible it is important that the diameters of the pump pipes are large enough and that sharp bends are avoided as far as possible. Large pipe dimensions are especially important in connection with long pumping distances. When installing in a pipe system where vibrations and temperature fluctuations affect the pipe system, compensators must be used.

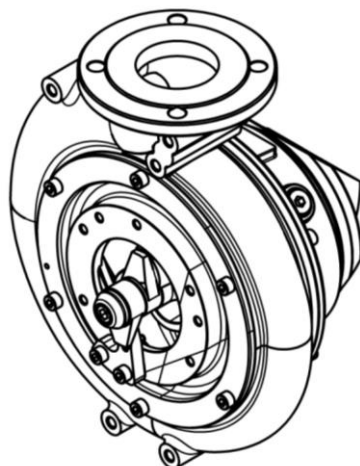
The pumps are equipped with open impellers especially suited for liquids with large particles, like e.g. raw wastewater, manure and industry applications.

For difficult mediums with e.g. a high dry matter content or large impurities which make up a risk for blocking, the pumps can be supplied with a knife system. The knife system which is placed in the inlet port consists of one (or three) fixed and two rotating knives. The knives comminute large impurities in the medium in order to ease the pumping. They are ideal for comminuting e.g. straw, shreds, paper, fish etc.

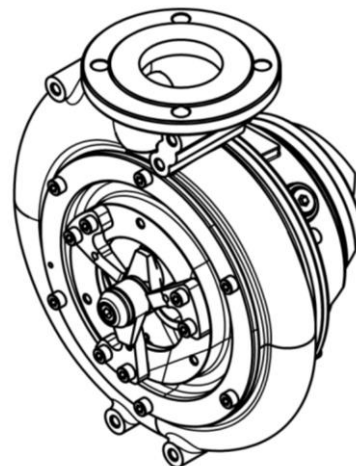
To minimize downtime on the pump due to metal objects in the medium, it may be recommended that a magnet be fitted to the feed system to the tank to which the pump is connected.

The pump capacity will be reduced if the edge of the guide traces on the front and back plates is worn round or if there are deep traces on the surface. You can minimize the wear on the front and rear plate by changing the impeller before the edges on the back of the impeller become too round. If the edges of the impeller become too round, it can be easier to settle stones in the clamp between the impeller and the back plate, which will turn the impeller round and the wear will increase. If you have any doubts or questions, please contact Landia for advice.

Pump casing w. knife system



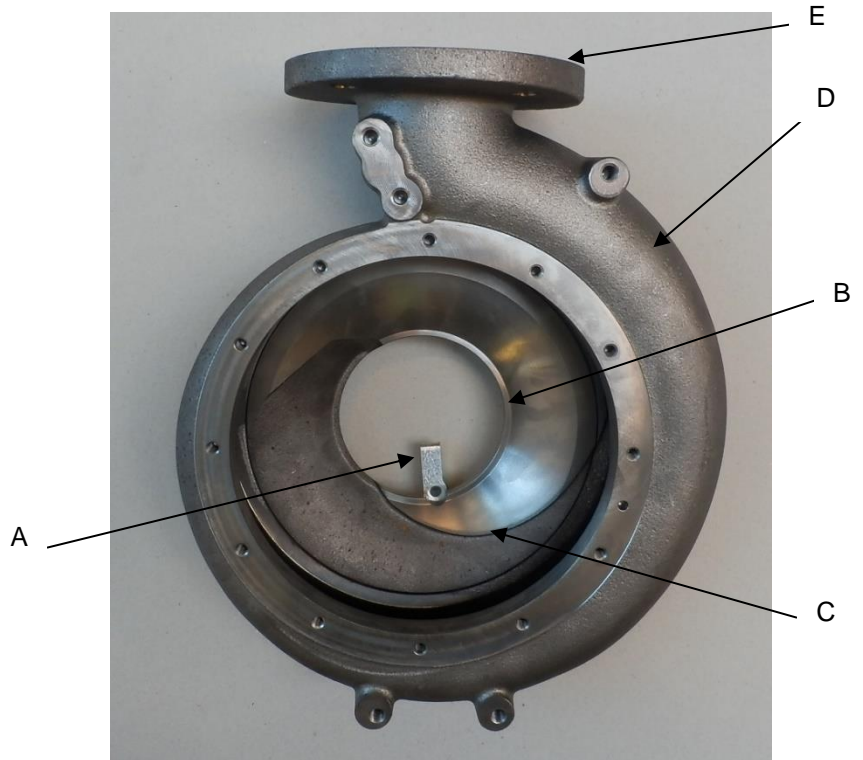
Pump casing w. extended knife system



Fitting the front plate

- A. Knife with tightening pin
- B. Front plate
- C. Guide trace
- D. Pump casing
- E. Outlet

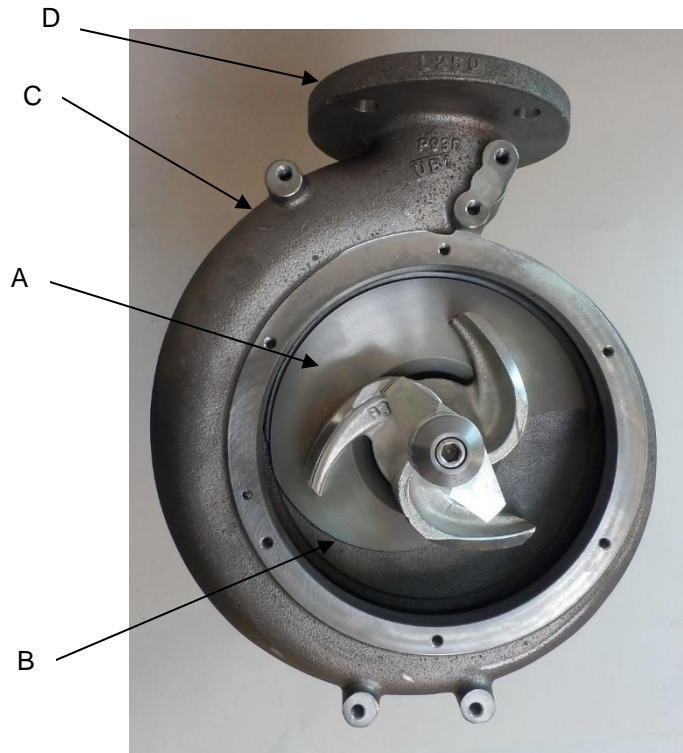
The front plate of the pump casing is designed with a guide trace. The guide trace has to be placed like shown on the above photo, regardless of how the outlet of the pump is turned.



Fitting the back plate

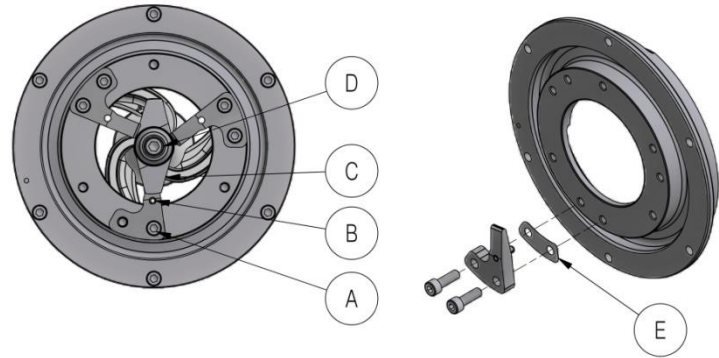
- A. Back plate
- B. Guide trace
- C. Pump casing
- D. Outlet

The back plate of the pump casing is designed with a guide trace. The guide trace has to be placed like shown on the above photo, regardless of how the outlet of the pump is turned.



Installation of knives

- A. Fixed knife
- B. Tightening pin
- C. Rotating knife
- D. Bolt
- E. Shim



If the tightening pin in the fixed knife is missing, the pin/knife must be replaced.

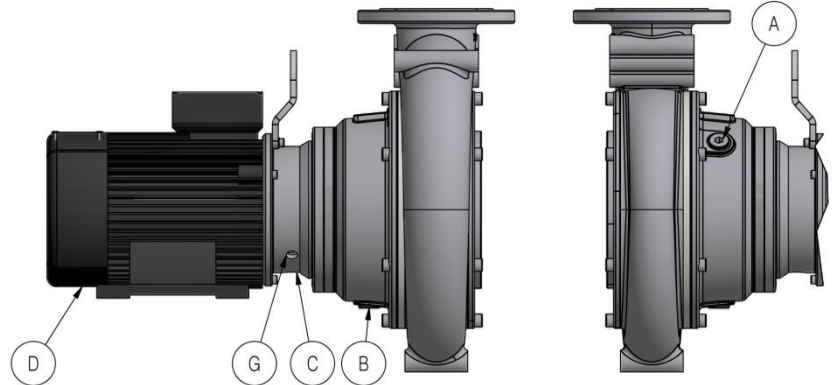
When the fixed and rotating knives are replaced, make sure that the shaft can rotate without the rotating knives touching the fixed knife/knives. If this is not the case, the fixed knife/knives must be adjusted with shims.

Inspection

Periodic inspections can ensure that the pump has a long life for modest costs. For every 6 months, possibly more often, depending on the operating conditions, the pump's impeller, oil supply, motor housing and any blade system should be checked. The oil must be changed at least once a year, or as described on the front of this manual for the recommended service interval for this particular unit.

If large amounts of oil / liquid leak out of the drain hole in the intermediate chamber, the mechanical shaft seals of the pump should be checked. When replacing the knife system, tighten the bolts with a torque wrench according to the diagram below.

- A. Top oil plug
- B. Lower oil plug
- C. Drainage hole
- D. Condensate hole
- E. Filter
- F. Pressure equalization
- G. Inspection hole



Oil control

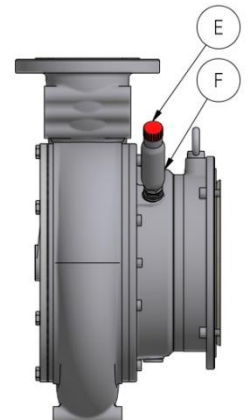
The oil is checked by uninstalling the upper oil plug pos. A. For pumps with pressure equalization, pos. F is uninstalled.

The oil has to be clean and the level must reach the level of the upper plug pos. A when the pump is in a horizontal position, standing on its feet. If the oil is dirty, it must be changed and the two mechanical seals must be checked and changed, if necessary. Oil type see part list.

The oil is drained off at oil plug pos. B and is filled at oil plug pos. A. For pumps with pressure equalization, oil is filled at pos. F.

If the pump is equipped with an oil collector, a plug is placed in drainage hole C. The oil in the collector is drained by removing the plug in drainage hole C. If the oil collector is full, the oil comes out of inspection hole G.

For pumps equipped with pressure equalization, the filter pos. F must be cleaned or replaced in connection with maintenance to avoid plugging.



Disassembling/assembling

A major repair should take place at a special workshop.

Below please find some general conditions regarding disassembling/ assembling of the pump. The drawing attached to the spare parts list shows the construction of the unit. Not all parts can/should be dismantled, e.g. do not press the rotor off the shaft. When disassembling the unit, handle the mechanical seals with care as they are not shock resistant.

Prior to re-assembly, all sealing surfaces must be cleaned; all O-rings must be checked and changed, if necessary. Adhesive substance (e.g. Loctite) must be applied on all bolt joints. All bolts must be tightened with a tightening torque according to the diagram below:

Bolt sizes	Quality 10.9 - 12.9 Steel	Quality A4 kl. 80 St. steel
M5	-	4,5 Nm
M6	14 Nm	10 Nm
M8	34 Nm	24 Nm
M10	67 Nm	48 Nm
M12	115 Nm	82 Nm
M16	160 Nm	137 Nm

After mounting the bearing flange, the axial clearance must be checked as indicated in the table below.

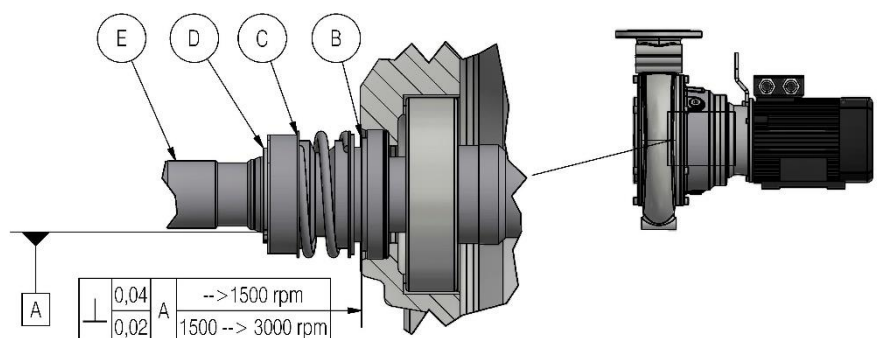
Pump size 1500 rpm	Acceptable clearance	Pump size 3000 rpm	Acceptable clearance
50	0.25 ± 0.05 mm	50	0.50 ± 0.05 mm
65	0.50 ± 0.05 mm	65	0.80 ± 0.05 mm
80	0.50 ± 0.05 mm	80	1.30 ± 0.05 mm
105	0.80 ± 0.05 mm		
150 and 105 22/30 kW	1.30 ± 0.05 mm		

Installation of mechanical seals

When installing the mechanical shaft seals, it is important to note that these are precision products and that they should be treated as such. The slide faces must be protected during the installation.

- B. Stationary sealing part
- C. Rotary sealing part
- D. Locking ring
- E. Shaft

Push the stationary sealing part, pos. B, into place. Be careful not to damage the slide face during the installation.



The rotating sealing part, pos. C, is put over the shaft. To ease the installation put soap water on the interior side of the rubber bellows as well as on the shaft. Do not apply silicone, PTFE lubricants or oil as they will prevent the rubber bellows from sticking to the shaft. Installation arbor should be used.

Locking ring, pos. D, is placed on the shaft and the seal is pressed until the locking ring is mounted in the locking ring groove. Check the seal by turning the motor shaft.

Oil is filled in the oil chamber. During the filling, the pump must be in a horizontal position. Oil quantity: see spare parts list, otherwise the oil must reach the level of the upper oil plug.

Repair of the surface coating is necessary before the pump is put back into operation. See instruction for maintenance of surface coating.

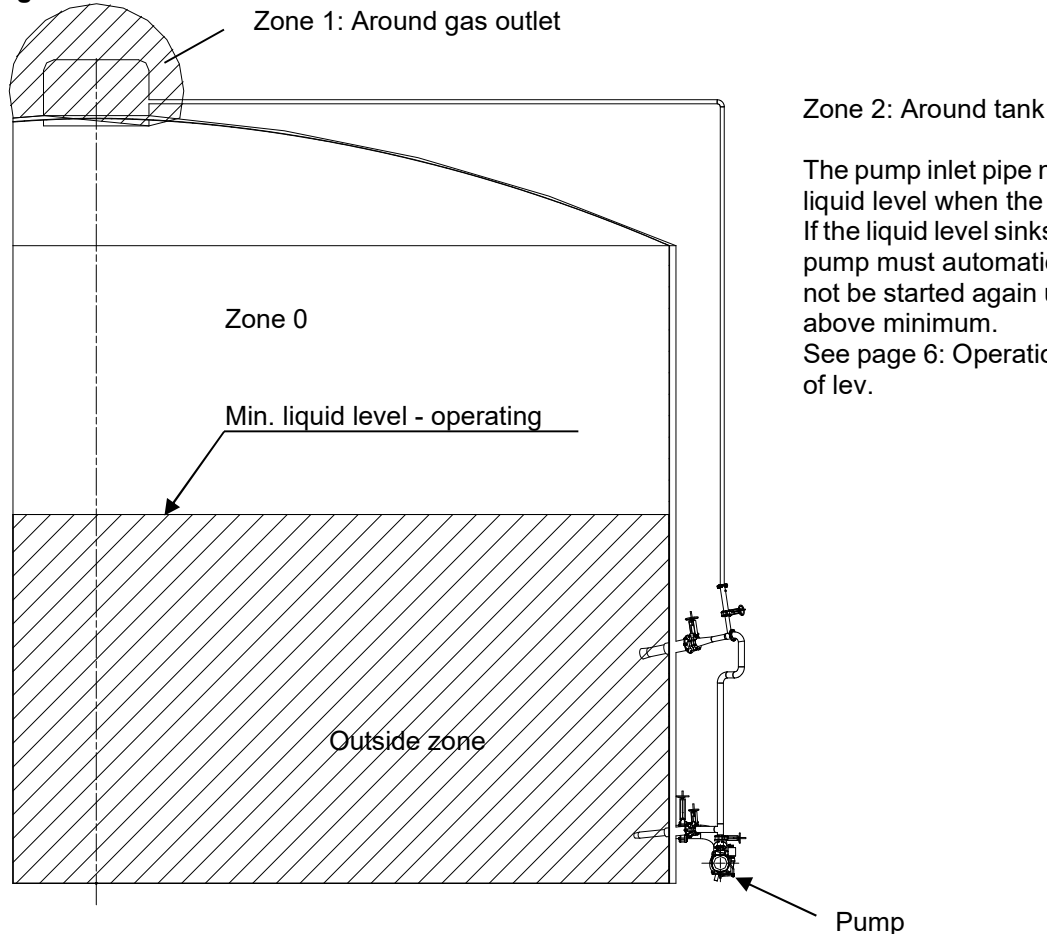
We reserve the right to technical alterations. Translated from Danish.

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Operation of pump by means of level sensor in the process tank.....	6
Power connection of level sensor in oil container	6
Lifting point.....	6
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Fitting the back plate	9
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Introduction – see fig. 1

The pump is a dry-installed pump ATEX marked to zone 2. See example of installation fig. 1.

Fig. 1

The pump inlet pipe must always be below liquid level when the pump is operating. If the liquid level sinks below minimum, the pump must automatically stop and it must not be started again until the liquid level is above minimum. See page 6: Operation of pump by means of lev.

The pump is installed with a dry-installed Ex-marked motor with temperature class T3. The motor pulls the pump directly via the motor shaft. Between motor and pump casing there is an oil chamber with two mechanical shaft seals; one mechanical shaft seal towards the motor and one mechanical shaft seal towards the pump casing. The mechanical shaft seals keep the oil in the oil chamber and the oil works as a lubricant and a refrigerant. Above the oil chamber level there is an oil container with a level sensor. The level sensor monitors low and high levels of oil, respectively.

Application

The pump is to be used for pumping of liquids with high or low dry matter content such as slurry and highly contaminated wastewater. The pump is only to be used dry-installed for purposes within for example wastewater treatment plants, industry and agriculture. The pump must not pump inflammable liquids. The pump may be exposed to a maximum of 6.0 bar excessive pressure and ambient temperature from -20 °C to +40 °C. If another application is requested, please consult Landia beforehand.

Installation

If the pump is installed before a tank installation has been used and there is no risk of development of a potentially explosive area such as a mix of oxygen and gas, the pump can be installed on the piping system with the gasket and bolts.

If the pump is installed when a tank installation has been used and there is a risk of potentially explosive gas from the plant, make sure that the plant is aired out and completely free from gas. The liquid level must be lowered until it is under the level where the pump is installed. When the above has been ensured, the pump can be installed on the piping system with the gasket and bolts. See service instructions.

The installation must allow the pump to be removed from the piping system in case of breakdown, for service etc. Therefore, block valves must be installed on the pressure- and inlet side of the pump unless the piping system can be emptied in another way. Besides, when fixing to the concrete foundation, it must be ensured that the pump can be lifted for service. The pump is to be positioned horizontally and supported on foundation/console via the pump motor bracket. For installation in piping systems where vibrations and temperature fluctuations influence the piping system, compensators must be applied.

The pump must be dry-installed but can be placed outdoors without cover, as the motor is splash proof, minimum IP 55.

Before start-up of the pump:

- Ensure that connections to the pump are fixed and tight.
- Ensure that oil has been filled.
- Ensure that the pump is fixed to the concrete foundation.
- Ensure that oil hoses on the pump are fixed and tight.
- Verify the direction of rotation at start-up of the pump. See arrow on oil chamber.

Important

Please note the following points:

- The pump must be dry-installed but can be placed outdoors without cover. The motor must not be wrapped in plastic film etc.
- Prior to service and repair of the pump it is always to be ensured that the electrical connection of the pump is switched off or locked.
- Prior to uninstalling of the pump, the valve on pressure- and inlet side must always be completely closed.

Service/repair

To maintain a high operating safety and a long service life without unnecessary and expensive repair, it is important from the beginning to execute regular and preventive service. Maintenance should be executed according to the intervals stated in the manual. Always follow the instruction carefully and only apply the parts described by Landia in the spare parts list.

Landia will be pleased to arrange a service agreement – please call for more information.

As the pump must adhere to the regulations of 2014/34/EU, service is to be executed by educated personnel only.

Please note

If spare parts not identical to the ones recommended are used at service/repair, the guarantee from Landia will be voided. Spare parts can be ordered at Landia or at your local distributor.

For major repairs, please contact:

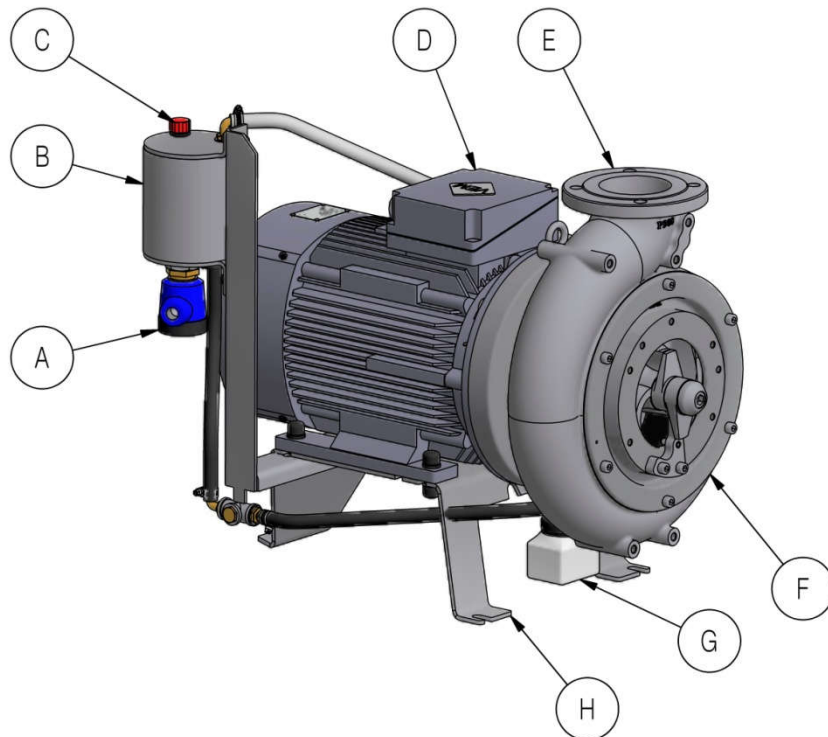
Head Office:
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www.landia.co.uk

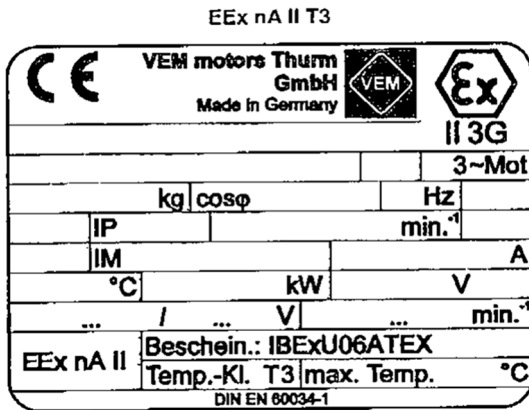
Construction of the pump

- A. Level sensor for monitoring too low oil level.
- B. Oil container
- C. Oil filling/ventilation cap
- D. Motor terminal board
See diagram no. AK11A.F03. Potential equalisation of the pump via the clamp behind the terminal box.
- E. Pump outlet flange DN 65/80/100 – PN6
Connection flange for DN 65/80/100 – PN 10 can be provided.
- F. Pump inlet flange
- G. Oil collector
- H. Motor bracket
To be fixed to the floor with 4 M12 expansion bolts.

Fig. 2

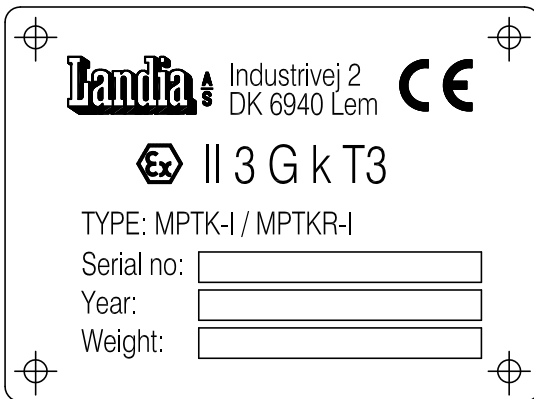


Rating plate



- IP: Cage class
- 3~mot.nr.: 3 phase motor
- IM: Construction form
- cos φ: Power factor
- kg: Motor's weight without pump
- kW: Max. shaft power
- V: Connection's voltage
- A: Nominal power consumption
- °C: Temperature
- min⁻¹: Motor revolutions per minute
- kW, V, A and min⁻¹ for resp. 50Hz and 60Hz

Ex-marking of unit



Explanation:

- II: Group 2
- 3: Category 3 – zone 2
- G: Permitted in potentially explosive areas with gas or steam
- k: Protected by liquid immersion
- T3: Temperature class up to 200 °C

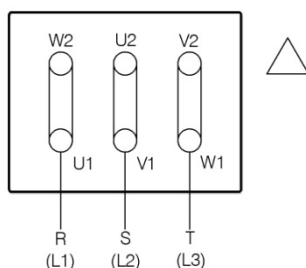
The rating plate indicates the motor's electrical data as well as the year of construction and serial / unit number (3 ~ mot. no.). For all inquiries to Landia regarding maintenance of a specific device, the production number must be provided.

Power connection of motor

Every motor is equipped with a rating plate with technical motor data. The motor is connected according to fig. 3 or fig. 4. See diagram AK11A.F03. It must be verified that the other electrical parts correspond to the motor data and a protective motor switch must be applied. The power installation of the pump must adhere to the regulations of EN60079-14:2008 Electrical installations in hazardous areas.

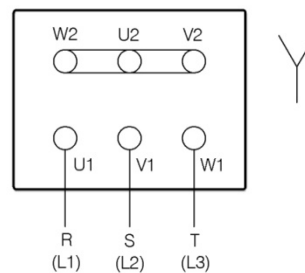
Only a certified electrician is allowed to connect the unit.

Fig. 3



Delta connection

Fig. 4



Star connection

Operation of pump by means of level sensor in the process tank

The pump casing including impeller, knife system and mechanical shaft seal is protected by liquid immersion "k". If the liquid level in the tank sinks below minimum, the pump must automatically stop and must not be started again until the liquid level is above minimum. See fig. 1. That is, the tank must be equipped with a level sensor sending a stop signal to the pump if the liquid level sinks below minimum.

It is the end user's responsibility that the installation adheres to the regulations of ATEX Directive

Power connection of level sensor in oil container

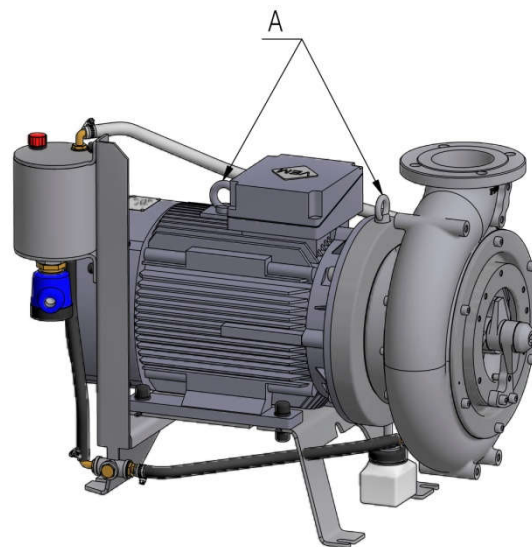
The two mechanical shaft seals on the pump are protected by liquid immersion "k". To ensure this, the oil container is equipped with a level sensor. See fig. 2 pos. A.

The level sensor monitors the oil level in the oil container and if the level sensor registers either too high or too low oil level, the pump must stop and must not be started again until the problem has been solved.

It is the end user's responsibility that the installation adheres to the regulations of ATEX Directive.
See diagram AK11A.F03.

Lifting point

- A. For pump lifting points.

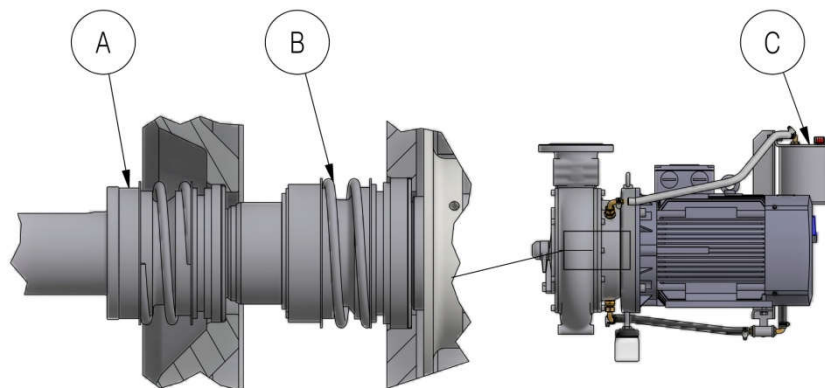


Fault detection

Type	Cause	Problem	Solution
Motor stops	Motor protecting switch activated	Connection voltage too low	Solve problem and reset motor protecting switch.
Motor stops	Motor protecting switch activated	Impeller blocked	Remove blocking from impeller and reset motor protecting switch.
Motor stops	Motor protecting switch activated	Motor overheated	Cooling time might last up to 1 hour. Find the cause and reset motor protecting switch.
Motor stops	Level in oil container too low	Normal oil consumption at mechanical shaft seals. The seals have low oil consumption. The oil does not run over the collector for waste oil.	Refill oil in oil container until the oil reaches the mark on the dip rod.
Motor stops	Level in oil container too low and oil runs over the collector for waste oil (oil has disappeared quickly).	The inner mechanical shaft seal is broken.	If the oil is not polluted, cleanse/change the inner mechanical shaft seal. If the oil is polluted, cleanse/change both mechanical shaft seals. Refill oil in oil container until the oil reaches the mark on the dip rod.
Motor stops	Level in oil container too high	Too much oil has been poured in.	Draw off oil until the oil reaches the mark on the dip rod.
Motor stops	Level in oil container too high	The outer mechanical shaft seal is broken and the oil is polluted.	Cleanse/change both mechanical shaft seals. Refill oil in oil container until the oil reaches the mark on the dip rod (see section on oil change).

Mechanical shaft seals

- A. Outer mechanical shaft seal
- B. Inner mechanical shaft seal
- C. Oil container



Capacity

The capacity of the pump will always depend on the consistency of the liquid.

To obtain the maximum capacity with as low motor power as possible, it is important that the diameters of the pump pipes are sufficiently large and that sharp bends are avoided as far as possible. Large pipe dimensions are especially important in connection with long pumping distances. For pump installations in piping systems where vibrations and temperature fluctuations influence the piping system, compensators must be applied.

The pumps are equipped with open impellers especially suited for liquids with large particles like e.g. raw wastewater, manure and industrial applications.

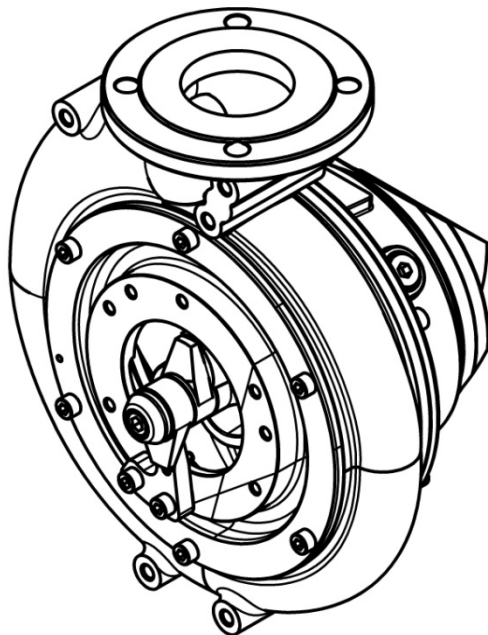
For difficult liquids with e.g. high dry matter content or large impurities which make up a risk for blocking, the pumps can be supplied with a knife system. The knife system is placed in the inlet opening and consists of one (or three) fixed and two rotating knives. The knives comminute large impurities in the liquid in order to ease the pumping. The knives are ideal for comminuting e.g. straw, rags, paper and fish.

To minimize downtime on the pump due to metal objects in the medium, it is recommended to install a magnet fitted to the feed system to the tank to which the pump is connected.

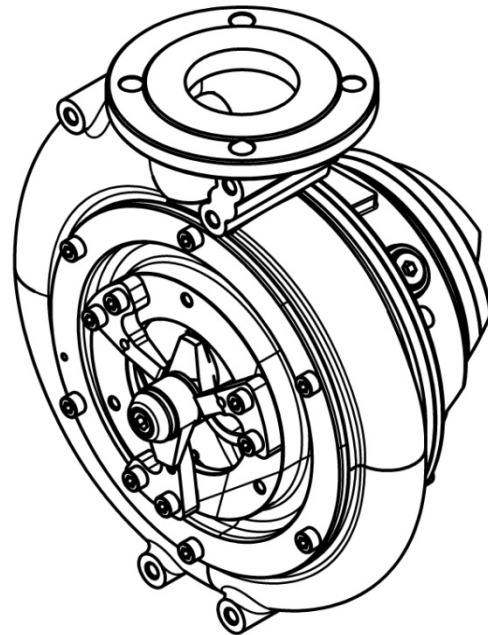
The pump capacity will be reduced if the edge of the guide traces on the front- and back plates is worn or if deep traces occur on the surface of the front- and back plate. You can minimize the wear on the front and back plate by changing the impeller before the edges on the back of the impeller become too round. If the edges of the impeller become too round, it can be easier to settle stones and the like in the clamp between the impeller and the back plate, which will turn the impeller round and the wear will increase.

If you have any doubts or questions, please contact Landia for advice.

Pump casing with knife system



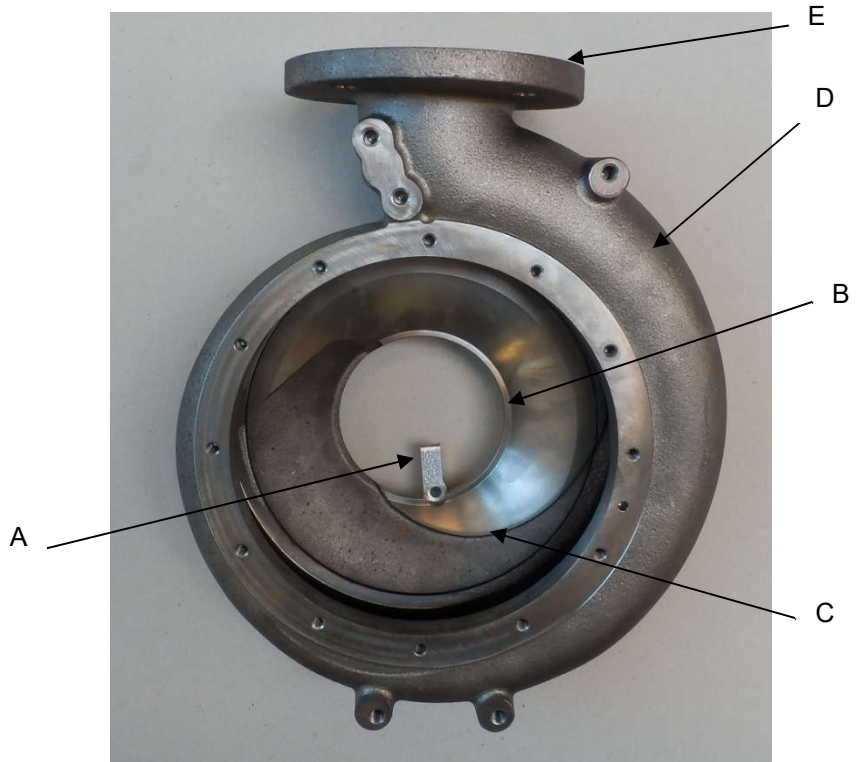
Pump casing with extended knife system



Fitting the front plate

- A. Knife with tightening pin
- B. Front plate
- C. Guide trace
- D. Pump casing
- E. Outlet

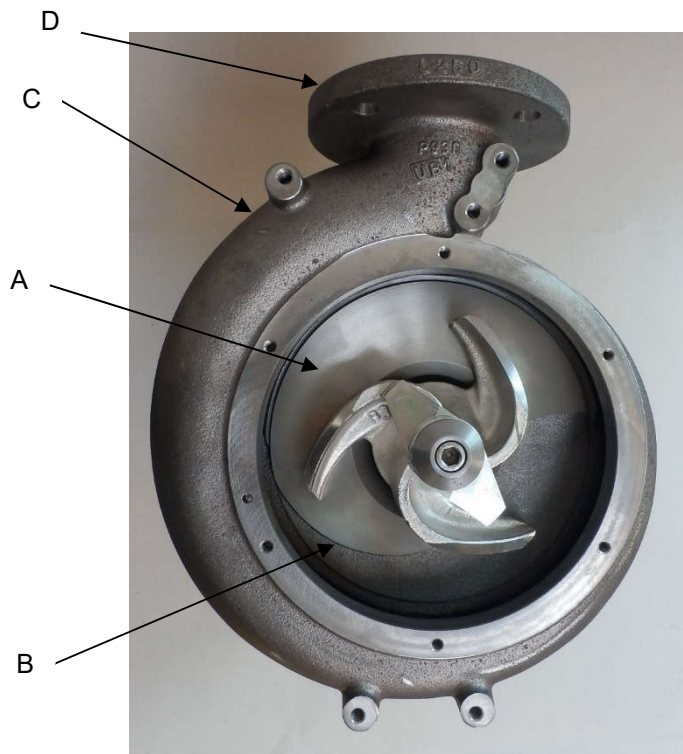
The front plate of the pump casing is designed with a guide trace. The guide trace has to be placed like shown on the above photo, regardless of how the outlet of the pump is turned.



Fitting the back plate

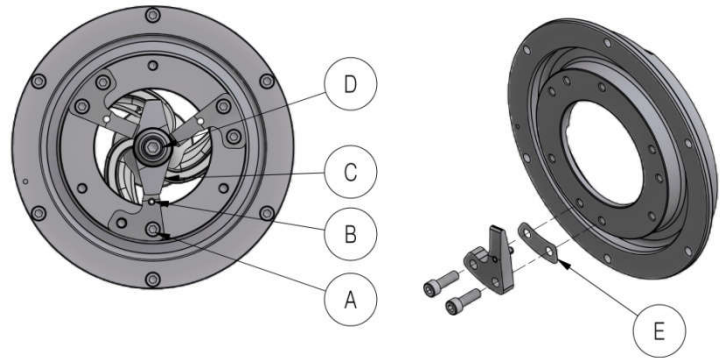
- A. Back plate
- B. Guide trace
- C. Pump casing
- D. Outlet

The back plate of the pump casing is designed with a guide trace. The guide trace has to be placed like shown on the above photo, regardless of how the outlet of the pump is turned.



Installing the knives

- A. Fixed knife
- B. Tightening pin
- C. Rotating knife
- D. Bolt
- E. Shim



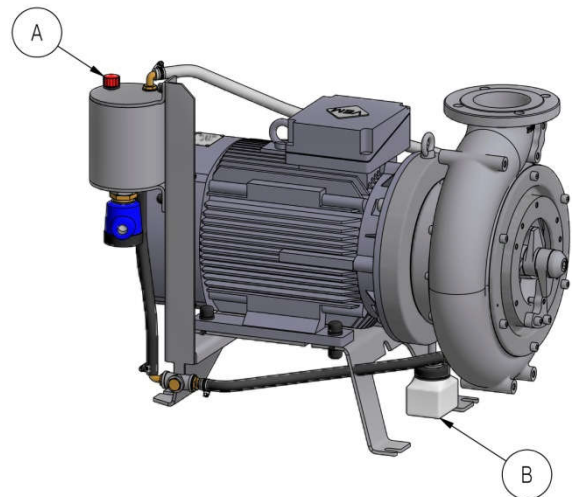
If the tightening pin in the fixed knife is missing, the pin/knife must be replaced.

When the fixed and rotating knives are replaced, make sure that the shaft can rotate without the rotating knives touching the fixed knife/knives. If this is not the case, the fixed knife/knives must be adjusted with shims.

Regular maintenance

It is important that the oil level in the oil container is checked every month. This is done by turning of the ventilation cap pos. A. The ventilation cap is equipped with a dip rod and the oil must reach the marking on the dip rod. If the level in the oil container has sunk and the amount equals what is in the collector beneath the pump pos B, oil should be refilled into the oil container and this is perfectly normal. Oil is filled through the tube on which the ventilation cap pos. A is installed. Check the ventilation cap to make sure that it is not clogged; it can be cleaned with compressed air. Empty the collector pos. B for waste oil. If the oil in the oil container is dirty, it must be changed and the outer mechanical seal must be checked.

- A. Ventilation cap
- B. Collector for waste oil from the mechanical shaft seal



Inspection

Periodic inspections can ensure that the pump has a long life at low costs. Every 6 months/4300 hours of operation or more often depending on the operating conditions, the impeller, oil quantity, motor casing and the knife system, if any, should be checked. If the impeller needs replacement, the outer mechanical seal must be checked. The oil must be changed at least once a year.

If the tightening pin of the fixed knife is lacking, the pin/knife must be replaced. See the paragraph Installing the knives.



When the knife system has been replaced, the bolts must be tightened with a tightening torque according to the table.

Assembling/disassembling

For a major repair, this should be done at a special workshop.

The following outlines are some general conditions regarding assembling/disassembling of the pump. The drawing attached to the parts list illustrates the construction of the unit. Not all parts can/should be disassembled, e.g. the rotor should not be pressed of the shaft. When dismantling the unit, handle the mechanical shaft seals with care as they are not shock resistant.

Prior to reinstallation of the unit, all sealing surfaces must be cleaned, and all O-rings must be checked and changed if necessary. Adhesive substance (e.g. Loctite) must be applied on all bolt joints except from separation bolt. All bolts must be tightened with a torque wrench as specified in the table below.

Bolt sizes	Quality 10.9 – 12.9 Steel 	Quality A4 kl. 80 St. steel 
M5	-	4,5 Nm
M6	14 Nm	10 Nm
M8	34 Nm	24 Nm
M10	67 Nm	48 Nm
M12	115 Nm	82 Nm
M16	160 Nm	137 Nm

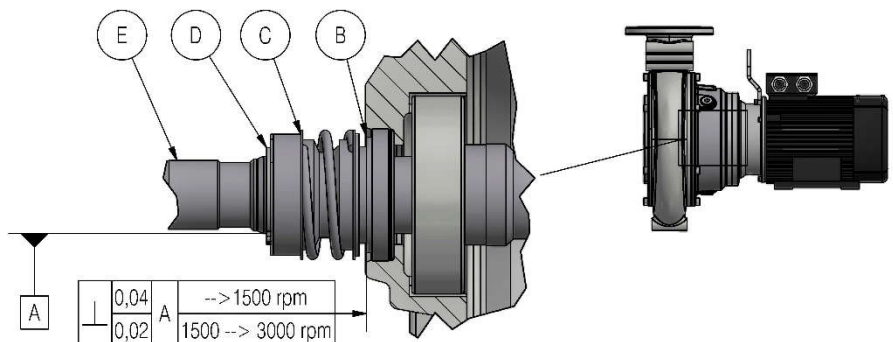
After the bearing flange has been installed, the axial clearance must be controlled acc. to the table below.

Pump size. 1500 rpm	Acceptable clearance
65	0,50 ± 0,05 mm
80	0,50 ± 0,05 mm
105	0,80 ± 0,05 mm
150 and 105 22/30 kW	1,30 ± 0,05 mm

Mechanical shaft seals

When installing the mechanical shaft seals, it is important to note that these are precision products and that they should be treated as such. The slide faces must be protected during the installation.

- B: Stationary seal part
- C: Rotating seal part
- D: Locking ring
- E: Shaft



Push the stationary sealing part into place. Check the stationary sealing part.

Be careful not to damage the slide face during the installation.

The rotating sealing part, pos. C, is put over the shaft. To ease the installation put soap water on the interior side of the rubber bellow and on the shaft. Do not use silicone, PTFE lubricants or oil as it will prevent the rubber bellow from sticking to the shaft. A installation arbour should be used.

Put the locking ring, pos. D, on the shaft and press the seal together until the locking ring snaps into the locking ring groove. Inspect the seal by turning the motor shaft.

Fill up with oil. See section oil change.

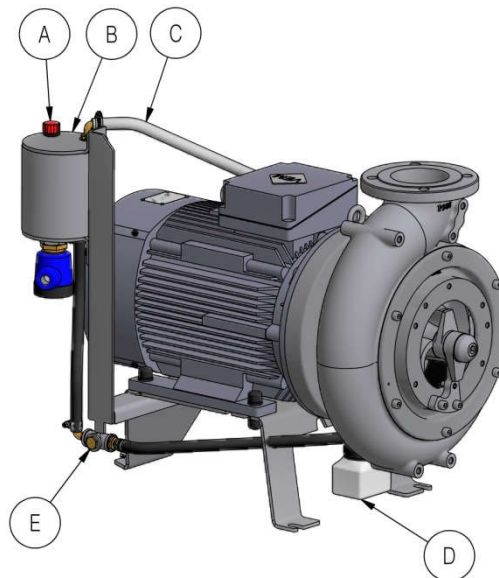
Repair of the surface coating is necessary prior to operation. See instruction for maintenance of surface coating.

Oil change

The oil is drained by removing the ventilation cap pos. A and the draining plug pos. E. Refill the oil through the tube on which the ventilation cap pos. A is installed. See oil type page **Fejl! Bogmærke er ikke defineret.** and oil quantity in the customer spare parts list. When changing the oil, the pump must be placed horizontally.

When refilling the oil, it is suitable to use a vacuum pump to suck in the oil. This is done by removing the top hose on the oil container pos. C and board up the hose connection. After this air can be pumped out of the unit via the uninstalled hose pos. C and oil can be refilled into the oil container pos. A/B. A vacuum pump can be bought at Landia – alternatively a pump for waste oil can be used. Empty the oil collector pos. D on this occasion and check the ventilation cap pos. A to make sure it is not clogged. The vent cap can be cleaned with compressed air. The oil hoses are UV and weather resistant but must be checked when changing the oil.

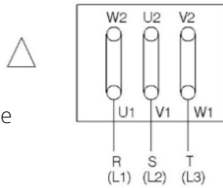
- A. Ventilation cap
- B. Oil container
- C. Hose
- D. Collector for waste oil from the mechanical shaft seal
- E. Draining plug



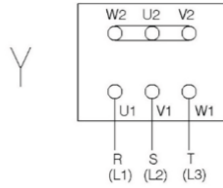
We reserve the right to technical alterations. Translated from Danish.

Klemrækketilslutning
Klemmbrettschaltungen
Terminal Board Connections
Couplages sur la planche à bornes

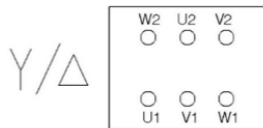
Trekantkobling
Delta connection
Dreieckschaltung
Branchement en triangle



Stjernekobling
Star connection
Sternschaltung
Branchement en étoile

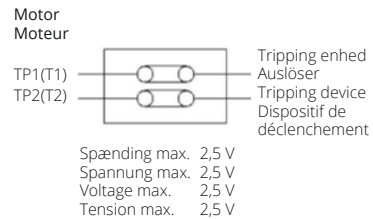


Stjerne-trekant tilslutning
Sterndreieckschalteranschluss
Star-delta switch connection
Connexion du commutateur étoile-triangle



Ved brug af stjerne-trekantstarter tilsluttes efter dennes diagram.
Bei Sterndreieckschalter ohne Brücken Anschluss nach Schema des Schalters.
For star-delta switches without jumpers connection is as indicated on the schematic of the switch.
En cas de commutateur étoile-triangle sans ponts, connexion selon le schéma au commutateur.

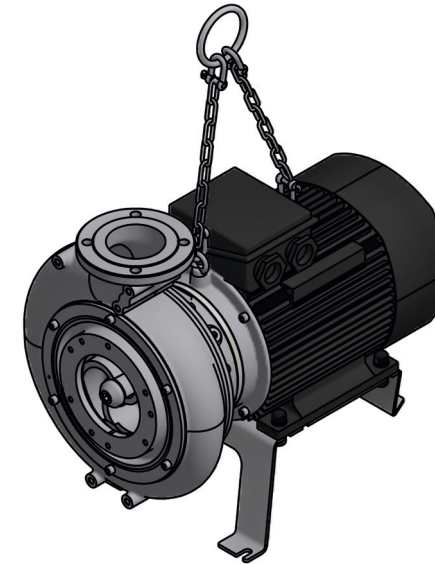
Motorer med termistorer
Motoren mit thermischem Wicklungsschutz
Motors with Thermal Winding Protection
Moteurs avec protection thermique par enroulement



Forbindelsen implementeres ifølge forbindelsesdiagrammet for tripperenheden.
Die Verbindung erfolgt nach dem Anschlussplan der Auslösevorrichtung.
The connection is implemented as per the connection diagram of the tripping device.
La connexion est implémentée selon le schéma de connexion du dispositif de déclenchement.

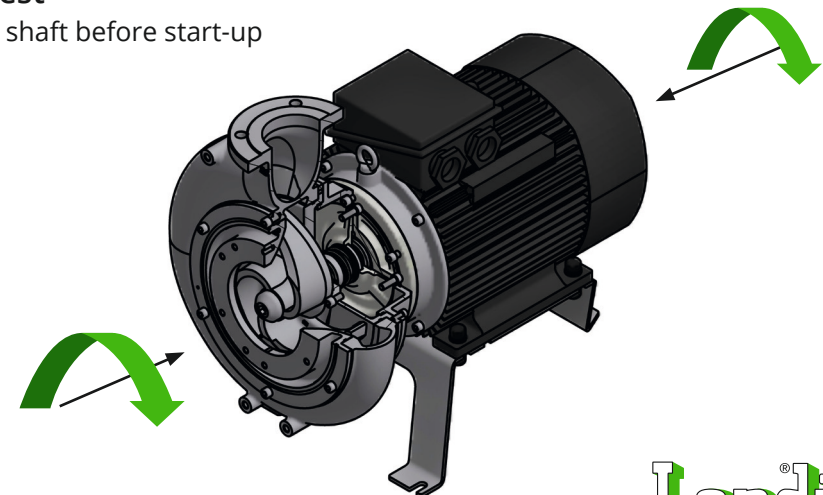
Quick Guide for Dry Mounted Pump MPTK-I/MPTKR-I/MPTK-GI

Lifting Point

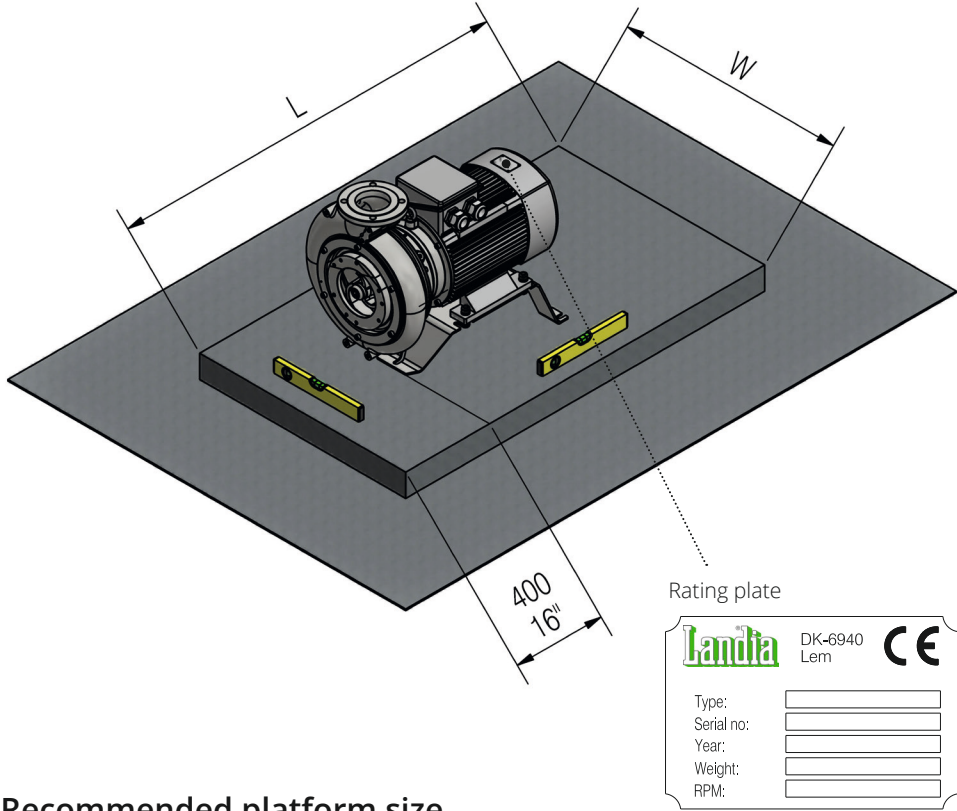


Dry Test

Rotate shaft before start-up



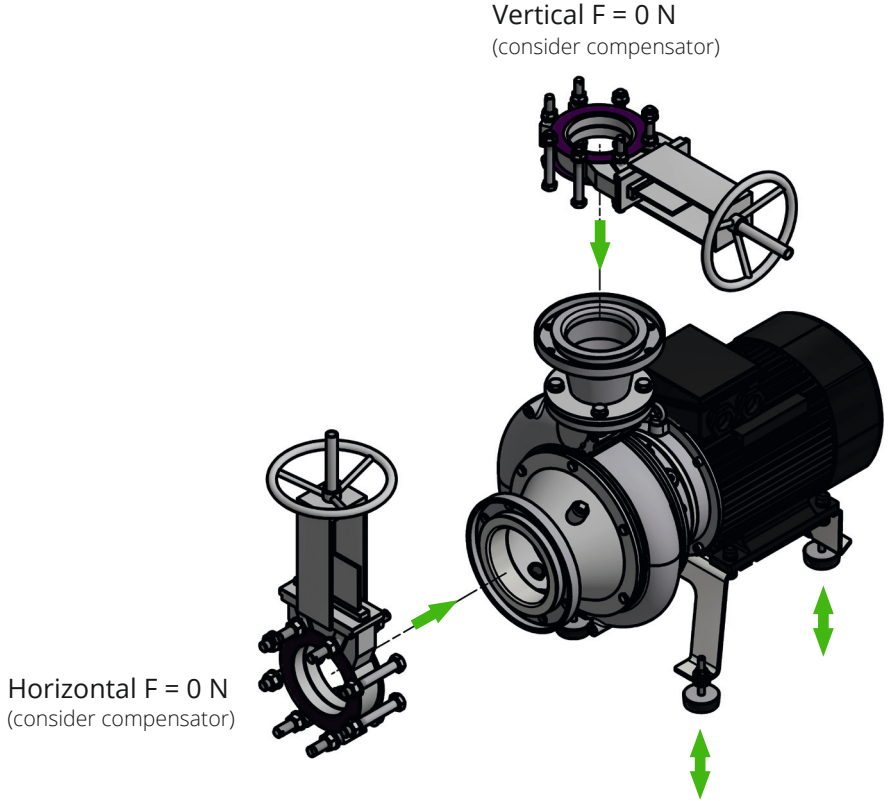
Service Area



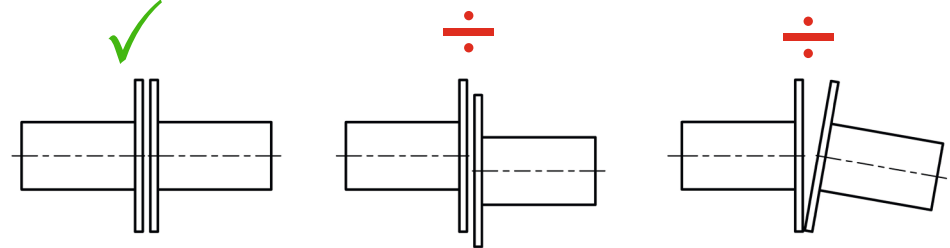
Recommended platform size

Model	W		L	
	mm	inch	mm	inch
MPTK-I 50	1250	49	1350	53
MPTK-I 65	1350	53	1500	59
MPTK-I 80	1400	55	1600	63
MPTK-I 105	1450	57	1800	70
MPTK-I 150	1600	63	1850	72

The pump is not designed to carry the weight of the pipe system. The pipe system needs to be supported.



Piping to be aligned



Oliemængdeskema - pumper

DG-I

Type	Pumpehus	Motorserie	Rpm.	CRB Multi 15W-40 (9380001)	Hyspin HVI 15 (9380011)	Tætnings- overvågning Hyspin HVI 46D (9380009)	Frekvens- omformer CRB Multi 15W-40 (9380001)	Levnedsmid- delindustrien Whitemore WOM 65 (9380015)
DG-I	50	71	1500	0,7 l	-		0,7 l	
	65	80/90		1,5 l			1,5 l	
DG-I	65	100		1,5 l			1,5 l	
DGR-I	80	100/112		2,4 l			2,4 l	
DGER-I	105	132/160/180		3,8 l			3,8 l	
DG-I	150	160		3,8 l			3,8 l	
		180	6,5 l	6,5 l				
DG-I	50	80/90/100	3000	-		0,8 l		
DG-I	65	112				1,1 l		
		132/160				1,7 l		
	80	160				2,4 l		
		180				4,0 l		

MPTK-I

Type	Pumpehus	Effekt [kW]	Rpm.	CRB Multi 15W-40 (9380001)	Hyspin HVI 15 (9380011)	Tætnings- overvågning Hyspin HVI 46D (9380009)	Frekvens- omformer CRB Multi 15W-40 (9380001)	Levnedsmid- delindustrien Whitemore WOM 65 (9380015)
MPTK-I	50	-	1500	0,6 l	-		0,6 l	
MPTK-I	65			1,3 l			1,3 l	
MPTKR-I	80			2,3 l			2,3 l	
MPTK-GI				3,4 l			3,4 l	
MPTK-I Ex.	105			3,4 l			3,4 l	
MPTKR-I				5,8 l			5,8 l	
MPTK-GI		18,5	4,0 l	4,0 l				
MPTK-I Ex.	150	22,0/30,0	5,5 l	5,5 l				
MPTKR-I Ex.		-	8,5 l	8,5 l				
MPTK-I	50	-	3000	-		0,7 l		
MPTK-I	65					1,3 l		
MPTKR-I	80					15,0/18,5		2,2 l
MPTK-GI						22,0/30,0		4,2 l

Konverteringsskema - Conversion table – Umrechnungstabelle - Tableau concernant**Olie - Oil - Öl**

CASTROL	Alpha SP 100	Alpha SP 220	Whitemore WOM 65	CRB Multi 15W-40	Hyspin HVI 15	Hyspin HVI 46D	Nevastane EP 100	Alphasyn GS 220
DIN-Norm / godkendelse	DIN 51502/DIN 51517 - CLP	DIN 51502/DIN 51517 - CLP	Ingen alternativer - No alternatives - Keine Alternativen - Pas d'alternative	Ingen alternativer - No alternatives - Keine Alternativen - Pas d'alternative	DIN 51502/ DIN 51524 - HVLP	DIN 51502-HVLP-D/ DIN 51524 - CLP	Ingen alternativer – No alternatives - Keine Alternativen - Pas d'alternative	DIN 51502/ DIN 51517 - CLP PG

Fedt - Grease - Fett - Graisse

BEL RAY	Bel Ray 50-2
CASTROL	Tribol GR 4747/220-2 HT
MOBIL	Mobilgrease FM 222
Q8	Rubens WB
SHELL	SHELL GADUS S3 V220C 2
TEXACO	Anderol 783-2
TOTAL	TOTAL NEVASTANE XMF 2

Smøremidler, som anvendes og anbefales af Landia A/S, er markeret med gråt i ovenstående skemaer. Konverteringsskemaerne angiver DIN-Norm / godkendelse på olietyper fra Castrol. DIN-Normen fra Castrol er vejledende og kan bruges til at finde en erstatningsolie hos Deres lokale olieleverandør. Hvis det ikke er muligt at finde en erstatningsolie, kan olien købes hos Landia A/S. Generelt bør blanding af forskellige fedttyper undgås enten ved udskiftning af al fedtet eller hyppig eftersmøring, så fedtet hurtigt udskiftes. Fedttyperne angivet ovenfor er blandbare.

Lubricants applied and recommended by Landia A/S are marked with grey in the above tables. The conversion schemes indicate the DIN Norms and the approved oil types from Castrol. The DIN Norm from Castrol is indicative and can be used to find a replacement oil from your local oil supplier. If it is not possible to find a replacement oil, the oil can be purchased from Landia A/S. Generally, mixing of different types of grease should be avoided either by replacing all the grease or frequent lubrication, so the grease is quickly replaced. The grease types mentioned above are mixable.

Das von Landia A/S empfohlene Schmiermittel, das verwendet werden muss ist in oben stehendem Schema mit grau markiert. Die Konvertierungsschemas zeigen die DIN-Normen und eine Übersicht der zugelassenen Öltypen von Castrol. Die DIN-Normen von Castrol sind indikativ und kann verwendet werden, um ein Ersatzöl von Ihrem lokalen Öllieferanten zu finden. Wenn es nicht möglich ist, ein Ersatzöl zu finden, kann das Öl von Landia A / S gekauft werden. Im Allgemeinen sollte Mischung von verschiedenen Schmiermitteln vermieden werden. Entweder das Fett wechseln oder häufig nachschmieren. Die oben genannte Fedttyper sind mischbar.

Les lubrifiants utilisés et recommandés par Landia A/S sont marqués d'un cri dans les tableaux ci-dessus. Les tableaux de conversion indiquent la norme DIN/approbation pour les types d'huile de Castrol. La norme DIN de Castrol est indicative et peut être utilisée pour trouver une huile de remplacement chez votre fournisseur d'huile local. S'il n'est pas possible de trouver une huile de remplacement, l'huile peut être acheté auprès de Landia. En général, il convient d'éviter de mélanger différents types de graisses en remplaçant toutes les graisses ou toutes les post-lubrifications fréquentes de manière à remplacer rapidement les graisses. Les types de graisse mentionnés ci-dessus sont miscibles.

Motordata for Landia motorer IE1
Side 1/1
3 x 400 Volt 50 Hz

Effekt kW	ms.	Poltal	RPM	Spænding trekant	Spænding stjerne	Strøm ved 3x400 V A	Strøm ved 3x690 A	Starts. direkte A	Cos phi %	Virk. grad fuld last %	Virk. grad 3/4 last %	Virk. grad 1/2 last %
1,5	80	2	2840	230	400	3,1	0	22	0,86	81,2	82,2	80,3
2,2	80	2	2850	230	400	4,6	0	34	0,85	82,1	83,4	81,9
3	90	2	2865	400	690	6,2	3,6	42	0,85	82,8	83,1	83,3
4	100	2	2900	400	690	8,4	4,9	59	0,81	84,9	85,5	84,4
5,5	100	2	2860	400	690	11	6,2	61	0,86	84,7	84,7	0
7,5	112	2	2890	400	690	15	8,6	99	0,85	86,1	86,1	84,1
11	132	2	2905	400	690	20,5	12	143	0,88	87,6	87,6	84,6
15	160	2	2940	400	690	27,5	16	195	0,89	88,7	88,7	85,8
18,5	160	2	2925	400	690	33	19,5	238	0,9	89,9	88,9	86,4
22	180	2	2935	400	690	39	22,5	265	0,9	90,5	90,5	86,7
30	180	2	2940	400	690	52,5	30,5	383	0,91	90,6	89,8	88,3
37		2	2940	400	690	65	37,50	455	0,9	91,5	90,5	89
45		2	2940	400	690	77,5	44,7	581	0,91	92	91,3	88,8
0,55	71	4	1400	230	400	1,6	0	7	0,69	71,9	70,7	64,1
0,75	71	4	1400	230	400	2,1	0	10	0,7	73,6	72,2	66,8
1,1	80	4	1410	230	400	2,6	0	14	0,79	76,7	76,8	73,6
1,5	80	4	1400	230	400	3,4	0	19	0,81	78,6	79,1	76,9
2,2	90	4	1410	230	400	5	0	30	0,8	80,2	80,7	79,5
3	100	4	1430	400	690	6,7	3,9	43	0,79	82,4	82,8	80,8
4	100	4	1435	400	690	8,8	5,1	61	0,78	84,1	85,1	83,6
5,5	112	4	1440	400	690	11	6,2	68	0,87	84,6	84,6	83,1
7,5	132	4	1455	400	690	15	8,8	90	0,83	86,2	85,2	83,8
11	131	4	1455	400	690	21,5	12,5	146	0,84	87,9	87,5	85,5
15	160	4	1465	400	690	29	17,00	212	0,84	88,7	88,3	85,8
18,5	160	4	1460	400	690	35	20,5	238	0,85	89,3	88,8	86,8
22	180	4	1465	400	690	43	25	280	0,82	90,1	90,1	88,6
30	180	4	1465	400	690	57	33	399	0,84	90,7	90,2	89,2
37		4	1470	400	690	68	39,2	476	0,86	91,2	90,2	89,2
45		4	1470	400	690	82,5	47,6	578	0,86	91,7	91,2	89,7
0,55	50	8	695	230	400	2	0	7	0,6	64,8	62,5	55,8
0,75	50	8	705	230	400	2,7	0	9	0,6	66,8	64,7	57,9
1,1	50	8	705	230	400	3,3	0	13	0,67	72,9	73,3	69,6
1,5	50	8	705	230	400	4,1	0	18	0,7	75,4	75,7	72,4
2,2	50	8	705	230	400	5,6	0	25	0,75	75,6	75,1	72,1
3	50	8	705	400	690	7,4	4,3	33	0,75	78	78	75
4	50	8	710	400	690	9,3	5	37	0,78	79,6	79,3	77,3
5,5	50	8	710	400	690	12,5	7,2	56	0,78	81,4	81	78
7,5	50	8	725	400	690	18	10,5	81	0,71	84,7	84,7	81,7
11	50	8	720	400	690	24	14	108	0,78	84,8	83,8	81,3

Motordata for Landia motorer IE2
Side 1/1
3 x 400 Volt 50 Hz

Effekt kW	ms.	Poltal	N rpm	Spænding trekant V	Spænding stjerne V	Strøm ved 3x400 V A	Strøm ved 3x690 A	Starts. direkte A	Cos phi ϕ	Virk. grad fuld last %	Virk. grad 3/4 last %	Virk. grad 1/2 last %
1,5	90	2	2910	230	400	2,9	0	34	0,87	81,3	85,5	82,9
2,2	90	2	2880	230	400	4,25	0	34	0,88	83,2	85,7	83,9
3	100	2	2930	400	690	6,55	3,8	56	0,76	84,6	86,2	83,5
4	100	2	2920	400	690	7,9	4,6	66	0,84	85,8	86,4	85,8
5,5	112	2	2900	400	690	10,3	5,9	80	0,88	87	88,7	88,8
7,5	132	2	2925	400	690	13,5	7,8	90	0,91	88,8	89,2	88,3
11	160	2	2950	400	690	19,5	11,3	150	0,9	90,3	90,3	89,1
15	160	2	2940	400	690	26	15,0	230	0,92	90,7	90,5	89,1
18,5	160	2	2935	400	690	32	18,5	230	0,91	91	91,4	91,4
22	180	2	2935	400	690	38,5	22,2	239	0,9	91,3	90,6	86,4
30	180	2	2945	400	690	52	30,0	359	0,91	92	91,3	90,5
37	180	2	2940	400	690	63	36,4	466	0,92	92,5	92,3	91,6
0,55	80	4	1430	230	400	1,25	0	8	0,8	79,4	79,6	78,7
0,75	80	4	1430	230	400	1,65	0	12	0,81	79,6	81,4	79,6
1,1	90	4	1435	230	400	2,4	0	16	0,8	81,4	82,3	80,4
1,5	100	4	1455	230	400	3,35	0	45	0,77	82,8	83,2	80,7
2,2	100	4	1455	230	400	4,8	0	45	0,77	84,3	85,2	81,7
3	112	4	1460	400	690	6,5	3,8	63	0,77	85,5	86,3	84,5
4	112	4	1460	400	690	7,6	4,4	63	0,86	87,6	88	86,9
5,5	132	4	1470	400	690	10,5	6,1	123	0,87	88,4	89,3	89
7,5	132	4	1470	400	690	14,5	8,4	123	0,82	89,9	90	88,5
11	160	4	1470	400	690	22,5	13,0	176	0,78	90,3	90,3	88,9
15	180	4	1475	400	690	28,5	16,5	307	0,83	91	90,4	89
18,5	180	4	1475	400	690	35,5	20,5	307	0,82	91,2	90,6	89,3
22	180	4	1475	400	690	42	24,2	307	0,83	91,6	91,4	89,9
0,55	80	6	950	230	400	1,5	0	6	0,69	76,5	76,1	72,6
0,75	90	6	955	230	400	1,95	0	10	0,71	75,9	78,3	75,1
1,1	100	6	955	230	400	2,75	0	15	0,71	78,1	82	79,3
1,5	112	6	955	400	690	3,55	0	50	0,75	81	80,5	79,6
2,2	112	6	955	400	690	5,2	0	50	0,74	82,8	82,5	80
3	112	6	955	400	690	7,1	4,1	50	0,73	83,3	83,1	80,5
4	132	6	965	400	690	8,5	4,9	43	0,79	85,5	85,5	83,8
5,5	160	6	970	400	690	12	6,9	91	0,76	87	86,4	85,8
7,5	160	6	970	400	690	15,5	8,9	91	0,79	87,5	87,6	85,9
11	180	6	975	400	690	21	12,1	177	0,84	89,2	87,9	86,3
15	180	6	975	400	690	28,5	16,5	177	0,84	89,7	88,8	86,7
18,5	180	6	980	400	690	35	20,2	231	0,85	90,4	88,8	86,5

Motordata for Landia motorer IE3

Side 1/1

3 x 400 Volt 50 Hz

Effekt	ms.	Poltal	N	Spænding trekant	Spænding stjerne	Strøm ved 3x400 V	Strøm ved 3x690	Starts. direkte	Cos phi	Virk. grad fuld last	Virk. grad 3/4 last	Virk. grad 1/2 last
kW			rpm	V	V	A	A	A	φ	%	%	%
1,5	100	4	1455	230	400	3,4	-	32,3	0,75	85,3	84	80,6
4	112	4	1465	400	690	7,9	4,6	74,3	0,82	88,6	88,9	87,4
7,5	132	4	1470	400	690	16	9,2	121,6	0,75	90,5	90,5	89,2
11	160	4	1465	400	690	21	12,1	147	0,82	91,4	91,4	91,5
18,5	180	4	1475	400	690	34,5	19,9	269,1	0,84	92,6	92,7	91,9
4	132	6	965	400	690	8,3	4,8	39,9	0,8	86,8	87	86
7,5	160	6	975	400	690	14,5	8,4	84,1	0,82	89,6	89,4	87,8