

MPTK-I

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)



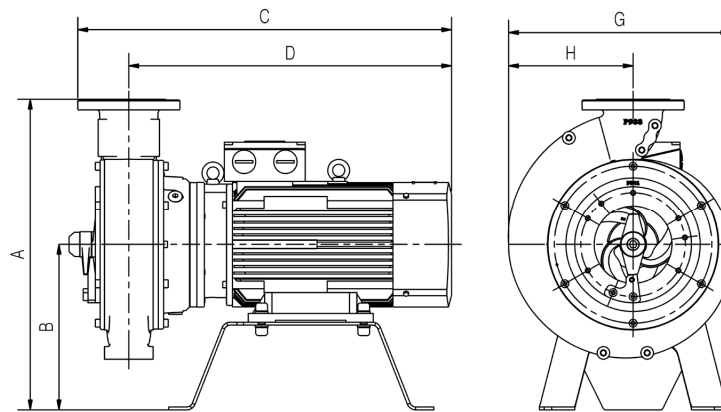
ELECTRICAL DATA MPTK-I

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	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 0,75 kW-1500 rpm	0,75	1400	2,1	Y	10	0,70	73,6
MPTK-I 65 2,2 kW-1500 rpm	2,2	1410	5,0	Y	30	0,80	80,2
MPTK-I 80 5,5 kW-1500 rpm	5,5	1440	11,0	Δ	68	0,87	84,6
MPTK-I 105 11,0 kW-1500 rpm	11,0	1455	21,5	Δ	146	0,84	87,9
MPTK-I 105 18,5 kW-1500 rpm	18,5	1460	35,0	Δ	238	0,85	89,3
MPTK-I 105 22,0 kW-1500 rpm	22,0	1465	43,0	Δ	280	0,82	90,1
MPTK-I 150 22,0 kW-1500 rpm	22,0	1465	43,0	Δ	280	0,82	90,1
MPTK-I 150 30,0 kW-1500 rpm	30,0	1465	57,0	Δ	399	0,84	90,7
High pressure							
MPTK-I 50 5,5 kW-3000 rpm	5,5	2860	11,0	Δ	61	0,86	84,7
MPTK-I 65 11,0 kW-3000 rpm	11,0	2905	20,5	Δ	143	0,88	87,6
MPTK-I 65 18,5 kW-3000 rpm	18,5	2925	33,0	Δ	238	0,90	89,9
MPTK-I 80 18,5 kW-3000 rpm	18,5	2925	33,0	Δ	238	0,90	89,9
MPTK-I 80 22,0 kW-3000 rpm	22,0	2935	39,0	Δ	265	0,90	90,5
MPTK-I 80 30,0 kW-3000 rpm	30,0	2940	52,5	Δ	383	0,91	90,6
Medium pressure							
MPTK-I 50 0,75 kW-1500 rpm	0,75	1430	1,6	Y	11	0,81	79,6
MPTK-I 65 2,2/1,1 kW-1500 rpm	2,2	1455	4,8	Y	45	0,77	84,3
MPTK-I 80 5,5/3,0 kW-1500 rpm	5,5	1465	11,3	Δ	105	0,87	88,4
MPTK-I 105 11,0/7,5 kW-1500 rpm	11,0	1470	22,5	Δ	176	0,78	90,3
MPTK-I 105 18,5/15,0 kW-1500 rpm	18,5	1470	37,5	Δ	240	0,78	91,2
MPTK-I 150 22,0 kW-1500 rpm	22,0	1475	42,0	Δ	307	0,83	91,6
MPTK-I 150 30,0 kW-1500 rpm	30,0	1480	58,5	Δ	423	0,8	92,3
High pressure							
MPTK-I 50 5,5/2,2 kW-3000 rpm	5,5	2900	10,3	Δ	80	0,88	87,0
MPTK-I 65 11,0/7,5 kW-3000 rpm	11,0	2955	20,5	Δ	160	0,86	91,1
MPTK-I 65 18,5/15,0 kW-3000 rpm	18,5	2935	32,0	Δ	230	0,91	91,0
MPTK-I 80 18,5/15,0 kW-3000 rpm	18,5	2935	32,0	Δ	230	0,91	91,0
MPTK-I 80 22,0 kW-3000 rpm	22,0	2935	38,5	Δ	239	0,90	91,3
MPTK-I 80 30,0 kW-3000 rpm	30,0	2945	52,0	Δ	359	0,91	92,0

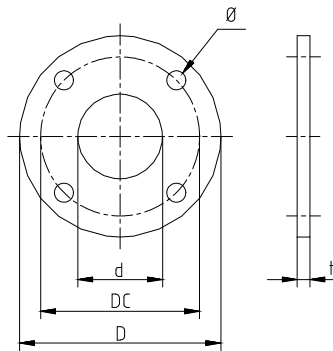


OVERALL DIMENSIONS MPTK-I



Model	A [mm]	B [mm]	C [mm]	D [mm]	G [mm]	H [mm]	Weight [kg]
Medium pressure							
MPTK-I 50 0.75 kW-1,500 rpm	295	135	360	305	250	135	25
MPTK-I 65 2.2 kW-1,500 rpm	455	250	490	410	320	175	55
MPTK-I 80 5.5 kW-1,500 rpm	522	280	635	540	370	205	100
MPTK-I 105 11.0 kW-1,500 rpm	640	340	720	615	460	250	160
MPTK-I 105 18.5 kW-1,500 rpm	640	340	730	625	460	250	210
MPTK-I 105 22.0 kW-1,500 rpm	640	340	795	690	460	250	310
MPTK-I 150 22.0 kW-1,500 rpm	822	380	870	725	580	320	330
MPTK-I 150 30.0 kW-1,500 rpm	822	380	870	725	580	320	360
High pressure							
MPTK-I 50 5.5 kW-3,000 rpm	410	250	545	490	250	135	61
MPTK-I 65 11.0 kW-3,000 rpm	545	340	650	570	320	175	105
MPTK-I 65 18.5 kW-3,000 rpm	545	340	695	615	320	175	155
MPTK-I 80 18.5 kW-3,000 rpm	622	380	719	624	370	205	205
MPTK-I 80 22.0 kW-3,000 rpm	622	380	759	664	370	205	258
MPTK-I 80 30.0 kW-3,000 rpm	622	380	805	710	370	205	305
Medium pressure							
MPTK-I 50 0.75 kW-1,500 rpm IE2	295	135	390	335	250	135	35
MPTK-I 65 2.2/1.1 kW-1,500 rpm IE2	455	250	546	466	320	175	80
MPTK-I 80 5.5/3.0 kW-1,500 rpm IE2	522	280	705	610	370	205	140
MPTK-I 105 11.0/7.5 kW-1,500 rpm IE2	640	340	769	664	460	250	190
MPTK-I 105 18.5/15.0 kW-1,500 rpm	640	340	752	647	460	250	270
MPTK-I 150 22.0 kW-1,500 rpm IE2	822	380	867	724	580	320	375
MPTK-I 150 30.0 kW-1,500 rpm IE2	822	380	937	794	580	320	435
High pressure							
MPTK-I 50 5.5/2.2 kW-3,000 rpm IE2	440	280	599	544	250	135	75
MPTK-I 65 11.0/7.5 kW-3,000 rpm IE2	545	340	656	576	320	175	165
MPTK-I 65 18.5/15.0 kW-3,000 rpm IE2	545	340	694	614	320	175	200
MPTK-I 80 18.5/15.0 kW-3,000 rpm IE2	622	380	722	627	370	205	215
MPTK-I 80 22.0 kW-3,000 rpm IE2	622	380	761	666	370	205	270
MPTK-I 80 30.0 kW-3,000 rpm IE2	622	380	806	711	370	205	305

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.

Landia[®]