



**VALIADIS**  
HELLENIC MOTORS

# AHV- $\Delta$ TMKHV- $\Delta$ series





# AHV-Δ & TMKHV-Δ series

## Medium voltage three-phase slip ring motors

### Slip Ring Motors

Slip ring motors are usually applied on high inertia loads or on high resistant starting torque loads. They are also required when there is starting current limitations on the power supply system. The most common loads driven by these motors are: ball mills, crushers, fans, exhausters, shredders and grinders for cement and mining industries, steel plants, among others.

### Standard Features

- Sinusoidal power supply of 3kV to 13.800V
- Motors manufactured in 4 to 12 poles
- Cast iron frames 315 to 450 and welded steel plates for frame from 500 and above
- Cooling methods used:
  - Open self-ventilated.
  - Self-ventilated by ducts, air inlet and outlet.
  - Forced ventilated, air inlet and outlet by ducts.
  - Forced ventilation, cooling on top of motor.
  - Self-ventilated with air-to air heat exchanger, heat exchanger on top of motor.
  - Self-ventilated with air-to-air heat exchanger, heat exchanger around the stator.
  - Forced ventilation in the air internal and external circuit, air-to-air heat exchanger.
  - Air-to-water heat exchanger.
  - Air-to-water heat exchanger, forced ventilation in the air internal circuit.
- Mounting: B3
- Degree of Protection: IP23 to IP55
- Service duty: (S1)
- Class of insulation: F
- Service Factor: 1.0
- Temperature rise: 80 °C
- Ambient temperature: 40 °C
- Altitude: 1000 m
- Temperature detector: Pt100, 1 per bearing with 3 wires.
- Temperature detector: Pt100, 2 per phase with 3 wires
- Two accessory terminal boxes, one for signal accessories and the other for those accessories requiring power supply (space heaters)
- Single phase space heater
- Grease lubricated bearings:
  - For 4 pole motors in the following frame sizes:  
Up to frame 560 (including it) for 60 and 50 Hz.
    - Grease lubricated bearings for 6 pole motors and above.
- Painting: Acrylic polyurethane Polyamide epoxy (Final coat: Blue RAL 5010)
- Stainless steel nameplate
- Grounding lug on the frame and terminal box
- Bronze slip rings
- Rotor terminal box separated from stator terminal box
- Compartment of slip rings and brushes separated from stator and rotor, behind the non-drive end bearing
- 03 connection terminals in the power terminal box for high voltage (with terminal block)



# AHV-Δ & TMKHV-Δ series

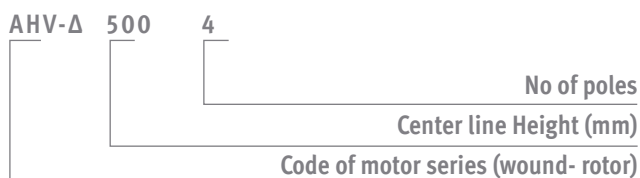
Medium voltage three-phase slip ring motors

## Optional Features

- Service Factor: 1.15
- Class of insulation: H
- Temperature rise: 105°K for class F
- Temperature rise: 125°K for class H
- Ambient temperature above 40°C (on request)
- Altitude above 1000 m (on request)
- Mountings: B5, B35, V1, V3, V5, V6, V18, V19, V36
- Degree of Protection IPW55 and above
- Special balance
- Special Base
- Steel welded terminal box in different sizes based on internal available space
- Non-reversion ratchet
- Temperature detector: Thermistor (PTC or NTC)
- Two energized power terminal boxes
- One or more accessory terminal boxes
- Shaft: Special dimensions, double shaft end, tapered, hollow, special steel
- Encoder
- Sleeve bearing
- Oil lubricated bearing
- Special bearing (over designed) for axial or radial thrust
- Special painting
- Vibration detector
- Noise suppressor in the air inlet and outlet
- Tachogenerator
- CT for differential and integral protection
- Bearing thermometer with/without contacts
- Independent hydraulic oil circulation system for sleeve bearing

## Basic Data

**Note:** AHV- Δ means the three-phase AC medium voltage slip ring, IP23 protection motor.



## Structure declaration

AHV-Δ series motors are basic type, their protection grade are IP23, cooling methods are IC01. By

changing the upper guard with air-to-air cooler or air-to-water cooler, we can get various motors with different protection grade and cooling-down method, such as TMKHV-Δ(air to air cooler).

Adopting welding steel plate to make the box type frame have features as light weight and enough rigidity.

Stator winding adopts F class insulation and its end adopts firm binding. The whole stator adopts solvent- free varnish Vacuum Pressure Impregnation (VPI) to ensure the stator has excellent electric properly and humidify resistance.

Rotor is made of cast aluminum or cooper bar. Aluminum rotor is made of pure aluminum, copper bar wedging copper rotor enhances the entirety of rotor. Wound rotor adopts F class insulating material and solvent-free varnish Vacuum Pressure Impregnation (VPI).

The motor adopts rolling bearing or sleeve bearing, according to the output power and rated speed. Bearing protection grade normally is IP44, if the motors 's protect grade increases, so does the bearings. Rolling bearing adopts lubricating grease and its grease charger and discharger can be operated without stopping the motor. The junction box is of IP54 protection grade and it is usually mounted on the motor's right side (viewed from shaft extension end). It is also can be mounted on the left side and its outlets have four optional orientations(up, down, left and right orientation). Separated grounding unit is available in main junction box too.

## Notice for selecting motors:

Please specify these technical data (for instance):

- Type of motor: (AHV-Δ, TMKHV-Δ)
- Rated frequency: (50Hz)
- Rated output power: (1000 Kw)
- Rated voltage: (6kV)
- Number of poles: (4Poles)
- Protection grade: (IP23)
- Cooling method: (IC01)
- Mounting type: (IMB3)
- Rotary direction: clockwise (viewed from the drive end)
- Junction box: right side (viewed from the drive end).

# AHV-Δ & TMKHV-Δ series

Medium voltage three-phase slip ring motors

IP23, 4 POLES-1.500 Rpm

6.000 VY/50Hz

Insulation class F

TYPE	Rated output (kW)	Rated current (A)	Speed (r/min)	Efficiency (%)	Power Factor (cosφ)	Mmax Mn	U (V)	I (A)	J motor (Kgm <sup>2</sup> )	Weight (kg)
AHV-Δ 355-4	220	26.3	1474	93.6	0.860	2.08	330	420.8	6.3	2200
AHV-Δ 355-4	250	29.6	1474	93.9	0.865	2.06	364	433.5	6.9	2290
AHV-Δ 355-4	280	33.1	1476	94.1	0.865	2.11	404	435.1	7.6	2370
AHV-Δ 400-4	315	36.8	1477	93.9	0.878	2.74	399	489.4	10.4	2630
AHV-Δ 400-4	355	41.1	1477	94.1	0.883	2.69	433	508.3	11.2	2710
AHV-Δ 400-4	400	46.1	1478	94.3	0.885	2.68	472	524	12.1	2790
AHV-Δ 400-4	450	51.4	1478	94.5	0.891	2.65	520	534.4	13.5	2910
AHV-Δ 400-4	500	57.4	1480	94.7	0.885	2.81	577	532.8	14.3	2980
AHV-Δ 450-4	560	63.8	1480	94.8	0.891	2.5	700	495	20.6	3630
AHV-Δ 450-4	630	71	1481	95.0	0.898	2.53	779	498.9	22.9	3760
AHV-Δ 450-4	710	80.1	1482	95.2	0.897	2.64	876	498.1	25.2	3860
AHV-Δ 450-4	800	90.3	1484	95.4	0.894	2.82	1001	488.8	28	4020
AHV-Δ 500-4	900	100.2	1485	95.4	0.906	2.64	822	670.6	39	4410
AHV-Δ 500-4	1000	111.7	1485	95.5	0.902	2.71	896	682.1	41.2	4540
AHV-Δ 500-4	1120	125.9	1486	95.7	0.895	2.8	984	693.8	43.4	4710
AHV-Δ 500-4	1250	142.3	1487	95.8	0.883	2.98	1091	696.1	45.6	4870
AHV-Δ 560-4	1400	154.6	1485	95.7	0.911	2.53	1363	630.2	74	6170
AHV-Δ 560-4	1600	176.3	1485	95.8	0.912	2.56	1515	646.7	80.6	6460
AHV-Δ 560-4	1800	198	1486	96.0	0.911	2.69	1704	644.3	88.6	6740
AHV-Δ 630-4	2000	219.1	1488	96.2	0.913	2.43	1449	843.4	122.5	8170
AHV-Δ 630-4	2240	244.7	1488	96.3	0.914	2.36	1566	875	132.7	8570
AHV-Δ 630-4	2500	272.9	1489	96.5	0.914	2.52	1761	864	143	8970

IP23, 4 POLES-1.500 Rpm

10.000 VY/50Hz

Insulation class F

TYPE	Rated output (kW)	Rated current (A)	Speed (r/min)	Efficiency (%)	Power Factor (cosφ)	Mmax Mn	U (V)	I (A)	J motor (Kgm <sup>2</sup> )	Weight (kg)
AHV-Δ 450-4	315	22.7	1478	93.3	0.860	2.65	453	434.8	12.5	3750
AHV-Δ 450-4	355	25.5	1477.9	93.5	0.861	2.61	487	454.6	13.3	3800
AHV-Δ 450-4	400	28.5	1478	93.8	0.865	2.57	529	471.9	14.3	3860
AHV-Δ 450-4	450	31.9	1478.3	93.9	0.867	2.56	577	485.8	15.4	4020
AHV-Δ 450-4	500	35.3	1479.5	94.2	0.868	2.63	635	488.5	16.7	4160
AHV-Δ 450-4	560	39.4	1480.4	94.4	0.870	2.68	706	490.6	18.4	4310
AHV-Δ 500-4	630	43.6	1485.2	94.5	0.883	2.91	831	467	32.6	4550
AHV-Δ 500-4	710	48.8	1485.1	94.7	0.886	2.85	895	488	34.8	4700
AHV-Δ 500-4	800	54.3	1485	94.9	0.896	2.77	972	506.1	38.4	4880
AHV-Δ 500-4	900	60.9	1485.4	95.2	0.897	2.79	1061	520.5	41.2	5040
AHV-Δ 500-4	1000	67.3	1485.8	95.3	0.901	2.8	1168	524.6	45.6	5190
AHV-Δ 560-4	1120	75.5	1484	95.4	0.898	2.49	1060	650.6	52.8	6650
AHV-Δ 560-4	1250	84	1484.7	95.6	0.899	2.55	1167	658	57	6750
AHV-Δ 560-4	1400	94	1485.6	95.7	0.899	2.63	1297	661.1	62.1	6900
AHV-Δ 630-4	1600	108	1488.5	95.9	0.891	2.58	1111	880.5	92.6	8600
AHV-Δ 630-4	1800	121.1	1488.8	96.1	0.893	2.59	1224	898.4	101.1	8750
AHV-Δ 630-4	2000	133.8	1489.4	96.2	0.897	2.64	1361	895.3	112.8	9000

# AHV-Δ & TMKHV-Δ series

Medium voltage three-phase slip ring motors

IP23, 6 POLES-1.000 Rpm

6.000 VY/50Hz

Insulation class F

TYPE	Rated output (kW)	Rated current (A)	Speed (r/min)	Efficiency (%)	Power Factor (cosφ)	Mmax Mn	U (V)	I (A)	J motor (Kgm <sup>2</sup> )	Weight (kg)
AHV-Δ 400-6	220	27.3	984	93.2	0.833	2.51	337	408.1	13.6	2610
AHV-Δ 400-6	250	31	984	93.3	0.833	2.42	361	433.5	14.3	2700
AHV-Δ 400-6	280	34.4	983	93.5	0.837	2.35	389	450.7	15.4	2790
AHV-Δ 400-6	315	38.1	983	93.7	0.848	2.24	422	467.8	17.2	2900
AHV-Δ 400-6	355	43	983	93.8	0.846	2.23	460	483	18.3	2990
AHV-Δ 450-6	400	47.3	985	94.4	0.861	2.35	597	417.5	23.3	3580
AHV-Δ 450-6	450	53.3	985	94.6	0.859	2.39	656	426.3	24.9	3690
AHV-Δ 450-6	500	59.1	986	94.7	0.860	2.44	729	425	27.5	3900
AHV-Δ 450-6	560	66.1	987	94.9	0.859	2.51	820	421.7	30.5	3950
AHV-Δ 500-6	630	73.3	988	95.1	0.870	2.18	733	533.1	47.9	4150
AHV-Δ 500-6	710	82.6	989	95.1	0.870	2.24	825	532.9	53	4280
AHV-Δ 500-6	800	92.8	989	95.3	0.871	2.34	943	522.9	59.9	4430
AHV-Δ 500-6	900	104.4	989	95.4	0.869	2.3	1015	546.4	63	4580
AHV-Δ 560-6	1000	115.3	990	95.5	0.873	2.35	1051	586.7	92.8	5800
AHV-Δ 560-6	1120	128.2	989	95.6	0.879	2.27	1133	610.2	101.1	6060
AHV-Δ 560-6	1250	142.2	989	95.8	0.883	2.2	1229	628.5	111	6230
AHV-Δ 630-6	1400	159.4	992	96.1	0.880	2.3	1343	639.6	149.7	7080
AHV-Δ 630-6	1600	181.8	991	96.1	0.881	2.27	1478	664.8	158.6	7330
AHV-Δ 630-6	1800	203.7	992	96.3	0.883	2.28	1643	670.9	179.7	7580

IP23, 6 POLES-1.000 Rpm

10.000 VY/50Hz

Insulation class F

TYPE	Rated output (kW)	Rated current (A)	Speed (r/min)	Efficiency (%)	Power Factor (cosφ)	Mmax Mn	U (V)	I (A)	J motor (Kgm <sup>2</sup> )	Weight (kg)
AHV-Δ 450-6	280	21.2	984.8	93.2	0.819	2.3	447	394.3	17.6	4000
AHV-Δ 450-6	315	23.6	984.6	93.5	0.825	2.23	482	411.8	19	4150
AHV-Δ 450-6	355	26.5	984.4	93.6	0.827	2.17	523	428.6	20.4	4310
AHV-Δ 450-6	400	29.8	984.6	93.8	0.825	2.16	570	442.5	21.7	4450
AHV-Δ 500-6	450	32.7	988	93.9	0.846	2.83	728	382.4	37.7	4530
AHV-Δ 500-6	500	35.7	987.7	94.2	0.859	2.69	782	395.8	41.7	4600
AHV-Δ 500-6	560	39.7	987.7	94.4	0.864	2.64	843	410.9	44.9	4690
AHV-Δ 500-6	630	44.7	987.8	94.5	0.862	2.63	913	426.5	47.3	4830
AHV-Δ 500-6	710	50.3	988	94.7	0.861	2.64	996	439.9	50.4	4980
AHV-Δ 560-6	800	56.6	987.5	94.9	0.860	2.32	936	531.6	62.6	6550
AHV-Δ 560-6	900	63.3	987.5	95.0	0.864	2.27	1015	551.7	67.6	6700
AHV-Δ 560-6	1000	70	987.7	95.2	0.867	2.26	1109	560.9	73.7	6840
AHV-Δ 560-6	1120	77.9	988	95.3	0.871	2.26	1221	569.8	81.1	6980
AHV-Δ 630-6	1250	87.6	988.8	95.5	0.863	2.34	1059	729.3	139.8	8700
AHV-Δ 630-6	1400	97.5	989	95.6	0.867	2.32	1156	747.5	151.5	9000
AHV-Δ 630-6	1600	110.7	989.1	95.8	0.871	2.25	1274	776.2	167.8	9160

# AHV-Δ & TMKHV-Δ series

Medium voltage three-phase slip ring motors

IP23, 8 POLES-750 Rpm

6.000 VY/50Hz

Insulation class F

TYPE	Rated output (kW)	Rated current (A)	Speed (r/min)	Efficiency (%)	Power Factor (cosφ)	Mmax Mn	U (V)	I (A)	J motor (Kgm <sup>2</sup> )	Weight (kg)
AHV-Δ 400-8	220	28.5	730	91.8	0.809	1.94	291	486.9	19.6	2600
AHV-Δ 400-8	250	32.3	732	92.3	0.807	2.03	332	2.23	480.4	2690
AHV-Δ 400-8	280	36.1	732	92.5	0.807	1.99	358	500.1	23.3	2750
AHV-Δ 450-8	315	39.7	738	93.5	0.816	2.47	549	357.9	34	3410
AHV-Δ 450-8	355	44.3	738	93.7	0.824	2.39	600	369.6	37.5	3520
AHV-Δ 450-8	400	49.3	738	93.9	0.831	2.33	661	378	41.8	3600
AHV-Δ 450-8	450	55.4	738	94.1	0.832	2.34	735	382	46.1	3730
AHV-Δ 500-8	500	61.4	739	94.3	0.831	2.1	600	522.2	59.5	4150
AHV-Δ 500-8	560	68.3	739	94.5	0.836	2.07	661	530.9	65.7	4260
AHV-Δ 500-8	630	76.1	740	94.6	0.842	2.03	736	536.7	74.4	4420
AHV-Δ 500-8	710	86.5	741	94.8	0.833	2.18	826	534.8	78.2	4570
AHV-Δ 560-8	800	96	741	95.1	0.843	2.05	829	602.2	107.5	5560
AHV-Δ 560-8	900	108.2	742	95.3	0.840	2.19	947	589.1	118.2	5780
AHV-Δ 560-8	1000	124.6	743	95.4	0.809	2.58	1099	557.7	123.7	6000
AHV-Δ 630-8	1120	132.6	742	95.6	0.850	2.16	1177	588.5	191.3	7090
AHV-Δ 630-8	1250	147.6	742	95.7	0.852	2.13	1276	606	206.3	7400
AHV-Δ 630-8	1400	164.7	742	95.8	0.854	2.1	1393	621.8	224.2	7710

IP23, 8 POLES-750 Rpm

10.000 VY/50Hz

Insulation class F

TYPE	Rated output (kW)	Rated current (A)	Speed (r/min)	Efficiency (%)	Power Factor (cosφ)	Mmax Mn	U (V)	I (A)	J motor (Kgm <sup>2</sup> )	Weight (kg)
AHV-Δ 500-8	280	23.1	740.5	93.1	0.752	2.76	540	323.1	34.8	4450
AHV-Δ 500-8	315	25.3	739.9	93.2	0.770	2.55	569	345.9	37.2	4530
AHV-Δ 500-8	355	27.6	739.1	93.4	0.795	2.31	603	370	41.2	4600
AHV-Δ 500-8	400	31.4	740	93.7	0.786	2.44	678	368.6	44.3	4700
AHV-Δ 500-8	450	35.1	739.7	93.9	0.789	2.35	723	389.3	46.7	4800
AHV-Δ 500-8	500	38.9	739.6	94.0	0.789	2.32	774	404	49.2	4950
AHV-Δ 560-8	560	42.8	741.2	94.2	0.802	2.32	716	487.8	80.8	6300
AHV-Δ 560-8	630	48.9	742.1	94.5	0.788	2.52	816	477.6	87.3	6540
AHV-Δ 560-8	710	54.4	741.9	94.6	0.797	2.39	880	500.2	95.4	6750
AHV-Δ 560-8	800	60.2	741.7	94.8	0.809	2.29	955	520	105	6910
AHV-Δ 630-8	900	65.4	740.3	95.1	0.835	2.25	916	610.5	134.5	8500
AHV-Δ 630-8	1000	72.4	740.5	95.2	0.837	2.24	1000	620.8	146.1	8650
AHV-Δ 630-8	1120	80.7	740.6	95.4	0.841	2.21	1101	631.4	162.3	8950

# AHV-Δ & TMKHV-Δ series

Medium voltage three-phase slip ring motors

**IP23, 10 POLES-600 Rpm**  
**6.000 VY/50Hz**  
**Insulation class F**

TYPE	Rated output (kW)	Rated current (A)	Speed (r/min)	Efficiency (%)	Power Factor (cosφ)	Mmax Mn	U (V)	I (A)	J motor (Kgm <sup>2</sup> )	Weight (kg)
AHV-Δ 450-10	220	29.7	588	92.5	0.770	2.34	501	277.7	2.34	3310
AHV-Δ 450-10	250	33.5	588	92.7	0.774	2.27	543	291.5	33.8	3410
AHV-Δ 450-10	280	37.1	588	92.8	0.782	2.2	593	299.2	37.3	3510
AHV-Δ 450-10	315	41.2	588	93.0	0.790	2.15	653	305.7	41.6	3590
AHV-Δ 450-10	355	46.3	588	93.2	0.792	2.15	726	309.3	45.9	3720
AHV-Δ 500-10	400	51.4	589	93.8	0.798	1.91	594	428.8	59	4110
AHV-Δ 500-10	450	57.4	589	93.9	0.803	1.87	655	438.3	65.3	4220
AHV-Δ 500-10	500	64	590	94.1	0.799	1.97	726	435.6	69.1	4390
AHV-Δ 500-10	560	71.6	591	94.3	0.798	2	818	432.2	77.8	4540
AHV-Δ 560-10	630	79.7	592	94.7	0.804	2.19	858	458.8	107.2	5570
AHV-Δ 560-10	710	90.6	592	94.8	0.795	2.33	980	450.1	117.9	5780
AHV-Δ 560-10	800	102.2	592	94.9	0.793	2.3	1054	471.7	123.4	5980
AHV-Δ 630-10	900	109.7	591	95.0	0.831	2.1	1018	552.5	178.5	7090
AHV-Δ 630-10	1000	121.5	591	95.1	0.832	2.06	1103	566.7	193.4	7400
AHV-Δ 630-10	1120	135.8	591	95.2	0.833	2.05	1204	581.4	208.2	7710

**IP23, 10 POLES-600 Rpm**  
**10.000 VY/50Hz**  
**Insulation class F**

TYPE	Rated output (kW)	Rated current (A)	Speed (r/min)	Efficiency (%)	Power Factor (cosφ)	Mmax Mn	U (V)	I (A)	J motor (Kgm <sup>2</sup> )	Weight (kg)
AHV-Δ 500-10	250	21.2	591.7	92.3	0.740	2.38	425	371	48.6	4440
AHV-Δ 500-10	280	23.6	592.1	92.5	0.740	2.42	479	367.8	54.5	4510
AHV-Δ 500-10	315	26.3	591.9	92.8	0.747	2.33	511	388.1	57.5	4580
AHV-Δ 500-10	355	29.5	591.7	92.9	0.747	2.26	547	409	60.5	4680
AHV-Δ 560-10	400	32	591.8	93.0	0.777	2.55	726	344.5	86	5880
AHV-Δ 560-10	450	35.3	591.5	93.2	0.789	2.42	780	361.6	93	6040
AHV-Δ 560-10	500	38.7	591.4	93.5	0.797	2.34	841	372.9	101.7	6280
AHV-Δ 560-10	560	42.9	591.2	93.6	0.805	2.25	912	385.7	112.1	6520
AHV-Δ 560-10	630	49.7	591.7	93.7	0.781	2.4	990	397.7	110.6	6730
AHV-Δ 630-10	710	53.5	592	94.4	0.812	2.29	912	486.4	156.9	8000
AHV-Δ 630-10	800	59.7	592	94.5	0.818	2.23	996	502.1	171.7	8480
AHV-Δ 630-10	900	67.1	592.1	94.7	0.819	2.23	1096	512.9	186.5	8630
AHV-Δ 630-10	1000	74.6	592.4	94.4	0.820	2.26	1218	513.8	207.2	8920



# AHV-Δ & TMKHV-Δ series

Medium voltage three-phase slip ring motors

IP23, 12 POLES-500 Rpm

6.000 VY/50Hz

Insulation class F

TYPE	Rated output (kW)	Rated current (A)	Speed (r/min)	Efficiency (%)	Power Factor (cosφ)	Mmax Mn	U (V)	I (A)	J motor (Kgm <sup>2</sup> )	Weight (kg)
AHV-Δ 450-12	220	31.6	489	92.1	0.728	2.21	548	256.4	40.9	3580
AHV-Δ 450-12	250	35.5	488	92.2	0.734	2.14	598	267.5	44.4	3710
AHV-Δ 500-12	280	38.7	489	92.8	0.750	1.95	432	417.7	56.1	3950
AHV-Δ 500-12	315	42.8	488	92.9	0.763	1.8	462	444.1	62.2	4070
AHV-Δ 500-12	355	49.3	490	93.2	0.744	2	531	428.4	65.9	4210
AHV-Δ 500-12	400	54.1	489	93.3	0.762	1.85	578	447	75.3	4350
AHV-Δ 560-12	450	60	491	93.9	0.769	2.06	695	410.1	94.5	5380
AHV-Δ 560-12	500	66.8	492	94.0	0.766	2.11	772	409	103.2	5540
AHV-Δ 560-12	560	74.9	492	94.2	0.763	2.18	868	405.4	113.7	5730
AHV-Δ 560-12	630	84.3	492	94.1	0.764	2.1	925	429.6	119	5920
AHV-Δ 630-12	710	91.7	492	94.6	0.787	2.1	959	464.5	190.3	7010
AHV-Δ 630-12	800	102.6	492	94.8	0.792	2.02	1033	487	205	7310
AHV-Δ 630-12	900	114.9	492	94.8	0.795	1.95	1120	506.9	222.6	7610

IP23, 12 POLES-500 Rpm

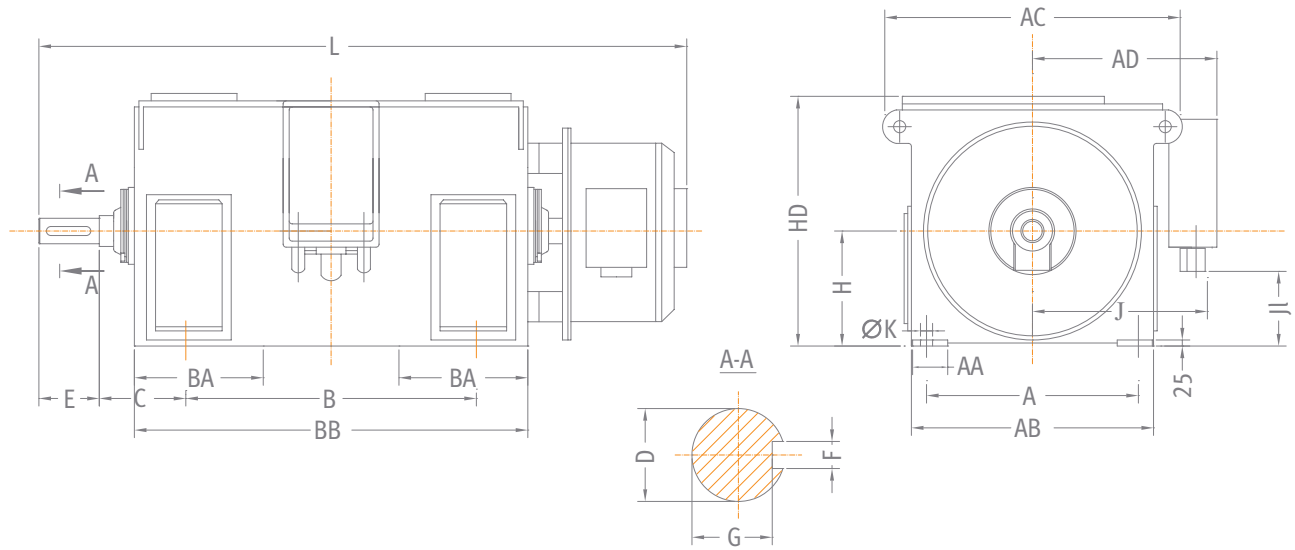
10.000 VY/50Hz

Insulation class F

TYPE	Rated output (kW)	Rated current (A)	Speed (r/min)	Efficiency (%)	Power Factor (cosφ)	Mmax Mn	U (V)	I (A)	J motor (Kgm <sup>2</sup> )	Weight (kg)
AHV-Δ 560-12	200	18.5	494.2	91.6	0.680	3.13	523	239	74	5720
AHV-Δ 560-12	220	20	492.5	91.3	0.695	2.97	550	251.5	74.7	5790
AHV-Δ 560-12	250	21.2	491.7	91.5	0.745	2.47	572	276.4	79.6	5860
AHV-Δ 560-12	280	23.4	490.7	91.8	0.752	2.35	581	306.6	83.2	5950
AHV-Δ 560-12	315	26.5	491.2	92.2	0.746	2.44	649	307.1	90	6010
AHV-Δ 560-12	355	30.2	491.9	92.5	0.734	2.57	735	303.9	98.5	6250
AHV-Δ 560-12	400	33.1	491.4	92.7	0.753	2.4	790	319.9	108.7	6500
AHV-Δ 560-12	450	37.2	491.4	92.9	0.752	2.37	850	334.3	113.9	6700
AHV-Δ 630-12	500	40.5	492.8	93.7	0.761	2.46	791	395.7	154.3	7950
AHV-Δ 630-12	560	44.5	492.7	93.9	0.774	2.35	853	411.7	169	8450
AHV-Δ 630-12	630	49.5	492.6	94.0	0.781	2.27	926	427.8	183.7	8600
AHV-Δ 630-12	710	55.2	492.4	94.2	0.789	2.18	1011	442.3	204.1	8900

# AHV-Δ & TMKHV-Δ series

## Dimension sheet



### MOUNTING B3

SIZE 355-500

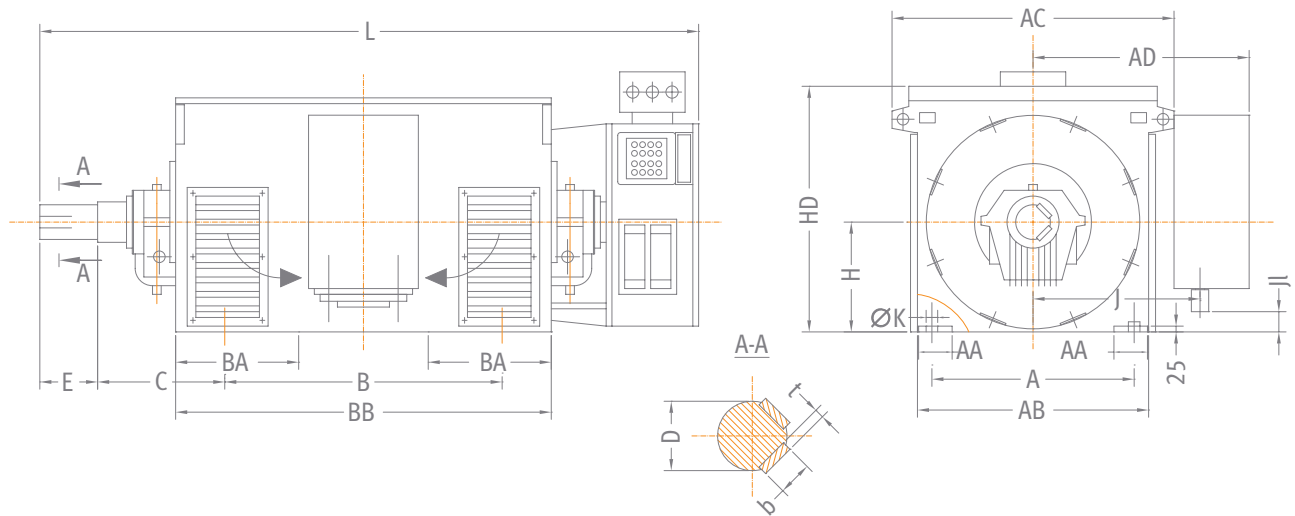
### AHV-Δ series, 6KV

TYPE	A	AA	AB	AC	AD	B	BA	BB	C
AHV-Δ 355-4	630	130	770	970	745	900	565	1420	315
AHV-Δ 400-4-8	710	130	810	1010	760	1000	565	1510	355
AHV-Δ 450-4	800	150	910	1120	810	1120	600	1620	355
AHV-Δ 450-6-12	800	150	910	1120	810	1120	600	1620	355
AHV-Δ 500-4	900	150	1010	1220	860	1250	655	1730	475
AHV-Δ 500-6-12	900	150	1010	1220	860	1250	655	1730	475

TYPE	D	E	F	G	HD	J	JL	K	L
AHV-Δ 355-4	100	210	28	90	780	587	55	28	2150
AHV-Δ 400-4-8	110	210	28	100	835	607	85	35	2310
AHV-Δ 450-4	120	210	32	109	935	657	185	35	2570
AHV-Δ 450-6-12	130	250	32	119	938	657	185	35	2610
AHV-Δ 500-4	130	250	32	119	1040	707	285	42	2920
AHV-Δ 500-6-12	140	250	36	128	1040	707	285	42	2920

# AHV-Δ & TMKHV-Δ series

## Dimension sheet



### MOUNTING B3

SIZE 560-630

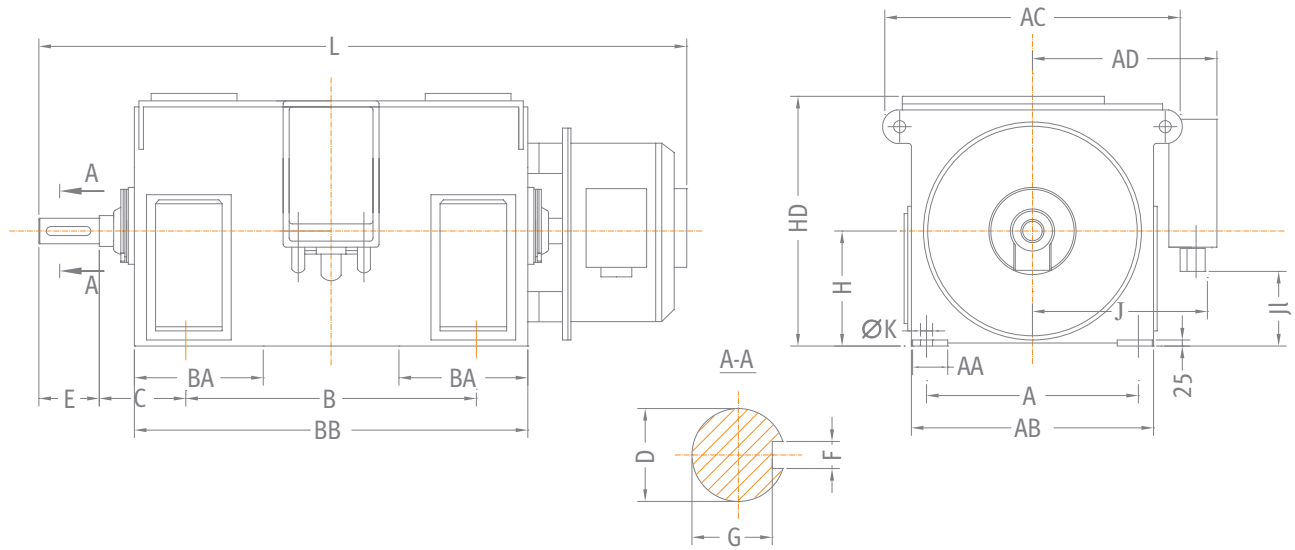
### AHV-Δ series, 6KV

TYPE	A	AA	AB	AC	AD	B	BA	BB	C
AHV-Δ 560-4	1000	170	1130	1350	1060	1400	690	1880	500
AHV-Δ 560-6-12	1000	170	1130	1350	1060	1400	690	1880	500
AHV-Δ 630-4	1120	190	1260	1530	1120	1600	740	2150	530
AHV-Δ 630-6-12	1120	190	1260	1530	1120	1600	740	2150	530

TYPE	D	E	t	b	HD	J	J1	K	L
AHV-Δ 560-4	150	250	11.4	39.7	1380	814	115	42	3400
AHV-Δ 560-6-12	160	300	12.4	42.8	1380	814	115	42	3400
AHV-Δ 630-4	170	300	12.4	44.2	1450	879	265	48	3700
AHV-Δ 630-6-12	180	300	12.4	45.6	1450	879	265	48	3700

# AHV-Δ & TMKHV-Δ series

## Dimension sheet



### MOUNTING B3

SIZE 450-500

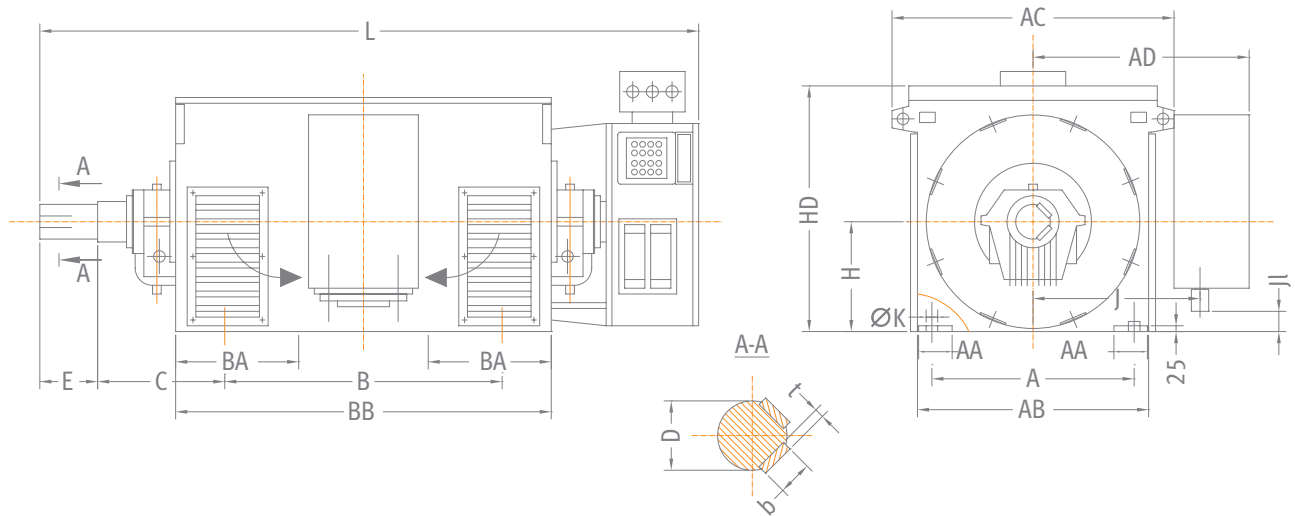
### AHV-Δ series, 10KV

TYPE	A	AA	AB	AC	AD	B	BA	BB	C
AHV-Δ 450-4	800	150	910	1120	940	1120	600	1620	355
AHV-Δ 450-6	800	150	910	1120	940	1120	600	1620	355
AHV-Δ 500-4	900	150	1010	1220	990	1250	655	1730	475
AHV-Δ 500-6-10	900	150	1010	1220	990	1250	655	1730	475

TYPE	D	E	F	G	HD	J	JL	K	L
AHV-Δ 450-4	120	210	32	109	935	702	660	35	2570
AHV-Δ 450-6	130	250	32	119	935	702	660	35	2610
AHV-Δ 500-4	130	250	32	119	1040	752	760	42	2920
AHV-Δ 500-6-10	140	250	36	128	1040	752	760	42	2920

# AHV-Δ & TMKHV-Δ series

## Dimension sheet



### MOUNTING B3

#### SIZE 560-630

### AHV-Δ series, 10KV

TYPE	A	AA	AB	AC	AD	B	BA	BB	C
AHV-Δ 560-4	1000	170	1130	1350	1060	1400	690	1880	500
AHV-Δ 560-6-12	1000	170	1130	1350	1060	1400	690	1880	500
AHV-Δ 630-4	1120	190	1260	1530	1120	1600	740	2150	530
AHV-Δ 630-6-12	1120	190	1260	1530	1120	1600	740	2150	530

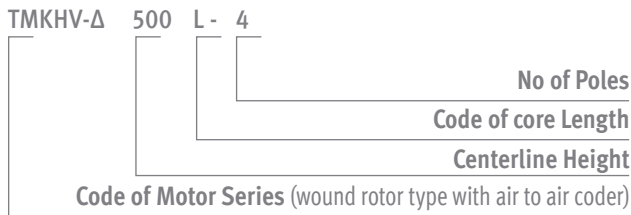
TYPE	D	E	t	b	HD	J	J1	K	L
AHV-Δ 560-4	150	250	11.4	39.7	1380	814	115	42	3400
AHV-Δ 560-6-12	160	300	12.4	42.8	1380	814	115	42	3400
AHV-Δ 630-4	170	300	12.4	44.2	1450	879	265	48	3700
AHV-Δ 630-6-12	180	300	12.4	45.6	1450	879	265	48	3700

# TMKHV-Δ series

6kV, 10kV medium sized three-phase asynchronous motors (H355-630)

## Basic Data

**Note:** TMKHV – Δ means the three-phase AC medium voltage slip ring motor, with air to air heat exchanger.



## Structure declaration

Adopting welding steel plate to make the box type frame have features as light weight and enough rigidity. Stator winding adopts F class insulation and its end adopts firm binding. The whole stator adopts solvent-free varnish Vacuum Pressure Impregnation (VPI) to ensure the stator has excellent electric properly and humidity resistance.

Rotor is made of cast aluminum or copper bar. Aluminum rotor is made of pure aluminum bar wedging copper rotor enhances the entirety of rotor. Wound rotor adopts F class insulating material and solvent-free varnish Vacuum Pressure Impregnation (VPI).

The motor adopts rolling bearing according to the output power and rotary speed. Bearing protection grade normally is IP55. If the motor's protect grade increases, so does the bearings. Rolling bearing adopts lubricating grease and its grease charger and discharger can be operated without stopping the motor. The junction box is of IP55 protection grade and it is usually mounted on the motor's right side (viewed from shaft extension end). It is also can be mounted on the left side and its outlets have four optional orientations (up, down, left and right orientation). Separated grounding unit is available in main junction box too.

## Notice for selecting motors:

Please specify these technical data (for instance):

Type of motor: (TMKHV – Δ 500 – 4)

Rated frequency: (50 Hz)

Rated output power: (1000 KW)

Rated voltage: (6 kV)

Number of poles: (4 Poles)

Protection grade: (IP55)

Cooling method: (IC611)

Mounting type: (IM B3)

Rotary direction: Clockwise (viewed from the driving end).

Junction box: Right side (viewed from the driving end).

# TMKHV-Δ series

6kV, 10kV medium sized three-phase asynchronous motors (H355-630)

**IP55, 4 POLES-1.500 Rpm**

6.000 VY/50Hz

Insulation class F

TYPE	Rated output (kW)	Rated current (A)	Speed (r/min)	Efficiency (%)	Power Factor (cosφ)	Mmax Mn	Rotor voltage (V)	Rotor current (A)	J motor (Kg <sup>m</sup> ²)	Weight (kg)
TMKHV-Δ 355-4	185	22.5	1475	92.7	0.853	2.22	302	388.8	5.8	2620
TMKHV-Δ 355-4	200	24.2	1477	93.0	0.855	2.3	330	383.2	6.3	2780
TMKHV-Δ 355-4	220	26.4	1478	93.3	0.860	2.34	364	381.1	6.9	2920
TMKHV-Δ 400-4	250	30.2	1482	92.9	0.858	3.47	399	389.7	10.4	3080
TMKHV-Δ 400-4	280	33.5	1482	93.2	0.864	3.42	432	401.8	11.2	3230
TMKHV-Δ 400-4	315	37.5	1483	93.4	0.865	3.42	472	413.4	12.1	3390
TMKHV-Δ 400-4	355	41.7	1483	93.7	0.875	3.38	520	421.8	13.5	3530
TMKHV-Δ 400-4	400	47.4	1484	93.9	0.865	3.52	577	426.9	14.3	3680
TMKHV-Δ 450-4	450	51.9	1481	93.8	0.889	2.72	636	440.5	19.2	3830
TMKHV-Δ 450-4	500	57.7	1482	94.0	0.887	2.8	699	443.6	20.6	3900
TMKHV-Δ 450-4	560	64.1	1483	94.3	0.892	2.85	778	445.2	22.9	3960
TMKHV-Δ 450-4	630	72.1	1484	94.5	0.890	2.98	876	443.4	25.2	4040
TMKHV-Δ 500-4	710	81.4	1486	94.4	0.890	3.09	975	577.8	35.3	5300
TMKHV-Δ 500-4	800	90.6	1486	94.6	0.899	2.98	821	599.5	39	5480
TMKHV-Δ 500-4	900	102	1487	94.8	0.896	3.01	895	617.2	41.2	5640
TMKHV-Δ 500-4	1000	114.1	1487	94.9	0.889	3.14	984	622.3	43.4	5790
TMKHV-Δ 560-4	1120	125.4	1486	94.7	0.908	2.76	1238	559	68.6	7800
TMKHV-Δ 560-4	1250	139.5	1487	94.8	0.909	2.83	1362	565.3	74	7940
TMKHV-Δ 560-4	1400	155.8	1487	95.0	0.910	2.93	1514	567.8	80.6	8100
TMKHV-Δ 630-4	1600	177.7	1489	95.2	0.910	2.69	1316	748	112.3	9200
TMKHV-Δ 630-4	1800	198.9	1490	95.4	0.913	2.71	1449	762.6	122.5	9330
TMKHV-Δ 630-4	2000	220.3	1490	95.5	0.915	2.64	1565	784	132.7	9500

**IP55, 4 POLES-1.500 Rpm**

10.000 VY/50Hz

Insulation class F

TYPE	Rated output (kW)	Rated current (A)	Speed (r/min)	Efficiency (%)	Power Factor (cosφ)	Mmax Mn	Rotor voltage (V)	Rotor current (A)	J motor (Kg <sup>m</sup> ²)	Weight (kg)
TMKHV-Δ 450-4	280	20.6	1480.4	92.3	0.849	2.99	452	389.1	12.5	3640
TMKHV-Δ 450-4	315	22.7	1478.5	92.5	0.866	2.72	467	424.8	13.3	3660
TMKHV-Δ 450-4	355	25.4	1478.6	92.8	0.870	2.68	507	440.7	14.3	3720
TMKHV-Δ 450-4	400	29	1480.8	93.0	0.857	2.89	576	433.8	15.4	3780
TMKHV-Δ 450-4	450	32.4	1481.5	93.4	0.859	2.93	635	441.5	16.7	3830
TMKHV-Δ 450-4	500	35.9	1482.5	93.6	0.860	3.01	706	439.8	18.4	3900
TMKHV-Δ 500-4	560	39.6	1486.8	93.4	0.874	3.27	831	418.5	32.6	5000
TMKHV-Δ 500-4	630	44.2	1486.7	93.7	0.878	3.22	895	436.2	34.8	5150
TMKHV-Δ 500-4	710	49.1	1486.7	94.0	0.889	3.12	972	452	38.4	5300
TMKHV-Δ 500-4	800	55	1487	94.3	0.890	3.14	1061	465.1	41.2	5480
TMKHV-Δ 560-4	900	61.6	1485.2	94.4	0.893	2.73	972	574.2	49.7	7300
TMKHV-Δ 560-4	1000	68.4	1485.8	94.6	0.893	2.79	1060	583.2	52.8	7550
TMKHV-Δ 560-4	1120	76.4	1486.3	94.8	0.894	2.85	1166	591.9	57	7800
TMKHV-Δ 630-4	1250	85.8	1489.6	94.8	0.887	2.91	1019	755.7	87.5	8700
TMKHV-Δ 630-4	1400	96.3	1489.9	95.0	0.884	2.96	1111	774.3	92.6	8950
TMKHV-Δ 630-4	1600	109.3	1490.1	95.2	0.888	2.92	1223	802.3	101.1	9200

# TMKHV-Δ series

6kV, 10kV medium sized three-phase asynchronous motors (H355-630)

**IP55, 6 POLES-1.000 Rpm**

6.000 VY/50Hz

Insulation class F

TYPE	Rated output (kW)	Rated current (A)	Speed (r/min)	Efficiency (%)	Power Factor (cosφ)	Mmax Mn	Rotor voltage (V)	Rotor current (A)	J motor (Kg·m <sup>2</sup> )	Weight (kg)
TMKHV-Δ 400-6	185	23.7	987	92.5	0.812	2.99	337	343.2	13.6	3470
TMKHV-Δ 400-6	200	25.7	987	92.7	0.808	3.03	361	345.8	14.3	3620
TMKHV-Δ 400-6	220	28	987	93.5	0.810	3.01	388	350	15.4	3760
TMKHV-Δ 400-6	250	31.2	987	93.2	0.829	2.83	422	369.1	17.2	3910
TMKHV-Δ 400-6	280	35	987	93.4	0.826	2.84	460	378.5	18.3	4060
TMKHV-Δ 450-6	315	37.9	987	93.8	0.852	2.68	547	358.8	21.7	4250
TMKHV-Δ 450-6	355	42.7	987	93.9	0.852	2.66	596	370.3	23.3	4410
TMKHV-Δ 450-6	400	48.2	987	94.1	0.849	2.69	655	378.7	24.9	4560
TMKHV-Δ 450-6	450	54.1	988	94.3	0.849	2.71	728	382.7	27.5	4720
TMKHV-Δ 500-6	500	58.7	989	94.3	0.870	2.37	660	471.9	44.9	5600
TMKHV-Δ 500-6	560	66.1	989	94.5	0.863	2.46	732	474.4	47.9	5750
TMKHV-Δ 500-6	630	74.3	990	94.5	0.863	2.53	824	473	53	5910
TMKHV-Δ 500-6	710	83.4	991	94.7	0.865	2.64	943	464.3	59.9	6060
TMKHV-Δ 560-6	800	94.3	991	94.7	0.862	2.73	979	504	86.1	7650
TMKHV-Δ 560-6	900	105.2	991	94.9	0.867	2.62	1051	528.8	92.8	7900
TMKHV-Δ 560-6	1000	115.9	991	95.1	0.874	2.54	1133	545.1	101.1	8040
TMKHV-Δ 630-6	1120	129.8	992	95.3	0.872	2.61	1230	560	137.1	8900
TMKHV-Δ 630-6	1250	144	993	95.4	0.875	2.58	1342	571.9	149.7	9050
TMKHV-Δ 630-6	1400	161	992	95.5	0.876	2.6	1477	581.5	158.6	9210

**IP55, 6 POLES-1.000 Rpm**

10.000 VY/50Hz

Insulation class F

Type	Rated output (kW)	Rated current (A)	Speed (r/min)	Efficiency (%)	Power Factor (cosφ)	Mmax Mn	Rotor voltage (V)	Rotor current (A)	J motor (Kg·m <sup>2</sup> )	Weight (kg)
TMKHV-Δ 450-6	220	17.4	986.8	92.2	0.792	2.71	416	333.1	16.3	3950
TMKHV-Δ 450-6	250	19.3	986.6	92.6	0.807	2.61	447	351.6	17.6	4050
TMKHV-Δ 450-6	280	21.4	986.4	92.9	0.814	2.51	482	365.8	19	4150
TMKHV-Δ 450-6	315	23.9	986.3	93.1	0.816	2.45	522	379.7	20.4	4250
TMKHV-Δ 500-6	355	26.8	989.6	92.8	0.824	3.34	682	323.7	35.3	5150
TMKHV-Δ 500-6	400	29.7	989.3	93.1	0.835	3.19	728	341.4	37.7	5300
TMKHV-Δ 500-6	450	32.7	988.9	93.4	0.851	3	782	357.6	41.7	5450
TMKHV-Δ 500-6	500	36.1	989	93.7	0.855	2.96	843	367.9	44.9	5600
TMKHV-Δ 500-6	560	40.4	989.1	93.9	0.852	2.96	913	379.9	47.3	5750
TMKHV-Δ 560-6	630	45.5	989.1	94.1	0.849	2.68	869	451	58.8	7250
TMKHV-Δ 560-6	710	51	989	94.3	0.852	2.62	936	471.7	62.6	7450
TMKHV-Δ 560-6	800	57.1	989	94.5	0.857	2.56	1014	490	67.6	7650
TMKHV-Δ 560-6	900	63.7	989	94.7	0.862	2.52	1108	504.4	73.7	7900
TMKHV-Δ 630-6	1000	71.7	990	94.6	0.852	2.69	976	634.2	128	8650
TMKHV-Δ 630-6	1120	79.6	990	94.8	0.858	2.62	1059	654.7	139.8	8900
TMKHV-Δ 630-6	1250	88.4	990.3	94.9	0.860	2.61	1156	668.5	151.5	9050



# TMKHV-Δ series

6kV, 10kV medium sized three-phase asynchronous motors (H355-630)

**IP55, 8 POLES-750 Rpm**

6.000 VY/50Hz

Insulation class F

Type	Rated output (kW)	Rated current (A)	Speed (r/min)	Efficiency (%)	Power Factor (cosφ)	Mmax Mn	Rotor voltage (V)	Rotor current (A)	J motor (Kgm²)	Weight (kg)
TMKHV-Δ 400-8	185	24.5	734	91.6	0.794	2.32	290	405.6	19.6	3470
TMKHV-Δ 400-8	200	26.8	736	92.0	0.781	2.55	332	380.4	21.9	3620
TMKHV-Δ 450-8	220	28.9	740	92.6	0.790	2.95	470	292.1	29.6	3800
TMKHV-Δ 450-8	250	32.4	739	92.8	0.800	2.82	507	308	31.8	3950
TMKHV-Δ 450-8	280	36.2	739	93.0	0.801	2.79	549	318.2	34	4090
TMKHV-Δ 450-8	315	40.1	739	93.2	0.810	2.7	600	327.7	37.5	4250
TMKHV-Δ 500-8	355	45	741	93.6	0.810	2.64	550	402.1	55.6	5050
TMKHV-Δ 500-8	400	50.6	742	93.8	0.810	2.63	600	414.8	59.5	5250
TMKHV-Δ 500-8	450	56.3	742	94.0	0.818	2.58	660	423.3	65.7	5450
TMKHV-Δ 500-8	500	61.8	742	94.2	0.826	2.57	735	421.7	74.4	5650
TMKHV-Δ 560-8	560	68.1	741	94.3	0.839	2.18	663	529.5	91.4	7350
TMKHV-Δ 560-8	630	76.5	741	94.5	0.838	2.23	736	534.3	98.6	7540
TMKHV-Δ 560-8	710	86.3	742	94.7	0.837	2.32	828	533	107.5	7750
TMKHV-Δ 560-8	800	97.8	743	94.8	0.830	2.46	946	523	118.2	7900
TMKHV-Δ 630-8	900	108.9	743	94.9	0.839	2.5	1092	509.5	176.3	8600
TMKHV-Δ 630-8	1000	120	743	95.0	0.844	2.43	1177	525.4	191.3	8850
TMKHV-Δ 630-8	1120	133.9	743	95.2	0.846	2.38	1276	542.6	206.3	9050

**IP55, 8 POLES-750 Rpm**

10.000 VY/50Hz

Insulation class F

Type	Rated output (kW)	Rated current (A)	Speed (r/min)	Efficiency (%)	Power Factor (cosφ)	Mmax Mn	Rotor voltage (V)	Rotor current (A)	J motor (Kgm²)	Weight (kg)
TMKHV-Δ 500-8	220	18.6	741.3	92.0	0.741	3.04	492	280.5	33.2	4750
TMKHV-Δ 500-8	250	21.4	741.6	92.3	0.732	3.1	540	289.3	34.8	4900
TMKHV-Δ 500-8	280	23.3	741.1	92.5	0.751	2.88	569	308	37.2	5050
TMKHV-Δ 500-8	315	25.1	740.4	92.9	0.779	2.6	603	328.1	41.2	5250
TMKHV-Δ 500-8	355	28.7	741.2	93.1	0.767	2.76	678	327.1	44.3	5450
TMKHV-Δ 500-8	400	32	740.9	93.4	0.773	2.65	723	404	46.7	5600
TMKHV-Δ 560-8	450	35.6	742.4	93.4	0.782	2.71	673	416.7	75.9	7140
TMKHV-Δ 560-8	500	39.1	742.2	93.6	0.790	2.6	715	435.8	80.8	7440
TMKHV-Δ 560-8	560	44.9	743	93.8	0.767	2.84	815	425.5	87.3	7750
TMKHV-Δ 560-8	630	49.5	742.8	94.0	0.781	2.7	879	444	95.4	8000
TMKHV-Δ 630-8	710	53.1	741.6	94.4	0.818	2.64	844	521.4	122.8	8650
TMKHV-Δ 630-8	800	59.1	741.5	94.6	0.826	2.54	916	541.8	134.5	8900
TMKHV-Δ 630-8	900	66.1	741.5	94.8	0.829	2.5	1000	558.1	146.1	9100

# TMKHV-Δ series

6kV, 10kV medium sized three-phase asynchronous motors (H355-630)

**IP55, 10 POLES-600 Rpm**

6.000 VY/50Hz

Insulation class F

TYPE	Rated output (kW)	Rated current (A)	Speed (r/min)	Efficiency (%)	Power Factor (cosφ)	Mmax Mn	Rotor voltage (V)	Rotor current (A)	J motor (Kgm <sup>2</sup> )	Weight (kg)
TMKHV-Δ 450-10	185	25.7	589	91.9	0.755	2.56	465	251.7	29.4	3500
TMKHV-Δ 450-10	200	27.7	589	92.1	0.756	2.58	501	252.1	31.6	3640
TMKHV-Δ 450-10	220	30.4	589	92.3	0.754	2.59	542	255.6	33.8	3800
TMKHV-Δ 450-10	250	33.9	589	92.5	0.767	2.47	592	266.2	37.3	3950
TMKHV-Δ 500-10	280	36.7	591	93.6	0.785	2.23	502	350.4	51.4	5490
TMKHV-Δ 500-10	315	41.1	590	93.3	0.790	2.17	544	366	55.2	5650
TMKHV-Δ 500-10	355	46.3	591	93.5	0.789	2.15	594	378	59	5790
TMKHV-Δ 500-10	400	51.7	591	93.7	0.795	2.11	654	386.7	65.3	5940
TMKHV-Δ 560-10	450	58.9	593	93.9	0.783	2.53	721	388.8	91	7170
TMKHV-Δ 560-10	500	66.2	593	94.1	0.773	2.66	805	385.4	98.2	7330
TMKHV-Δ 560-10	560	72.2	593	94.3	0.791	2.47	858	406.4	107.2	7550
TMKHV-Δ 560-10	630	82.4	593	94.4	0.779	2.63	979	398.4	117.9	7700
TMKHV-Δ 630-10	710	90.2	593	94.5	0.802	2.56	941	467.7	157.9	8600
TMKHV-Δ 630-10	800	99	592	94.7	0.822	2.37	1017	489.2	178.5	8850
TMKHV-Δ 630-10	900	110.5	592	94.8	0.827	2.3	1102	508.1	193.4	9050

**IP55, 10 POLES-600 Rpm**

10.000 VY/50Hz

Insulation class F

TYPE	Rated output (kW)	Rated current (A)	Speed (r/min)	Efficiency (%)	Power Factor (cosφ)	Mmax Mn	Rotor voltage (V)	Rotor current (A)	J motor (Kgm <sup>2</sup> )	Weight (kg)
TMKHV-Δ 500-10	220	19.3	592.7	91.6	0.719	2.71	425	326.5	48.6	5050
TMKHV-Δ 500-10	250	21.8	593	91.8	0.721	2.72	478	328.6	54.5	5250
TMKHV-Δ 500-10	280	24.1	592.8	92.1	0.727	2.63	510	345	57.5	5450
TMKHV-Δ 500-10	315	27.1	592.7	92.3	0.728	2.56	546	362.6	60.5	5650
TMKHV-Δ 560-10	355	29.3	592.7	92.3	0.757	2.87	726	306.1	86	7350
TMKHV-Δ 560-10	400	32.4	592.5	92.6	0.771	2.73	779	321.6	93	7540
TMKHV-Δ 560-10	450	35.7	592.3	92.9	0.783	2.61	840	335.6	101.7	7750
TMKHV-Δ 560-10	500	39	592.3	93.2	0.794	2.52	912	343.7	112.1	7900
TMKHV-Δ 630-10	560	43.3	592.9	93.7	0.798	2.62	841	415.4	147.9	8600
TMKHV-Δ 630-10	630	48.6	592.9	93.8	0.797	2.59	911	431.3	156.9	8850
TMKHV-Δ 630-10	710	54.2	592.9	94.0	0.804	2.52	995	444.9	171.7	9050
TMKHV-Δ 630-10	800	60.9	593.1	94.2	0.805	2.51	1095	455	186.5	9200

# TMKHV-Δ series

6kV, 10kV medium sized three-phase asynchronous motors (H355-630)

**IP55, 12 POLES-500 Rpm**

6.000 VY/50Hz

Insulation class F

TYPE	Rated output (kW)	Rated current (A)	Speed (r/min)	Efficiency (%)	Power Factor (cosφ)	Mmax Mn	Rotor voltage (V)	Rotor current (A)	J motor (Kgm <sup>2</sup> )	Weight (kg)
TMKHV-Δ 450-12	185	27.2	489	91.5	0.715	2.4	505	233.4	38.1	3500
TMKHV-Δ 450-12	200	29.5	490	91.8	0.711	2.44	547	232.3	40.9	3640
TMKHV-Δ 500-12	220	31.8	491	92.3	0.721	2.36	405	344.9	52.4	5170
TMKHV-Δ 500-12	250	35.4	490	92.5	0.736	2.19	431	370.3	56.1	5330
TMKHV-Δ 500-12	280	38.5	490	92.7	0.754	2.02	462	390.2	62.2	5490
TMKHV-Δ 500-12	315	44.9	491	92.9	0.727	2.27	530	377.2	65.9	5650
TMKHV-Δ 560-12	355	48.5	492	93.4	0.754	2.33	631	354.2	87.4	7170
TMKHV-Δ 560-12	400	54.6	492	93.6	0.753	2.33	694	362.5	94.5	7330
TMKHV-Δ 560-12	450	61.4	492	93.8	0.753	2.35	771	366.2	103.2	7470
TMKHV-Δ 630-12	500	66.1	493	93.9	0.775	2.32	789	397.4	163.8	8250
TMKHV-Δ 630-12	560	75.3	494	94.1	0.760	2.5	892	390.5	175.6	8410
TMKHV-Δ 630-12	630	83.1	493	94.3	0.774	2.37	958	410.1	190.3	8570

**IP55, 12 POLES-500 Rpm**

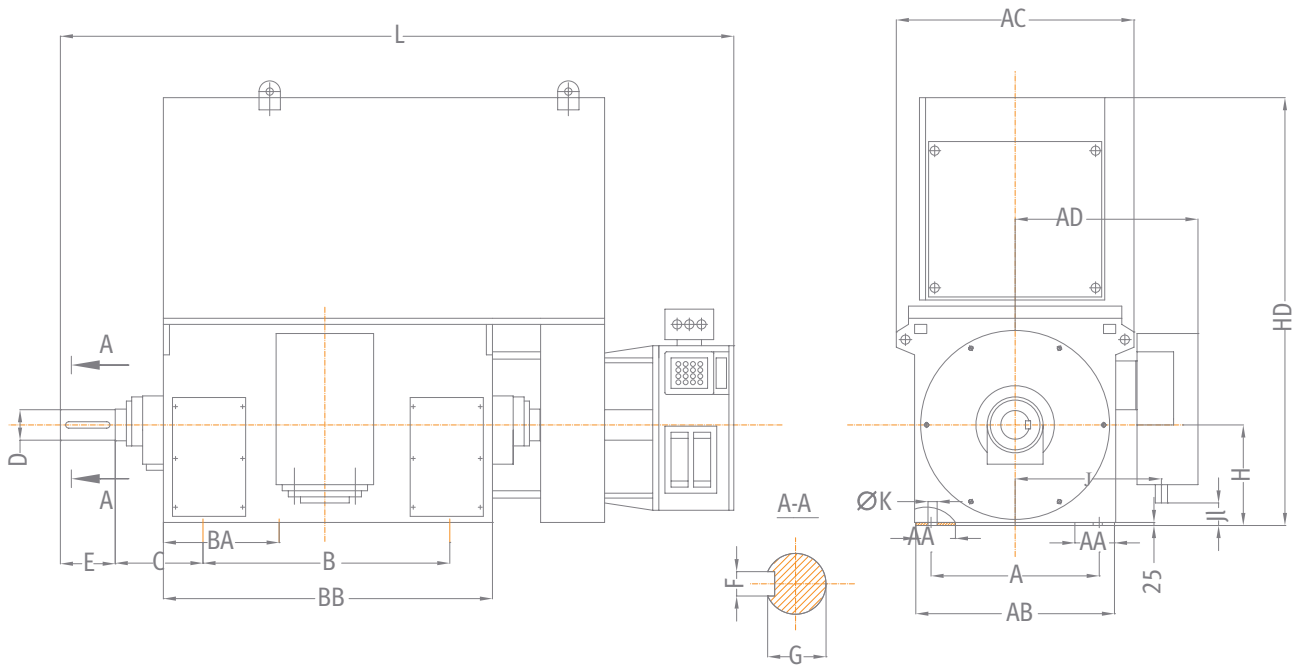
10.000 VY/50Hz

Insulation class F

Type	Rated output (kW)	Rated current (A)	Speed (r/min)	Efficiency (%)	Power Factor (cosφ)	Mmax Mn	Rotor voltage (V)	Rotor current (A)	J motor (Kgm <sup>2</sup> )	Weight (kg)
TMKHV-Δ 560-12	220	19.4	492.2	90.9	0.722	2.81	552	252.9	79.7	7170
TMKHV-Δ 560-12	250	21.5	491.7	91.2	0.737	2.64	581	273.3	83.3	7330
TMKHV-Δ 560-12	280	24.2	492.8	91.5	0.729	2.76	676	261.1	90.2	7550
TMKHV-Δ 560-12	315	27.7	492.8	91.9	0.716	2.91	735	269.3	98.7	7700
TMKHV-Δ 560-12	355	30.2	492.4	92.2	0.737	2.72	790	283.1	108.8	7850
TMKHV-Δ 630-12	400	33.7	493.7	92.9	0.737	2.84	738	339.1	145.3	8600
TMKHV-Δ 630-12	450	32	494.1	93.6	0.867	2.74	819	342.8	154.3	8850
TMKHV-Δ 630-12	500	40.9	493.5	93.4	0.757	2.63	853	367	169	9050
TMKHV-Δ 630-12	560	45.2	493.5	93.6	0.764	2.56	925	379.2	183.7	9200

# TMKHV-Δ series

## Dimension sheet



### MOUNTING B3 SIZE 355-500

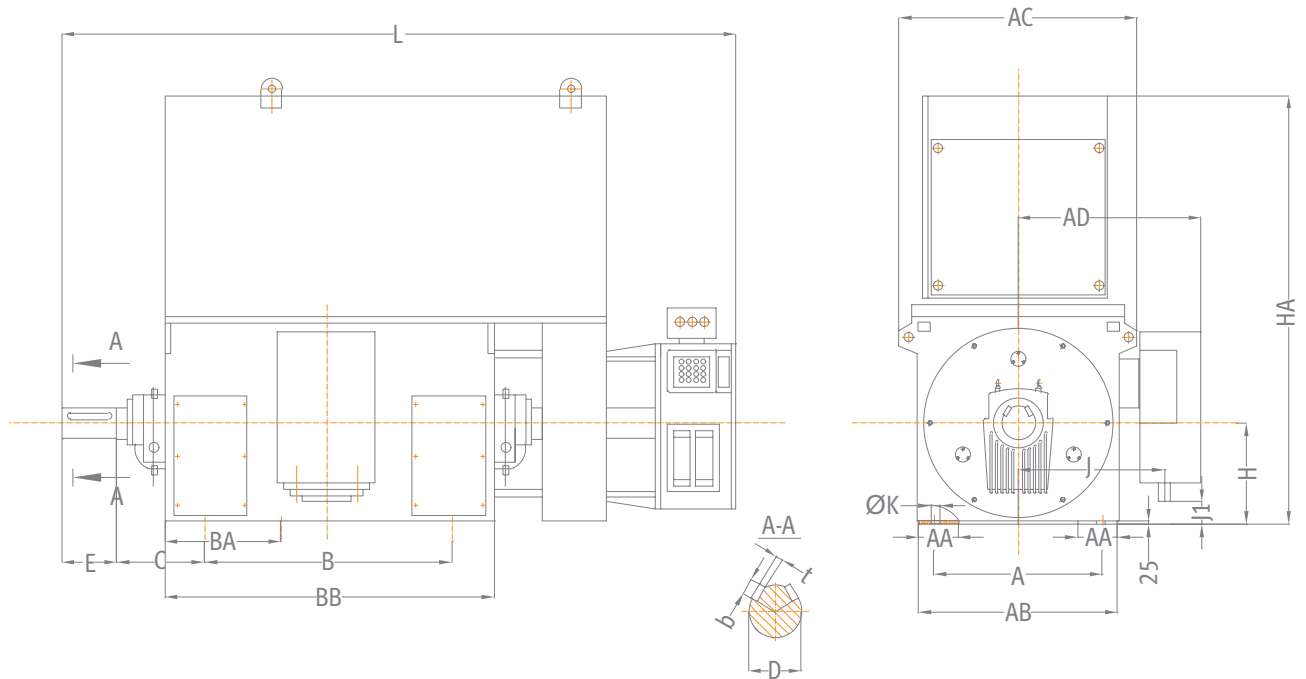
### TMKHV-Δ series, 6KV

TYPE	A	AA	AB	AC	AD	B	BA	BB	C
TMKHV Δ 355-4-6	630	130	770	965	745	900	565	1420	315
TMKHV Δ 400-4-8	710	130	810	1010	760	1000	565	1510	375
TMKHV Δ 400-8	710	130	810	1010	760	1000	565	1510	375
TMKHV Δ 450-4	800	150	910	1120	810	1120	600	1620	355
TMKHV Δ 450-6	800	150	910	1120	810	1120	600	1620	355
TMKHV Δ 450-8-12	800	150	910	1120	810	1120	600	1620	355
TMKHV Δ 500-4	900	150	1010	1220	860	1250	655	1730	475
TMKHV Δ 500-6	900	150	1010	1220	860	1250	655	1730	475
TMKHV Δ 500-8-12	900	150	1010	1220	860	1250	655	1730	475

TYPE	D	E	F	G	HD	J	JL	K	L
TMKHV Δ 355-4-6	100	210	28	90	1500	587	55	28	2550
TMKHV Δ 400-4-8	110	210	28	100	1700	607	85	35	2690
TMKHV Δ 400-8	110	210	28	100	1700	607	85	35	2760
TMKHV Δ 450-4	120	210	32	109	1900	657	185	35	2930
TMKHV Δ 450-6	130	250	32	119	1900	657	185	35	2930
TMKHV Δ 450-8-12	130	250	32	119	1900	657	185	35	3000
TMKHV Δ 500-4	130	250	32	119	2200	707	285	42	3230
TMKHV Δ 500-6	140	250	36	125	2200	707	285	42	3230
TMKHV Δ 500-8-12	140	250	36	125	2200	707	285	42	3270

# TMKHV-Δ series

## Dimension sheet



### MOUNTING B3 SIZE 560-630

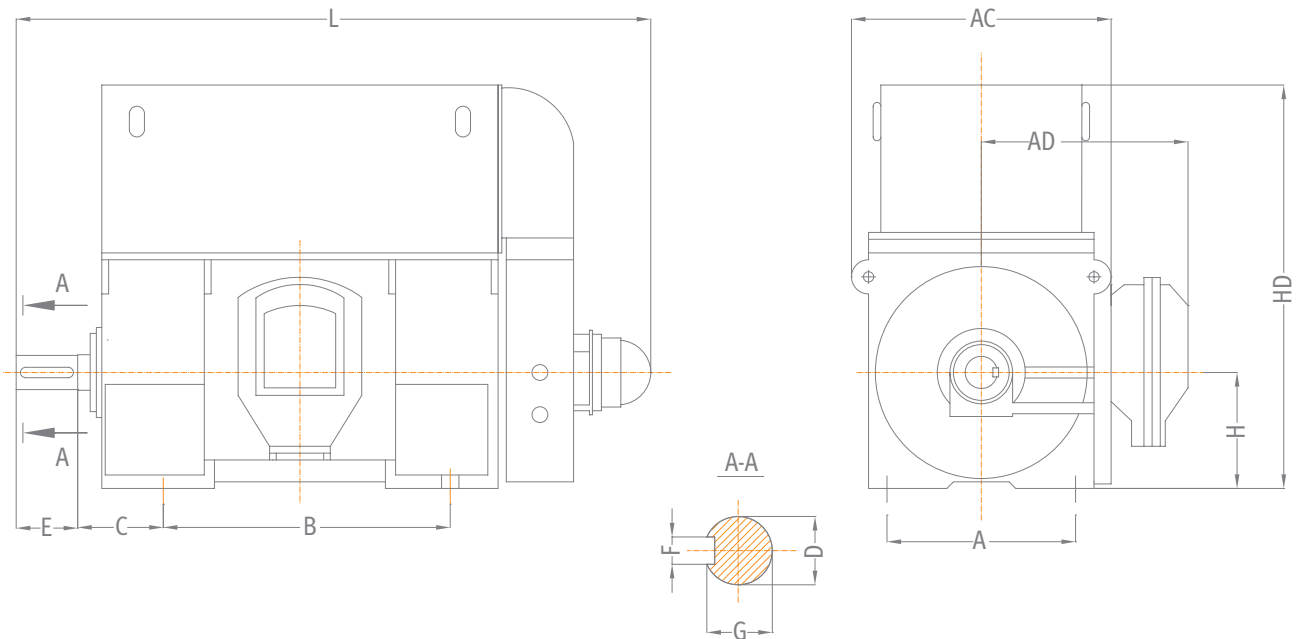
### TMKHV-Δ series, 6KV

TYPE	A	AA	AB	AC	AD	B	BA	BB	C
TMKHV-Δ 560-4	1000	170	1130	1350	1060	1400	690	1880	500
TMKHV-Δ 560-6-12	1000	170	1130	1350	1060	1400	690	1880	500
TMKHV-Δ 630-4	1120	190	1260	1530	1120	1600	770	2150	530
TMKHV-Δ 630-6-12	1120	190	1260	1530	1120	1600	770	2150	530

TYPE	D	E	t	b	HD	J	JL	K	L
TMKHV-Δ 560-4	150	250	11.4	39.7	2400	814	115	42	3500
TMKHV-Δ 560-6-12	160	300	12.4	42.8	2400	814	115	42	3850
TMKHV-Δ 630-4	170	300	12.4	44.2	2700	879	265	48	4120
TMKHV-Δ 630-6-12	180	300	12.4	45.6	2700	879	265	48	4120

# TMKHV-Δ series

## Dimension sheet



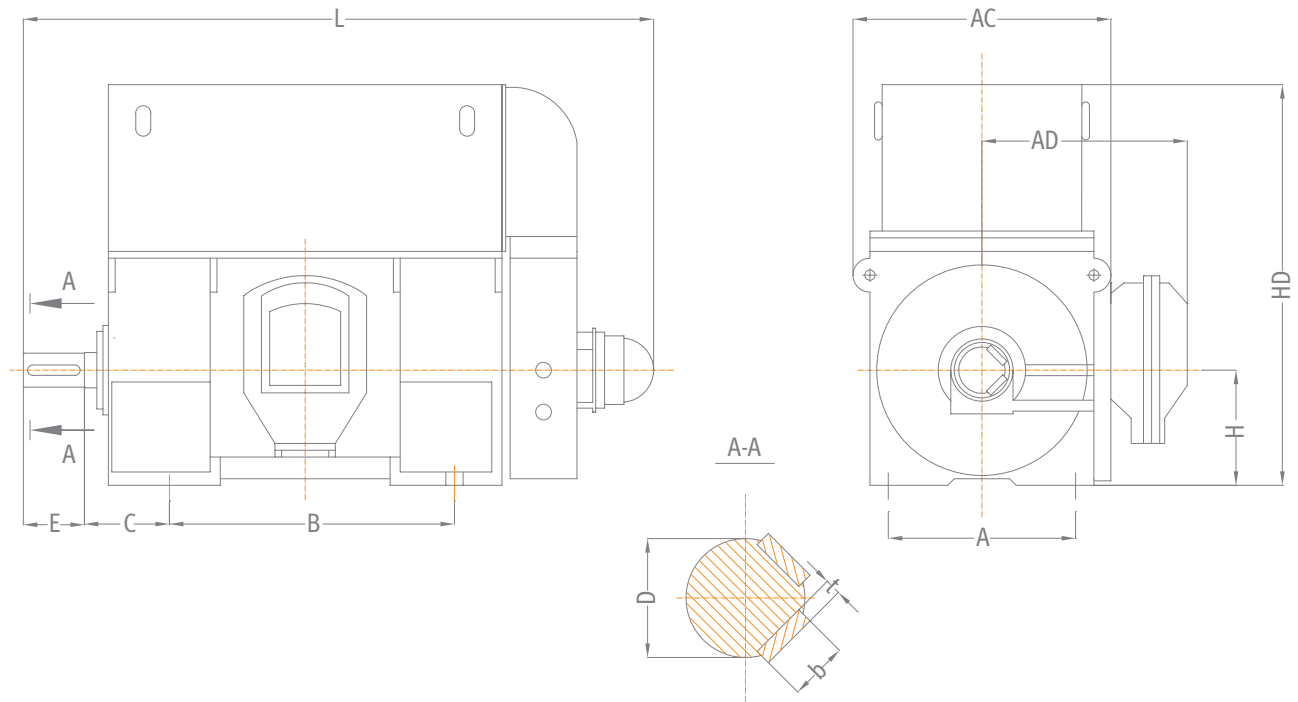
### MOUNTING B3 SIZE 450-500

### TMKHV-Δ series, 10KV

TYPE	Number of Poles	Mounting dimension									Outlined dimension			
		A	B	C	D	E	F	G	H	K	AC	AD	HD	L
TMKHV-Δ 450	4-6	800	1120	355	110	210	28	100	450	35	1300	1050	1900	2800
TMKHV-Δ 500	4	900	1250	475	120	210	32	109	500	42	1420	1080	2200	3200
	6-10				130	250	32	119						

# TMKHV-Δ series

## Dimension sheet



### MOUNTING B3 SIZE 560-630

### TMKHV-Δ series, 10KV

TYPE	Number of Poles	Mounting dimension								
		A	B	C	D	E	t	b	H	K
TMKHV-Δ 560	4	1000	1400	500	150	250	11.4	39.7	560	42
	6-12				160	300	12.4	42.5		
TMKHV-Δ 630	4	1120	1600	530	170	300	12.4	44.2	630	48
	6-12				180	300	12.4	45.6		

TYPE	Number of Poles	Outlined dimension			
		AC	AD	HD	L
TMKHV-Δ 560	4	1600	1100	2400	3500
	6-12				
TMKHV-Δ 500	4	1800	1200	2700	3850
	6-12				



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