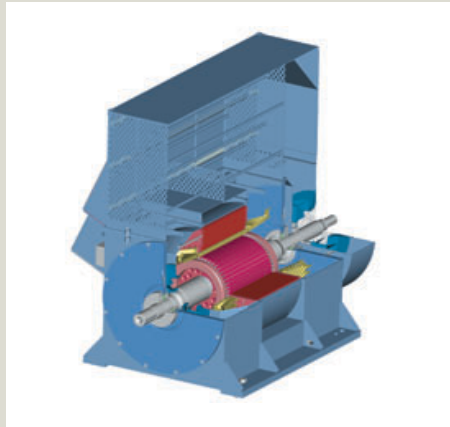


FTC type high voltage induction motors

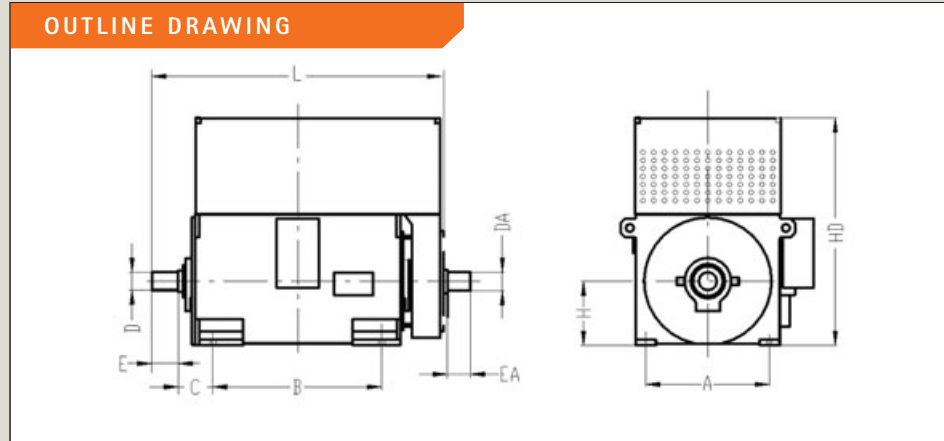
FTC type belongs to our general purpose F series, consisting of horizontal, foot mounted (IM B3, IEC 34-7) induction machines constructed on the principle of variable modules. FTC type is totally enclosed (IP 54, IEC 34-5), self-ventilated with air-to-air heat exchanger (IC 61, IEC 34-6) and squirrel cage rotor for direct starting. The range of rated powers as a function of number of poles of the 6000 V, 50 Hz basic design motors with class F insulation for S1 type duty as per IEC 34-1 operational conditions are shown on the diagram below.



Main constructional features of the motors are robust welded stator case, fabricated steel shields, labyrinth sealed bearings with grease disk, two symmetrical inner air circuits with radial air ducts for both directions of rotation, swept-back blade radial ventilator with reversible according to the direction of rotation blade-holder in the outer air-circuit, top mounted heat exchanger with aluminium tubes, two-layer stator winding with strengthened turn-to-turn insulation, fabricated steel terminal boxes of IP 55 protection grade with pressure relief membrane and double-cage rotor for heavy starting. Pt 100 resistance temperature detectors are built in the stator slots and at the bearings.

On special request we build in additional sensors (microswitch, contact thermometer, vibration sensor,

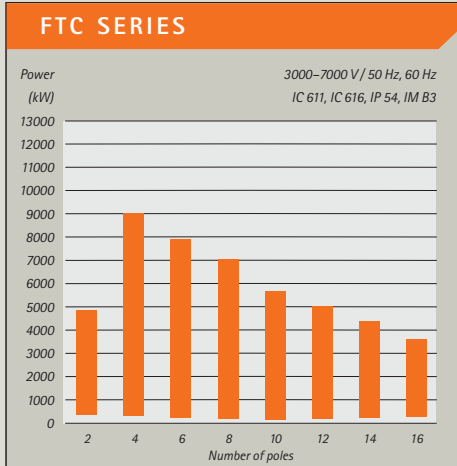
speed sensor) and space heaters. Beside the basic design we can deliver variants of special electrical (15 kV, 60 Hz, 6 terminals, two voltage level, even higher pole numbers than shown in the table) and constructional (two shaft ends, slide bearings, increased safety, pressurized and non-sparking type design for potentially explosive environment) versions and variants meeting special requirements and standards (low noise, high runaway speed, increased reliability for energetics).



FTC IP 54 IC 611 / OVERALL DIMENSION OF MOTOR

Type	Number of poles	A	B	C	D, DA	E, EA	H	HD	L	LC
400 K	4-12	800	800	250	110	210	400	1600	1790	2030
400 H	4-12	800	1000	250	110	210	400	1600	2000	2240
450 L	4-12	900	800	250	120	210	450	1800	1790	2030
450 K	4-12	900	900	250	120	210	450	1800	1940	2180
450 H	4-12	900	1120	250	120	210	450	1800	2110	2350
500 L	4-12	1000	900	280	140	250	500	2000	1990	2275
500 K	4-12	1000	1000	280	140	250	500	2000	2160	2445
500 H	4-12	1000	1250	280	140	250	500	2000	2350	2635
560 L	4-12	1120	1000	280	160	300	560	2250	2175	2500
560 K	4-12	1120	1120	280	160	300	560	2250	2365	2690
560 H	4-12	1120	1400	280	160	300	560	2250	2365	2890
630 L	4-12	1250	1120	315	160	300	630	2250	2410	2730
630 K	4-12	1250	1250	315	180	300	630	2500	2610	2930
630 H	4-12	1250	1600	315	180	300	630	2500	2860	3180
710 L	4*-6-12	1400	1250	315	180	300	710	2500	2630	2950
710 K	4*-6-12	1400	1400	315	200	350	710	2800	2930	3300
710 H	4*-6-12	1400	1800	315	200	350	710	2800	3180	3550
800 L	4*-6-12	1600	1600	315	220	350	800	2800	2930	3310
800 K	4*-6-12	1600	1800	315	220	350	800	2800	3220	3590
800 H	4*-6-12	1600	2000	315	250	410	800	3150	3570	4010

*with slide-bearing block



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Rotating Machines
Business Unit

H-1095 Budapest
Máriássy u. 7.

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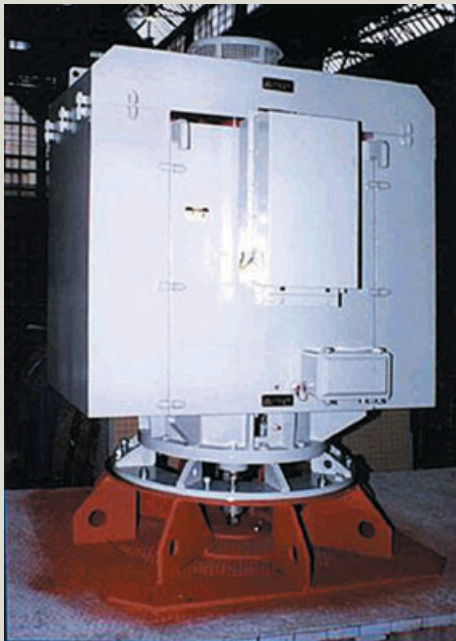
Fax
+36 1 483 6637

E-mail
rotatingmachines.hu
@cgglobal.com
Internet
www.cgglobal.com

FTCV type high voltage induction motors

FTCV type belongs to our general purpose F series, consisting of vertical, flange mounted (IM V1, IEC 34-7) induction machines constructed on the principle of variable modules. FTCV type is totally enclosed (IP 54, IEC 34-5), self-ventilated with air-to-air heat exchanger (IC 61, IEC 34-6) and squirrel cage rotor for direct starting. The range of rated powers as a function of number of poles of the 6000 V, 50 Hz basic design motors with class F insulation for S1 type duty as per IEC 34-1 operational conditions are shown on the diagram below.

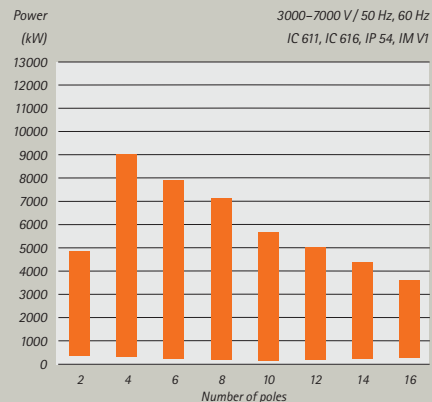
Main constructional features of the motors are robust welded stator case, fabricated steel shields, labyrinth sealed bearings with grease disk, two symmetrical inner air circuits with radial air ducts for both



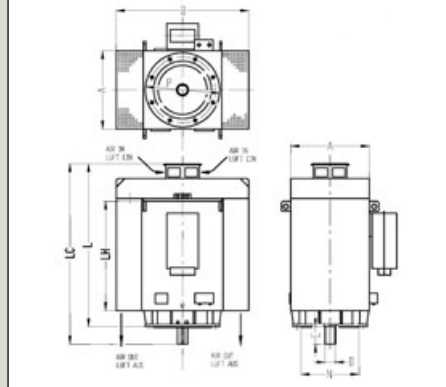
directions of rotation, swept-back blade radial ventilator with reversible according to the direction of rotation blade-holder in the outer air-circuit, side mounted heat exchanger with aluminium tubes, two-layer stator winding with strengthened turn-to-turn insulation, fabricated steel terminal boxes of IP 55 protection grade with pressure relief membrane and double-cage rotor for heavy starting. Pt 100 resistance temperature detectors are built in the stator slots and at the bearings.

On special request we build in additional sensors (microswitch, contact thermometer, vibration sensor, speed sensor) and space heaters. Beside the basic design we can deliver variants of special electrical (15 kV, 60 Hz, 6 terminals, two voltage level, even higher pole numbers than shown in the table) and constructional (increased safety, pressurized and non-sparking type design for potentially explosive environment) versions and variants meeting special requirements and standards (low noise, high runaway speed, increased reliability for energetics). Oil lubricated spherical roller bearings are applied for high axial loads and low-speed motors, or oil lubricated slide thrust bearings for high-speed motors.

FTCV SERIES



OUTLINE DRAWING



FTCV IP 54 IC 611 / OVERALL DIMENSION OF MOTOR

Type	Number of poles	A	D	N	P	E	LH	L	LC
400 L	4-12	950	100	780	900	210	1050	1690	1900
400 J	4-12	950	100	780	900	210	1200	1840	2050
400 H	4-12	950	100	780	900	210	1350	1990	2200
450 L	4-12	1050	110	880	1000	210	1150	1840	2050
450 K	4-12	1050	110	880	1000	210	1300	1990	2200
450 H	4-12	1050	110	880	1000	210	1450	2140	2350
500 L	4-12	1150	130	1000	1150	250	1300	1990	2240
500 K	4-12	1150	130	1000	1150	250	1450	2140	2390
500 H	4-12	1150	130	1000	1150	250	1650	2340	2590
560 L	4-12	1300	150	1120	1250	250	1400	2180	2430
560 K	4-12	1300	150	1120	1250	250	1600	2380	2630
560 H	4-12	1300	150	1120	1250	250	1800	2580	2830
630 L	4-12	1400	180	1250	1400	300	1600	2380	2680
630 K	4-12	1400	180	1250	1400	300	1800	2580	2880
630 H	4-12	1400	180	1250	1400	300	2050	2830	3130
710 L	4*-6-12	1600	200	1400	1600	350	1700	2620	2970
710 K	4*-6-12	1600	200	1400	1600	350	2000	2920	3270
710 H	4*-6-12	1600	200	1400	1600	350	2250	3170	3520
800 L	6-12	1800	220	1600	1800	350	1900	2820	3170
800 K	6-12	1800	220	1600	1800	350	2200	3120	3470
800 H	6-12	1800	220	1600	1800	350	2450	3370	3720

*with slide-bearing block



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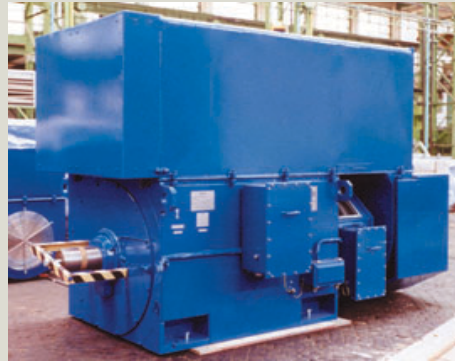
Fax
+36 1 483 6637

E-mail
rotatingmachines.hu
@cgglobal.com
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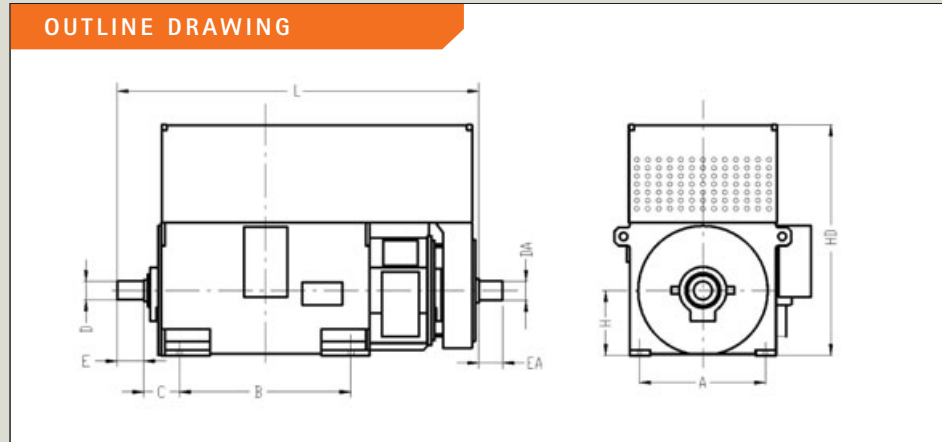
FTA type high voltage induction motors

FTA type belongs to our general purpose F series consisting of horizontal, foot mounted (IM B3, IEC 34-7) induction machines constructed on the principle of variable modules. FTA type is totally enclosed (IP 54, IEC 34-5), self-ventilated motor having air-to-air heat exchanger (IC 61, IEC 34-6) and slip-ring rotor with permanently operating brushes with rotor circuit resistance for starting and speed control. The range of rated powers as a function of number of poles of the 6000 V, 50 Hz basic design motors with class F insulation for S1 type duty as per IEC 34-1 operational conditions are shown on the diagram below.

Main constructional features of the motors are robust welded stator case, fabricated steel shields, labyrinth sealed bearings with grease disc, two symmetrical inner air circuits with radial air ducts for both directions of rotation, swept-back blade radial ventilator with reversible according to the direction of rotation blade-holder in the outer air-circuit, top mounted heat exchanger with aluminium tubes, two-layer stator winding with strengthened turn-to-turn insulation, fabricated steel terminal boxes of IP 55 protection grade with pressure relief membrane, 3-phase two-layer winding. Pt 100 resistance temperature detectors are built in the stator slots and at the bearings.



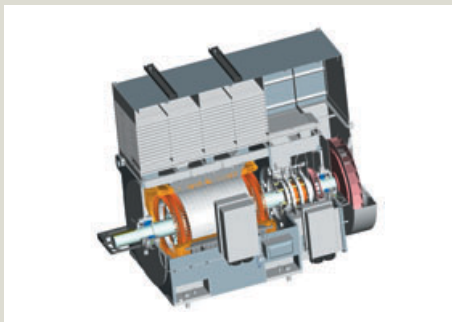
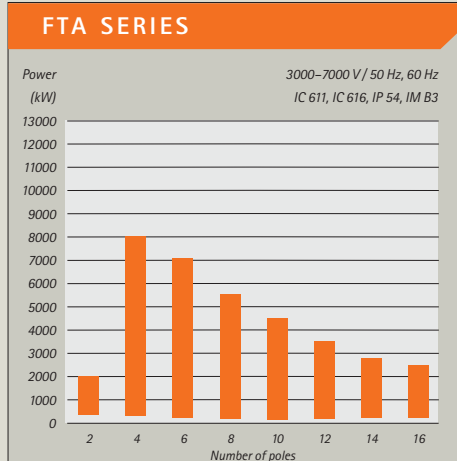
On special request we build in additional sensors (microswitch, contact thermometer, vibration sensor, speed sensor) and space heaters. Beside the basic design we can deliver variants of special electrical (15 kV, 60 Hz, 6 terminals, two voltage level, even higher pole numbers than shown in the table) and constructional (two shaft ends, slide bearings, manual or motor driven brush-lifting) versions and variants meeting special requirements and standards (low noise, high runaway speed, speed control with thyristor cascade, etc.).



FTA IP 54 IC 611 / OVERALL DIMENSION OF MOTOR

Type	Number of poles	A	B	C	D, DA	E, EA	H	HD	L	LC
400 K	4-12	800	800	250	110	210	400	1600	2320	2560
400 H	4-12	800	1000	250	110	210	400	1600	2530	2770
450 L	4-12	900	800	250	120	210	450	1800	2320	2560
450 K	4-12	900	900	250	120	210	450	1800	2470	2710
450 H	4-12	900	1120	250	120	210	450	1800	2640	2880
500 L	4-12	1000	900	280	140	250	500	2000	2520	2805
500 K	4-12	1000	1000	280	140	250	500	2000	2690	2975
500 H	4-12	1000	1250	280	140	250	500	2000	2880	3165
560 L	4-12	1120	1000	280	160	300	560	2250	2775	3100
560 K	4-12	1120	1120	280	160	300	560	2250	2965	3290
560 H	4-12	1120	1400	280	160	300	560	2250	3165	3490
630 L	4-12	1250	1120	315	160	300	630	2500	3010	3330
630 K	4-12	1250	1250	315	180	300	630	2500	3210	3530
630 H	4-12	1250	1600	315	180	300	630	2500	3460	3780
710 L	4*-6-12	1400	1250	315	180	300	710	2500	3300	3620
710 K	4*-6-12	1400	1400	315	200	350	710	2800	3600	3970
710 H	4*-6-12	1400	1800	315	200	350	710	2800	3850	4220
800 L	4*-6-12	1600	1600	315	220	350	800	2800	3600	3980
800 K	4*-6-12	1600	1800	315	220	350	800	2800	3890	4260
800 H	4*-6-12	1600	2000	315	250	410	800	3150	4240	4680

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Máriássy u. 7.

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E-mail
rotatingmachines.hu
@cgglobal.com
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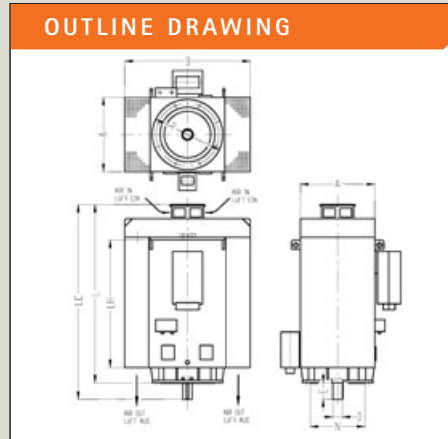
FTAV type high voltage induction motors

FTAV type belongs to our purpose F series consisting of vertical, flange mounted (IMV1, IEC 34-7) induction machines constructed on principle of variable modules. FTAV type is totally enclosed (IP 54, IEC 34-5), self-ventilated motor with air-to-air heat exchanger (IC 61, IEC 34-6) and slip-ring rotor with permanently operating brushes with rotor circuit resistance for starting and speed control. The range of rated powers as a function of number of poles of the 6000 V, 50 Hz basic design motors with class F insulation for S1 type duty as per IEC 34-1 operational conditions are shown on the diagram below.

Main constructional features of the motors are robust welded stator case, fabricated steel shields, labyrinth sealed bearings with grease disc, two symmetrical inner air circuits with radial air ducts for both directions of rotation, swept-back blade radial ventilator with reversible according to the direction of rotation blade-holder in the outer air-circuit, side mounted heat exchanger with aluminium tubes, two-layer stator winding with strengthened turn-to-turn insulation, fabricated steel terminal boxes of IP 55 protection grade with pressure relief membrane,

3-phase two-layer rotor winding. Pt 100 resistance temperature detectors are built in the stator slots and at the bearings.

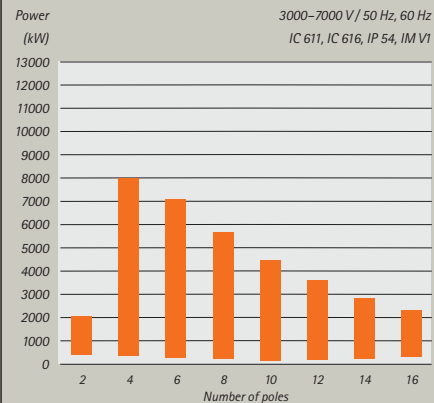
On special request we build in additional sensors (microswitch, contact thermometer, vibration sensor, speed sensor) and space heaters. Beside the basic design we can deliver variants of special electrical (15 kV, 60 Hz, 6 terminals, two voltage level, even higher pole numbers than shown in the table) and constructional (manual or motor driven brush-lifting) versions and variants meeting special requirements and standards (low noise, high runaway speed, speed control with thyristor cascade, etc.). Oil lubricated spherical roller bearings are applied for high axial loads and low-speed motors, or oil lubricated slide thrust bearings for high-speed motors.



FTAV IP 54 IC 611 / OVERALL DIMENSION OF MOTOR									
Type	Number of poles	A	D	N	P	E	LH	L	LC
400 L	4-12	950	100	780	900	210	1600	2240	2450
400 J	4-12	950	100	780	900	210	1750	2390	2600
400 H	4-12	950	100	780	900	210	1900	2540	2750
450 L	4-12	1050	110	880	1000	210	1700	2390	2600
450 K	4-12	1050	110	880	1000	210	1850	2540	2750
450 H	4-12	1050	110	880	1000	210	2000	2690	2900
500 L	4-12	1150	130	1000	1150	250	1850	2540	2790
500 K	4-12	1150	130	1000	1150	250	2000	2690	2940
500 H	4-12	1150	130	1000	1150	250	2200	2890	3140
560 L	4-12	1300	150	1120	1250	250	2000	2780	3030
560 K	4-12	1300	150	1120	1250	250	2200	2980	3230
560 H	4-12	1300	150	1120	1250	250	2400	3180	3430
630 L	4-12	1400	180	1250	1400	300	2200	2980	3280
630 K	4-12	1400	180	1250	1400	300	2400	3180	3480
630 H	4-12	1400	180	1250	1400	300	2650	3430	3730
710 L	4*-6-12	1600	200	1400	1600	350	2400	3320	3670
710 K	4*-6-12	1600	200	1400	1600	350	2650	3570	3920
710 H	4*-6-12	1600	200	1400	1600	350	2900	3820	4170
800 L	6-12	1800	220	1600	1800	350	2600	3520	3870
800 K	6-12	1800	220	1600	1800	350	2900	3820	4170
800 H	6-12	1800	220	1600	1800	350	3150	4070	4420

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H-1095 Budapest
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+36 1 483 6602

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rotatingmachines.hu
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