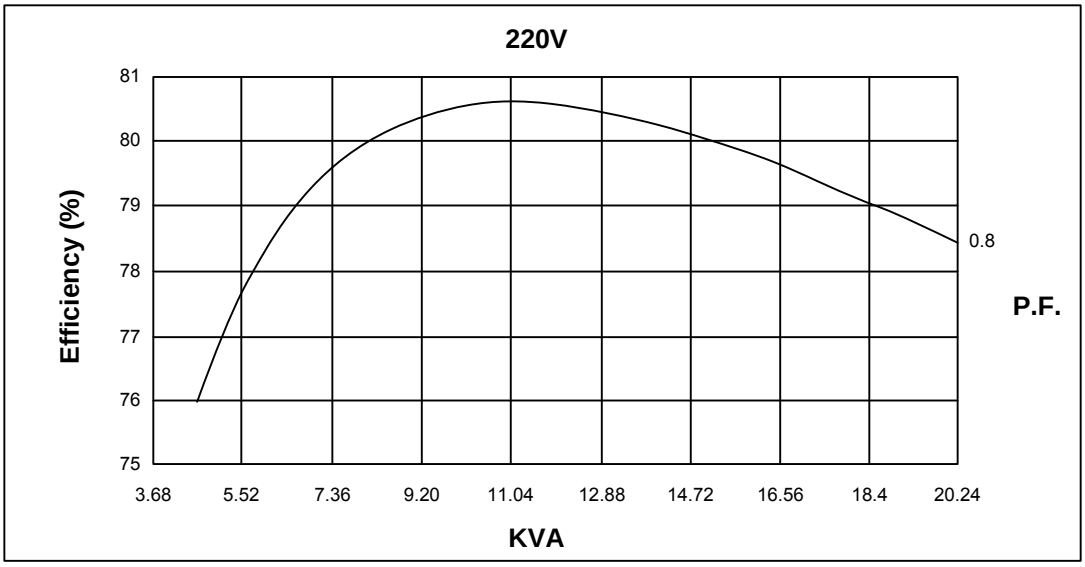
Specification Sheet for WorldWide Electric AHD5104

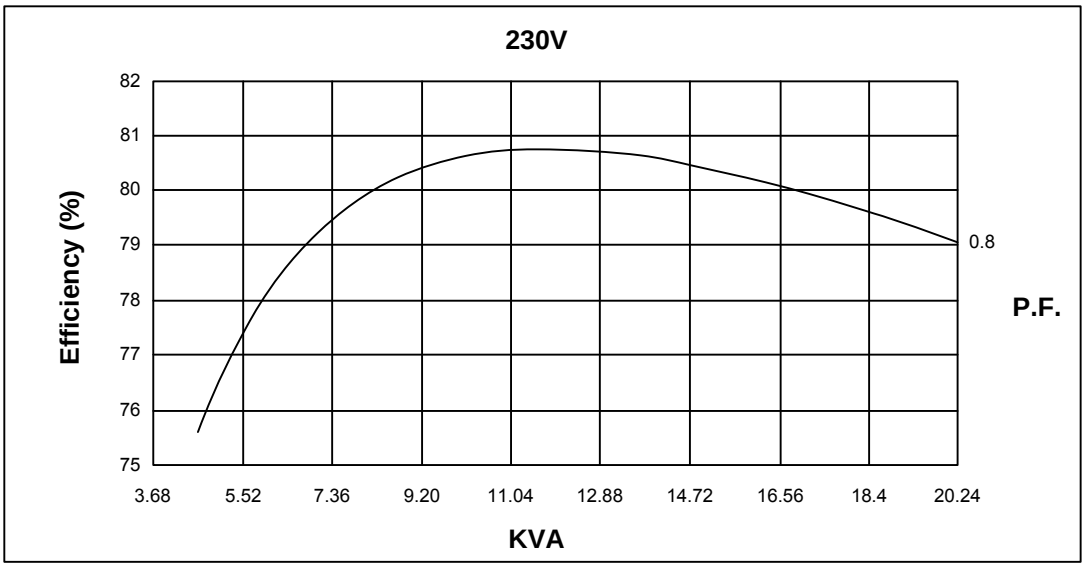
CONTROL SYSTEM	SELF-EXCITED					
AUTOMATIC VOLTAGE REGUALTOR	AGR460 (STANDARD)		AGR440 (OPTIONAL)			
VOLTAGE REGULATION	± 1.0 %		± 1.0 %			
SUSTAINED SHORT CIRCUIT	NONE – SELF-EXCITED MACHINES CANNOT SUPPLY A SHORT-CIRCUIT CURRENT					
INSULATION SYSTEM	CLASS H					
PROTECTION	IP23					
RATED POWER FACTOR	0.8					
STATOR WINDING	SINGLE LAYER CONCENTRIC					
WINDING PITCH	TWO-THIRDS					
NUMBER OF WINDING LEADS	4					
STATOR WINDING RESISTANCE	0.131Ω @ 22°C WIRED AS SERIES					
ROTOR WINDING RESISTANCE	0.64Ω @ 22°C					
EXCITER STATOR RESISTANCE	20Ω @ 22°C					
EXCITER ROTOR RESISTANCE	0.105Ω @ 22°C					
R.F.I. SUPPRESSION	BS EN 61000-6-2 & BS EN 61000-6-4, VDE 0875G, VDE 0875N. Consult the factory for others.					
WAVEFORM DISTORTION	NO LOAD < 1.5% NON-DISTORTING BALANCED LINEAR LOAD < 5.0%					
MAXIMUM OVERSPEED	2250 Rev/Min					
BEARING DRIVE END	BALL. 6309 - 2RS (ISO)					
BEARING NON-DRIVE END	BALL. 6306 - 2RS (ISO)					
	1 BEARING		2 BEARING			
WEIGHT COMP. GENERATOR	128 kg		131 kg			
WEIGHT WOUND STATOR	43.6 kg		43.6 kg			
WEIGHT WOUND ROTOR	40.69 kg		41.47 kg			
WR² INERTIA	0.1568 kgm^2		0.1568 kgm^2			
SHIPPING WEIGHTS in a crate	138 kg		141 kg			
PACKING CRATE SIZE	84 x 59 x 75 (cm)		84 x 59 x 75 (cm)			
TELEPHONE INTERFERENCE	THF < 2%		TIF < 50			
COOLING AIR	0.119 m^3/sec, 250 CFM					
VOLTAGE, SERIES	220		230		240	
VOLTAGE, PARALLEL	110		115		120	
POWER FACTOR	0.8	1.0	0.8	1.0	0.8	1.0
KVA BASE RATING FOR REACTANCE VALUES	18.4	21.0	18.4	22.3	18.4	23.0
Xd DIR. AXIS SYNCHRONOUS	1.821	2.078	1.666	2.019	1.530	1.913
X'd DIR. AXIS TRANSIENT	0.184	0.210	0.169	0.205	0.155	0.194
X"d DIR. AXIS SUBTRANSIENT	0.117	0.134	0.107	0.130	0.098	0.123
Xq QUAD. AXIS REACTANCE	0.901	1.028	0.824	0.999	0.757	0.946
X"q QUAD. AXIS SUBTRANSIENT	0.204	0.233	0.186	0.225	0.171	0.214
X_L LEAKAGE REACTANCE	0.074	0.084	0.068	0.082	0.062	0.078
X_2 NEGATIVE SEQUENCE	0.165	0.188	0.151	0.183	0.139	0.174
X_0 ZERO SEQUENCE	0.079	0.090	0.072	0.087	0.066	0.083
REACTANCES ARE SATURATED.	VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED.					
T'd TRANSIENT TIME CONST.	0.02 s					
T"d SUB-TRANSIENT TIME CONST.	0.005 s					
T'do O.C. FIELD TIME CONST.	0.4 s					
Ta ARMATURE TIME CONST.	0.006 s					
SHORT CIRCUIT RATIO	1/Xd					

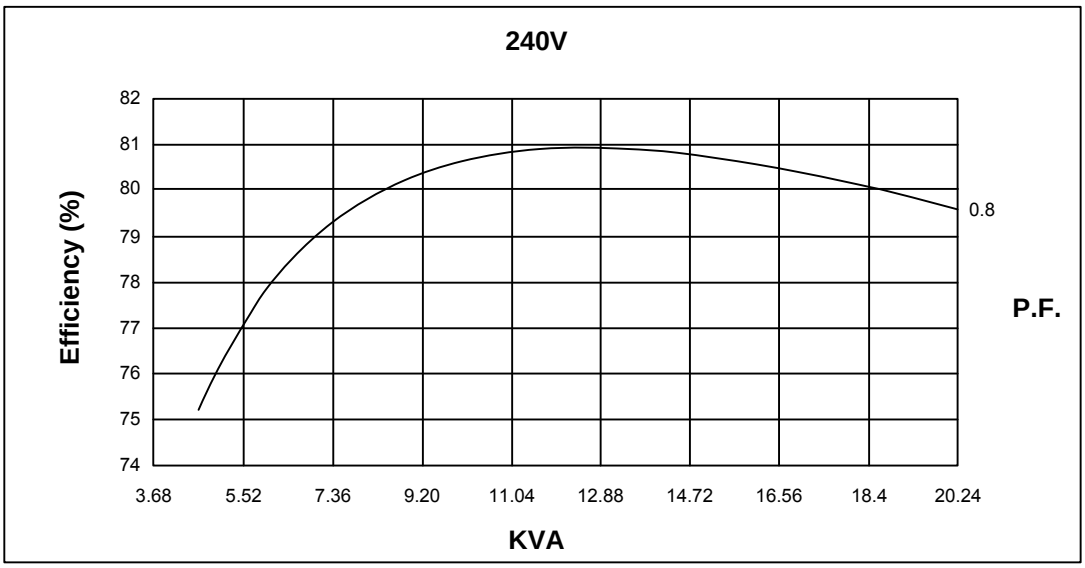
Specification Sheet for WorldWide Electric AG184E-4

CONTROL SYSTEM	SELF-EXCITED					
AUTOMATIC VOLTAGE REGUALTOR	AGR460 (STANDARD)		AGR440 (OPTIONAL)			
VOLTAGE REGULATION	± 1.0 %		± 1.0 %			
SUSTAINED SHORT CIRCUIT	NONE – SELF-EXCITED MACHINES CANNOT SUPPLY A SHORT-CIRCUIT CURRENT					
INSULATION SYSTEM	CLASS H					
PROTECTION	IP23					
RATED POWER FACTOR	0.8					
STATOR WINDING	SINGLE LAYER CONCENTRIC					
WINDING PITCH	TWO-THIRDS					
NUMBER OF WINDING LEADS	4					
STATOR WINDING RESISTANCE	0.131Ω @ 22°C WIRED AS SERIES					
ROTOR WINDING RESISTANCE	0.64Ω @ 22°C					
EXCITER STATOR RESISTANCE	20Ω @ 22°C					
EXCITER ROTOR RESISTANCE	0.105Ω @ 22°C					
R.F.I. SUPPRESSION	BS EN 61000-6-2 & BS EN 61000-6-4, VDE 0875G, VDE 0875N. Consult the factory for others.					
WAVEFORM DISTORTION	NO LOAD < 1.5% NON-DISTORTING BALANCED LINEAR LOAD < 5.0%					
MAXIMUM OVERSPEED	2250 Rev/Min					
BEARING DRIVE END	BALL. 6309 - 2RS (ISO)					
BEARING NON-DRIVE END	BALL. 6306 - 2RS (ISO)					
	1 BEARING		2 BEARING			
WEIGHT COMP. GENERATOR	128 kg		131 kg			
WEIGHT WOUND STATOR	43.6 kg		43.6 kg			
WEIGHT WOUND ROTOR	40.69 kg		41.47 kg			
WR² INERTIA	0.1568 kgm^2		0.1568 kgm^2			
SHIPPING WEIGHTS in a crate	138 kg		141 kg			
PACKING CRATE SIZE	84 x 59 x 75 (cm)		84 x 59 x 75 (cm)			
TELEPHONE INTERFERENCE	THF < 2%		TIF < 50			
COOLING AIR	0.119 m^3/sec, 250 CFM					
VOLTAGE, SERIES	220		230		240	
VOLTAGE, PARALLEL	110		115		120	
POWER FACTOR	0.8	1.0	0.8	1.0	0.8	1.0
KVA BASE RATING FOR REACTANCE VALUES	18.4	21.0	18.4	22.3	18.4	23.0
Xd DIR. AXIS SYNCHRONOUS	1.821	2.078	1.666	2.019	1.530	1.913
X'd DIR. AXIS TRANSIENT	0.184	0.210	0.169	0.205	0.155	0.194
X"d DIR. AXIS SUBTRANSIENT	0.117	0.134	0.107	0.130	0.098	0.123
Xq QUAD. AXIS REACTANCE	0.901	1.028	0.824	0.999	0.757	0.946
X"q QUAD. AXIS SUBTRANSIENT	0.204	0.233	0.186	0.225	0.171	0.214
X_L LEAKAGE REACTANCE	0.074	0.084	0.068	0.082	0.062	0.078
X_2 NEGATIVE SEQUENCE	0.165	0.188	0.151	0.183	0.139	0.174
X_0 ZERO SEQUENCE	0.079	0.090	0.072	0.087	0.066	0.083
REACTANCES ARE SATURATED.	VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED.					
T'd TRANSIENT TIME CONST.	0.02 s					
T"d SUB-TRANSIENT TIME CONST.	0.005 s					
T'do O.C. FIELD TIME CONST.	0.4 s					
Ta ARMATURE TIME CONST.	0.006 s					
SHORT CIRCUIT RATIO	1/Xd					

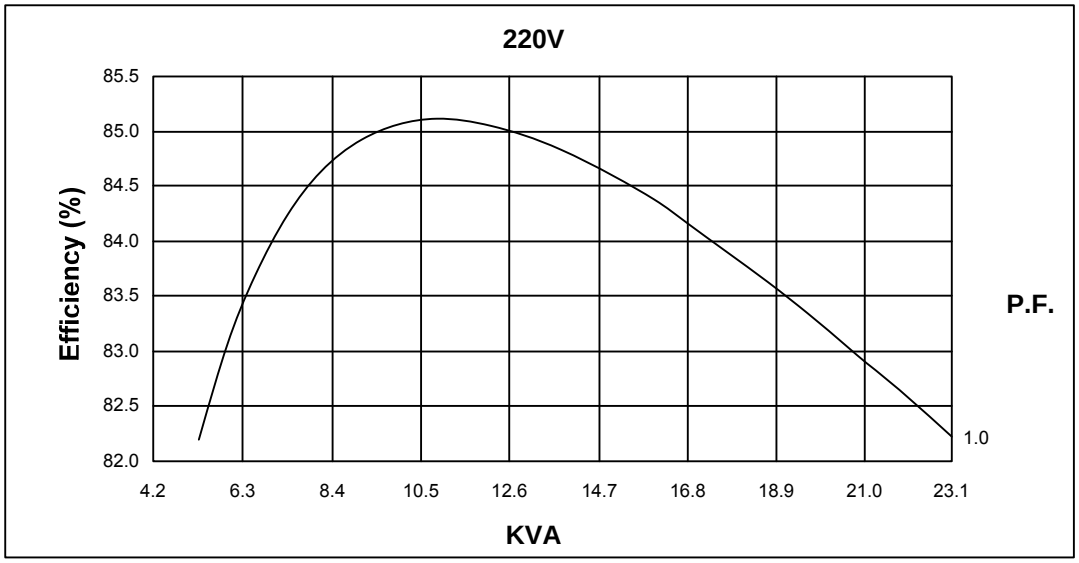
SINGLE-PHASE EFFICIENCY CURVES FOR 06 WINDING AT 0.8 POWER FACTOR

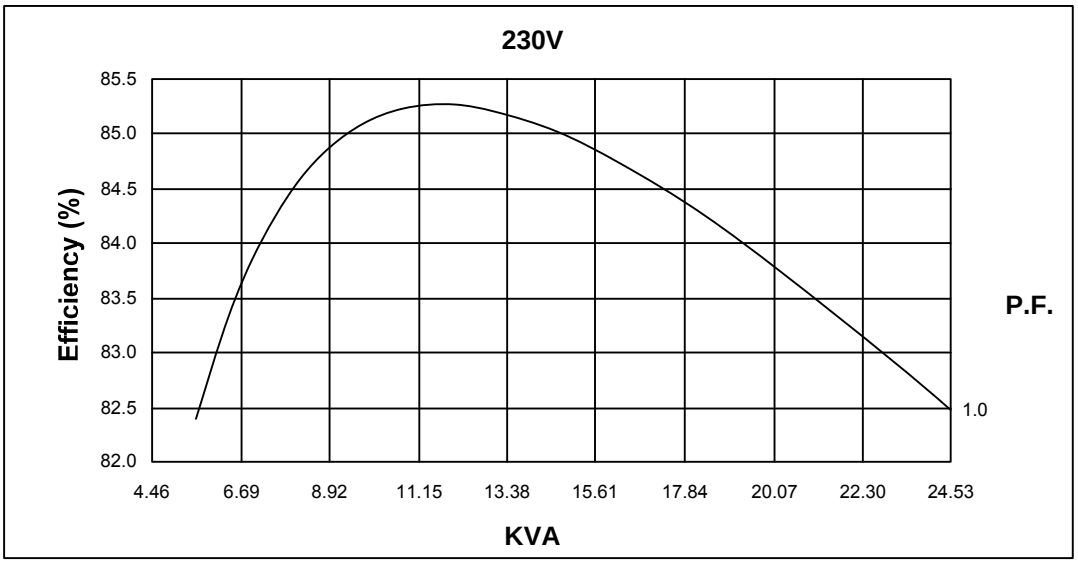


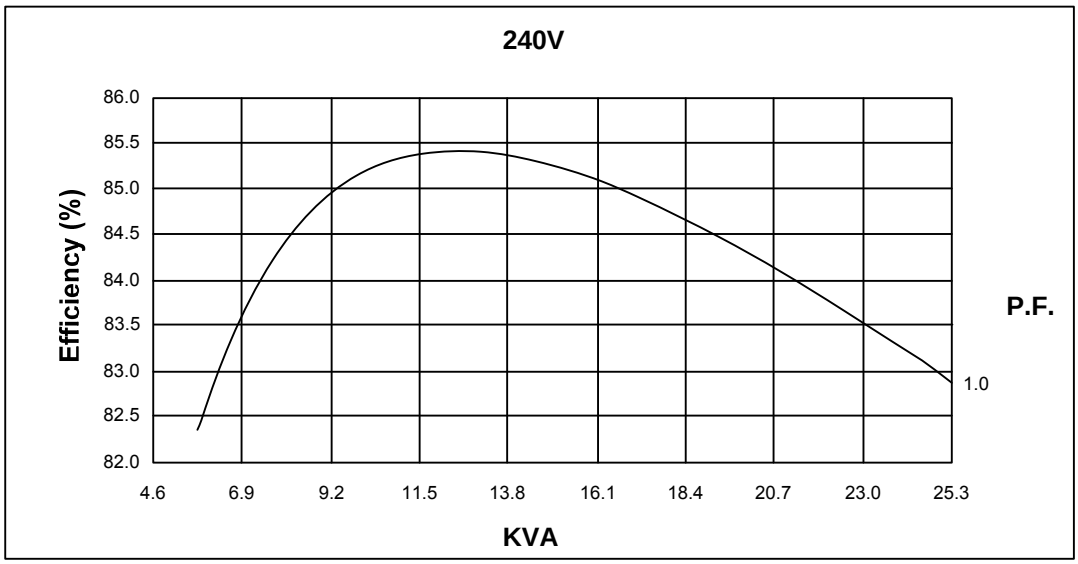




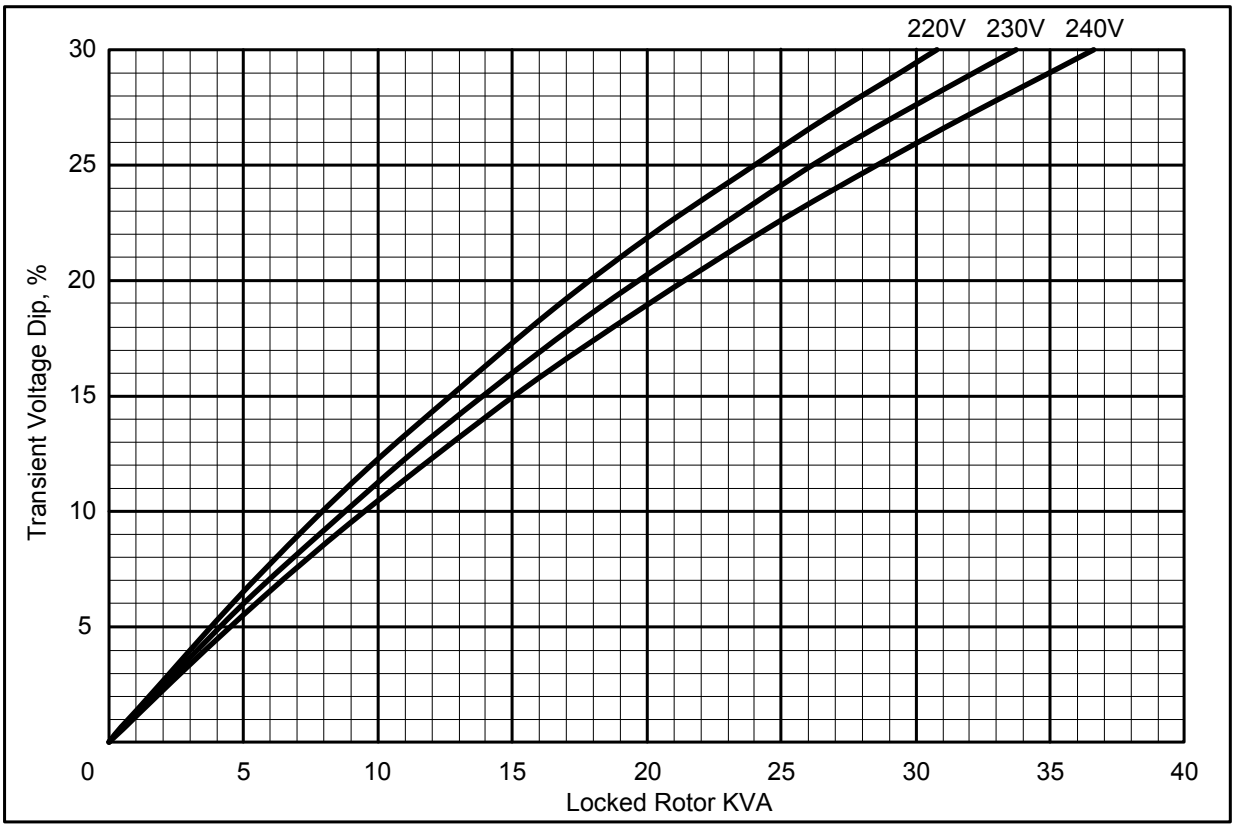
SINGLE-PHASE EFFICIENCY CURVES FOR 06 WINDING AT 1.0 POWER FACTOR







LOCKED ROTOR MOTOR STARTING CURVE



50 Hz RATINGS

Class	F						H					
Temp Rise	105°C R/R (40°C)						125°C R/R (40°C)					
Power Factor	0.8			1.0			0.8			1.0		
Series Voltage	220	230	240	220	230	240	220	230	240	220	230	240
Parallel Voltage	110	115	120	110	115	120	110	115	120	110	115	120
KVA Output	13.5	13.5	13.5	15.0	15.0	15.0	15.0	15.0	15.0	16.6	16.6	16.6
kW Output	10.8	10.8	10.8	15.0	15.0	15.0	12.0	12.0	12.0	16.6	16.6	16.6
Efficiency, %	79.6	80.1	80.5	83.0	83.5	83.6	79.1	79.6	80.1	82.4	82.7	83.0
kW Input	13.6	13.5	13.4	18.1	18.0	17.9	15.2	15.1	15.0	20.1	20.1	20.0

60 Hz RATINGS

Class	F						H					
Temp Rise	105°C R/R (40°C)						125°C R/R (40°C)					
Power Factor	0.8			1.0			0.8			1.0		
Series Voltage	220	230	240	220	230	240	220	230	240	220	230	240
Parallel Voltage	110	115	120	110	115	120	110	115	120	110	115	120
KVA Output	16.5	16.5	16.5	19.0	19.2	21.0	18.4	18.4	18.4	21.0	22.3	23.0
kW Output	13.2	13.2	13.2	19.0	19.2	21.0	14.7	14.7	14.7	21.0	22.3	23.0
Efficiency, %	79.6	80.1	80.5	83.0	83.5	83.6	79.1	79.6	80.1	82.4	82.7	83.0
kW Input	16.6	16.5	16.4	22.9	23.0	25.1	18.6	18.5	18.4	25.5	27.0	27.7