



## BASIC HORIZONTAL DIESEL GENERATOR SET UNIT (TYPICAL TELCO STANDARD TYPE OUTSIDE PLANT)

ENGINE: Multi-cylinder reciprocating diesel, Prime kW @ 110\_\_F - Test @ 100% rating  
 Option: Standby kW @ 110\_\_F - Test @ 100% rating  
 GENERATOR : Brushless, continuous duty rated, 1 bearing, 1800 rpm, 12 lead, 105\_\_C rise, Class F (or 125\_\_C rise, Class H)  
 VOLTAGE REGULATOR: Solid state \_\_\_ 1% regulation  
 ELECTRONIC GOVERNOR: Isochronous, steady state speed band of \_\_\_ 0.25%  
 OPTION: Standby kW @ 100% - Test @ 100%  
 FUEL: Ratings are on D2 diesel (call factory for ratings with other fuels)

## COMPLIANCE WITH THE FOLLOWING BELL SYSTEM STANDARDS IF SPECIFIED

BELL CORE - TR-EOP-000053	SWBT - 000146	AT&T Publication - 51001
NYNEX - NK-200-15000	AMERITECH - EEN - 000015	PACIFIC TELEPHONE - PBS-064-100PT
US WEST - 4518*1*1	BELLSOUTH - TR 73508	BELL ATLANTIC - 84RJM0072
NYNEX - ntr74187	NYNEX - Mega	BELL ATLANTIC - 790-500-700
		BELL ATLANTIC - 790-500-600

## SKID MOUNTED ENGINE/GENERATOR (OPEN TYPE UNIT)

A standard unit contains the following basic equipment:

- |   |   |
|---|---|
| -electric starter, 12/24V                                 | -control/start battery(maintenance free), stand & box |
| -radiator with pusher fan, flanged                        | -battery charger, 10 amp, automatic dual rate         |
| -dry element filter                                       | -jacket water heater                                  |
| -fuel lift pump, 16' lift, e/w hand primer                | -residential exhaust muffler and flex with insulator  |
| -fuel oil filter (primary and secondary)                  | -one lot spares                                       |
| -output circuit breaker (110% rated lead) e/w shunt trip  | -two (2) year warranty period                         |
| -installation kit (flex lines, hardware, etc              | -domestic packing                                     |
| -three (3) sets of operation/maintenance manuals/drawings |   |

## UNIT MOUNTED CONTROL PANEL (FREE STANDING IS OPTIONAL)

- |   |   |
|---|---|
| -AC ammeter (analog)                                    | -AC voltmeter (analog)                                |
| -frequency meter (analog)                               | -voltage/ammeter selector switch                      |
| -3-position operation selector switch (manual-off-auto) | -elapsed time meter                                   |
| -lube oil pressure and air filter gauges                | -water temperature gauge                              |
| -speed/frequency adjust potentiometer (___ Hz)          | -voltage adjust potentiometer (___ 10% rated voltage) |
| -panel lights e/w on/off switch                         | -lamp test/alarm reset button                         |
| -complete AC/DC circuit protection                      | -emergency stop button                                |
| -start/stop switch                                      |   |

Standard indicators for MAJOR alarm (safety shutdown) include the following:

- |                            |                        |
|----------------------------|------------------------|
| -overcrank (crank failure) | -low lube oil pressure |
| -high coolant temperature  | -low coolant level     |
| -overspeed                 |                        |

Standard indicators for MINOR alarm (non-shutdown) include the following:

- rectifier fail

## CUSTOMER CONNECTIONS

- remote start/stop
- battery charger (20A AC service)
- remote emergency stop
- water jacket heater (20A AC service)

## DRY CONTACTS FOR CUSTOMER USE

- major summary (NO rated 10A)
- minor alarm(s) (NO rated 3A)
- engine run (NO, NC rated 10A)

**OPTIONAL GENERATOR SET FEATURES AVAILABLE (listed numerically by Option Number)**

102	kilowatt meter (analog)	118-2	remote status panel w/emerg stop	130-3	manifold insulation
102	outside duct	118-3	remote status panel	130-4	rain cap
103-1	acoustic outside duct		w/emerg start/stop	131	24 VDC start/control
103-2	acoustic retrofit kit	119	main CB motor operator	132-1	grounded neutral
104	intake wall louvers (fixed blade)	120	audible alarm e/w ACO	133	air box shutdown (2 cyc eng)
105	dampers (backdraft gravity)		major malfunction	134-1	radiator duct flange
106-1	motorized int/exh dampers	121	digital meters, LED/set of 4	134-2	radiator duct
107	remote emergency stop (loose)	122	multi-crank cycle	134-3	radiator duct flex
108-1	high lift (18') fuel transfer pump	123	parallel kit (kvar-syn-rpr)	134-4	special hoses, 2 drains
108-2	hand priming pump system	124	nicad batteries (free-stdg)	136	remote radiator system
109-1	manual load bank (duct-mtd)	125	auto transfer logic (12 wire)	137	flex, intake interconnect
109-2	multi-stage load bank	128-2	mech governor 3-5% (deduct)	138	flex, exhaust interconnect
	(auto-manual-off)(unit mounted)	127	fire detection system	141	battery charger, auto alarms DC
110-1	base/weight bearing fuel tank system ___ hours	127-1	fire detection suppression system		voltmeter, ammeter, AC/DC protection, 30 amp
110-2	remote day tank w/alarms	128	install wall plate, less frame		extended lube oil reserve, 72 hrs
110-6	Veeder-Root alarms	129-1	unit enclosure indoor	142	heat exchanger (in lieu of radiator) or with OPTION
111	lube oil heater (300 watt)	129-2	unit enclosure (acoustic) indoor	143	heat recovery exhaust silencer
112	battery heater pad (50 watt)	129-3	unit enclosure outdoor	144	gas fuel system (NG/LPG)
113-1	fuel/water separator (unit mtd)	129-4	unit enclosure (acoustic) outdoor	145	ground fault relay
113-2	fuel/water separator gauge	129-5	unit enclosure (acoustic) bay	146	differential fault relay
113-3	fuel/water alarm indication	129-6	window type	147	breather vent & collector bottle
114-2	climatized enclosure		unit enclosure (acoustic) dual bay	148	voltage regulator, 30 sensing
115	outdoor walk-in module	129-7	window type	149	special generator
116-1	isolation springs	129-8	5th wall, bay window	150	permanent magnetic exciter
116-2	isolation pads (rubber)	129-9	enclosure fire door	151	metering xder(s) for remote monitoring
117-1	auto transfer switch, smart		specific paint (other than Alturdyne's standard polar gray)	152	start smoke limiter
117-2	auto transfer switch, dumb	130-1	exhaust muffler and flex		
118-1	remote status panel	130-2	muffler insulation	153	

**OPTIONAL MAJOR SAFETY (SHUTDOWN) INDICATORS**

201	underspeed/locked rotor	206	overcurrent (relay sensed)	211	individual dry contact for any major or minor malfunction or unit status indication
202	overvoltage (individual)	207	instrument breaker trip		
203	undervoltage (individual)	208	emergency stop (indicator)		
204	over/undervoltage (combined)	209	overload (main breaker trip)	212	smart controls for remote operation
205	high oil temperature	210	reverse power relay		

**OPTIONAL MINOR ALARM (NON-SHUTDOWN) INDICATORS**

301	low water temperature	305-1	switch-off-normal (off only)	308	pre-low oil pressure caution
302	low fuel level	305-2	switch-off-normal (manual only)	309	auxiliary relays special
302-1	fuel tank rupture	305-3	switch-off-normal (combined)	310	heater fail (oil, battery)
303	AC fail to battery charger	306	alarm cutoff indicator	311	low oil level
304	glow plug failure	307	pre-high water temperature	312	fire/smoke detector (specify mfg)

**OPTIONAL STATUS INDICATORS**

401	auto standby	406	ECB (transfer closed in emergency)	409	ACB open
402	proper operation		ready to load	410	ACB closed
403	commercial power fail	407			
404	commercial power return	408	xdcr & remote term board for remote instrument panel (specify read outs desired)		
405	NCB (transfer closed in normal)				

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