Appendix D
Noise Report

Field Noise Measurement Data

DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT: RANCHO CUNEJO BLD-TECH | PROJECT #: 12902:02
SITE ID:
SITE ADDRESS: | OBSERVER(S): PETE VITAR
START DATE: 5/10/22 | END DATE: 5/10/22
START TIME: | END TIME:

METEOROLOGICAL CONDITIONS

TEMP: 61 F | HUMIDITY: 30 % R.H. | WIND: CALM (LIGHT) MODERATE
WINDSPD: 4 MPH | DIR. N NE E SE S SW W NW | VARIABLE STEADY GUSTY
SKY: (SUNNY) (CLEAR) OVRCAST PRTLY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS

MEAS. INSTRUMENT: PICCOLO SLM-P3 | TYPE 1 2 | SERIAL # 13927046
CALIBRATOR: REED-R8090 | SERIAL #:
CALIBRATION CHECK: PRE-TEST ____ dBA SPL | POST-TEST ____ dBA SPL | WINDSCRN: yes

SETTINGS: (A-WTD) (SLOW) FAST FRONTAL RANDOM ANSI OTHER:

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
1-16	10:08	10:23							

(5+1)

COMMENTS:
READING TAKEN AT SOUTH EAST CORNER OF PARKING LOT ON PROJECT SITE, BEHIND RESIDENCES AT 1755 FOX SPARROW CIRCLE; NOISE SOURCES INCLUDE CONSTRUCTION VEHICLE IDLING ON PROPERTY TO THE SOUTH, FAINT DISTANT TRAFFIC ON NEARBY RUNWAYS (VISTA PARK RD);

SOURCE INFO AND TRAFFIC COUNTS

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL OTHER:
ROADWAY TYPE: ASPHALT | DIST. TO RDWY C/L OR EOP:
TRAFFIC COUNT DURATION: — MIN

COUNT 1 (OR RDWY 1)	DIRECTION	NB/EB	SB/WB	SPEED NB/EB	SPEED SB/WB
	AUTOS				
	MED TRKS				
	HVY TRKS				
	BUSES				
	MOTRCLS				

IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE —

COUNT 2 (OR RDWY 2) — ____ MIN

NB/EB	SB/WB	SPEED NB/EB	SPEED SB/WB

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): (DIST. AIRCRAFT) RUSTLING LEAVES DIST. BARKING DOGS (BIRDS) DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVERSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE
OTHER: DISTANT SOUND OF CONSTRUCTION EQUIPMENT IDLING & SPORADIC USE OF POWER TOOLS (SAW) FROM PROPERTY APPROACHED ON SE SIDE; OCCASIONAL DISTANT AIRCRAFT NOISE (PROPJET)

DESCRIPTION / SKETCH

TERRAIN: (HARD) SOFT MIXED FLAT OTHER:
PHOTOS: 3972; 3973; 3974; 3975; 3976; 3977; 3978
OTHER COMMENTS / SKETCH

DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT: RANCHO CUENCA BLD-TECH PROJECT #: 12902:02
SITE ID:
SITE ADDRESS: OBSERVER(S): PETE VITAR
START DATE: 5/10/22 END DATE: 5/10/22
START TIME: END TIME:

METEOROLOGICAL CONDITIONS
TEMP: 64 F HUMIDITY: 33 % R.H. WIND: CALM (LIGHT) MODERATE
WINDSPD: 5 MPH DIR. N NE E SE S SW W NW VARIABLE STEADY GUSTY
SKY: (SUNNY) (CLEAR) OVRCAST PRTLY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS
MEAS. INSTRUMENT: PICCOLO SLM-P3 TYPE 1 2 SERIAL # 13927046
CALIBRATOR: REED-R8090 SERIAL #:
CALIBRATION CHECK PRE-TEST: ____ dBA SPL POST-TEST: ____ dBA SPL WINDSCRN: YES

SETTINGS: (A-WTD) (SLOW) FAST FRONTAL RANDOM ANSI OTHER:

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
(ST2) 20-35	11:11	11:26							

COMMENTS
READING TAKEN IN FRONT OF 1376 OAK TRAIL ST (RESIDENCE); PRIMARY NOISE SOURCE IS DEMOLITION NOISE FROM PROJECT SITE TO THE SOUTH; SOME NOISE FROM LIGHT TRAFFIC ON NEARBY STREETS;

SOURCE INFO AND TRAFFIC COUNTS
PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL OTHER:
ROADWAY TYPE: ASPHALT DIST. TO RDWY C/L OR EOP: APX IS ~TO C/L OF OAK TRAIL ST.
TRAFFIC COUNT DURATION: 15 MIN SPEED: ____ MIN

COUNT 1 (OR RDWY 1) DIRECTION	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED
AUTOS	0			
MED TRKS	0			
HVY TRKS	0			
BUSES	0			
MOTRCLS	0			

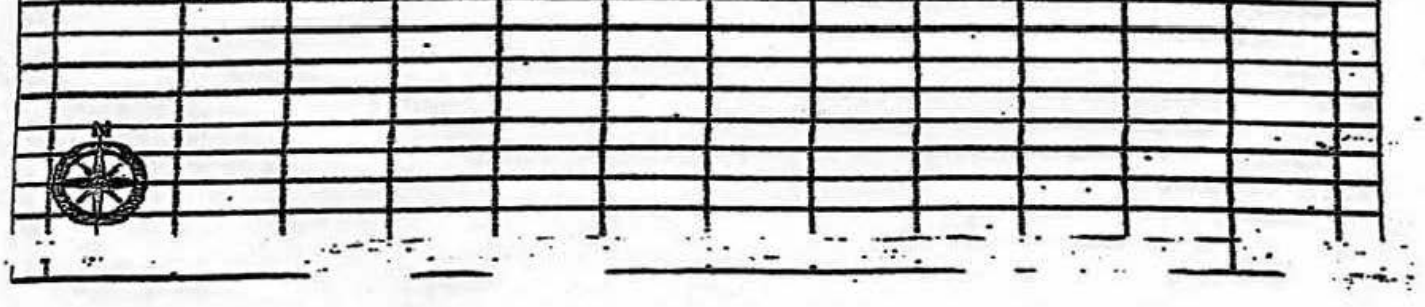
IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ✓

COUNT 2 (OR RDWY 2)	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS (BIRDS) DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DIST'D GARDENERS/LANDSCAPING NOISE
OTHER: OCCASIONAL DISTANT AIRCRAFT NOISE;

DESCRIPTION / SKETCH
TERRAIN: HARD SOFT (MIXED) FLAT OTHER:
PHOTOS: 3980; 3981; 3982; 3983
OTHER COMMENTS / SKETCH



DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT: RANCHO CONEJO BLD-JEQ PROJECT #: 12902:02
SITE ID:
SITE ADDRESS: OBSERVER(S): PETE VITAR
START DATE: 5/10/22 END DATE: 5/10/22
START TIME: END TIME:

METEOROLOGICAL CONDITIONS
TEMP: 65 F HUMIDITY: 33 % R.H. WIND: CALM (LIGHT) MODERATE
WINDSPD: 10 MPH DIR. N NE E SE S SW W NW VARIABLE STEADY GUSTY
SKY: (SUNNY) CLEAR OVRCAST PRTLY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS
MEAS. INSTRUMENT: PICCOLO SLM-P3 TYPE 1 2 SERIAL # 13927046
CALIBRATOR: REED-R8090 SERIAL #:
CALIBRATION CHECK PRE-TEST: ____ dBA SPL POST-TEST: ____ dBA SPL WINDSCRN: yes

SETTINGS: (A-WTD) (SLOW) FAST FRONTAL RANDOM ANSI OTHER:

REC #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
(ST3) 36-51	11:45	12:00							

COMMENTS
READING TAKEN ALONG RANCHO CONEJO BLVD, AT PACHINO CIRCLE, NEXT TO ARBOR VILLA APARTMENT COMPLEX; PRIMARY NOISE SOURCE IS TRAFFIC ALONG RANCHO CONEJO BLVD.

SOURCE INFO AND TRAFFIC COUNTS
PRIMARY NOISE SOURCE: (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL OTHER:
ROADWAY TYPE: ASPHALT DIST. TO RDWY C/L OR EOP: ARX 50' TO C/L OF RANCHO CONEJO BLVD

TRAFFIC COUNT DURATION: 15 MIN

COUNT 1 (OR RDWY 1) DIRECTION	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED
AUTOS	105			
MED TRKS	4			
HVY TRKS	6			
BUSES	0			
MOTRCLS	0			

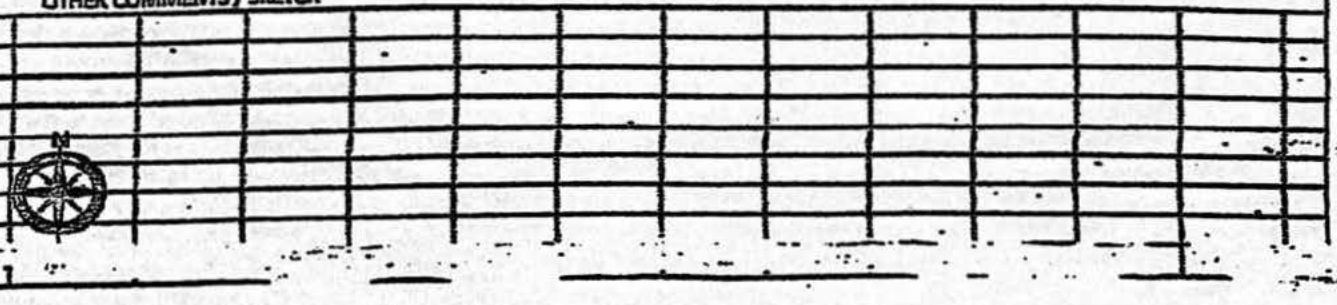
IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ✓

COUNT 2 (OR RDWY 2)	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT (RUSTLING LEAVES) DIST. BARKING DOGS (BIRDS) DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DIST'D GARDENERS/LANDSCAPING NOISE
OTHER:

DESCRIPTION / SKETCH
TERRAIN: HARD SOFT (MIXED) FLAT OTHER:
PHOTOS: 3985; 3986; 3987; 3988
OTHER COMMENTS / SKETCH



FIELD NOISE MEASUREMENT DATA

DUDEK

PROJECT: RANCHO CONEJO BLD-TECH — PROJECT #: 12902:02
SITE ID:
SITE ADDRESS: — OBSERVER(S): PETE VITAR
START DATE: 5/10/22 — END DATE: 5/10/22
START TIME: — END TIME:

METEOROLOGICAL CONDITIONS
TEMP: 63 F — HUMIDITY: 32 % R.H. — WIND: CALM LIGHT (MODERATE)
WINDSPD: 12 MPH — DIR. N NE E SE S SW W NW — VARIABLE STEADY GUSTY
SKY: (SUNNY) (CLEAR) OVRCAST PRTLY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS
MEAS. INSTRUMENT: PICCOLO SLM-P3 — TYPE 1 2 — SERIAL# 130927046
CALIBRATOR: REED-R8090 — SERIAL#:
CALIBRATION CHECK — PRE-TEST: ____ dBA SPL — POST-TEST: ____ dBA SPL — WINDSCRN: YES

SETTINGS: (A-WTD) (SLOW) FAST FRONTAL RANDOM ANSI OTHER:

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
(STS) 52-67	12:21	12:36							

COMMENTS
READING TAKEN IN PARKING LOT OF 999 RANCHO CONEJO BLVD (THE BRIDGE CHURCH), APPROX. IN FRONT OF CHURCH ENTRANCE; PRIMARY NOISE SOURCE IS TRAFFIC ON RANCHO CONEJO BLVD; CONSISTENT HUMMING OF GENERATOR UNIT IN DISTANCE;

SOURCE INFO AND TRAFFIC COUNTS
PRIMARY NOISE SOURCE: (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL OTHER:
ROADWAY TYPE: ASPHALT — DIST. TO RDWY C/L OR EOP: APX. 155' TO C/L OF NEAREST RANCHO CONEJO BLVD
TRAFFIC COUNT DURATION: 15 MIN

COUNT 1 (OR RDWY 1) DIRECTION	NB/EB	SB/WB	SPEED NB/EB	SPEED SB/WB
AUTOS	116			
MED TRKS	4			
HVY TRKS	2			
BUSES	2			
MOTRCLS	0			

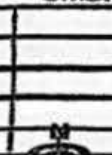
IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ✓

COUNT 2 (OR RDWY 2)	SPEED NB/EB	SPEED SB/WB	SPEED NB/EB	SPEED SB/WB

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT (RUSTLING LEAVES) DIST. BARKING DOGS (BIRDS) DIST. INDUSTRIAL
DIST. KIDS PLAYING (DIST. CONVRSTNS / YELLING) DIST. TRAFFIC (LIST RDWYS BELOW) DIST'D GARDENERS/LANDSCAPING NOISE
OTHER: OCCASIONAL CONVERSATION IN AREA;

DESCRIPTION / SKETCH
TERRAIN: HARD SOFT (MIXED) FLAT OTHER:
PHOTOS: 3991; 3992; 3993; 3994;
OTHER COMMENTS / SKETCH



DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT: RANCHO CONEJO BLVD-TECH | PROJECT #: 12902:02
SITE ID:
SITE ADDRESS:
OBSERVER(S): PETE VITAR
START DATE: 5/10/22 | END DATE: 5/10/22
START TIME: | END TIME:

METEOROLOGICAL CONDITIONS
TEMP: 63 F | HUMIDITY: 33 % R.H. | WIND: CALM LIGHT (MODERATE)
WINDSPD: 13 MPH | DIR. N NE S SE S SW W NW | VARIABLE STEADY (GUSTY)
SKY: (SUNNY) (CLEAR) OVRCAST PRTLY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS
MEAS. INSTRUMENT: PICCOLO SLM-P3 | TYPE 1 2 | SERIAL # 13927046
CALIBRATOR: REED-R8090 | SERIAL #:
CALIBRATION CHECK: PRE-TEST ____ dBA SPL | POST-TEST ____ dBA SPL | WINDSCRN: YES

SETTINGS: (A-WTD) (SLOW) FAST FRONTAL RANDOM ANSI OTHER:

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
(ST4) 68-83	12:59	13:14							

COMMENTS: READING TAKEN ALONG VENTU PARK RD, BEHIND RESIDENCE ON 1668 GLIDER CT; PRIMARY NOISE SOURCE IS TRAFFIC ALONG VENTU PARK RD;

SOURCE INFO AND TRAFFIC COUNTS
PRIMARY NOISE SOURCE: (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL OTHER:
ROADWAY TYPE: ASPHALT | DIST. TO RDWY ℄ OR EOP: ACK. 60' +/- TO C/L ON VENTU PARK RD

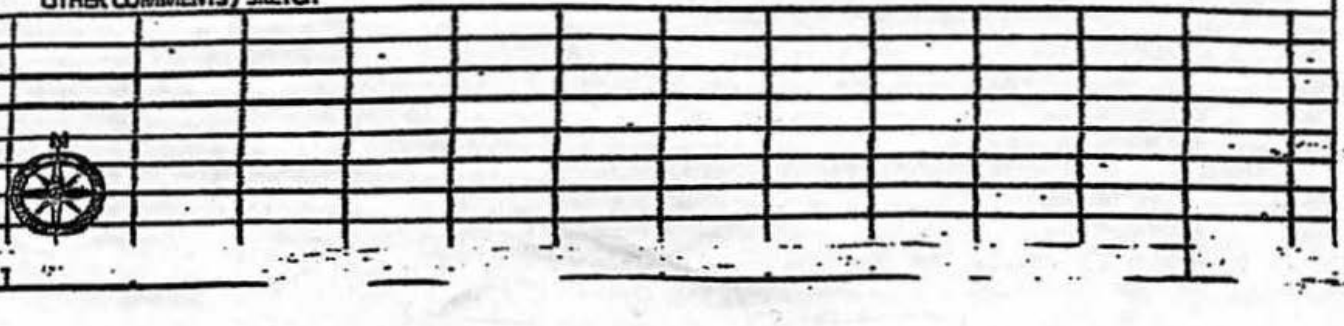
TRAFFIC COUNT DURATION: 15 MIN SPEED ____ MIN SPEED

COUNT 1 (OR RDWY 1) DIRECTION	NB/EB	SB/WB	NB/EB	SB/WB	IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE	COUNT 2 (OR RDWY 2)	NB/EB	SB/WB	NB/EB	SB/WB
AUTOS	95									
MED TRKS	4									
HVY TRKS	1									
BUSES	0									
MOTRCLS	0									

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT (RUSTLING LEAVES) DIST. BARKING DOGS (BIRDS) DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) (DISTD GARDENERS/LANDSCAPING NOISE)
OTHER:

DESCRIPTION / SKETCH
TERRAIN: HARD SOFT (MIXED) FLAT OTHER:
PHOTOS: 3996; 3997; 3998; 3999
OTHER COMMENTS / SKETCH



ST-1

Rec 1 to 16	Slow Response		dBA weighting		2.0 dB resc
Date hh:mm:ss	LeqPeriod	Leq	SEL	Lmax	Lmin
5/10/2022 10:08	1.0 min	47.3	65.1	56.3	44.5
5/10/2022 10:09	1.0 min	45.3	63.1	50.2	44.3
5/10/2022 10:10	1.0 min	47.4	65.2	50.4	44.3
5/10/2022 10:11	1.0 min	47.1	64.9	52.5	44.8
5/10/2022 10:12	1.0 min	46.5	64.3	50	44.3
5/10/2022 10:13	1.0 min	45.1	62.9	47.5	44.2
5/10/2022 10:14	1.0 min	45.9	63.7	48.3	44.4
5/10/2022 10:15	1.0 min	48.5	66.3	52.6	45
5/10/2022 10:16	1.0 min	47.7	65.5	53.1	44.7
5/10/2022 10:17	1.0 min	47.6	65.4	53.2	45.1
5/10/2022 10:18	1.0 min	45.8	63.6	50.3	44.5
5/10/2022 10:19	1.0 min	47.4	65.2	54.3	44.9
5/10/2022 10:20	1.0 min	47.5	65.3	56.9	44.9
5/10/2022 10:21	1.0 min	48.3	66.1	58.4	45.8
5/10/2022 10:22	1.0 min	49.1	66.9	55.4	45.9
5/10/2022 10:23	11 sec	50.9	61.3	53.1	46.6

L_{eq}	L_{max}	L_{min}
47.2	58.4	44.2

ST2

Rec 20 to 35	Slow Response		dBA weighting		2.0 dB resc
Date hh:mm:ss	LeqPeriod	Leq	SEL	Lmax	Lmin
5/10/2022 11:11	1.0 min	45	62.8	54.6	41.4
5/10/2022 11:12	1.0 min	43.5	61.3	53.1	40.2
5/10/2022 11:13	1.0 min	44.5	62.3	49.6	41.1
5/10/2022 11:14	1.0 min	42.6	60.4	53.5	38.5
5/10/2022 11:15	1.0 min	41	58.8	44.5	38.4
5/10/2022 11:16	1.0 min	45	62.8	53.2	40.3
5/10/2022 11:17	1.0 min	47.9	65.7	56.7	41.7
5/10/2022 11:18	1.0 min	42.5	60.3	46.9	40.2
5/10/2022 11:19	1.0 min	41.1	58.9	50.9	39.4
5/10/2022 11:20	1.0 min	42	59.8	45.8	40
5/10/2022 11:21	1.0 min	43.3	61.1	47.2	41
5/10/2022 11:22	1.0 min	42.7	60.5	45.6	40.6
5/10/2022 11:23	1.0 min	42	59.8	45	40.9
5/10/2022 11:24	1.0 min	41.2	59	43.4	40.3
5/10/2022 11:25	1.0 min	41	58.8	42.9	40
5/10/2022 11:26	11 sec	42.5	52.9	43.5	41.1

	L_{eq}	L_{max}	L_{min}
	43.5	56.7	38.4

ST3

Rec 36 to 51	Slow Response		dBA weighting		2.0 dB resc
Date hh:mm:ss	LeqPeriod	Leq	SEL	Lmax	Lmin
5/10/2022 11:45	1.0 min	61.4	79.2	71.3	44.6
5/10/2022 11:46	1.0 min	57.5	75.3	68.9	45
5/10/2022 11:47	1.0 min	64.8	82.6	73.3	49.5
5/10/2022 11:48	1.0 min	59.5	77.3	67.9	47.2
5/10/2022 11:49	1.0 min	63.6	81.4	72	47
5/10/2022 11:50	1.0 min	71.4	89.2	85.4	47.7
5/10/2022 11:51	1.0 min	61.9	79.7	72.8	47.6
5/10/2022 11:52	1.0 min	63.9	81.7	72.1	49.2
5/10/2022 11:53	1.0 min	61.7	79.5	70	46.9
5/10/2022 11:54	1.0 min	60.9	78.7	70.6	49.6
5/10/2022 11:55	1.0 min	61.8	79.6	72.5	45.9
5/10/2022 11:56	1.0 min	58.6	76.4	68.7	46.2
5/10/2022 11:57	1.0 min	57.8	75.6	68.1	46.2
5/10/2022 11:58	1.0 min	64.6	82.4	73.7	53.1
5/10/2022 11:59	1.0 min	63.4	81.2	71.5	51.9
5/10/2022 12:00	10 sec	57.8	67.8	64.4	52.9

	L_{eq}	L_{max}	L_{min}
	63.9	85.4	44.6

ST4

Rec 68 to 83	Slow Response		dBA weighting		2.0 dB resc
Date hh:mm:ss	LeqPeriod	Leq	SEL	Lmax	Lmin
5/10/2022 12:59	1.0 min	62	79.8	70.4	49.9
5/10/2022 13:00	1.0 min	63.2	81	70.4	47.1
5/10/2022 13:01	1.0 min	61.3	79.1	70.8	45.9
5/10/2022 13:02	1.0 min	62.8	80.6	70.3	48.7
5/10/2022 13:03	1.0 min	60.2	78	70	47.1
5/10/2022 13:04	1.0 min	60.8	78.6	70.3	48.2
5/10/2022 13:05	1.0 min	60.2	78	68.9	47.9
5/10/2022 13:06	1.0 min	66.5	84.3	77.6	51.9
5/10/2022 13:07	1.0 min	61.8	79.6	71.3	49.9
5/10/2022 13:08	1.0 min	63.8	81.6	72.7	47
5/10/2022 13:09	1.0 min	62.8	80.6	70.8	47.6
5/10/2022 13:10	1.0 min	64.1	81.9	72.6	49.6
5/10/2022 13:11	1.0 min	61.3	79.1	74.8	48.1
5/10/2022 13:12	1.0 min	62.8	80.6	72.9	47.1
5/10/2022 13:13	1.0 min	63	80.8	72.6	47.3
5/10/2022 13:14	16 sec	55.9	67.9	67.9	48.1

	L_{eq}	L_{max}	L_{min}
	62.8	77.6	45.9

ST5

Rec 52 to 67	Slow Response		dBA weighting		2.0 dB resc
Date hh:mm:ss	LeqPeriod	Leq	SEL	Lmax	Lmin
5/10/2022 12:21	1.0 min	50.8	68.6	55	47.6
5/10/2022 12:22	1.0 min	51.1	68.9	55.8	48.3
5/10/2022 12:23	1.0 min	50.5	68.3	56.7	48.2
5/10/2022 12:24	1.0 min	49.5	67.3	52.2	47.5
5/10/2022 12:25	1.0 min	50.3	68.1	56.6	47.9
5/10/2022 12:26	1.0 min	52.6	70.4	61.5	48.1
5/10/2022 12:27	1.0 min	51	68.8	54.1	49
5/10/2022 12:28	1.0 min	51.6	69.4	57	49
5/10/2022 12:29	1.0 min	55	72.8	62	48.7
5/10/2022 12:30	1.0 min	51.5	69.3	55.5	48.1
5/10/2022 12:31	1.0 min	50.4	68.2	52.7	49.1
5/10/2022 12:32	1.0 min	50.5	68.3	53	48.6
5/10/2022 12:33	1.0 min	51.2	69	57	47.5
5/10/2022 12:34	1.0 min	51	68.8	58.7	48.4
5/10/2022 12:35	1.0 min	50.3	68.1	53.7	48.3
5/10/2022 12:36	28 sec	52.8	67.3	59.4	49

	L_{eq}	L_{max}	L_{min}
	51.4	62.0	47.5

Construction Noise Model Input / Output

To User: bordered cells are inputs, unbordered cells have formulae

noise level limit for construction phase at occupied building, per FTA guidance = 80
allowable hours over which Leq is to be averaged (example: 8 per FTA guidance) = 8

Construction Activity	Equipment	Total Equipment Qty	AUF % (from FHWA RCNM)	Reference Lmax @ 50 ft. from FHWA RCNM	Client Equipment Description, Data Source and/or Notes	Source to NSR Distance (ft.)	*Barrier / Topo Insertion Loss (dB)*	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 8-hour Leq
Demolition	Concrete Saw	1	20	90		150	15.0	65.5	8	480	58
	Excavator	1	40	81		200	15.0	54.0	8	480	50
	Front End Loader	1	40	79		350	15.0	47.1	8	480	43
								Total for Demolition Phase:			**59.2**
Site Preparation/Grading	Excavator	1	40	81		50	15.0	66.0	8	480	62
	Scraper	1	40	84		150	15.0	59.5	8	480	55
	Dozer	1	40	82		100	15.0	61.0	8	480	57
	Front End Loader	1	40	79		250	15.0	50.0	8	480	46
	Backhoe	1	40	78		300	15.0	47.4	8	480	43
								Total for Site Preparation/Grading Phase:			**64.0**
Building Construction	Crane	1	16	81		150	15.0	56.5	8	480	48
	Man Lift	1	20	75		200	15.0	48.0	8	480	41
	Man Lift	1	20	75		400	15.0	41.9	8	480	35
	Generator	1	50	72		150	15.0	47.5	8	480	44
	Tractor	1	40	84		300	15.0	53.4	8	480	49
	Front End Loader	1	40	79		350	15.0	47.1	8	480	43
	Welder / Torch	1	40	73		200	15.0	46.0	8	480	42
											53.8
Paving	Paver	1	50	77		50	15.0	62.0	8	480	59
	Paver	1	50	77		150	15.0	52.5	8	480	49
	Paver	1	50	77		250	15.0	48.0	8	480	45
	Concrete Mixer Truck	1	40	79		100	15.0	58.0	8	480	54
	Concrete Mixer Truck	1	40	79		100	15.0	58.0	8	480	54
	Roller	1	20	80		150	15.0	55.5	8	480	48
	Roller	1	20	80		350	15.0	48.1	8	480	41
								Total for Paving Phase:			**61.5**
Architectural Coating	Compressor (air)	1	40	78		150	15.0	53.5	8	480	49
	Compressor (air)	1	40	78		250	15.0	49.0	8	480	45
								Total for Phase:			**45.0**

To User: bordered cells are inputs, unbordered cells have formulae

noise level limit for construction phase at occupied building, per FTA guidance = 80

allowable hours over which Leq is to be averaged (example: 8 per FTA guidance) = 8

Construction Activity	Equipment	Total Equipment Qty	AUF % (from FHWA RCNM)	Reference Lmax @ 50 ft. from FHWA RCNM	Client Equipment Description, Data Source and/or Notes	Source to NSR Distance (ft.)	*Barrier / Topo Insertion Loss (dB)*	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 8-hour Leq
Demolition	Concrete Saw	1	20	90		375	15.0	57.5	8	480	51
	Excavator	1	40	81		375	15.0	48.5	8	480	45
	Excavator	1	40	81		375	15.0	48.5	8	480	45
	Excavator	1	40	81		375	15.0	48.5	8	480	45
	Excavator	1	40	81		375	15.0	48.5	8	480	45
	Dozer	1	40	82		375	15.0	49.5	8	480	46
	Front End Loader	1	40	79		375	15.0	46.5	8	480	43
	Man Lift	1	20	75		375	15.0	42.5	8	480	36
	Concrete Batch Plant	1	15	83		375	15.0	50.5	8	480	42
								Total for Demolition Phase:			**54.5**
Site Preparation/Grading	Excavator	1	40	81		375	15.0	48.5	8	480	45
	Scraper	1	40	84		375	15.0	51.5	8	480	48
	Scraper	1	40	84		375	15.0	51.5	8	480	48
	Scraper	1	40	84		375	15.0	51.5	8	480	48
	Scraper	1	40	84		375	15.0	51.5	8	480	48
	Scraper	1	40	84		375	15.0	51.5	8	480	48
	Dozer	1	40	82		375	15.0	49.5	8	480	46
	Dozer	1	40	82		375	15.0	49.5	8	480	46
	Front End Loader	1	40	79		375	15.0	46.5	8	480	43
	Backhoe	1	40	78		375	15.0	45.5	8	480	42
								Total for Site Preparation/Grading Phase:			**56.2**
Building Construction	Crane	1	16	81		350	15.0	49.1	8	480	41
	Crane	1	16	81		350	15.0	49.1	8	480	41
	Man Lift	1	20	75		350	15.0	43.1	8	480	36
	Man Lift	1	20	75		350	15.0	43.1	8	480	36
	Man Lift	1	20	75		350	15.0	43.1	8	480	36
	Man Lift	1	20	75		350	15.0	43.1	8	480	36
	Man Lift	1	20	75		350	15.0	43.1	8	480	36
	Man Lift	1	20	75		350	15.0	43.1	8	480	36
	Man Lift	1	20	75		350	15.0	43.1	8	480	36
	Man Lift	1	20	75		350	15.0	43.1	8	480	36
	Generator	1	50	72		350	15.0	40.1	8	480	37
	Generator	1	50	72		350	15.0	40.1	8	480	37
	Tractor	1	40	84		350	15.0	52.1	8	480	48
	Front End Loader	1	40	79		350	15.0	47.1	8	480	43
	Welder / Torch	1	40	73		350	15.0	41.1	8	480	37
	Welder / Torch	1	40	73		350	15.0	41.1	8	480	37
	Welder / Torch	1	40	73		350	15.0	41.1	8	480	37
	Welder / Torch	1	40	73		350	15.0	41.1	8	480	37
	Welder / Torch	1	40	73		350	15.0	41.1	8	480	37
	Welder / Torch	1	40	73		350	15.0	41.1	8	480	37
	Welder / Torch	1	40	73		350	15.0	41.1	8	480	37
	Welder / Torch	1	40	73		350	15.0	41.1	8	480	37
								Total for Building Construction Phase:			**52.9**
Paving	Paver	1	50	77		375	15.0	44.5	8	480	41
	Paver	1	50	77		375	15.0	44.5	8	480	41
	Paver	1	50	77		375	15.0	44.5	8	480	41
	Paver	1	50	77		375	15.0	44.5	8	480	41
	Paver	1	50	77		375	15.0	44.5	8	480	41
	Concrete Mixer Truck	1	40	79		375	15.0	46.5	8	480	43

	Concrete Pump Truck	1	20	81		375	15.0	48.5	8	480	42
	Concrete Mixer Truck	1	40	79		375	15.0	46.5	8	480	43
	Concrete Pump Truck	1	20	81		375	15.0	48.5	8	480	42
	Concrete Mixer Truck	1	40	79		375	15.0	46.5	8	480	43
	Roller	1	20	80		375	15.0	47.5	8	480	41
	Roller	1	20	80		375	15.0	47.5	8	480	41
	Roller	1	20	80		375	15.0	47.5	8	480	41
	Roller	1	20	80		375	15.0	47.5	8	480	41
	Roller	1	20	80		375	15.0	47.5	8	480	41
								Total for Paving Phase:			**51.8**
Architectural Coating	Compressor (air)	1	40	78		350	15.0	46.1	8	480	42
	Compressor (air)	1	40	78		350	15.0	46.1	8	480	42
	Compressor (air)	1	40	78		350	15.0	46.1	8	480	42
								Total for Phase:			**42.1**

To User: bordered cells are inputs, unbordered cells have formulae

noise level limit for construction phase at occupied building, per FTA guidance = 80
allowable hours over which Leq is to be averaged (example: 8 per FTA guidance) = 8

Construction Activity	Equipment	Total Equipment Qty	AUF % (from FHWA RCNM)	Reference Lmax @ 50 ft. from FHWA RCNM	Client Equipment Description, Data Source and/or Notes	Source to NSR Distance (ft.)	*Barrier / Topo Insertion Loss (dB)*	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 8-hour Leq
Demolition	Concrete Saw	1	20	90		950	5.0	59.4	8	480	52
	Excavator	1	40	81		1000	5.0	50.0	8	480	46
	Front End Loader	1	40	79		1150	5.0	46.8	8	480	43
									Total for Demolition Phase:		**53.7**
Site Preparation/Grading	Excavator	1	40	81		850	5.0	51.4	8	480	47
	Scraper	1	40	84		950	5.0	53.4	8	480	49
	Dozer	1	40	82		900	5.0	51.9	8	480	48
	Front End Loader	1	40	79		1050	5.0	47.6	8	480	44
	Backhoe	1	40	78		1100	5.0	46.2	8	480	42
									Total for Site Preparation/Grading Phase:		**53.9**
Building Construction	Crane	1	16	81		950	5.0	50.4	8	480	42
	Man Lift	1	20	75		1000	5.0	44.0	8	480	37
	Man Lift	1	20	75		1200	5.0	42.4	8	480	35
	Generator	1	50	72		950	5.0	41.4	8	480	38
	Tractor	1	40	84		1100	5.0	52.2	8	480	48
	Front End Loader	1	40	79		1150	5.0	46.8	8	480	43
	Welder / Torch	1	40	73		1000	5.0	42.0	8	480	38
											50.9
Paving	Paver	1	50	77		850	5.0	47.4	8	480	44
	Paver	1	50	77		950	5.0	46.4	8	480	43
	Paver	1	50	77		1050	5.0	45.6	8	480	43
	Concrete Mixer Truck	1	40	79		900	5.0	48.9	8	480	45
	Concrete Mixer Truck	1	40	79		900	5.0	48.9	8	480	45
	Roller	1	20	80		950	5.0	49.4	8	480	42
	Roller	1	20	80		1150	5.0	47.8	8	480	41
									Total for Paving Phase:		**51.1**
Architectural Coating	Compressor (air)	1	40	78		950	5.0	47.4	8	480	43
	Compressor (air)	1	40	78		1050	5.0	46.6	8	480	43
									Total for Phase:		**42.6**

To User: bordered cells are inputs, unbordered cells have formulae

noise level limit for construction phase at occupied building, per FTA guidance = 80
allowable hours over which Leq is to be averaged (example: 8 per FTA guidance) = 8

Construction Activity	Equipment	Total Equipment Qty	AUF % (from FHWA RCNM)	Reference Lmax @ 50 ft. from FHWA RCNM	Client Equipment Description, Data Source and/or Notes	Source to NSR Distance (ft.)	*Barrier / Topo Insertion Loss (dB)*	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 8-hour Leq
Demolition	Concrete Saw	1	20	90		2400	5.0	51.4	8	480	44
	Excavator	1	40	81		2400	5.0	42.4	8	480	38
	Excavator	1	40	81		2400	5.0	42.4	8	480	38
	Excavator	1	40	81		2400	5.0	42.4	8	480	38
	Excavator	1	40	81		2400	5.0	42.4	8	480	38
	Dozer	1	40	82		2400	5.0	43.4	8	480	39
	Front End Loader	1	40	79		2400	5.0	40.4	8	480	36
	Man Lift	1	20	75		2400	5.0	36.4	8	480	29
	Concrete Batch Plant	1	15	83		2400	5.0	44.4	8	480	36
									Total for Demolition Phase:		**48.4**
Site Preparation/Grading	Excavator	1	40	81		2400	5.0	42.4	8	480	38
	Scraper	1	40	84		2400	5.0	45.4	8	480	41
	Scraper	1	40	84		2400	5.0	45.4	8	480	41
	Scraper	1	40	84		2400	5.0	45.4	8	480	41
	Scraper	1	40	84		2400	5.0	45.4	8	480	41
	Scraper	1	40	84		2400	5.0	45.4	8	480	41
	Dozer	1	40	82		2400	5.0	43.4	8	480	39
	Dozer	1	40	82		2400	5.0	43.4	8	480	39
	Front End Loader	1	40	79		2400	5.0	40.4	8	480	36
	Backhoe	1	40	78		2400	5.0	39.4	8	480	35
									Total for Site Preparation/Grading Phase:		**50.0**
Building Construction	Crane	1	16	81		2400	5.0	42.4	8	480	34
	Crane	1	16	81		2400	5.0	42.4	8	480	34
	Man Lift	1	20	75		2400	5.0	36.4	8	480	29
	Man Lift	1	20	75		2400	5.0	36.4	8	480	29
	Man Lift	1	20	75		2400	5.0	36.4	8	480	29
	Man Lift	1	20	75		2400	5.0	36.4	8	480	29
	Man Lift	1	20	75		2400	5.0	36.4	8	480	29
	Man Lift	1	20	75		2400	5.0	36.4	8	480	29
	Man Lift	1	20	75		2400	5.0	36.4	8	480	29
	Man Lift	1	20	75		2400	5.0	36.4	8	480	29
	Generator	1	50	72		2400	5.0	33.4	8	480	30
	Generator	1	50	72		2400	5.0	33.4	8	480	30
	Tractor	1	40	84		2400	5.0	45.4	8	480	41
	Front End Loader	1	40	79		2400	5.0	40.4	8	480	36
	Welder / Torch	1	40	73		2400	5.0	34.4	8	480	30
	Welder / Torch	1	40	73		2400	5.0	34.4	8	480	30
	Welder / Torch	1	40	73		2400	5.0	34.4	8	480	30
	Welder / Torch	1	40	73		2400	5.0	34.4	8	480	30
	Welder / Torch	1	40	73		2400	5.0	34.4	8	480	30
	Welder / Torch	1	40	73		2400	5.0	34.4	8	480	30
	Welder / Torch	1	40	73		2400	5.0	34.4	8	480	30
	Welder / Torch	1	40	73		2400	5.0	34.4	8	480	30
									Total for Building Construction Phase:		**46.2**
Paving	Paver	1	50	77		2400	5.0	38.4	8	480	35
	Paver	1	50	77		2400	5.0	38.4	8	480	35
	Paver	1	50	77		2400	5.0	38.4	8	480	35
	Paver	1	50	77		2400	5.0	38.4	8	480	35

	Paver	1	50	77		2400	5.0	38.4	8	480	35
	Concrete Mixer Truck	1	40	79		2400	5.0	40.4	8	480	36
	Concrete Pump Truck	1	20	81		2400	5.0	42.4	8	480	35
	Concrete Mixer Truck	1	40	79		2400	5.0	40.4	8	480	36
	Concrete Pump Truck	1	20	81		2400	5.0	42.4	8	480	35
	Concrete Mixer Truck	1	40	79		2400	5.0	40.4	8	480	36
	Roller	1	20	80		2400	5.0	41.4	8	480	34
	Roller	1	20	80		2400	5.0	41.4	8	480	34
	Roller	1	20	80		2400	5.0	41.4	8	480	34
	Roller	1	20	80		2400	5.0	41.4	8	480	34
	Roller	1	20	80		2400	5.0	41.4	8	480	34
									Total for Paving Phase:		**45.7**
Architectural Coating	Compressor (air)	1	40	78		2400	5.0	39.4	8	480	35
	Compressor (air)	1	40	78		2400	5.0	39.4	8	480	35
	Compressor (air)	1	40	78		2400	5.0	39.4	8	480	35
									Total for Phase:		**35.4**

Operational Noise Input / Output

1100 Rancho Conejo Life Science Campus

Response to Dudek RFIs: Operational Needs

05/06/2022

Gensler

Operational Data Needs No. 1

1100 Rancho Conejo

Line No.	Data Need	Responsibility	Response
1	***Project Description***		
1a.	Provide latest version of the project plans, as applicable, including site plan, site elevations, floor plans, landscape plan, utility plan, grading plan, etc.	Client	See attached.
1b.	Provide details regarding off-street site improvements that are planned (per the City Standards).	Client	No off street upgrades are planned as part of the project.
1c.	Provide estimated employees to be generated by proposed project.	Client	(2168 lab/office employees + 70 café employees, not all present at the same time+ 8 fitness) = 2,246
1d.	Provide anticipated energy use during project operation.	Client	See attached "Operatonial Needs" section.
1e.	Provide anticipated water use during project construction and operation.		See attached "Operatonial Needs" section.
1e.	Provide anticipated solid waste generated during operation.	Client	Use CalEEMod values.
1f.	Provide Phase I and Phase II reports (if applicable)		See attached.
1g.	Provide hazard, hydrological, and geotechincal studies (if available)		The only chemicals being used by the landlord are cleaning supplies, and they will be disposed of with the regular waste. Information on hazardous materials used as part of tenant operations will be included with the tenant improvement permit package. All state and local regulatory guidelines will be followed.
2	***Air Quality***		
2a.	Provide Project and construction details included in **Tab 2** of this speadsheet titled "AQ". This information will be used for AQ modeling.	Client	
2b.	Provide details regading stationary sources of air pollutants (i.e. generators, boilers, etc).	Client	Generators will be tested monthly. See response to Dudek Rfi Request Memo
3	***Noise***		
3a.	Provide mechanical plans showing the location and details of any mechanical equipment (data sheets are helpful).	Client	See response to Dudek Rfi Request Memo

1100 Rancho Conejo Life Science Campus

Demolition

- Estimated 1,200 Tons of Green Waste, 1,800 Tons of Trash/Debris
- Use CalEEMod default for distance
- Not removing existing gravel/dirt surface other than Green Waste listed above as this is a net import/fill project
- Estimated 23,000 Tons of Concrete and Asphalt to be crushed and re-used onsite

Green Strategies (M&P)

- Project is targeting LEED Gold
- High efficiency Condensing Boilers
- High efficiency Packaged DX AHUs
- Variable Frequency Drives on fans and compressors for reduced energy usage
- Low flow/flush plumbing fixtures (>30% reduction over LEED baseline)

Operational Data Needs

Energy Sources

- Please use default values in CalEEMod for estimated annual electricity consumption and natural gas consumption
- Onsite Solar Energy: Estimated 32,000 SF PV Panels, 20W/SF
- Emergency Generators: (2) 1,250 KW, (1) 600 KW located in loading docks

Estimated Water Consumption

- 3,864,800 gallons/year
    - *1,619,800 domestic*
    - *2,245,000 industrial (lab)*

Solid Waste

- Please use default values in CalEEMod

Estimated Lighting Power Density (per Lighting Designer)

- The Alexandria
    - 0.585 W/SF
- Buildings A, B, & C
    - Shell only: 0.36 W/SF
    - After TI: 0.74 W/SF

Anticipated On-Site Outdoor Noise Source:

- Three Generators total. Each Generator is 76DB at the generator enclosure, these enclosures are further than 50' from the property line, and estimated below 60DB at the property line
- Reference Mechanical Equipment Noise Emission sheet

MECHANICAL EQUIPMENT - NOISE EMISSION

Building	Unit	Make	Model	Sound Power (LwA)	15' Sound Pressure (dBA)	25' Sound Pressure (dBA)	60' Sound Pressure (dBA)	100' Sound Pressure (dBA)
Building X	AC-X1	AAON	RQ-3	75	54	49	42	37
	AC-X2	AAON	RQ-5	80	59	55	47	43
	AC-X3	AAON	RN-7	80	59	55	47	43
	AC-X4	AAON	RQ-2	75	54	49	42	37
	AC-X5	AAON	RQ-3	75	54	49	42	37
	AC-X6	AAON	RN-7	80	59	55	47	43
	AC-X7	AAON	RQ-2	75	54	49	42	37
	AC-X8	AAON	RN-20	91	69	65	57	53
	AC-X9	AAON	RQ-3	75	54	49	42	37
	AC-X10	AAON	RQ-3	75	54	49	42	37
	AC-X11	AAON	RN-15	91	69	65	57	53
	AC-X12	AAON	RN-15	91	69	65	57	53
	AC-X13	AAON	RN-15	91	69	65	57	53

Building	Unit	Make	Model	Airflow (CFM)	Cooling Capacity (MBH)	Sound Power (LwA)	5' Sound Pressure (dBA)
Building A	AC-A1*	AAON	RZA-240	44,000	2,373	-	-
	AC-A2*	AAON	RZA-240	44,000	2,373	-	-
	AC-A3*	AAON	RZA-160	28,000	1,626	-	-
	AC-A4*	AAON	RZA-220	39,000	2,070	-	-
	EF-A1.1	Greenheck	USF	17,600	-	93	82
	EF-A1.2	Greenheck	USF	17,600	-	93	82
	EF-A1.3	Greenheck	USF	17,600	-	93	82
	EF-A1.4	Greenheck	USF	17,600	-	93	82
	EF-A1.5	Greenheck	USF	17,600	-	93	82
	EF-A2.1	Greenheck	USF	16,750	-	94	82
	EF-A2.2	Greenheck	USF	16,750	-	94	82
	EF-A2.3	Greenheck	USF	16,750	-	94	82
	EF-A2.4	Greenheck	USF	16,750	-	94	82

**Sound data not available*

Building	Unit	Make	Model	Airflow (CFM)	Cooling Capacity (MBH)	Sound Power (LwA)	5' Sound Pressure (dBA)
Building B	AC-B1*	AAON	RZA-220	39,000	2,070	-	-
	AC-B2*	AAON	RZA-120	22,000	1,230	-	-
	AC-B3*	AAON	RZA-120	22,000	1,230	-	-
	EF-B1.1	Greenheck	USF	13,000	-	91	80
	EF-B1.2	Greenheck	USF	13,000	-	91	80
	EF-B1.3	Greenheck	USF	13,000	-	91	80
	EF-B2.1	Greenheck	USF	14,670	-	93	82
	EF-B2.2	Greenheck	USF	14,670	-	93	82
	EF-B2.3	Greenheck	USF	14,670	-	93	82

**Sound data not available*

Building	Unit	Make	Model	Airflow (CFM)	Cooling Capacity (MBH)	Sound Power (LwA)	5' Sound Pressure (dBA)
Building C	AC-C1*	AAON	RZA-240	44,000	2,373	-	-
	AC-C2*	AAON	RZA-240	44,000	2,373	-	-
	AC-C3*	AAON	RZA-160	28,000	1,626	-	-
	AC-C4*	AAON	RZA-220	39,000	2,070	-	-
	EF-C1.1	Greenheck	USF	17,600	-	93	82
	EF-C1.2	Greenheck	USF	17,600	-	93	82
	EF-C1.3	Greenheck	USF	17,600	-	93	82
	EF-C1.4	Greenheck	USF	17,600	-	93	82
	EF-C1.5	Greenheck	USF	17,600	-	93	82
	EF-C2.1	Greenheck	USF	16,750	-	94	82
	EF-C2.2	Greenheck	USF	16,750	-	94	82
	EF-C2.3	Greenheck	USF	16,750	-	94	82
	EF-C2.4	Greenheck	USF	16,750	-	94	82

**Sound data not available*

Construction Data Needs

Construction Start Date:	5/2/2022	MM/DD/YYYY
Construction End Date:	3/1/2025	MM/DD/YYYY
Demolition Area:	167,475	Square Feet
Existing asphalt to be removed:	215,950	Square Feet
Total Area Graded/Disturbed:	19	Acres
Cut:	24400	cubic yards
Fill:	63800	cubic yards
Quantity of soil export:	n/a	cubic yards
Quantity of soil import:	39400	cubic yards
Contaminated soils on-site:	N/A	Y/N; cubic yards
Distance to disposal of soils:	N/A	miles
Contaminated soils disposal site/distance	N/A	location/distance (miles)
Rock/concrete crushing:	Y	Y/N
Average Depth of disturbance:	0.5	feet below ground surface
Maximum Depth of Disturbance:	2.5	feet below ground surface
Architectural Coating:	Y	Y/N
Off-site street/utility improvements	N/A	Description; half-width or full width of street

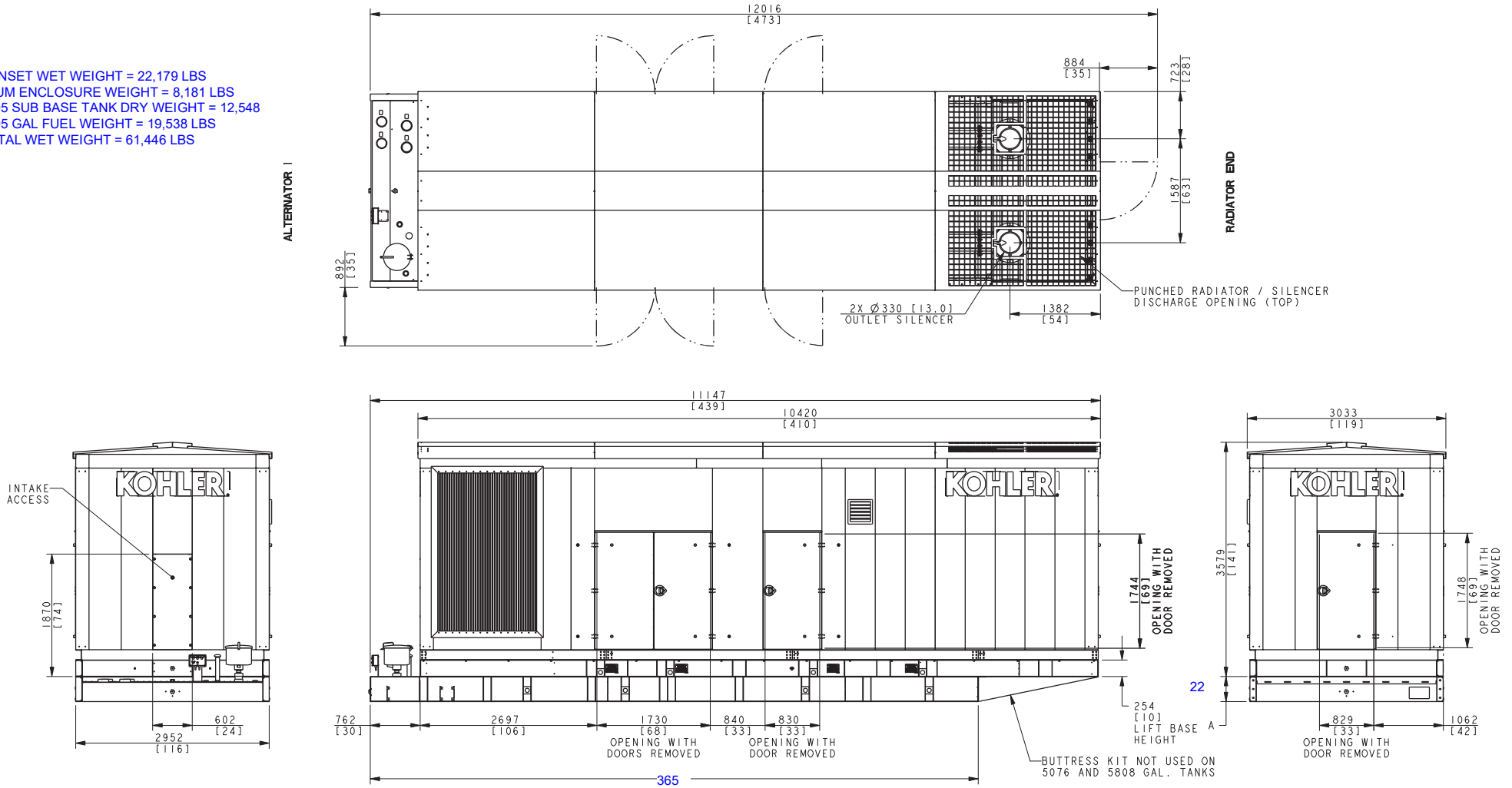
Will low-VOC or no-VOC paint be used for interior and exterior (i.e., VOC content of 5 grams/Liter or less)

Table 1 Construction Scenario Assumptions

Potential Construction Phase	Start Date	Finish Date	One-Way Vehicle Trips			Equipment		
			Average Daily Workers	Average Daily Vendor Trucks	Total Haul Trucks	Type	Quantity	Usage Hours
Demolition	5/2/2022	7/29/2022	10	3	160	Concrete/Industrial Saws	1	440
						Excavators	4	1760
						Skid Steers	6	2640
						Loader	1	440
						Aerial Lifts/Scissor Lifts	8	3520
						Crushing/Proc. Equipment	1	440
Site Prep/Grading	8/1/2022	11/15/2022	7	1	3214	Excavators	1	528
						Scraper	4	2112
						Rubber Tired Dozers	2	1056
						Tractors/Loaders/Backhoes	2	1056
Building Construction *(please note if there would be multiple building construction phases)*	Bldg A: 10/3/22 The Alexandria: 10/16/23 Bldg B: 1/1/24 Bldg C: 1/1/24	Bldg A: 11/20/23 The Alexandria: 1/29/25 Bldg B: 2/1/25 Bldg C: 3/1/25	70	8	0	Cranes	4	450
						Forklifts	12	10600
						Generator Sets	2	300
						Tractors/Loaders/Backhoes	2	300
						Welders	8	800
Paving	7/10/2023	11/17/2023	20	1	0	Pavers	5	4000
						Paving Equipment	5	4000
						Rollers	5	4000
Architectural Coating	9/11/2023	12/22/2023	8	1	0	Air Compressors	3	1344
Other phases?								

KD1250

GENSET WET WEIGHT = 22,179 LBS
ALUM ENCLOSURE WEIGHT = 8,181 LBS
2605 SUB BASE TANK DRY WEIGHT = 12,548
2605 GAL FUEL WEIGHT = 19,538 LBS
TOTAL WET WEIGHT = 61,446 LBS



NOTE: DIMENSIONS IN [ ] ARE ENGLISH EQUIVALENTS.
*WEIGHT INCLUDES ENCLOSURE AND SILENCER.

ALUM. SL2 ENCLOSURE WEIGHT KG [LBS]	3711 [8181]

TANK & LIFT BASE INFORMATION

LITERS [GALLONS]	GENSETS	HEIGHT DIM A MM [INCH]	LENGTH DIM B MM [INCH]	TANK WEIGHT KG [LBS] (NO FUEL)
SL2 LIFT BASE	KD1250-1750	SEE DIM	10350 [407]	1424 [3140]
5863 [1549]	KD1250-1750	381 [15]	9281 [365]	5210 [11,486]
9860 [2605]	KD1250-1750	559 [22]	9281 [365]	5692 [12,548]
11204 [2960]	KD1250-1750	635 [25]	9281 [365]	5857 [12,913]
19214 [5076]	KD1250-1750	889 [35]	11113 [437]	8161 [17,993]
21985 [5808]	KD1250-1750	991 [39]	11113 [437]	8568 [18,889]

TANK WEIGHT + LIFT BASE WEIGHT + ENCLOSURE WEIGHT + GENERATOR SET WEIGHT (REFERENCE FROM GENERATOR SET ADV) =TOTAL WEIGHT

KD1250-1750 SL2 ENCLOSURE AND LIFTING BASE WITH SUB BASE TANK OPTION

REV	DATE	☐ INDICATES PART NUMBERS AFFECTED BY LATEST DRAWING REVISION	BY
-	9-28-16	NEW DRAWING [CTI60830]	CCL
A	1-24-17	SEE SHEETS 4 & 11 [CTI69898]	CCL
B	3-22-17	SEE SHEET 5,7 & 8 [CTI72499]	PAS
C	4-5-17	SEE SHEET 7,8 & 9 [CTI72948]	PRM
D	7-24-17	(C-4) 2X Ø330 DIMENSION ADDED; SEE SHEET 1 [CTI76858]	MVT
E	12-14-17	SEE SHEET 5 & 7 [CTI82350]	RVM

UNLESS OTHERWISE SPECIFIED - 1) DIMENSIONS ARE IN MILLIMETERS 2) TOLERANCES ARE: X.XX ± X.X ± X ± ANGLES ± SURFACE FINISH MAX. THIRD ANGLE PROJECTION

APPROVALS		DATE (M-D-Y)
DRAWN	CCL	9-28-16
CHECKED	CCL	9-28-16
APPROVED	BLM	9-28-16

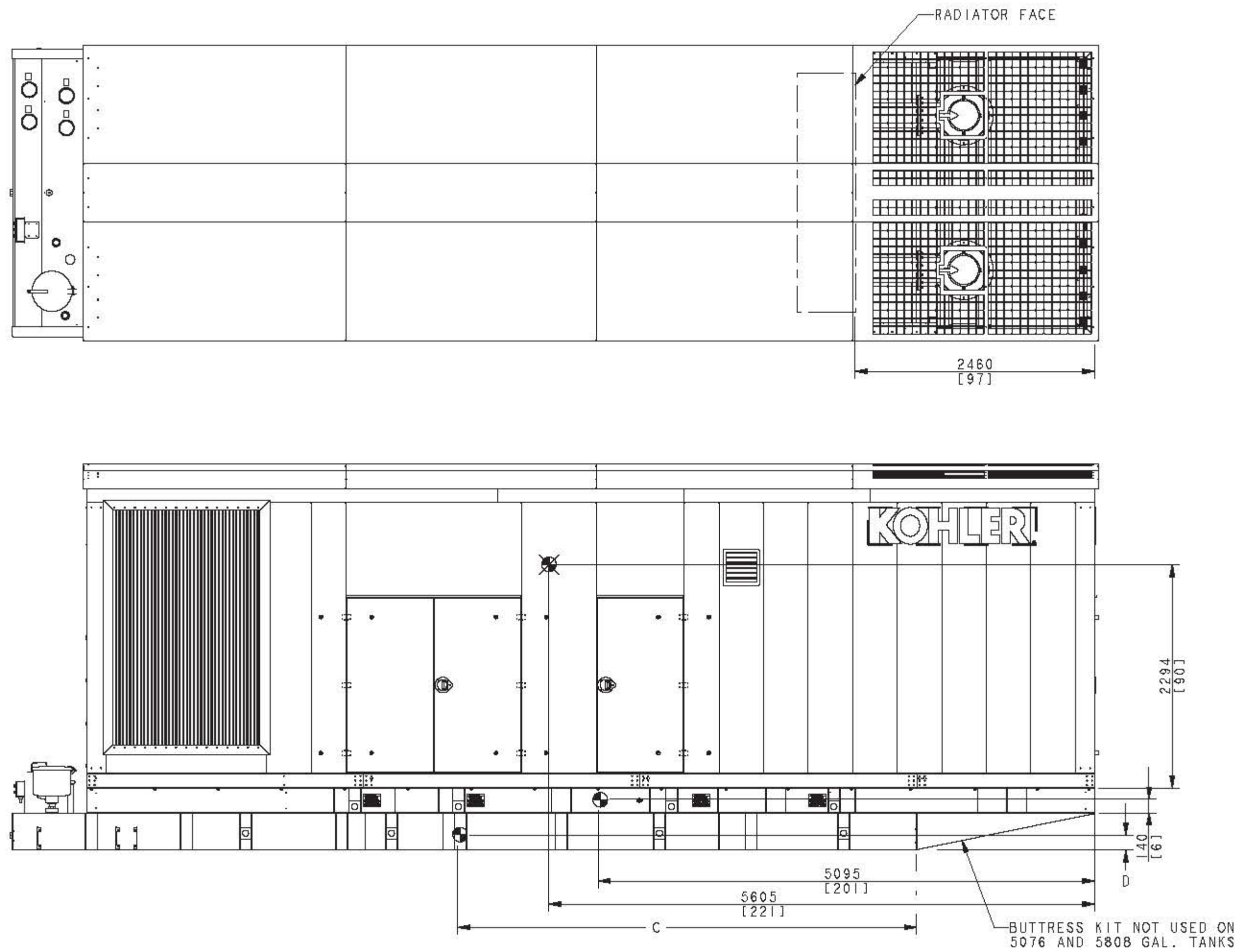
KOHLER CO. SDMO — METRIC — PRO-E

KOHLER POWER SYSTEMS, KOHLER, WI 53044 U.S.A. SDMO, CS 92848, 28028 BREST CEDEX 2, FRANCE.

TITLE: DIMENSION PRINT KD1250-1750 TANK & ENCLOSURE

SCALE 0.04 | CAD NO. | SHEET 5 of 11

DWG NO. ADV-8927 | D



SL2 CENTER OF GRAVITY POINTS FOR ENCLOSURE, LIFT BASE AND TANK VARIATIONS

SL2 CENTER OF GRAVITY (CG) INFORMATION			
LITERS [GALLONS]	GENSETS	HORIZONTAL C.G. DIM C MM [INCH]	VERTICAL C.G. DIM D MM [INCH]
SL2 ENCLOSURE	KD1250-1750	SEE DIM	SEE DIM
SL2 LIFT BASE	KD1250-1750	SEE DIM	SEE DIM
5863 [1549]	KD1250-1750	4706 [185]	155 [6]
9860 [2605]	KD1250-1750	4679 [184]	240 [9]
11204 [2960]	KD1250-1750	4710 [185]	426 [17]
19214 [5076]	KD1250-1750	5727 [225]	383 [15]
21985 [5808]	KD1250-1750	5722 [225]	225 [17]

REV	DATE	ON COMPOSITE DWGS, SEE PART NO. FOR REVISION LEVEL ☐ INDICATES PART NUMBERS AFFECTED BY LATEST DRAWING REVISION	BY
-	9-28-16	NEW DRAWING [CT160830]	CCL
A	1-24-17	(A-7) HORIZONTAL & VERTICAL TITLES SWITCHED;	
		SEE SHEET 11 [CT169898]	CCL
B	3-22-17	SEE SHEET 5,7 & 8 [CT172499]	PAS
C	4-5-17	SEE SHEET 7,8 & 9 [CT172948]	PRM
D	7-24-17	SEE SHEET 1 & 3 [CT176858]	MVT
E	12-14-17	SEE SHEET 5 & 7 [CT182350]	RVM

UNLESS OTHERWISE SPECIFIED -
1) DIMENSIONS ARE IN MILLIMETERS
2) TOLERANCES ARE:
X.XX ±
X.X ±
X ±
ANGLES ±
SURFACE FINISH MAX.
THIRD ANGLE PROJECTION

APPROVALS		DATE (M-D-Y)
DRAWN	CCL	9-28-16
CHECKED	CCL	9-28-16
APPROVED	BLM	9-28-16

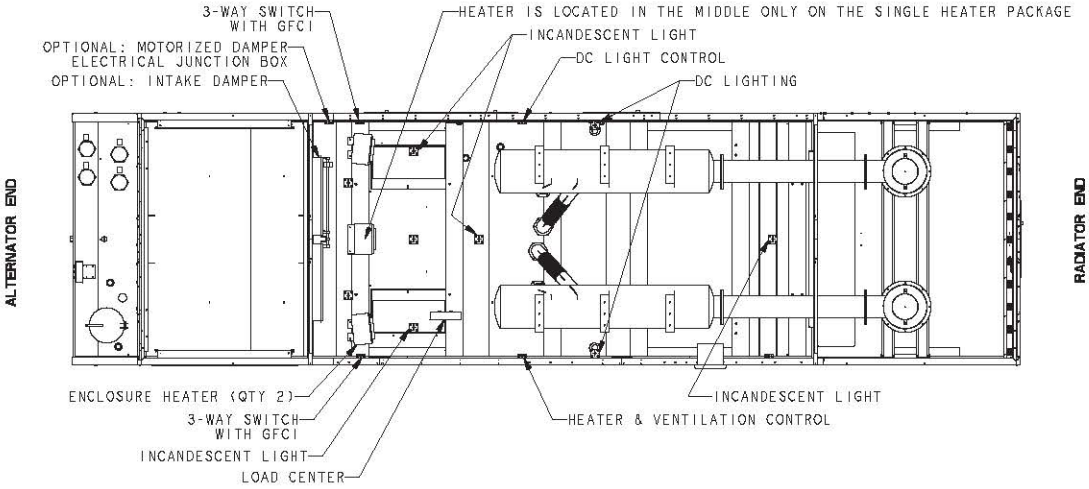
KOHLER CO. SDMO — METRIC — PRO-E

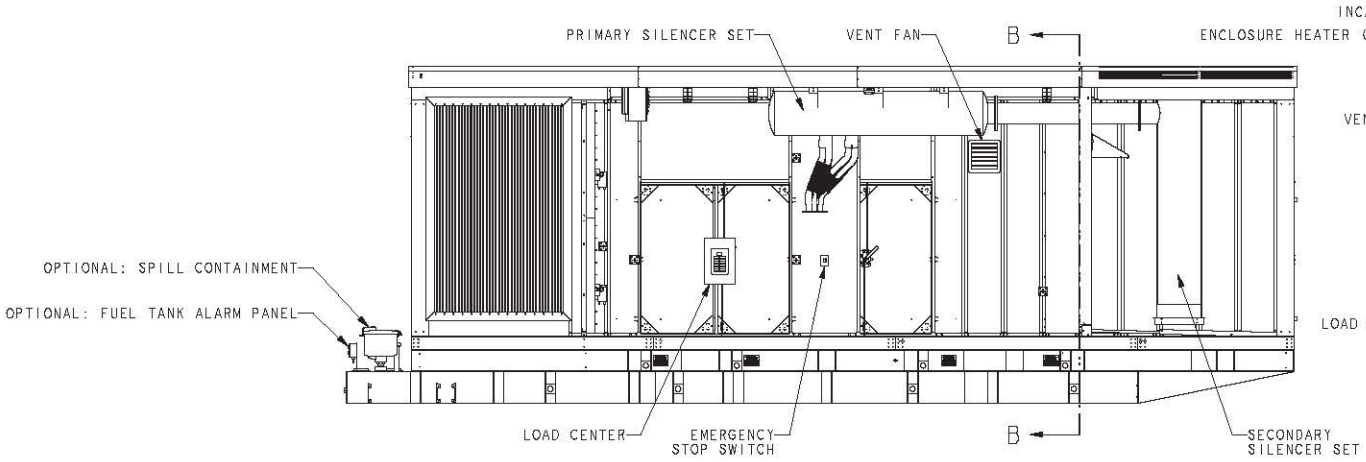
KOHLER POWER SYSTEMS, KOHLER, WI 53044 U.S.A.
SDMO, CS 92848, 29228 BREST CEDEX 2, FRANCE

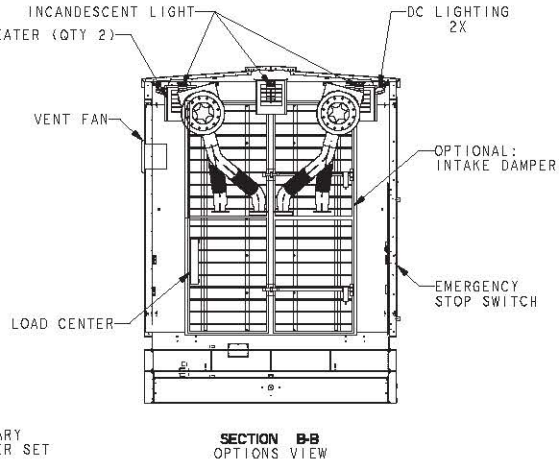
TITLE **DIMENSION PRINT KD1250-1750 TANK & ENCLOSURE**

SCALE 0.04 | CAD NO. | SHEET 4 of 11

DWG NO. **ADV-8927** | D







SECTION B-B
OPTIONS VIEW

KD1250-1750KW ELECTRICAL ENCLOSURE & TANK ACCESSORY OPTIONS

REV	DATE	ON COMPOSITE DWGS, SEE PART NO. FOR REVISION LEVEL. □ INDICATES PART NUMBERS AFFECTED BY LATEST DRAWING REVISION	BY
A	1-24-17	SEE SHEETS 4 & 11 [CT1698981]	CCL
B	3-22-17	(C-1) DC LIGHTING QTY 4 WAS QTY 2; (D-4) DC LIGHTING POSITIONS UPDATED & SEE SHEET 7 & 8 [CT1724991]	PAS
C	4-5-17	SEE SHEET 7,8 & 9 [CT1729481]	PRM
D	7-24-17	SEE SHEET 1 & 3 [CT1768581]	MVT
E	12-14-17	(C, D-5) SINGLE HEATER PACKAGE & NOTE ADDED [CT1823501]	RVM

UNLESS OTHERWISE SPECIFIED - 1) DIMENSIONS ARE IN MILLIMETERS 2) TOLERANCES ARE: X.XX ±, X.X ±, ANGLES ±, SURFACE FINISH MAX., THIRD ANGLE PROJECTION

DRAWN	CCL	9-28-16
CHECKED	CCL	9-28-16
APPROVED	BLM	9-28-16

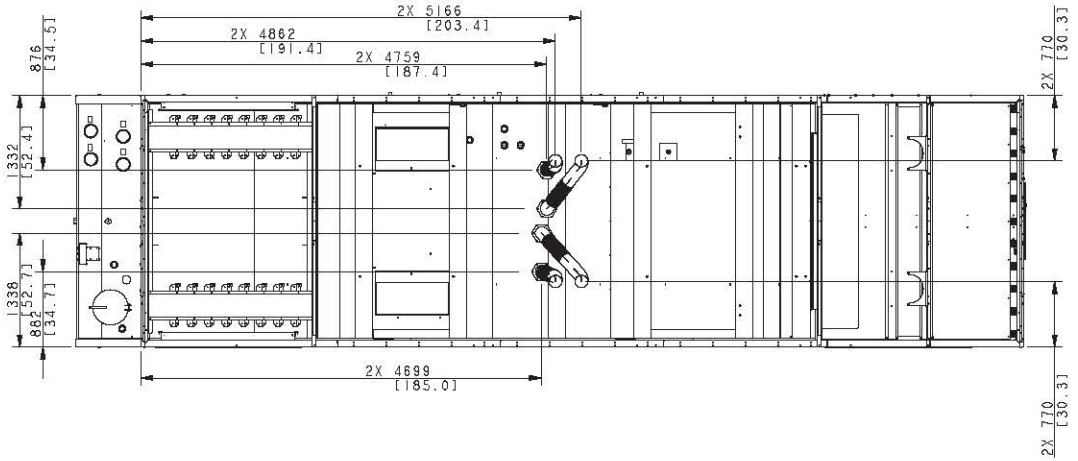
KOHLER CO. SDMO — METRIC — PRO-E

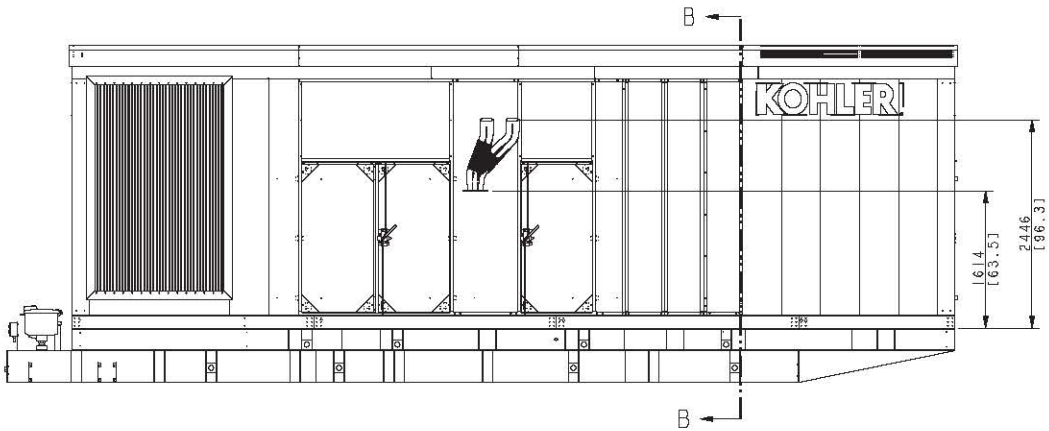
KOHLER POWER SYSTEMS, KOHLER, WI 53044 U.S.A.
SDMO, CS 90548, 18028 ANGERS CEDEX 2, FRANCE

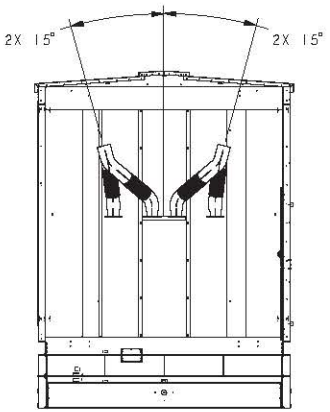
TITLE: **DIMENSION PRINT KD1250-1750 TANK & ENCLOSURE**

SCALE 0.04 | DWG NO. | SHEET 9 of 11

DWG NO. **ADV-8927** — D







SECTION B-B

KD1250-1750KW
SL2 ENCLOSURE, AQMD

REV	DATE	ON COMPOSITE DWGS, SEE PART NO. FOR REVISION LEVEL. □ INDICATES PART NUMBERS AFFECTED BY LATEST DRAWING REVISION	BY
-	9-28-16	NEW DRAWING [CT160830]	CCL
A	1-24-17	SEE SHEETS 4 & 11 [CT169898]	CCL
B	3-22-17	SEE SHEET 5,7 & 8 [CT172499]	PAS
C	4-5-17	SEE SHEET 7,8 & 9 [CT172948]	PRM
D	7-24-17	SEE SHEET 1 & 3 [CT178858]	MVT
E	12-14-17	SEE SHEET 5 & 7 [CT185230]	RVM

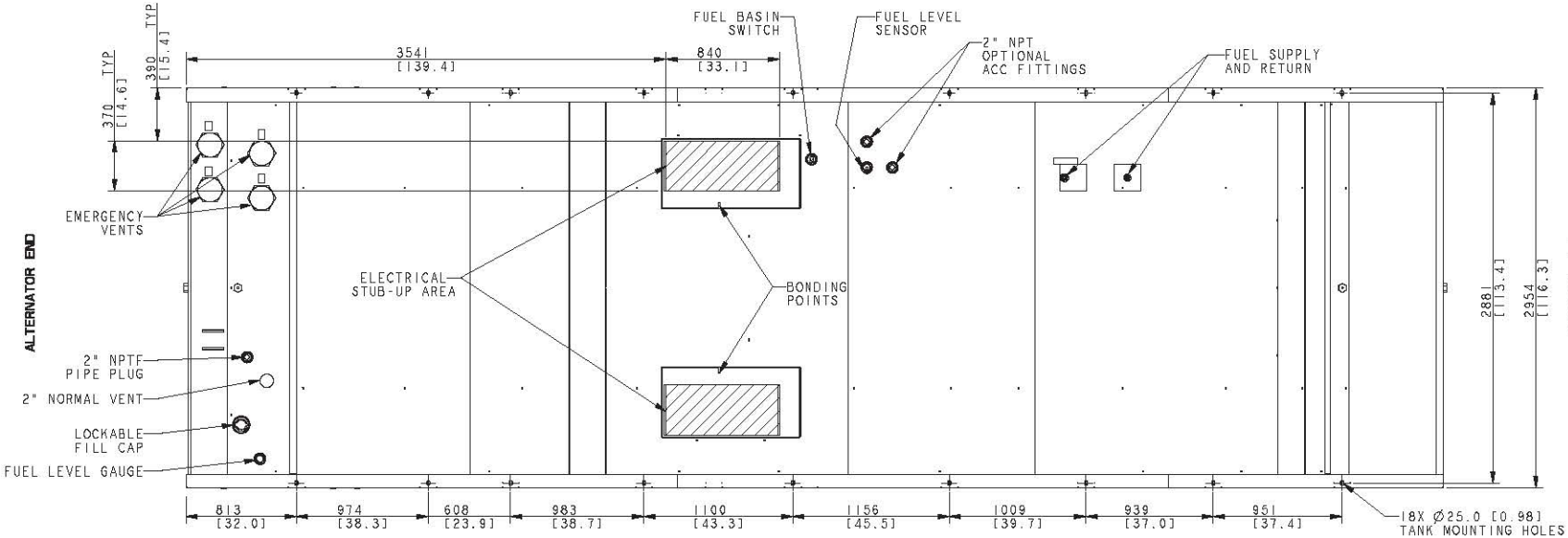
UNLESS OTHERWISE SPECIFIED - (1) DIMENSIONS ARE IN MILLIMETERS (2) TOLERANCES ARE: X.XX ±, X.X ±, ANGLES ±, SURFACE FINISH MAX., THIRD ANGLE PROJECTION

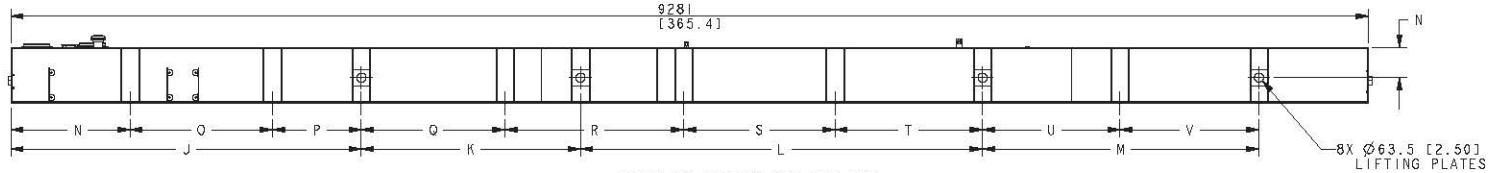
APPROVALS	DATE (M-D-Y)	
DRAWN	CCL	9-28-16
CHECKED	CCL	9-28-16
APPROVED	BLM	9-28-16

KOHLER CO. SDMO — METRIC — PRO-E

TITLE: DIMENSION PRINT KD1250-1750
TANK & ENCLOSURE

SCALE 0.04 | DWG NO. ADV-8927 | SHEET 6 of 11 | D





MOUNTING AND LIFTING LOCATIONS
1549 GAL. TANK SHOWN
ALSO REFERENCING TANKS:
2605 GAL. & 2960 GAL.

TANK MOUNTING INFORMATION

LITTERS [GALLONS]	DIMENSION "N"	DIMENSION "O"	DIMENSION "P"	DIMENSION "Q"	DIMENSION "R"	DIMENSION "S"	DIMENSION "T"	DIMENSION "U"	DIMENSION "V"
5863[1549]	813.0	974.0	608.3	982.9	1220.7	1034.8	1008.9	939.3	950.8
9860[2605]	813.0	974.0	608.3	982.9	1220.7	1034.8	1008.9	939.3	950.8
11204[2960]	813.0	974.0	608.3	982.9	1220.7	1034.8	1008.9	939.3	950.8

TANK LIFT PLATE INFORMATION

LITERS [GALLONS]	DIMENSION "J" MM [INCHES]	DIMENSION "K" MM [INCHES]	DIMENSION "L" MM [INCHES]	DIMENSION "M" MM [INCHES]	DIMENSION "N" MM [INCHES]
5863 [1549]	2395 [94]	1498 [59]	2749 [108]	1890 [74]	159 [6]
9860 [2605]	2395 [94]	1498 [59]	2749 [108]	1890 [74]	210 [8]
11204 [2960]	1787 [70]	2106 [83]	2749 [108]	1890 [74]	210 [8]

REV	DATE	ON COMPOSITE DWGS, SEE PART NO. FOR REVISION LEVEL □ INDICATES PART NUMBERS AFFECTED BY LATEST DRAWING REVISION	BY
A	1-24-17	SEE SHEETS 4 & 11 [CT169898]	CCL
B	3-22-17	(A-4,5) NOTE: SEISMIC (IDC) RATED TANKS REMOVED & SEE SHEET 5 & 8 [CT172499]	PAS
C	4-5-17	(B-3 THRU-7) DIM N THRU V ADDED; (A-8) TANK MOUNTING INFORMATION TABLE ADDED; SEE SHEET 8 & 9 [CT172948]	PRM
D	7-24-17	SEE SHEET 1 & 3 [CT176858]	MVT
E	12-14-17	(A-8) 2605 WAS 2960 [CT182350]	RVM

UNLESS OTHERWISE SPECIFIED - 1) DIMENSIONS ARE IN MILLIMETERS 2) TOLERANCES ARE: X.XX ±, X.X ±, ANGLES ±, SURFACE FINISH MAX., THIRD ANGLE PROJECTION

APPROVALS	DATE (M-D-Y)
DRAWN CCL	9-28-16
CHECKED CCL	9-28-16
APPROVED BLM	9-28-16

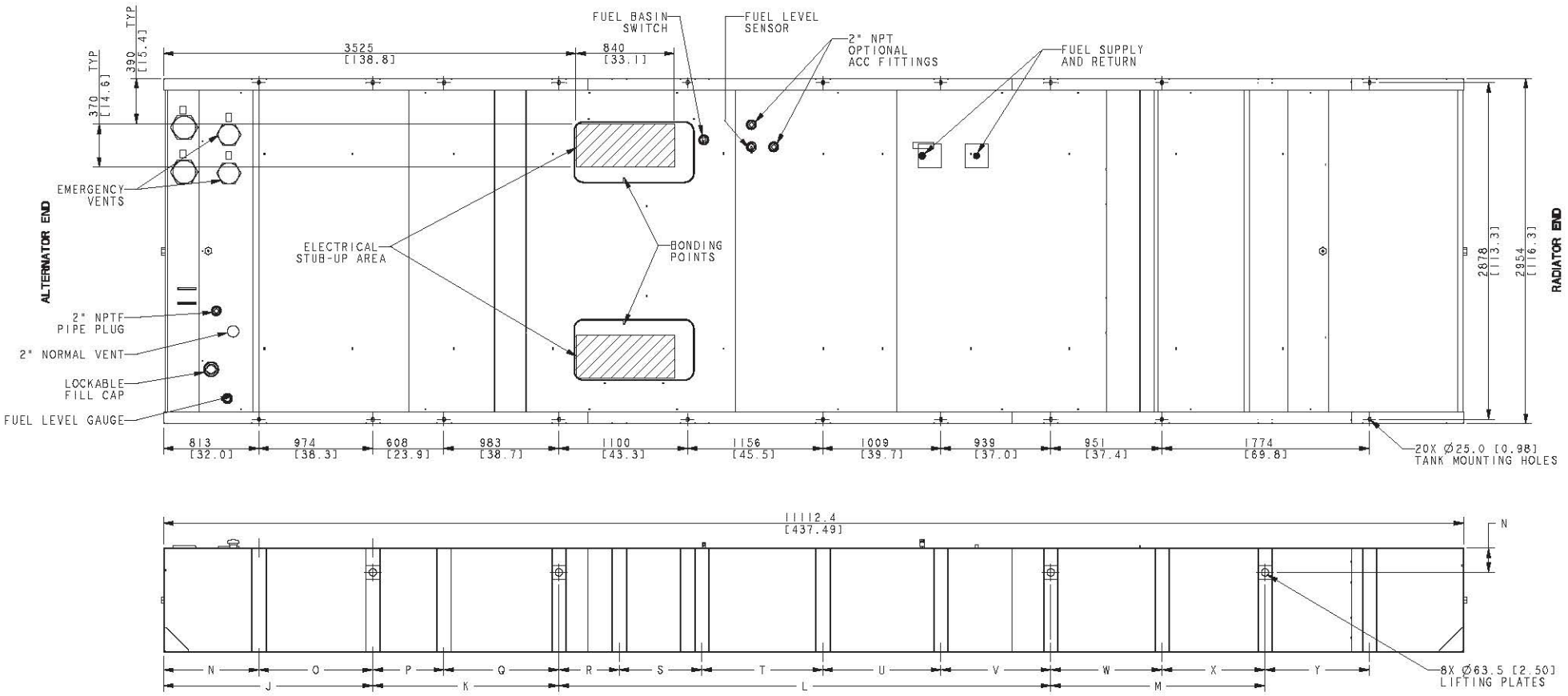
KOHLER CO. SDMO — METRIC — PRO-E

KOHLER POWER SYSTEMS, KOHLER, WI 53044 U.S.A.
SDMO, CS 90548, 18028 ANGERS CEDEX 2, FRANCE

TITLE: **DIMENSION PRINT KD1250-1750 TANK & ENCLOSURE**

SCALE 0.06 | DWG NO. | SHEET 1 of 11

DWG NO. **ADV-8927** | **D**



MOUNTING AND LIFTING LOCATIONS
5076 GAL. TANK SHOWN
ALSO REFERENCING TANK:
5808 GAL.

TANK MOUNTING INFORMATION

LITTERS [GALLONS]	DIMENSION "N"	DIMENSION "O"	DIMENSION "P"	DIMENSION "Q"	DIMENSION "R"	DIMENSION "S"	DIMENSION "T"	DIMENSION "U"	DIMENSION "V"	DIMENSION "W"	DIMENSION "X"	DIMENSION "Y"
19214[5076]	813.0	974.0	608.3	982.9	514.9	705.8	1034.8	1008.9	939.3	950.8	880.3	893.5
21985[5808]	813.0	974.0	608.3	982.9	514.9	705.8	1094.8	1008.9	939.3	950.8	880.3	893.5

TANK LIFT PLATE INFORMATION

LITERS [GALLONS]	DIMENSION "J" MM [INCHES]	DIMENSION "K" MM [INCHES]	DIMENSION "L" MM [INCHES]	DIMENSION "M" MM [INCHES]	DIMENSION "N" MM [INCHES]
19214 [5076]	1787 [70]	1591 [63]	4204 [166]	1831 [72]	210 [8]
21985 [5808]	1787 [70]	1591 [63]	4204 [166]	1831 [72]	210 [8]

REV	DATE	ON COMPOSITE DWGS, SEE PART NO. FOR REVISION LEVEL. □ INDICATES PART NUMBERS AFFECTED BY LATEST DRAWING REVISION	BY
A	1-24-17	SEE SHEETS 4 & 11 [CT169898]	CCL
B	3-22-17	(A-4,5) NOTE: SEISMIC (IDC) RATED TANKS	
		REMOVED & SEE SHEET 5 & 7 [CT172499]	PAS
C	4-5-17	(B-3 THRU-7) DIM N THRU Y ADDED; (A-8) TANK	
		MOUNTING INFORMATION TABLE ADDED; SEE SHEET	
		7 & 9 [CT172948]	PRM
D	7-24-17	SEE SHEET 1 & 3 [CT176858]	MVT
E	12-14-17	SEE SHEET 5 & 7 [CT182350]	RVM

UNLESS OTHERWISE SPECIFIED - 1) DIMENSIONS ARE IN MILLIMETERS 2) TOLERANCES ARE: X.XX ±, X.X ±, ANGLES ±. SURFACE FINISH MAX. THIRD ANGLE PROJECTION

APPROVALS	DATE (M-D-Y)
DRAWN CCL	9-28-16
CHECKED CCL	9-28-16
APPROVED BLM	9-28-16

KOHLER CO. KSDMO

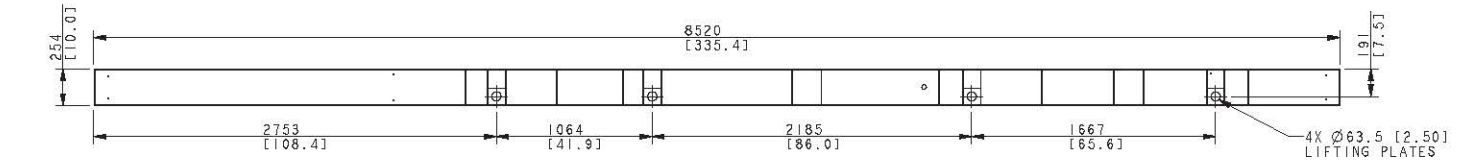
KOHLER POWER SYSTEMS, KOHLER, WI 53044 U.S.A.
SIDNEY, OH 45365 - 9500 SIDNEY SIDNEY & FRANCIS

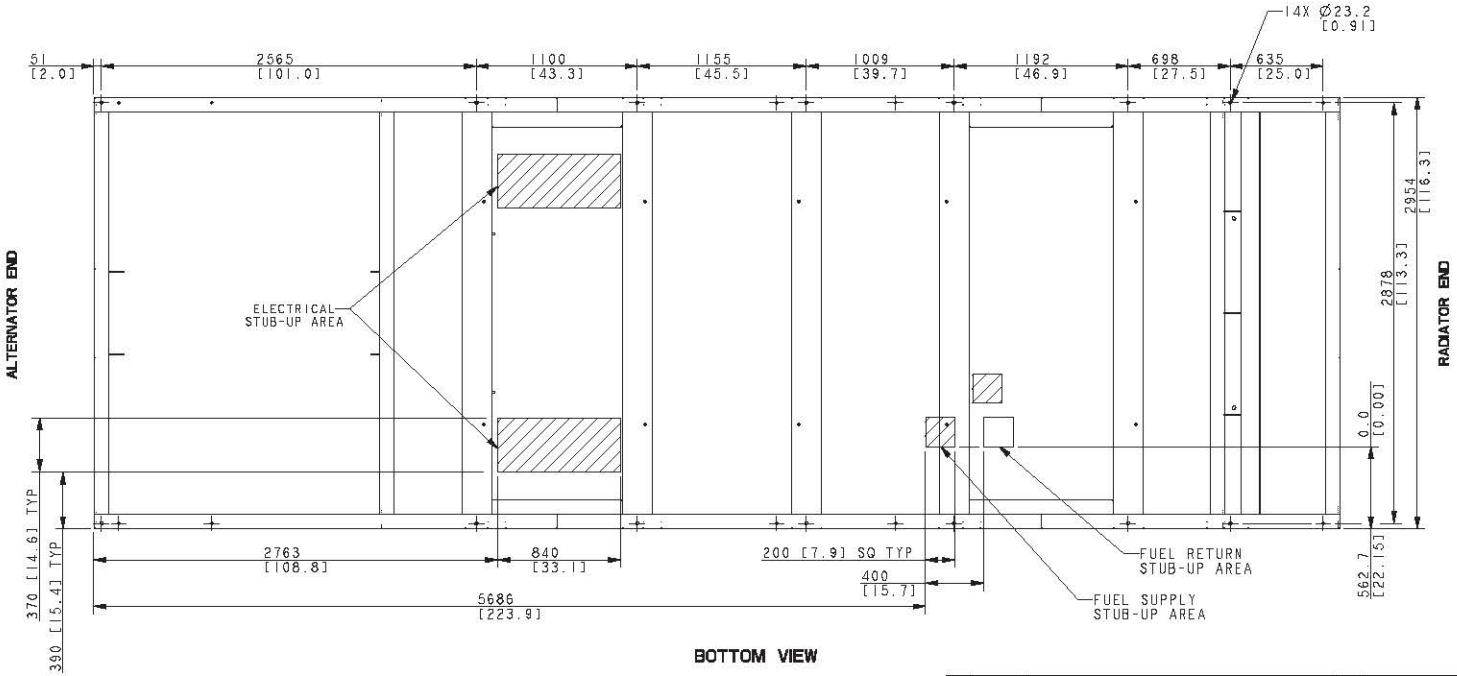
METRIC
PRO-E

TITLE: DIMENSION PRINT KD1250-1750 TANK & ENCLOSURE

SCALE 0.06 | DWG NO. | SHEET 6 of 11

DWG NO. ADV-8927 | D





BOTTOM VIEW

KD1250-1750 SL1 ENCLOSURE
LIFTING BASE MOUNTING

REV	DATE	ON COMPOSITE DWGS, SEE PART NO. FOR REVISION LEVEL. □ INDICATES PART NUMBERS AFFECTED BY LATEST DRAWING REVISION	BY
-	9-28-16	NEW DRAWING [CT160830]	CCL
A	1-24-17	SEE SHEETS 4 & 11 [CT168898]	CCL
B	3-22-17	SEE SHEET 5, 7 & 8 [CT172499]	PAS
C	4-5-17	(C-2) DIM 635 ADDED; SEE SHEET 7 & 8 [CT172948]	PRM
D	7-24-17	SEE SHEET 1 & 3 [CT178858]	MVT
E	12-14-17	SEE SHEET 5 & 7 [CT182350]	RVM

UNLESS OTHERWISE SPECIFIED -
1) DIMENSIONS ARE IN MILLIMETERS
2) TOLERANCES ARE:
X.XX ±
X.X ±
ANGLES ±
SURFACE FINISH MAX.
THIRD ANGLE PROJECTION

APPROVALS	DATE (M-D-Y)
DRAWN CCL	9-28-16
CHECKED CCL	9-28-16
APPROVED BLM	9-28-16

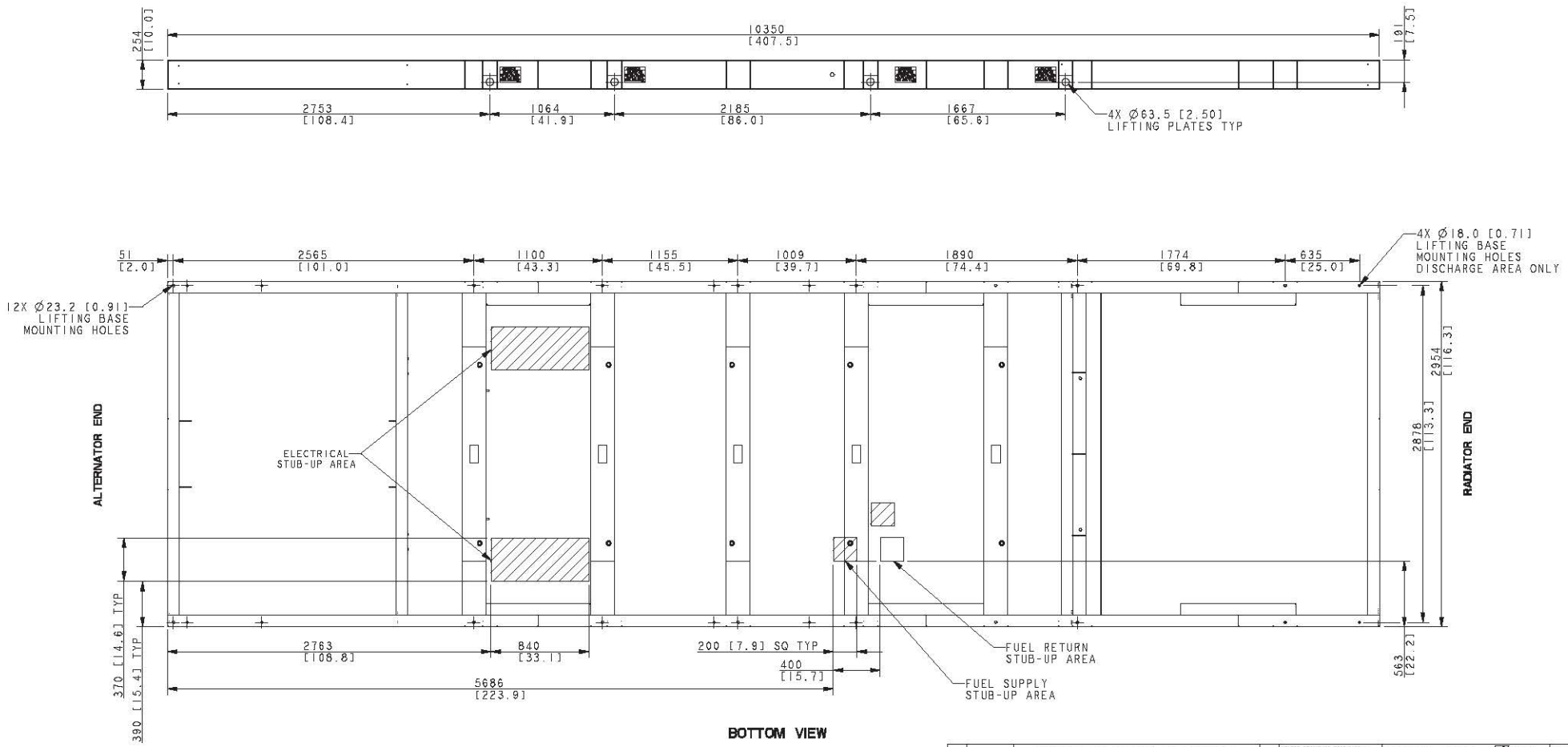
KOHLER CO. SDMO METRIC PRO-E

KOHLER POWER SYSTEMS, KOHLER, WI 53044 U.S.A.
SDMO, CS 90548, 78008 RUEIL MALMAISON CEDEX, FRANCE

TITLE: **DIMENSION PRINT KD1250-1750 TANK & ENCLOSURE**

SCALE 0.06 | END NO. | SHEET 5 of 11

DWG NO. **ADV-8927** D



BOTTOM VIEW

KD1250-1750 SL2 ENCLOSURE
LIFTING BASE MOUNTING

REV	DATE	ON COMPOSITE DWGS, SEE PART NO. FOR REVISION LEVEL. □ INDICATES PART NUMBERS AFFECTED BY LATEST DRAWING REVISION	BY
-	9-28-16	NEW DRAWING [CT160830]	CCL
A	1-24-17	SEE SHEETS 4 & 11 [CT169898]	CCL
B	3-22-17	SEE SHEET 5, 7 & 8 [CT172499]	PAS
C	4-5-17	SEE SHEET 7, 8 & 9 [CT172948]	PRM
D	7-24-17	SEE SHEET 1 & 3 [CT178858]	MVT
E	12-14-17	SEE SHEET 5 & 7 [CT182350]	RVM

UNLESS OTHERWISE SPECIFIED -
1) DIMENSIONS ARE IN MILLIMETERS
2) TOLERANCES ARE:
X.XX ±
X.X ±
X
ANGLES ±
SURFACE FINISH
MAX.
THIRD ANGLE PROJECTION

APPROVALS	DATE (M-D-Y)
DRAWN CCL	9-28-16
CHECKED CCL	9-28-16
APPROVED BLM	9-28-16

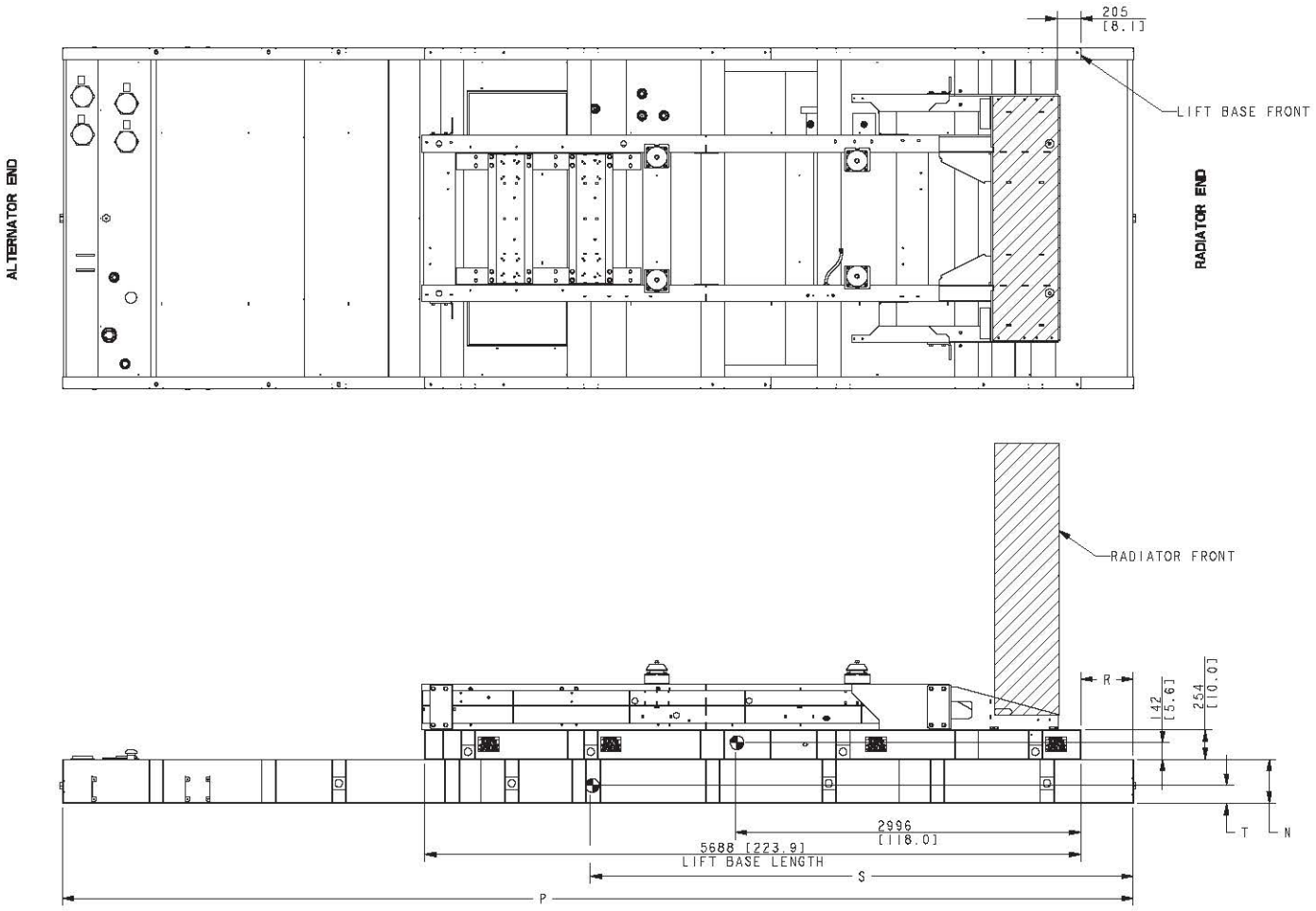
KOHLER CO. / SDMO
KOHLER POWER SYSTEMS, KOHLER, WI 53044, U.S.A.
SDMO, CS 90548, 49008 ANGERS CEDEX 01, FRANCE

METRIC
PRO-E

TITLE: **DIMENSION PRINT KD1250-1750**
TANK & ENCLOSURE

SCALE 0.06 | DWG NO. | SHEET 10 of 11

DWG NO. **ADV-8927** | D



CENTER OF GRAVITY POINTS

TANK WEIGHT + LIFT BASE WEIGHT + GENERATOR SET WEIGHT
(REFERENCE FROM GENERATOR SET ADV) =TOTAL WEIGHT

TANK & LIFT BASE INFORMATION

LITERS [GALLONS]	GENSETS	HEIGHT DIM N MM [INCH]	LENGTH DIM P MM [INCH]	LENGTH DIM R MM [INCH]	WEIGHT KG [LBS] (NO FUEL)	HORIZONTAL C.G. DIM S MM [INCH]	VERTICAL C.G. DIM T MM [INCH]
OPEN LIFT BASE	KD1250-1750	SEE NOTE	8520 [335]	N/A	986 [2174]	SEE DIM	SEE DIM
5863 [1549]	KD1250-1750	381 [15]	9281 [365]	454 [18]	5210 [11,486]	4706 [185]	155 [6]
9860 [2605]	KD1250-1750	559 [22]	9281 [365]	454 [18]	5692 [12,548]	4679 [184]	240 [9]
11204 [2960]	KD1250-1750	635 [25]	9281 [365]	454 [18]	5857 [12,913]	4710 [185]	426 [17]
19214 [5076]	KD1250-1750	889 [35]	11113 [438]	2285 [90]	8161 [17,993]	5727 [225]	383 [15]
21985 [5808]	KD1250-1750	991 [39]	11113 [438]	2285 [90]	8568 [18,889]	5722 [225]	225 [17]

KD1250-1750 OPEN UNIT
LIFTING BASE WITH SUB
BASE TANK OPTION

REV	DATE	ON COMPOSITE DWGS, SEE PART NO. FOR REVISION LEVEL. □ INDICATES PART NUMBERS AFFECTED BY LATEST DRAWING REVISION	BY
-	9-28-16	NEW DRAWING [CTI60830]	CCL
A	1-24-17	(A-5) HORIZONTAL & VERTICAL TITLES SWITCHED;	
		SEE SHEET 4 [CTI69895]	CCL
B	3-22-17	SEE SHEET 5,7 & 8 [CTI72499]	PAS
C	4-5-17	SEE SHEET 7,8 & 9 [CTI72948]	PRM
D	7-24-17	SEE SHEET 1 & 3 [CTI76858]	MVT
E	12-14-17	SEE SHEET 5 & 7 [CTI82350]	RVM

UNLESS OTHERWISE SPECIFIED -
1) DIMENSIONS ARE IN MILLIMETERS
2) TOLERANCES ARE:
X.XX ±
X.X ±
° ANGLES ±
SURFACE FINISH MAX.
THIRD ANGLE PROJECTION

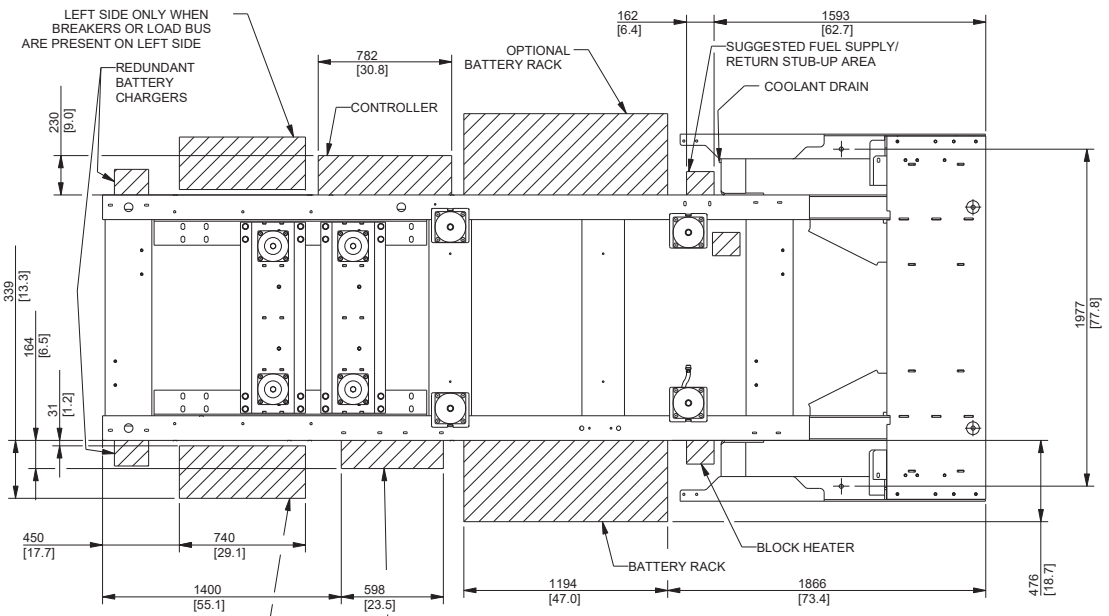
DRAWN	CCL	9-28-16
CHECKED	CCL	9-28-16
APPROVED	BLM	9-28-16

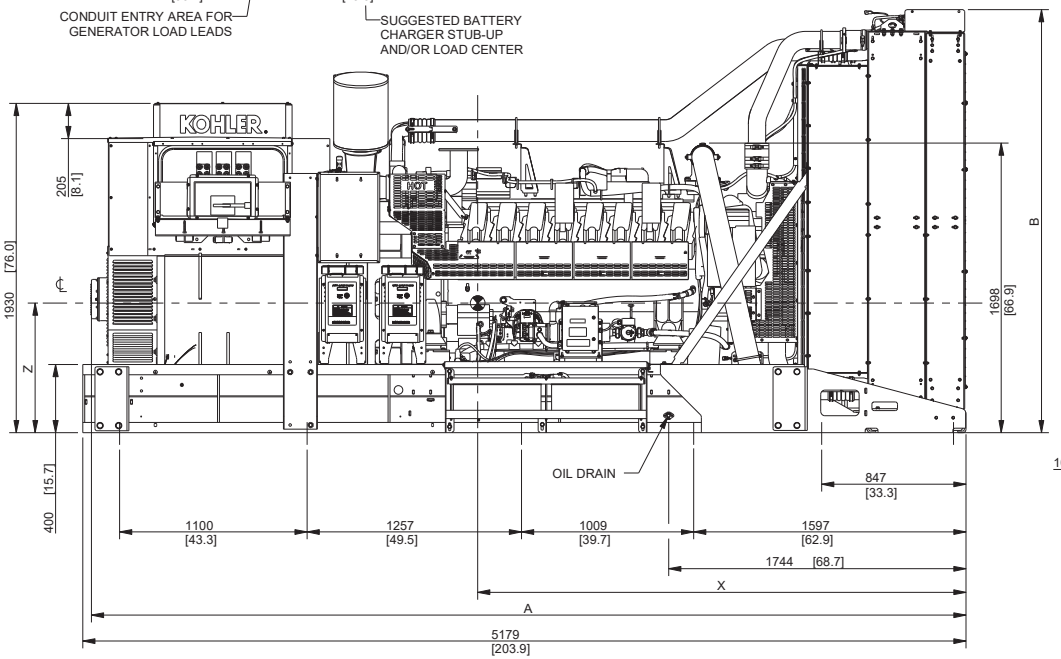
KOHLER CO. SDMO
KOHLER POWER SYSTEMS, KOHLER, WI 53044 U.S.A.
SDMO, CS 90548, 18028 ANGERS CEDEX 2, FRANCE

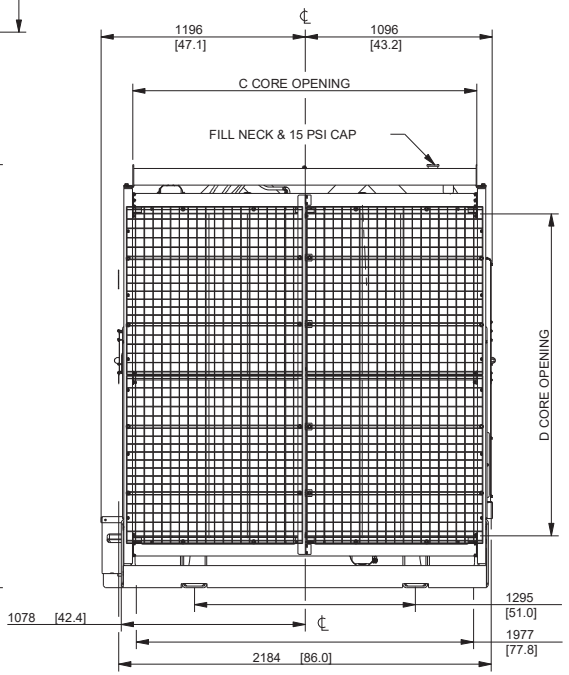
METRIC
PRO-E

TITLE: DIMENSION PRINT KD1250-1750
TANK & ENCLOSURE

SCALE 0.05 | DWG NO. ADV-8927 | SHEET 1 of 11 | D







	KD1250-A/1350			
	ALTERNATOR FRAME SIZE			
	KH04830TO4D	KH05520TO4D	KH03850TO4D KH04590TO4D KH04920TO4D	KH05740TO4D KH06810TO4D
A	4853 [191.1]	4933 [194.2]	4900 [192.9]	5129 [201.9]

KD1250-A/1350				
COG WITH RESPECT TO DIFFERENT ALTERNATORS - 9 SECTION RADIATOR				
MODEL	ALT.	GENSET MAXIMUM WEIGHT (WET)	HORIZONTAL CG (WET) "X"	VERTICAL CG (WET) "Z"
KD1250-A	KH04830TO4D	10056 [22179 lbs]	2608 [102.7]	811 [32.0]
KD1250-A/1350	KH05520TO4D	10369 [22870 lbs]	2660 [104.7]	810 [31.9]
KD1250-A/1350	KH03850TO4D	10434 [23013 lbs]	2627 [103.4]	810 [31.9]
KD1250-A	KH04590TO4D	10834 [23894 lbs]	2695 [106.1]	809 [31.8]
KD1250-A/1350	KH06810TO4D	11914 [26276 lbs]	2858 [112.5]	806 [31.7]
KD1350	KH04920TO4D	11066 [24407 lbs]	2721 [107.1]	808 [31.8]
KD1350	KH05740TO4D	11331 [25472 lbs]	2776 [109.3]	808 [31.8]

DIMENSIONS	KD1250-A/1350 60Hz RADIATOR	KD1250-A/1350 50Hz RADIATOR
B	2480 [97.6]	2311 [90.9]
C	2022 [79.6]	1798 [70.8]
D	1900 [74.8]	1700 [66.9]

NOTES:
1) DIMENSIONS IN [] ARE ENGLISH EQUIVALENTS.

2) IF AN ENCLOSURE IS USED THE FUEL LINE MUST BE STUBBED UP FROM DIRECTLY UNDER THE UNIT. REFER TO ENCLOSURE ADV.

3) IF IBC OR OSHPD CERTIFICATION IS REQUIRED SEE SEISMIC ADV FOR INSTALLATION INSTRUCTIONS.

4) IF SUBBASE FUEL TANK AND/OR ENCLOSURE IS USED. REFER TO SUBBASE FUEL TANK/ENCLOSURE ADV TO DETERMINE MOUNTING LOCATION.

208V-600V
KD1250-A/1350KW 50/60HZ

REV	DATE	ON COMPOSITE DWGS, SEE PART NO. FOR REVISION LEVEL	BY
-	11-22-17	NEW DRAWING [CT179146]	YBY
A	8-21-18	SHEET 7 ADDED, SEE SHEET 3 [CT189948]]	SSS

DO NOT SCALE. REFERENCE THE MODEL FOR ALL UNSPECIFIED DIMENSIONS

UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS IN MILLIMETERS. GENERAL TOLERANCES: X.XX ± 0.25, X.X ± 1.0, X ± 1.5, ANGULAR ± 2.0°. SURFACE FINISH 125 MAX. THIRD ANGLE PROJECTION

APPROVALS	DATE
DRAWN YBY	11-6-17
CHECKED BGP	11-6-17
APPROVED BMK	11-6-17

KOHLER.
KOHLER, WISCONSIN 53044

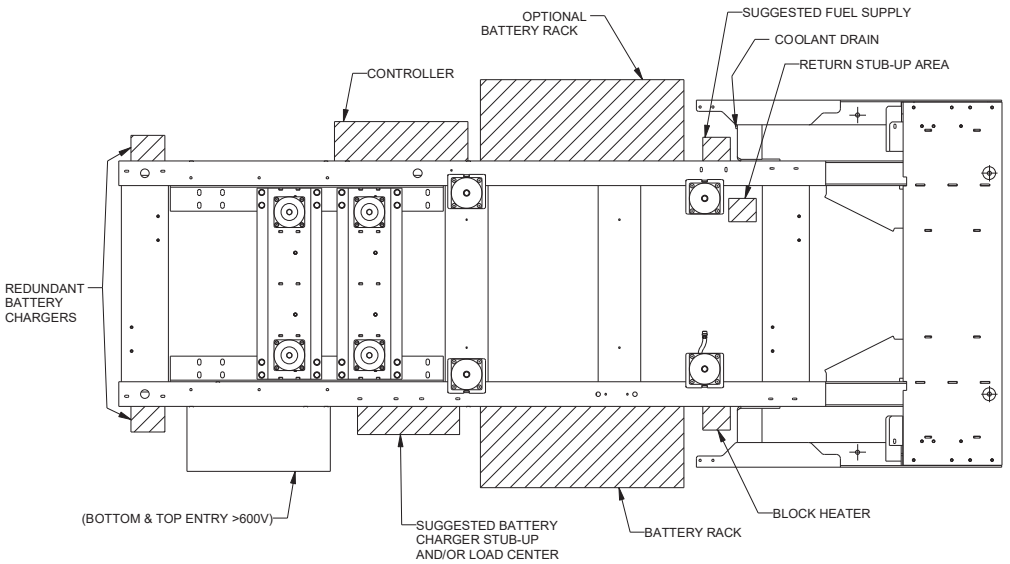
TITLE: DIMENSION PRINT, KD1250-A/1350KW

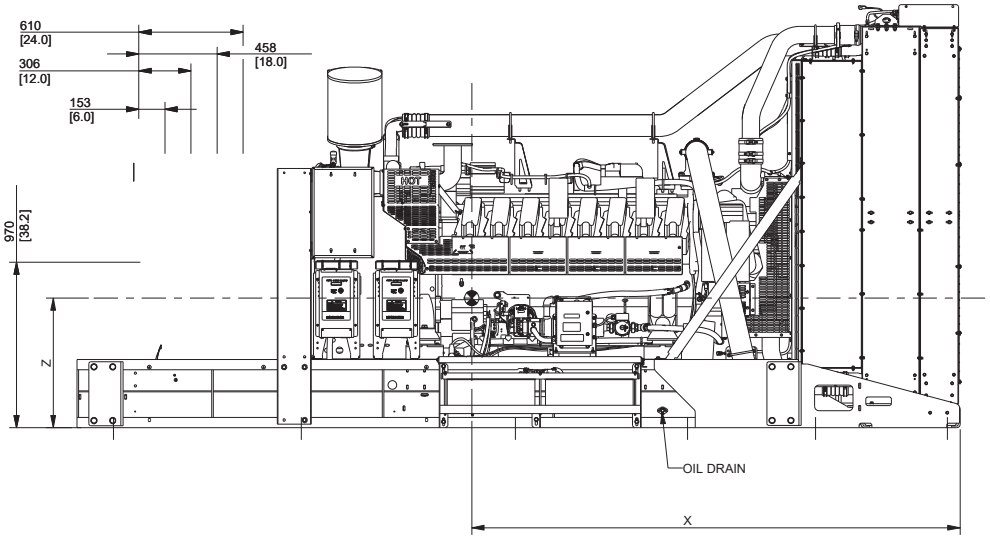
SCALE 0.07 | CAD NO. | SHEET 1 of 7

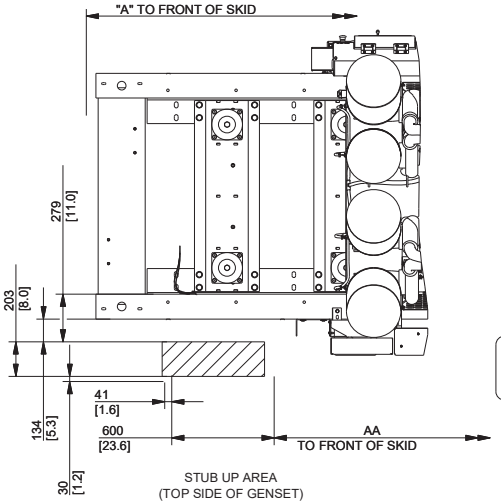
DWG NO. ADV-9015 | D

KD1250-A/1350		
ALTERNATOR	LOW VOLTAGE (380-600V)	ALTERNATOR FRAME SIZE
	AA	A
KH05641TO4D	4087 [161.0]	5191 [204.4]
KH06721TO4D	4189 [165.0]	5291 [208.3]

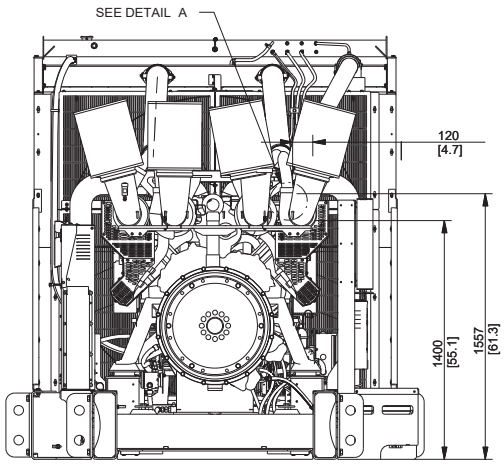
KD1250-A/1350 COG WITH RESPECT TO DIFFERENT ALTERNATORS - 9 SECTION RADIATOR				
MODEL	ALT.	GENSET MAXIMUM WEIGHT (WET)	HORIZONTAL CG (WET) "X"	VERTICAL CG (WET) "Z"
KD1250-A/1350	KH05641TO4D	11140 [24569 lbs]	2801 [110.3]	804 [31.7]
KD1250-A/1350	KH06721TO4D	11549 [25472 lbs]	2871 [113.0]	804 [31.7]



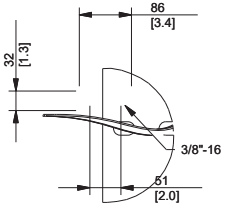




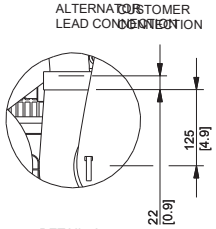
STUB UP AREA
(TOP SIDE OF GENSET)



TERMINAL DETAIL
(BACK SIDE OF GENSET)



CUSTOMER CONNECTION DETAIL
(TOP SIDE OF GENSET)



DETAIL A
SCALE 0.250

NOTES:
1) DIMENSIONS IN [] ARE ENGLISH EQUIVALENTS.

2) IF AN ENCLOSURE IS USED THE FUEL LINE MUST BE STUBBED UP FROM DIRECTLY UNDER THE UNIT. REFER TO ENCLOSURE ADV.

3) IF IBC OR OSHPD CERTIFICATION IS REQUIRED SEE SEISMIC ADV FOR INSTALLATION INSTRUCTIONS.

4) IF SUBBASE FUEL TANK AND/OR ENCLOSURE IS USED. REFER TO SUBBASE FUEL TANK/ENCLOSURE ADV TO DETERMINE MOUNTING LOCATION.

>600V
KD1250-A/1350KW 50/60HZ

REV	DATE	ON COMPOSITE DWGS, SEE PART NO. FOR REVISION LEVEL	BY
-	11-22-17	NEW DRAWING [CT179146]	YBY
A	8-21-18	SEE SHEET 3 [CT189948]	SSS

DO NOT SCALE. REFERENCE THE MODEL FOR ALL UNSPECIFIED DIMENSIONS

UNLESS OTHERWISE SPECIFIED:
ALL DIMENSIONS IN MILLIMETERS
GENERAL TOLERANCES
XXX ± 0.25
XX ± 1.0
X ± 1.5
ANGLES ± 1°
SURFACE FINISH
MAX
THIRD ANGLE PROJECTION

APPROVALS		DATE
DRAWN	YBY	11-6-17
CHECKED	BGP	11-6-17
APPROVED	BMK	11-6-17

KOHLER.
KOHLER, WISCONSIN 53044

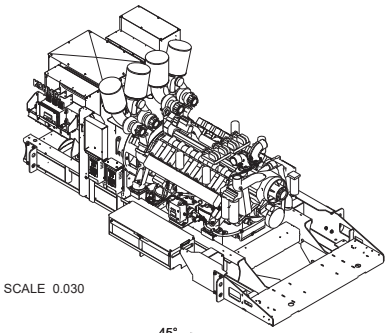
TITLE: DIMENSION PRINT, KD1250-A/1350KW

SCALE 0.07 | CAD NO. | SHEET 2 of 7

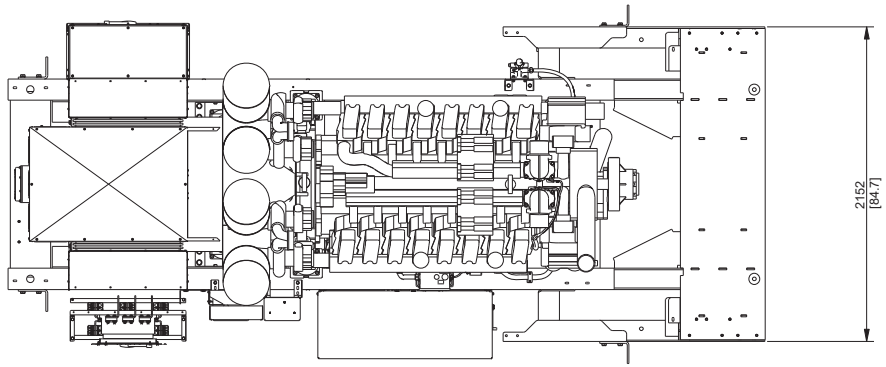
DWG NO. ADV-9015 | D

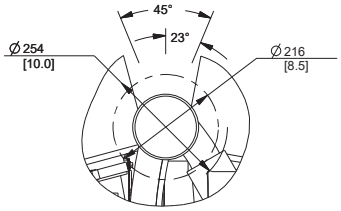
GENSET MODEL	ALTERNATOR	GENSET MAX WEIGHT (WET)	HORIZONTAL CG (WET) "X" MEASURED FROM FRONT OF GENSET	VERTICAL CG (WET) "Z" MEASURED FROM BOTTOM OF SKID	"A" (FRONT OF SKID TO REAR PANEL OF ALTERNATOR)
KD1250-A	KH04830TO4D	8948 [19728 lbs]	2918 [114.9]	781 [30.7]	4853 [191.1]
KD1250-A / KD1350	KH05520TO4D	9262 [20419 lbs]	2966 [116.8]	785 [30.9]	4933 [194.2]
KD1250-A / KD1350	KH03850TO4D	9327 [20562 lbs]	2927 [115.2]	785 [30.9]	4900 [192.9]
KD1250-A	KH04590TO4D	9726 [21443 lbs]	2990 [117.7]	789 [31.1]	4900 [192.9]
KD1250-A / KD1350	KH06810TO4D	10807 [23825 lbs]	3141 [123.7]	798 [31.4]	5129 [201.9]
KD1350	KH04920TO4D	9959 [21956 lbs]	3012 [118.6]	789 [31.4]	4900 [192.9]
KD1350	KH05740TO4D	10224 [22539 lbs]	3065 [120.7]	791 [31.1]	5129 [201.9]
KD1250-A / KD1350	KH05641TO4D	10033 [22118 lbs]	3099 [122.0]	804 [31.7]	5191 [204.4]
KD1250-A / KD1350	KH06721TO4D	10442 [23021 lbs]	3164 [124.6]	804 [31.7]	5291 [208.3]

DIMENSIONS IN [] ARE INCH EQUIVALENTS

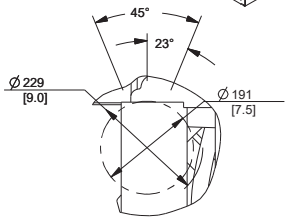


SCALE 0.030

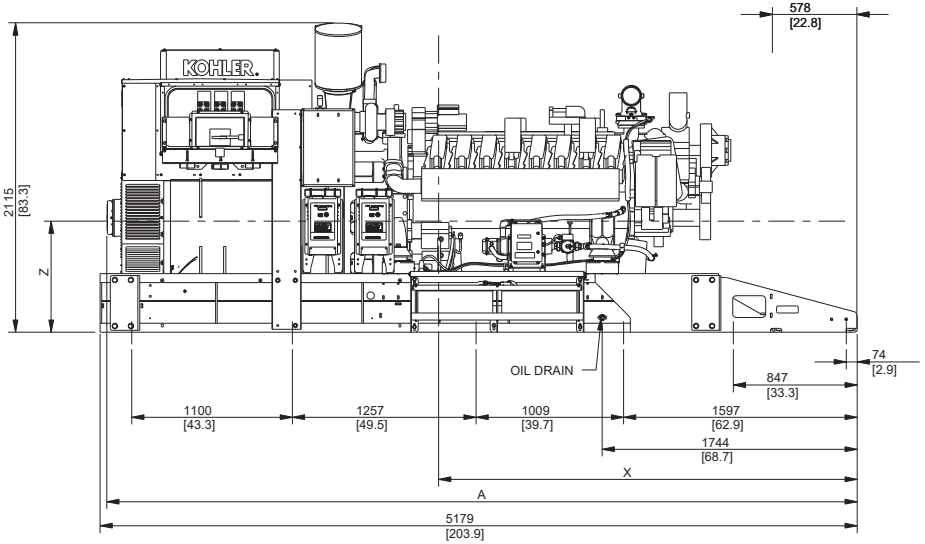


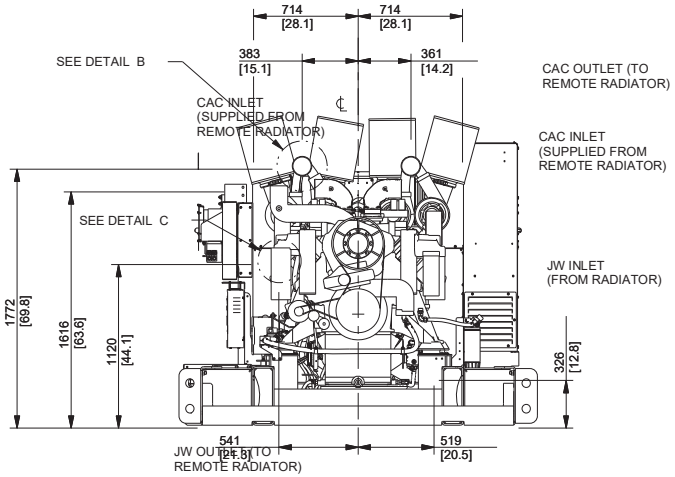


DETAIL B
SCALE 0.200



DETAIL C
SCALE 0.200





REV	DATE	ON COMPOSITE DWGS, SEE PART NO. FOR REVISION LEVEL	BY
A	8-21-18	CONTENTS OF THIS SHEET MOVED TO SHEET 4 &	
		REMOTE RADIATOR SETUP ADDED [CT189948]]	SSS

DO NOT SCALE. REFERENCE THE MODEL FOR ALL UNSPECIFIED DIMENSIONS

UNLESS OTHERWISE SPECIFIED:
ALL DIMENSIONS IN MILLIMETERS
GENERAL TOLERANCES
X.XX ± 0.25
X.X ± 1.0
X ± 1.5
ANGULAR ± 2°
SURFACE FINISH
MAX.
THIRD ANGLE PROJECTION

APPROVALS		DATE
DRAWN	ADP	8-20-18
CHECKED	BGP	8-20-18
APPROVED	BMK	8-20-18

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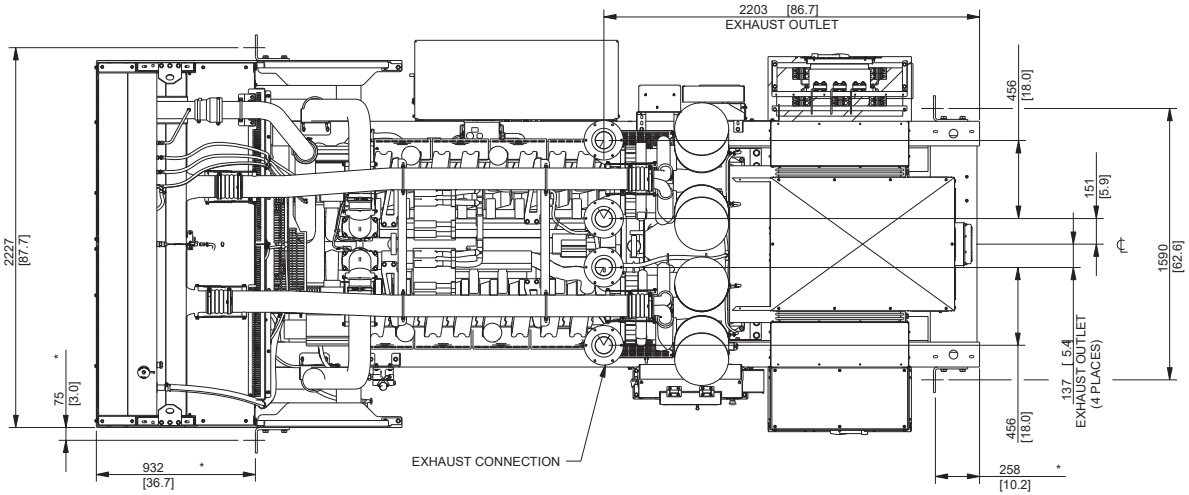
KOHLER, WISCONSIN 53044

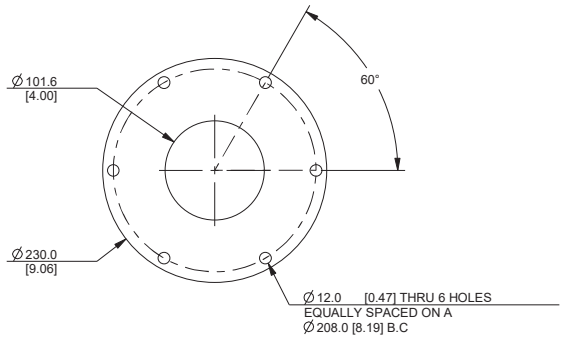
TITLE: DIMENSION PRINT, KD1250-A/1350KW

SCALE 0.06 | CAD NO. | SHEET 3 of 7

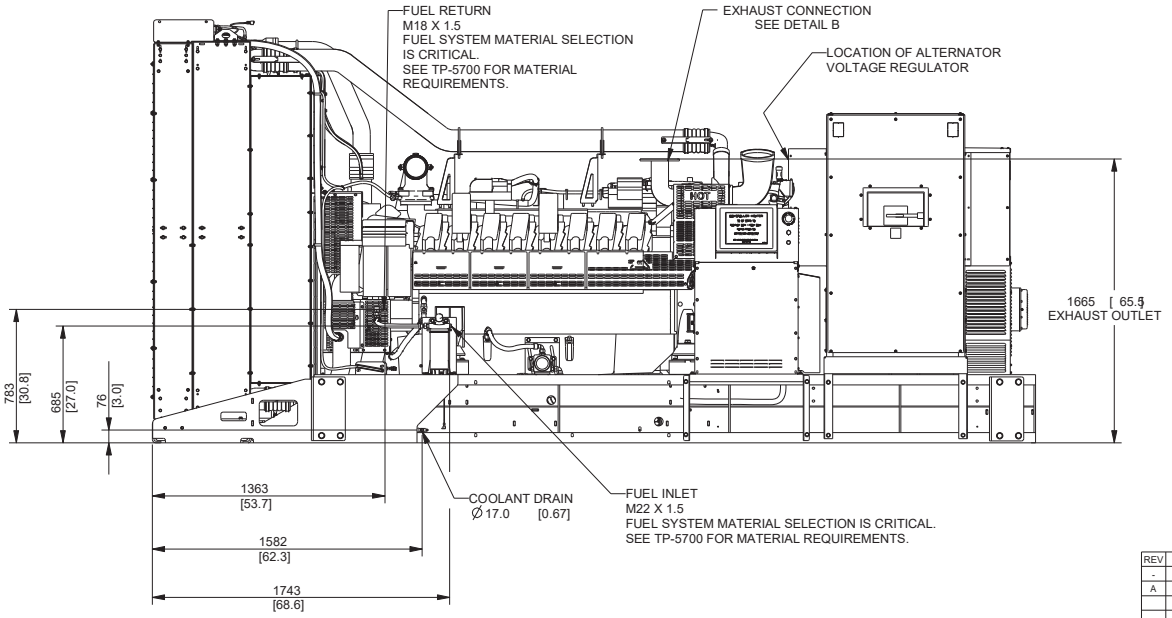
DWG NO. ADV-9015 | D

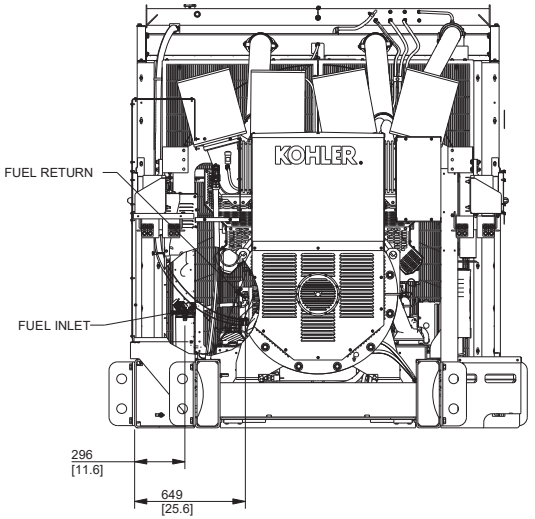


* GENERATOR LIFT POINTS TO BE USED TO LIFT OPEN GENERATOR ONLY



ENGINE EXHAUST OUTLET
(4- PLACES)
DETAIL B





KD1250-A/1350KW 50/60HZ

REV	DATE	ON COMPOSITE DWGS, SEE PART NO. FOR REVISION LEVEL	BY
-	11-22-17	NEW DRAWING [CT179146]	YBY
A	8-21-18	CONTENTS OF SHEET 3 MOVED TO SHEET 4 &	
		CONTENTS OF SHEET 4 MOVED TO SHEET 5	
		[CT189948]	SSS

DO NOT SCALE. REFERENCE THE MODEL FOR ALL UNSPECIFIED DIMENSIONS

UNLESS OTHERWISE SPECIFIED:
ALL DIMENSIONS IN MILLIMETERS
GENERAL TOLERANCES
X.XX ± 0.25
X.X ± 1.0
ANGLES ± 1.5°
SURFACE FINISH 3.2 MAX
THIRD ANGLE PROJECTION

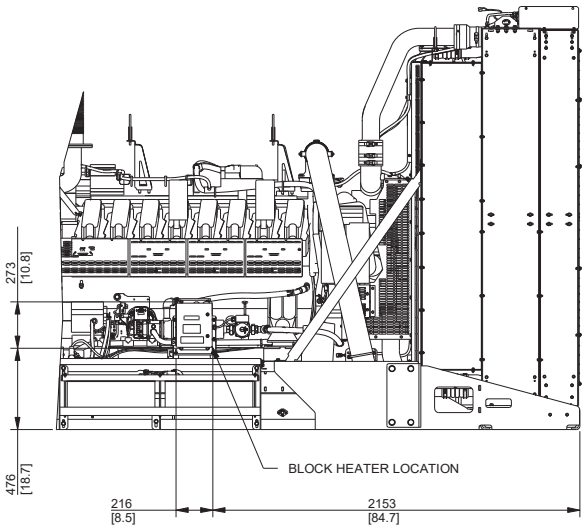
APPROVALS		DATE
DRAWN	YBY	11-6-17
CHECKED	BGP	11-6-17
APPROVED	BMK	11-6-17

KOHLER.
KOHLER, WISCONSIN 53044

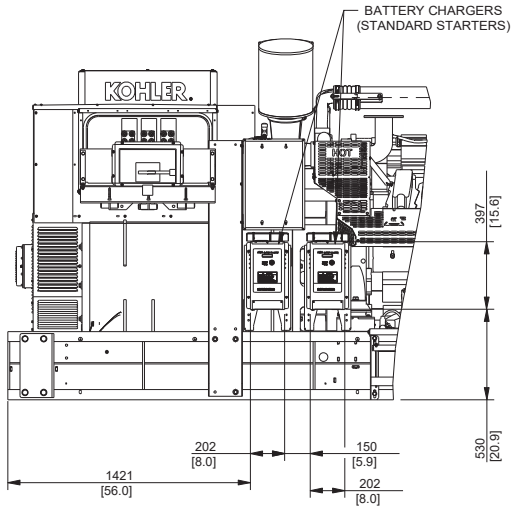
TITLE: DIMENSION PRINT, KD1250-A/1350KW

SCALE 0.07 | CAD NO. | SHEET 4 of 7

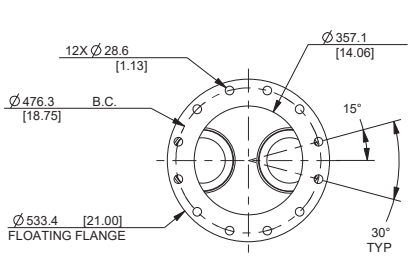
DWG NO. ADV-9015 | D



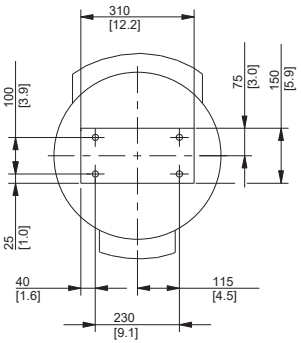
BLOCK HEATER
(RIGHT SIDE OF GENSET)



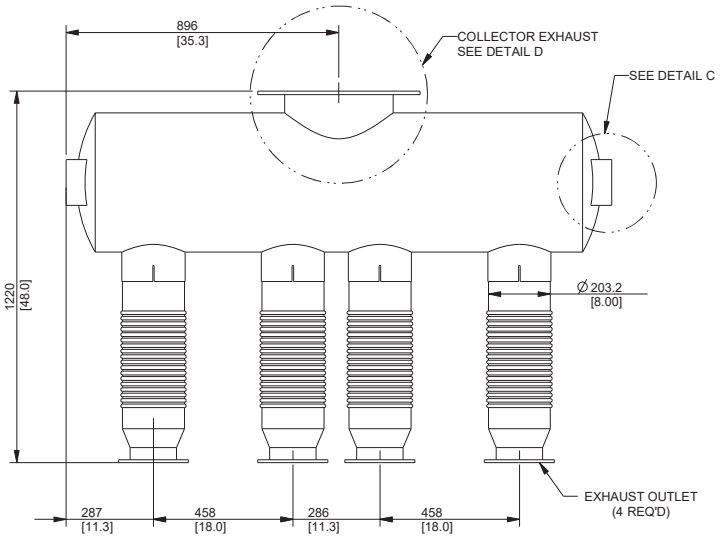
BATTERY CHARGER
(RIGHT SIDE OF GENSET)



DETAIL D
COLLECTOR EXHAUST OUTLET

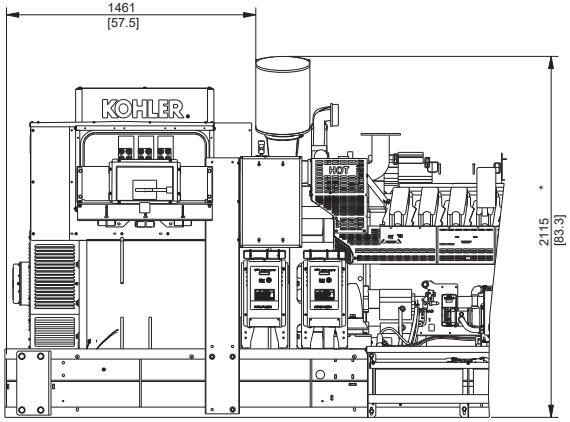


DETAIL C
SCALE 0.150

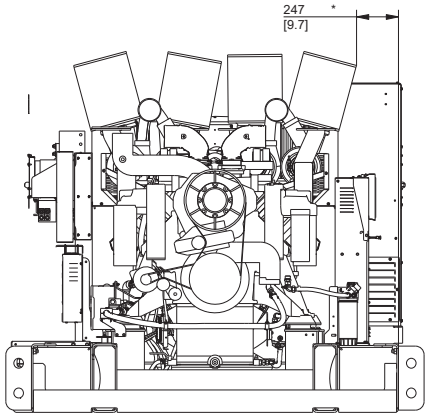


COLLECTOR EXHAUST

* DIMENSIONS MAY CHANGE AS ELBOWS CAN BE ROTATED



STANDARD DUTY AIR CLEANER
(RIGHT SIDE OF GENSET)



FRONT VIEW WITHOUT RADIATOR

KD1250-A/1350KW 50/60HZ

NOTE:
FLEXIBLE EXHAUST TO BE FULLY SUPPORTED BY EXTERNAL STRUCTURE
(ALLOWED BENDING MOMENT AT EXHAUST FLANGE INTERFACE LESS THAN 19 Nm)

REV	DATE	ON COMPOSITE DWGS, SEE PART NO. FOR REVISION LEVEL	BY
-	11-22-17	NEW DRAWING [CT179146]	YBY
A	8-21-18	CONTENTS OF SHEET 4 MOVED TO SHEET 5 &	
		CONTENTS OF SHEET 5 MOVED TO SHEET 6	
		[CT189948]	SSS

DO NOT SCALE. REFERENCE THE MODEL FOR ALL UNSPECIFIED DIMENSIONS

UNLESS OTHERWISE SPECIFIED:
ALL DIMENSIONS IN MILLIMETERS
GENERAL TOLERANCES
X.XX ± 0.25
X.X ± 1.0
X ± 1.5
ANGLES ± 2°
SURFACE FINISH
MAX.
THIRD ANGLE PROJECTION

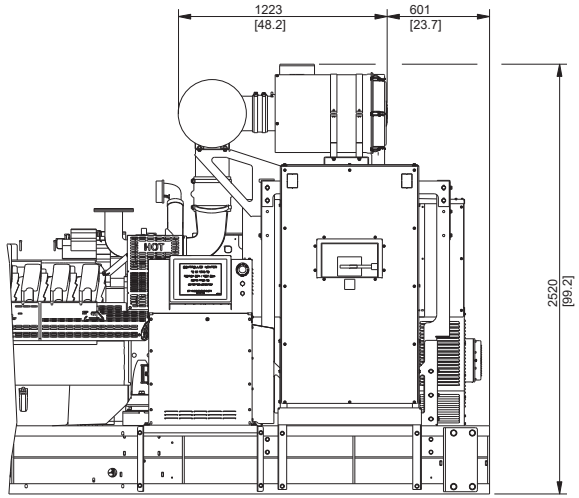
APPROVALS		DATE
DRAWN	YBY	11-6-17
CHECKED	BGP	11-6-17
APPROVED	BMK	11-6-17

KOHLER.
KOHLER, WISCONSIN 53044

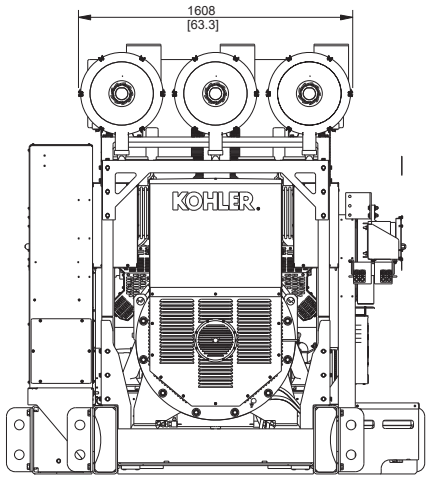
TITLE: DIMENSION PRINT, KD1250-A/1350KW

SCALE 0.07 | CAD NO. | SHEET 5 of 7

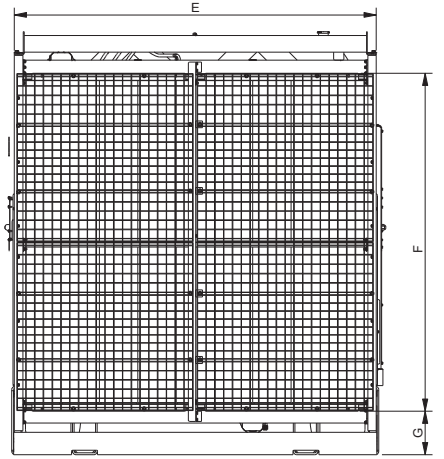
DWG NO. ADV-9015 | D



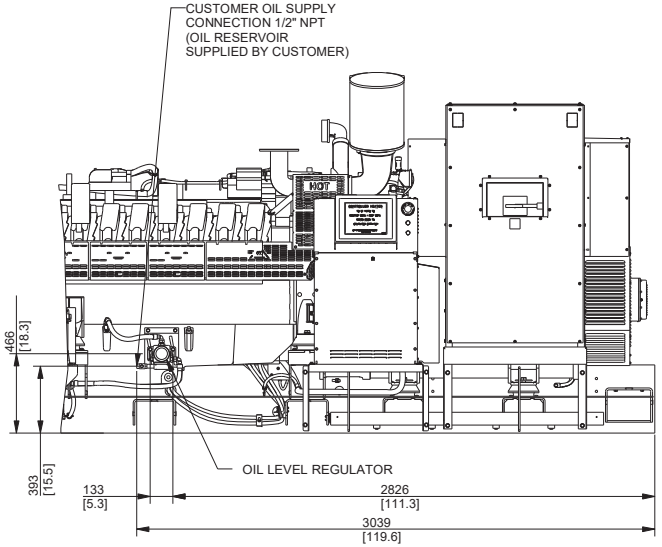
HEAVY DUTY AIR CLEANER
(LEFT SIDE OF GENSET)



RADIATOR DUCT FLANGE DIMENSIONS			
MODEL	E	F	G
KD1250-A/1350 KW 50 Hz	1898 [74.7]	1785 [70.3]	256 [10.1]
KD1250-A/1350 KW 60 Hz	2120 [83.5]	1990 [78.3]	250 [9.8]

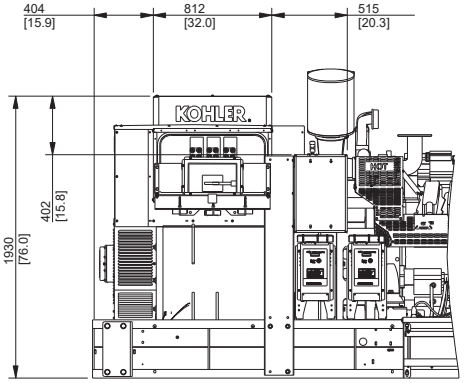


DUCT FLANGE & STONE GUARD

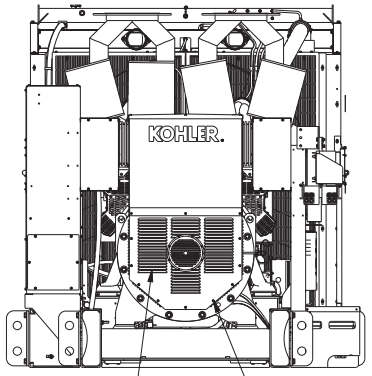


AUTOMATIC OIL REPLENISHMENT SYSTEM
(LEFT SIDE OF GENSET)

NOTE:
LEFT SIDE SKID MEMBER HIDDEN TO SHOW CONNECTION FROM
OIL LEVEL REGULATOR TO OIL SUMP.



BASIC ELECTRICAL PACKAGE (BEP) LOAD CENTER



ALTERNATOR AIR FILTER INSTALLED
INSIDE OF LOUVERED PANELS
(7% DERATE ON GENERATOR RATING)

ALTERNATOR HEATER THREADS
INTO REAR CASTING OF ALTERNATOR

ALTERNATOR AIR FILTER & HEATER

KD1250-A/1350KW 50/60HZ

REV	DATE	ON COMPOSITE DWGS, SEE PART NO. FOR REVISION LEVEL	BY
-	11-22-17	NEW DRAWING [CT179146]	YBY
A	8-21-18	CONTENTS OF SHEET 5 MOVED TO SHEET 6 &	
		CONTENTS OF SHEET 6 MOVED TO SHEET 7	
		[CT189948]	SSS

DO NOT SCALE. REFERENCE THE MODEL FOR ALL UNSPECIFIED DIMENSIONS

UNLESS OTHERWISE SPECIFIED:
ALL DIMENSIONS IN MILLIMETERS
GENERAL TOLERANCES
X.XX ± 0.25
X.X ± 1.0
ANGLES ± 2°

SURFACE FINISH
MAX.

THIRD ANGLE PROJECTION

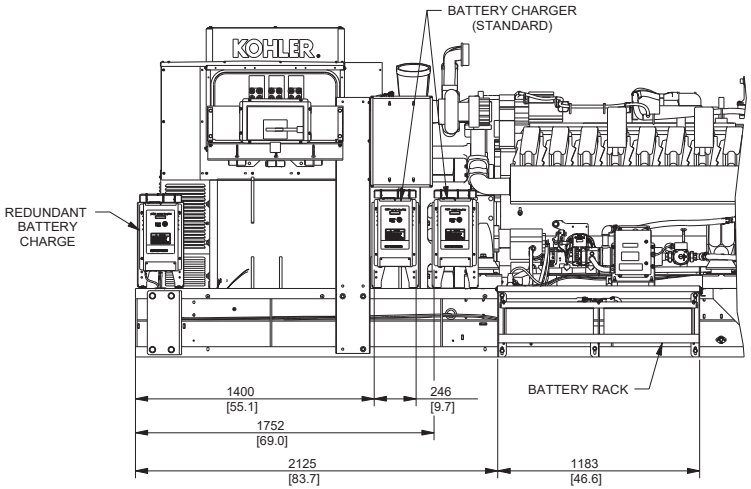
APPROVALS		DATE
DRAWN	YBY	11-6-17
CHECKED	BGP	11-6-17
APPROVED	BMK	11-6-17

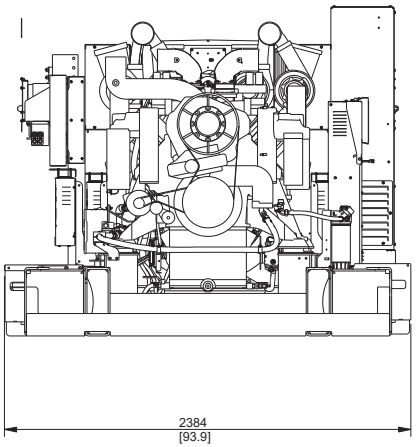
KOHLER.
KOHLER, WISCONSIN 53044

TITLE: DIMENSION PRINT, KD1250-A/1350KW

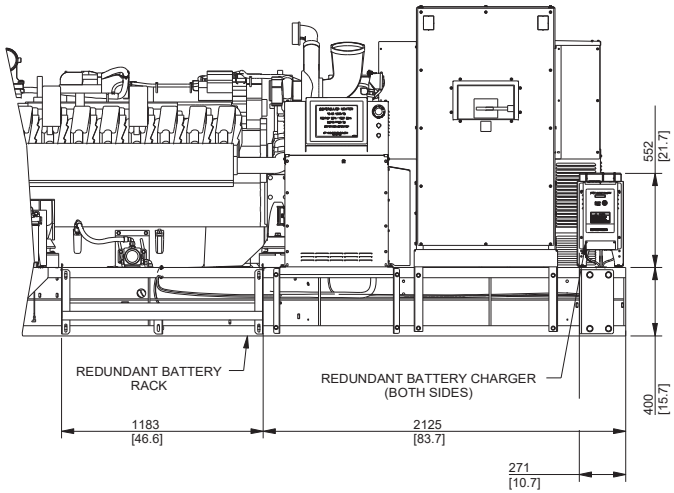
SCALE: 0.07 | CAD NO. | SHEET: 6 of 7

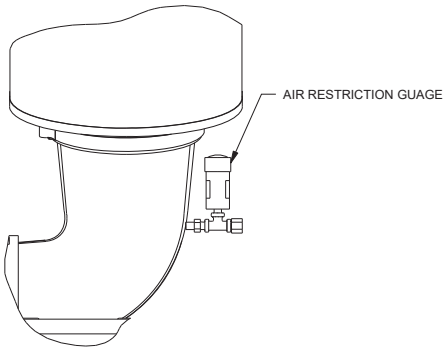
DWG NO.: ADV-9015 | D





REDUNDANT STARTER, BATTERY RACK & CHARGER
(FRONT VIEW WITHOUT RADIATOR)





AIR FILTER RESTRICTION INDICATOR
(LEFT SIDE OF GENSET)

KD1250-A/1350KW 50/60HZ

REV	DATE	ON COMPOSITE DWGS, SEE PART NO. FOR REVISION LEVEL	BY
-	11-22-17	NEW DRAWING [CT179146]	YBY
A	8-21-18	CONTENTS OF SHEET 6 MOVED TO SHEET 7 [CT189948]	SSS

DO NOT SCALE. REFERENCE THE MODEL FOR ALL UNSPECIFIED DIMENSIONS

UNLESS OTHERWISE SPECIFIED:
ALL DIMENSIONS IN MILLIMETERS
GENERAL TOLERANCES
X.XX ± 0.25
X.X ± 1.0
X ± 2.0
ANGULAR ± 1.0°

SURFACE FINISH
MAX.

THIRD ANGLE PROJECTION

APPROVALS		DATE
DRAWN	YBY	11-6-17
CHECKED	BGP	11-6-17
APPROVED	BMK	11-6-17

KOHLER.
KOHLER, WISCONSIN 53044

TITLE
DIMENSION PRINT,
KD1250-A/1350KW

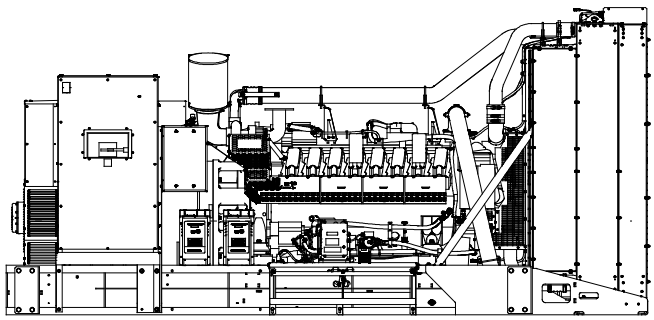
SCALE 0.07 | CAD NO. | SHEET 7 of 7

DWG NO. ADV-9015 | D

KOHLER®

Industrial Diesel Generator Set - KD1250

Tier 2 EPA-Certified for Stationary Emergency Applications



KDxxxx designates a generator set with a Tier 2 EPA-Certified engine.
KDxxxx-F designates a 60 Hz generator set with a fuel optimized engine.

Ratings Range

		60 Hz
Standby:	**kW**	1180- 1250
	kVA	1475- 1562
Prime:	**kW**	1070- 1120
	kVA	1338- 1400

Standard Features

- Kohler Co. provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The 60 Hz generator set offers a UL 2200 listing.
- The generator set accepts rated load in one step.
- The 60 Hz generator set meets NFPA 110, Level 1, when equipped with the necessary accessories and installed per NFPA standards.
- A standard three-year or 1000-hour limited warranty for standby applications. Five-year basic, five-year comprehensive, and ten-year extended limited warranties are also available.
- A standard two-year or 8700-hour limited warranty for prime power applications.
- Other features:
  - Kohler designed controllers for one-source system integration and remote communication. See Controllers on page 4.
  - The low coolant level shutdown prevents overheating (standard on radiator models only).

General Specifications

Orderable Generator Model Number	GMKD1250-A
Manufacturer	Kohler
Engine: model	KD36V16
Alternator Choices	KH03850TO4D KH04590TO4D KH04830TO4D KH05520TO4D KH05641TO4D KH06721TO4D KH06810TO4D
Performance Class	Per ISO 8528-5
One Step Load Acceptance	100%
Voltage	Wye, 600 V., or 4160 V
Controller	APM603, APM802
Fuel Tank Capacity, L (gal.)	5863- 21985 (1549- 5808)
Fuel Consumption, L/hr (gal./hr) 100% at Standby	330 (87.2)
Fuel Consumption, L/hr (gal./hr) 100% at Prime Power	298 (78.7)
Emission Level Compliance (KDxxxx)	Tier 2
Open Unit Noise Level @ 7 m dB(A) at Rated Load	97
Data Center Continuous (DCC) Rating (Refer to TIB-101 for definitions)	Same as the Standby Rating below

Generator Set Ratings

				150°C Rise Standby Rating		130°C Rise Standby Rating		125°C Rise Prime Rating		105°C Rise Prime Rating	
Alternator	**Voltage**	**Ph**	**Hz**	**kW/kVA**	**Amps**	**kW/kVA**	**Amps**	**kW/kVA**	**Amps**	**kW/kVA**	**Amps**
KH03850TO4D	230/400	3	60	1250/1562	2255	1250/1562	2255	1120/1400	2021	1120/1400	2021
	240/416	3	60	1250/1562	2168	1250/1562	2168	1120/1400	1944	1120/1400	1944
	277/480	3	60	1250/1562	1879	1250/1562	1879	1120/1400	1684	1120/1400	1684
KH04590TO4D	230/400	3	60	1250/1562	2255	1250/1562	2255	1120/1400	2021	1120/1400	2021
	240/416	3	60	1250/1562	2168	1250/1562	2168	1120/1400	1944	1120/1400	1944
	277/480	3	60	1250/1562	1879	1250/1562	1879	1120/1400	1684	1120/1400	1684
KH04830TO4D	240/416	3	60	1210/1512	2099	1180/1475	2048	1120/1400	1944	1070/1338	1857
	277/480	3	60	1250/1562	1879	1250/1562	1879	1120/1400	1684	1120/1438	1684

RATINGS: All three-phase units are rated at 0.8 power factor. *Standby Ratings:* The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. *Prime Power Ratings:* At varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO-8528-1 and ISO-3046-1. For limited running time and continuous ratings, consult the factory. Obtain technical information bulletin (TIB-101) for ratings guidelines, complete ratings definitions, and site condition derates. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

KOHLER®

Industrial Diesel Generator Set - KD1250

Tier 2 EPA-Certified for Stationary Emergency Applications

				150°C Rise Standby Rating		130°C Rise Standby Rating		125°C Rise Prime Rating		105°C Rise Prime Rating	
Alternator	**Voltage**	**Ph**	**Hz**	**kW/kVA**	**Amps**	**kW/kVA**	**Amps**	**kW/kVA**	**Amps**	**kW/kVA**	**Amps**
KH05520TO4D	220/380	3	60	1250/1562	2374	1250/1562	2374	1120/1400	2128	1120/1400	2128
	240/416	3	60	1250/1562	2168	1250/1562	2168	1120/1400	1944	1120/1400	1944
	277/480	3	60	1250/1562	1879	1250/1562	1879	1120/1400	1684	1120/1400	1684
	347/600	3	60	1250/1562	1504	1250/1562	1504	1120/1400	1348	1120/1400	1348
KH06810TO4D	220/380	3	60	1250/1562	2374	1250/1562	2374	1120/1400	2128	1120/1400	2128
	240/416	3	60	1250/1562	2168	1250/1562	2168	1120/1400	1944	1120/1400	1944
	277/480	3	60	1250/1562	1879	1250/1562	1879	1120/1400	1684	1120/1400	1684
	347/600	3	60	1250/1562	1504	1250/1562	1504	1120/1400	1348	1120/1400	1348
KH05641TO4D	2400/4160	3	60	1250/1562	217	1250/1562	217	1120/1400	195	1120/1400	195
KH06721TO4D	2400/4160	3	60	1250/1562	217	1250/1562	217	1120/1400	195	1120/1400	195

Engine Specifications	**60 Hz**
Manufacturer	Kohler
Engine: model	KD36V16
Engine: type	4-Cycle, Turbocharged, Intercooled
Cylinder arrangement	16-V
Displacement, L (cu. in.)	36 (2197)
Bore and stroke, mm (in.)	135 x 157 (5.31 x 6.18)
Compression ratio	15.0:1
Piston speed, m/min. (ft./min.)	565 (1854)
Main bearings: quantity, type	11, Precision Half Shells
Rated rpm	1800
Max. power at rated rpm, kWm (BHP)	1391 (1865)
Cylinder head material	Cast Iron
Crankshaft material	Steel
Valve (exhaust) material	Steel
Governor: type, make/model	KODEC Electronic Control
Frequency regulation, no-load to-full load	Isochronous
Frequency regulation, steady state	±0.25%
Frequency	Fixed
Air cleaner type, all models	Dry

Lubricating System	**60 Hz**
Type	Full Pressure
Oil pan capacity with filter (dipstick max. mark), L (qt.) §	135 (143)
Oil pan capacity with filter (initial fill), L (qt.) §	152 (161)
Oil filter: quantity, type §	4, Cartridge
Oil cooler	Water-Cooled

§ Kohler recommends the use of Kohler Genuine oil and filters.

Exhaust System	**60 Hz**
Exhaust flow at rated kW, m^3/min. (cfm)	241 (8511)
Exhaust temperature at rated kW at 25°C (77°F) ambient, dry exhaust, °C (°F)	496 (925)
Maximum allowable back pressure, kPa (in. Hg)	8.5 (2.5)
Exh. outlet size at eng. hookup, mm (in.)	See ADV drawing

Fuel System	**60 Hz**
Fuel supply line, min. ID, mm (in.)	19 (0.75)
Fuel return line, min. ID, mm (in.)	12 (0.5)
Max. fuel flow, Lph (gph)	330 (87)
Min./max. fuel pressure at engine supply connection, kPa (in. Hg)	-30/30 (-8.8/8.8)
Maximum diesel fuel lift, m (ft.)	3.7 (12)
Max. return line restriction, kPa (in. Hg)	20 (5.9)
Fuel filter: quantity, type	1, Primary Engine Filter 1, Fuel/Water Separator
Recommended fuel	#2 Diesel ULSD

Fuel Consumption	**60 Hz**
Diesel, Lph (gph) at % load	**Standby Rating**
100%	322 (85.1)
75%	256 (67.6)
50%	181 (47.8)
25%	105 (27.7)
Diesel, Lph (gph) at % load	**Prime Rating**
100%	293 (77.4)
75%	233 (61.6)
50%	164 (43.3)
25%	95 (25.1)

Radiator System	60 Hz
Ambient temperature, °C (°F)*	50 (122)
Engine jacket water capacity, L (gal.)	124 (33)
Radiator system capacity, including engine, L (gal.)	283 (74.7)
Engine jacket water flow, Lpm (gpm)	2241 (592)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	511 (29086)
Heat rejected to charge air cooler at rated kW, dry exhaust, kW (Btu/min.)	320 (18214)
Charge cooling air inlet temperature at 25°C (77°F) ambient, °C (°F)	214 (417)
Turbocharger boost (abs), bar (psi)	3.31 (48)
Water pump type	Centrifugal
Fan diameter, including blades, mm (in.)	1750 (68.9)
Fan, kWm (HP)	33 (44.2)
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H_2O)	0.125 (0.5)

* Enclosure with enclosed silencer reduces ambient temperature capability by 5°C (9°F).

Remote Radiator System†	60 Hz
Exhaust manifold type	Dry
Connection sizes:	
Water inlet/outlet, mm (in.)	—
Charge air cooler inlet/outlet (pipe dia. of flange), mm (in.)	—
Static head allowable above engine, kPa (ft. H_2O)	70 (23.5)

† Contact your local distributor for cooling system options and specifications based on your specific requirements.

Electrical System	60 Hz
Battery charging alternator:	
Ground (negative/positive)	Negative
Volts (DC)	24
Ampere rating	140
Starter motor qty. at starter motor power rating, rated voltage (DC)	Standard: 2 @ 8.4 kW, 24; Redundant (optional): 4 @ 8.4 kW, 24
Battery, recommended cold cranking amps (CCA):	
Quantity, CCA rating each, type (with standard starters)	4, 1110, AGM
Quantity, CCA rating each, type (with optional redundant starters)	8, 1110, AGM
Battery voltage (DC)	12

Air Requirements	60 Hz
Radiator-cooled cooling air, m^3/min. (scfm)‡	1470 (51913)
Cooling air required for generator set when equipped with city water cooling or remote radiator, based on 14°C (25°F) rise, m^3/min. (scfm)‡	938 (33131)
Combustion air, m^3/min. (cfm)	89.6 (3166)
Heat rejected to ambient air:	
Engine, kW (Btu/min.)	171 (9733)
Alternator, kW (Btu/min.)	93 (5325)

‡ Air density = 1.20 kg/m^3 (0.075 lbm/ft^3)

Alternator Specifications		60 Hz
Type		4-Pole, Rotating-Field
Exciter type		Brushless, Permanent-Magnet Pilot Exciter
Voltage regulator		Solid-State, Volts/Hz
Insulation:		NEMA MG1, UL 1446, Vacuum Pressure Impregnated (VPI)
Material		Class H, Synthetic, Nonhygroscopic
Temperature rise		130°C, 150°C Standby
Bearing: quantity, type		1, Sealed
Coupling		Flexible Disc
Amortisseur windings		Full
Alternator winding type (up to 600 V)		Random Wound
Alternator winding type (above 600 V)		Form Wound
Rotor balancing		125%
Voltage regulation, no-load to full-load		±0.25%
Unbalanced load capability		100% of Rated Standby Current
Peak motor starting kVA:		(35% dip for voltages below)
480 V	KH03850TO4D	5351
480 V	KH04590TO4D	6030
480 V	KH04830TO4D	4193
480 V	KH05520TO4D	4612
480 V	KH06810TO4D	8466

Alternator Standard Features

- The pilot-excited, permanent magnet (PM) alternator provides superior short-circuit capability.
- All models are brushless, rotating-field alternators.
- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
- Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the alternator field.
- Self-ventilated and dripproof construction.
- Superior voltage waveform from two-thirds pitch windings and skewed stator.
- Brushless alternator with brushless pilot exciter for excellent load response.

NOTE: See TIB-102 Alternator Data Sheets for alternator application data and ratings, efficiency curves, voltage dip with motor starting curves, and short circuit decrement curves.

Controllers

APM802 Controller
Provides advanced control, system monitoring, and system diagnostics for optimum performance and compatibility.

- 12-inch graphic display with touch screen and menu control provide easy local data access
- Measurements are selectable in metric or English units
- User language is selectable
- Two USB ports allow connection of a flash drive, mouse, or keypad
- Electrical data, mechanical data, and system settings can be saved to a flash drive
- Ethernet port allows connection to a PC type computer or Ethernet switch
- The controller supports Modbus® RTU and TCP protocols
- NFPA 110 Level 1 capability

Refer to G6-152 for additional controller features and accessories.

Modbus® is a registered trademark of Schneider Electric.

APM603 Controller
Provides advanced control, system monitoring, and system diagnostics for optimum performance and compatibility.

- 7-inch graphic display with touch screen and menu control provides easy local data access
- Measurements are selectable in metric or English units
- Paralleling capability to control up to 8 generators on an isolated bus with first-on logic, synchronizer, kW and kVAR load sharing, and protective relays
  Note: Parallel with other APM603 controllers only
- Generator management to turn paralleled generators off and on as required by load demand
- Load management to connect and disconnect loads as required
- Controller supports Modbus® RTU, Modbus® TCP, SNMP and BACnet®
- Integrated voltage regulator with ±0.25% regulation
- Built-in alternator thermal overload protection
- UL-listed overcurrent protective device
- NFPA 110 Level 1 capability

Refer to G6-162 for additional controller features and accessories.

BACNet® is a registered trademark of ASHRAE.

Codes and Standards

- Engine- generator set is designed and manufactured in facilities certified to ISO 9001.
- Generator set meets NEMA MG1, BS5000, ISO, DIN EN, and IEC standards, NFPA 110
- Engine generator set is tested to ISO 8528-5 for transient response.
- The generator set and its components are prototype-tested, factory-built, and production-tested.

Third-Party Compliance

- Tier 2 EPA-Certified for Stationary Emergency Applications

Available Approvals and Listings
❑ California OSHPD Approval
❑ CSA Certified
❑ IBC Seismic Certification
❑ UL 2200 Listing
❑ cULus Listing (fuel tanks only)
❑ Florida Dept. of Environmental Protection (FDEP) Compliance (fuel tanks only)

Warranty Information

- A standard three-year or 1000-hour limited warranty for standby applications. Five-year basic, five-year comprehensive, and ten-year extended limited warranties are also available.
- A standard two-year or 8700-hour limited warranty for prime power applications.

Available Warranties for Standby Applications
❑ 5-Year Basic Limited Warranty
❑ 5-Year Comprehensive Limited Warranty
❑ 10-Year Major Components Limited Warranty
❑ 5-Year Basic Limited Warranty
❑ 5-Year Comprehensive Limited Warranty

Standard Features

- Closed Crankcase Ventilation (CCV) Filters
- Customer Connection
- Generator Heater (4160 Volt)
- Integral Vibration Isolation
- Local Emergency Stop Switch
- Oil Drain and Coolant Drain Extension
- Operation and Installation Literature

KOHLER®

Industrial Diesel Generator Set - KD1250

Tier 2 EPA-Certified for Stationary Emergency Applications

Available Options

Circuit Breakers

Type

- ❑ Magnetic Trip
- ❑ Thermal Magnetic Trip
- ❑ Electronic Trip (LI)
- ❑ Electronic Trip with Short Time (LSI)
- ❑ Electronic Trip with Ground Fault (LSIG)

Rating

- ❑ 80%
- ❑ 100%

Operation

- ❑ Manual
- ❑ Electrically Operated (for paralleling)

Circuit Breaker Mounting

- ❑ Generator Mounted
- ❑ Remote Mounted
- ❑ Bus Bar (for remote mounted breakers)

Enclosed Remote Mounted Circuit Breakers

- ❑ NEMA 1 (15- 5000 A)
- ❑ NEMA 3R (15- 1200 A)

Engine Type

- ❑ KDxxxx Tier 2 EPA-Certified Engine
- ❑ KDxxxx-F Fuel Optimized Engine

Approvals and Listings

- ❑ California OSHPD Approval
- ❑ CSA Certified
- ❑ IBC Seismic Certification
- ❑ UL 2200 Listing
- ❑ cULus Listing (fuel tanks only)
- ❑ Florida Dept. of Environmental Protection (FDEP) Compliance (fuel tanks only)
- ❑ Hurricane Rated Enclosure

Enclosed Unit

- ❑ Sound Level 1 Enclosure/Fuel Tank Package
- ❑ Sound Level 2 Enclosure/Fuel Tank Package

Open Unit

- ❑ Exhaust Silencer, Critical (kits: PA-361625 qty. 2)
- ❑ Exhaust Silencer, Hospital (kits: PA-361626 qty. 2)
- ❑ Flexible Exhaust Connector, Stainless Steel

Controller

- ❑ Input/Output, Digital
- ❑ Input/Output, Thermocouple (standard on 4160 V)
- ❑ Load Shed (APM802 only)
- ❑ Manual Key Switch
- ❑ Remote Emergency Stop Switch
- ❑ Lockable Emergency Stop Switch
- ❑ Remote Serial Annunciator Panel

Cooling System

- ❑ Block Heater; 9000 W, 208 V, (Select 1 Ph or 3 Ph) *
- ❑ Block Heater; 9000 W, 240 V, (Select 1 Ph or 3 Ph) *
- ❑ Block Heater; 9000 W, 380 V, 3 Ph *
- ❑ Block Heater; 9000 W, 480 V, (Select 1 Ph or 3 Ph) *

* Required for ambient temperatures below 10°C (50°F). Block heater kit includes air intake manifold grid heater.

- ❑ Radiator Guard and Duct Flange

Electrical System

- ❑ Battery, AGM (kit with qty. 4)
- ❑ Battery, AGM (kit with qty. 8)
- ❑ Battery Charger
- ❑ Battery Heater; 80 W, 120 V, 1Ph
- ❑ Battery Rack and Cables
- ❑ Generator Heater (up to 600 Volt)
- ❑ Redundant Starters

Fuel System

- ❑ Flexible Fuel Lines
- ❑ Restriction Gauge (for fuel/water separator)

Literature

- ❑ General Maintenance
- ❑ NFPA 110
- ❑ Overhaul
- ❑ Production

Miscellaneous

- ❑ Air Cleaner, Heavy Duty
- ❑ Air Cleaner Restriction Indicator
- ❑ Alternator Air Filter (will reduce generator set rating up to 7%)
- ❑ Automatic Oil Replenishment System
- ❑ Engine Fluids (oil and coolant) Added
- ❑ Rated Power Factor Testing

Electrical Package

- ❑ Basic Electrical Package (select 1 Ph or 3 Ph)
- ❑ Wire Battery Charger (1 Ph)
- ❑ Wire Block Heater (select 1 Ph or 3 Ph)
- ❑ Wire Power Supply
- ❑ Wire Generator Heater (1 Ph)

Warranty (Standby Applications only)

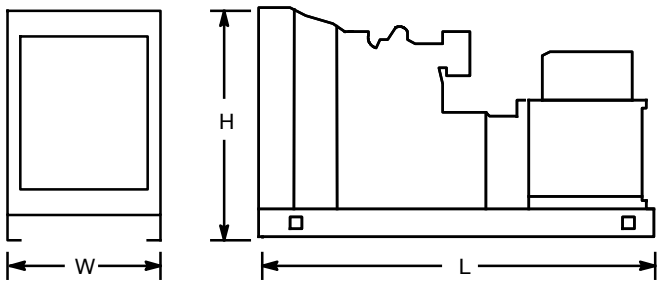
- ❑ 5-Year Basic Limited Warranty
- ❑ 5-Year Comprehensive Limited Warranty
- ❑ 10-Year Major Components Limited Warranty

Other

- ❑
- ❑

Dimensions and Weights

Overall Size, max., L x W x H, mm (in.):	5291 x 2184 x 2480 (208.3 x 86.0 x 97.6)
Weight, radiator model, max. wet, kg (lb.):	11919 (26276)



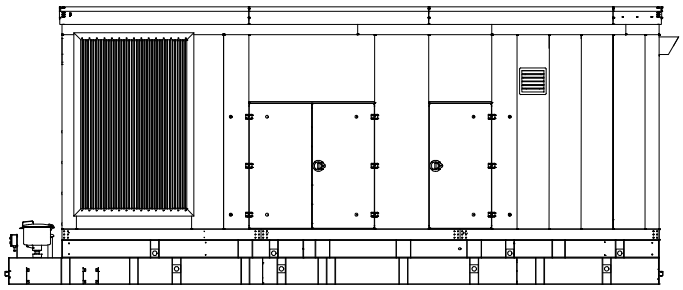
NOTE: This drawing is provided for reference only and should not be used for planning installation. Contact your local distributor for more detailed information.

KOHLER CO., Kohler, Wisconsin 53044 USA
Phone 920-457-4441, Fax 920-459-1646
For the nearest sales and service outlet in the US and Canada, phone 1-800-544-2444
KOHLERPower.com

Sound Enclosures and Subbase Fuel Tank

Sound Level 1 Enclosure Standard Features

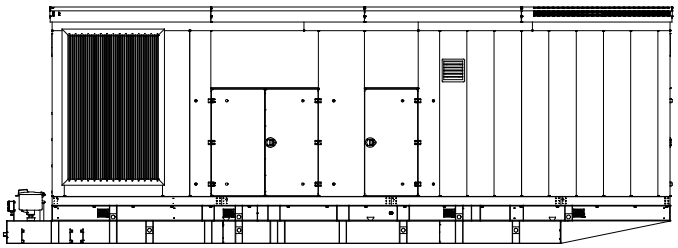
- Lift base or tank-mounted, aluminum construction enclosure with internal-mounted, exhaust silencers.
- Every enclosure has a sloped roof to reduce the buildup of moisture and debris.
- Sound attenuated enclosure that offers noise reduction using acoustic insulation, acoustic-lined air inlets and an acoustic-lined air discharge.
- Fade-, scratch-, and corrosion-resistant Kohler® Power Armor™ automotive-grade textured finish.
- Acoustic insulation that meets UL 94 HF1 flammability classification.
- Enclosure has large access doors that are hinged and removable which allow for easy maintenance.
- Lockable, flush-mounted door latches.
- Air inlet louvers reduce rain and snow entry.
- High wind bracing, 241 kph (150 mph).



Sound Level 1 Enclosure
(Shown with available spill containment)

Sound Level 2 Enclosure Standard Features

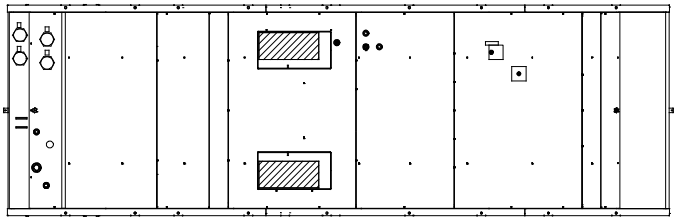
- Includes all of the sound level 1 enclosure features with the addition of up to 51 mm (2 in.) acoustic insulation material, intake sound baffles, vertical air discharge, and secondary silencers.
- Louvered air inlet and vertical outlet hood with 90 degree angles to redirect air and reduce noise.



Sound Level 2 Enclosure
(Shown with available spill containment)

Subbase Fuel Tank Features

- The fuel tank has a Power Armor Plus™ textured epoxy-based rubberized coating.
- The above-ground rectangular secondary containment tank mounts directly to the generator set, below the generator set skid (subbase).
- Both the inner and outer tanks have UL-listed emergency relief vents.
- Flexible fuel lines are provided with subbase fuel tank selection.
- The containment tank's construction protects against fuel leaks or ruptures. The inner (primary) tank is sealed inside the outer (secondary) tank. The outer tank contains the fuel if the inner tank leaks or ruptures.
- The above ground secondary containment subbase fuel tank meets UL 142 requirements.
- Features include:
  - Additional fittings for optional accessories (qty. 3)
  - Electrical stub-up area open to bottom
  - Emergency inner and outer tank relief vents
  - Fuel fill with lockable cap and 51 mm (2 in.) riser
  - Fuel leak detection switch
  - Fuel level mechanical gauge
  - Fuel level sender
  - Normal vent
  - Removable engine supply and return diptubes



Subbase Fuel Tank (Top View)

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KOHLER®

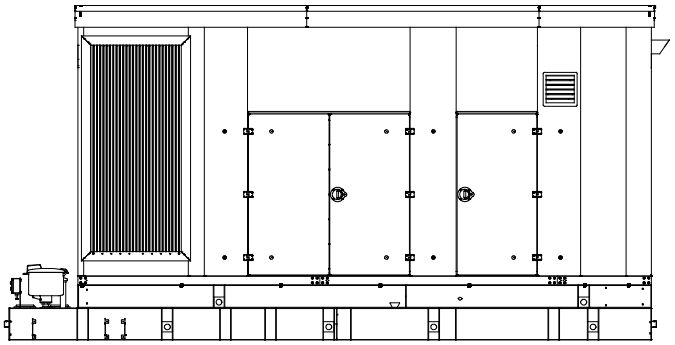
Industrial Diesel Generator Set - KD1000
Tier 2 EPA-Certified for Stationary Emergency Applications

KOHLER CO., Kohler, Wisconsin 53044 USA
Phone 920-457-4441, Fax 920-459-1646
For the nearest sales and service outlet in the US and Canada, phone 1-800-544-2444
KOHLERPower.com

Sound Enclosures and Subbase Fuel Tank

Sound Level 1 Enclosure Standard Features

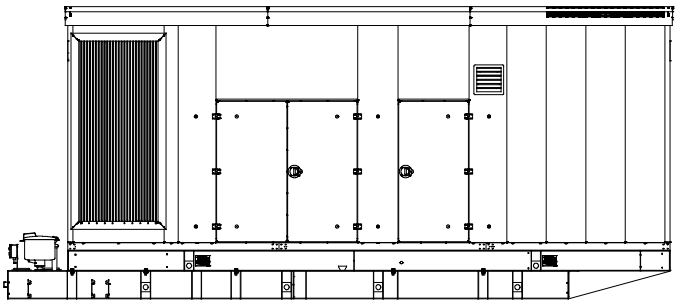
- Lift base or tank-mounted, aluminum construction enclosure with internal-mounted, exhaust silencers.
- Every enclosure has a sloped roof to reduce the buildup of moisture and debris.
- Sound attenuated enclosure that offers noise reduction using acoustic insulation, acoustic-lined air inlets and an acoustic-lined air discharge.
- Fade-, scratch-, and corrosion-resistant Kohler® Power Armor™ automotive-grade textured finish.
- Acoustic insulation that meets UL 94 HF1 flammability classification.
- Enclosure has large access doors that are hinged and removable which allow for easy maintenance.
- Lockable, flush-mounted door latches.
- Air inlet louvers reduce rain and snow entry.
- High wind bracing, 241 kph (150 mph).



Sound Level 1 Enclosure
(Shown with available spill containment)

Sound Level 2 Enclosure Standard Features

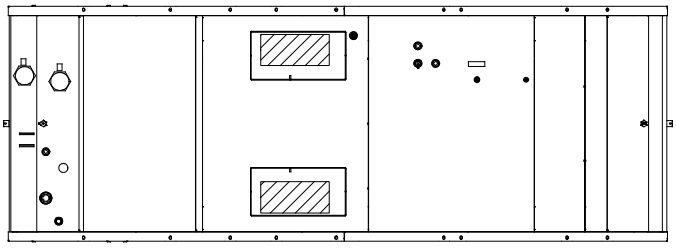
- Includes all of the sound level 1 enclosure features with the addition of up to 51 mm (2 in.) acoustic insulation material, intake sound baffles, vertical air discharge, and secondary silencers.
- Louvered air inlet and vertical outlet hood with 90 degree angles to redirect air and reduce noise.



Sound Level 2 Enclosure
(Shown with available spill containment)

Subbase Fuel Tank Features

- The fuel tank has a Power Armor Plus™ textured epoxy-based rubberized coating.
- The above-ground rectangular secondary containment tank mounts directly to the generator set, below the generator set skid (subbase).
- Both the inner and outer tanks have UL-listed emergency relief vents.
- Flexible fuel lines are provided with subbase fuel tank selection.
- The containment tank's construction protects against fuel leaks or ruptures. The inner (primary) tank is sealed inside the outer (secondary) tank. The outer tank contains the fuel if the inner tank leaks or ruptures.
- The above ground secondary containment subbase fuel tank meets UL 142 requirements.
- Features include:
  - Additional fittings for optional accessories (qty. 3)
  - Electrical stub-up area open to bottom
  - Emergency inner and outer tank relief vents
  - Fuel fill with lockable cap and 51 mm (2 in.) riser
  - Fuel leak detection switch
  - Fuel level mechanical gauge
  - Fuel level sender
  - Normal vent
  - Removable engine supply and return diptubes



Subbase Fuel Tank (Top View)

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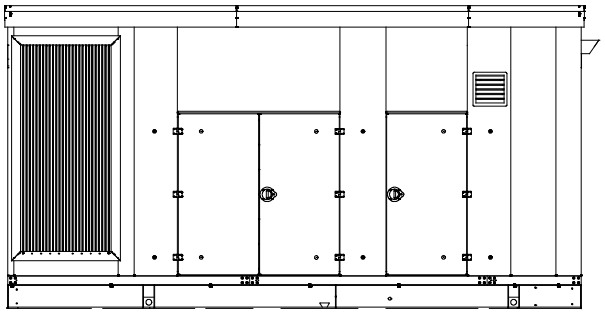
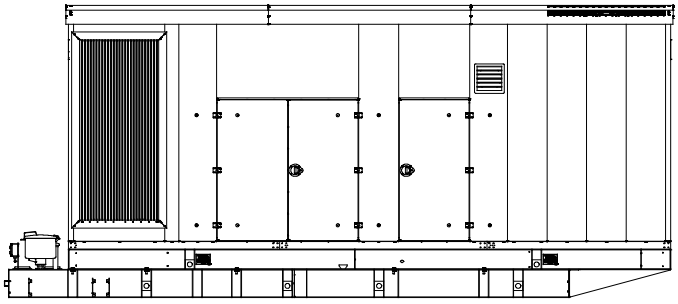
KOHLER

Industrial Generator Set Accessories

Sound Enclosure and Subbase Fuel Tank Package



Level 1 Sound Enclosure with Lift Base



Level 2 Sound Enclosure with Subbase Fuel Tank
(shown with optional spill containment)

Enclosure and Subbase Fuel Tank Combinations

Four enclosure configurations are available with the subbase fuel tanks:

- ○ Sound Enclosure Level 1
- ○ Sound Enclosure Level 1, AQMD Ready
- ○ Sound Enclosure Level 2
- ○ Sound Enclosure Level 2, AQMD Ready

Available Approvals and Listings

- ❑ UL 2200 Listing
- ❑ UL142 Listing (fuel tanks)
- ❑ CSA Approval
- ❑ IBC Seismic Certification
- ❑ California OSHPD Approval (KD800-KD1750 models)
- ❑ cUL Listing (fuel tanks only)
- ❑ Hurricane Rated Enclosure - Available on aluminum Sound Level 2 enclosures, KD800-KD1750 models (Impact rated for Large Missile Level E and Wind load rated per Florida Building Code, tested to TAS201-94, TAS202-94 and TAS203-94 standards)

NOTE: Some models may have limited third-party approvals; see your local distributor for details.

Applicable to the following models: KD800 - KD2500 (includes KD1250-A)

Sound Level 1 Enclosure Standard Features

- Internal silencers with flexible exhaust connectors and exhaust elbows.
- Mounts to lift base and optional subbase fuel tank.
- Aluminum construction with six large, hinged, removable doors for easy maintenance.
- Fade-, scratch-, and corrosion-resistant Kohler® Power Armor™ automotive-grade textured finish.
- Lockable, flush-mounted door latches.
- Air inlet louvers to reduce rain and snow entry.
- Sloped roof to reduce the buildup of moisture and debris.
- Acoustic insulation that meets UL 94 HF1 flammability classification.
- Sound level 1 enclosure is designed to 150 mph (241 kph) wind load rating.
- Sound level 1 enclosure uses internal silencers, acoustic insulation and acoustic-lined air inlet hoods.

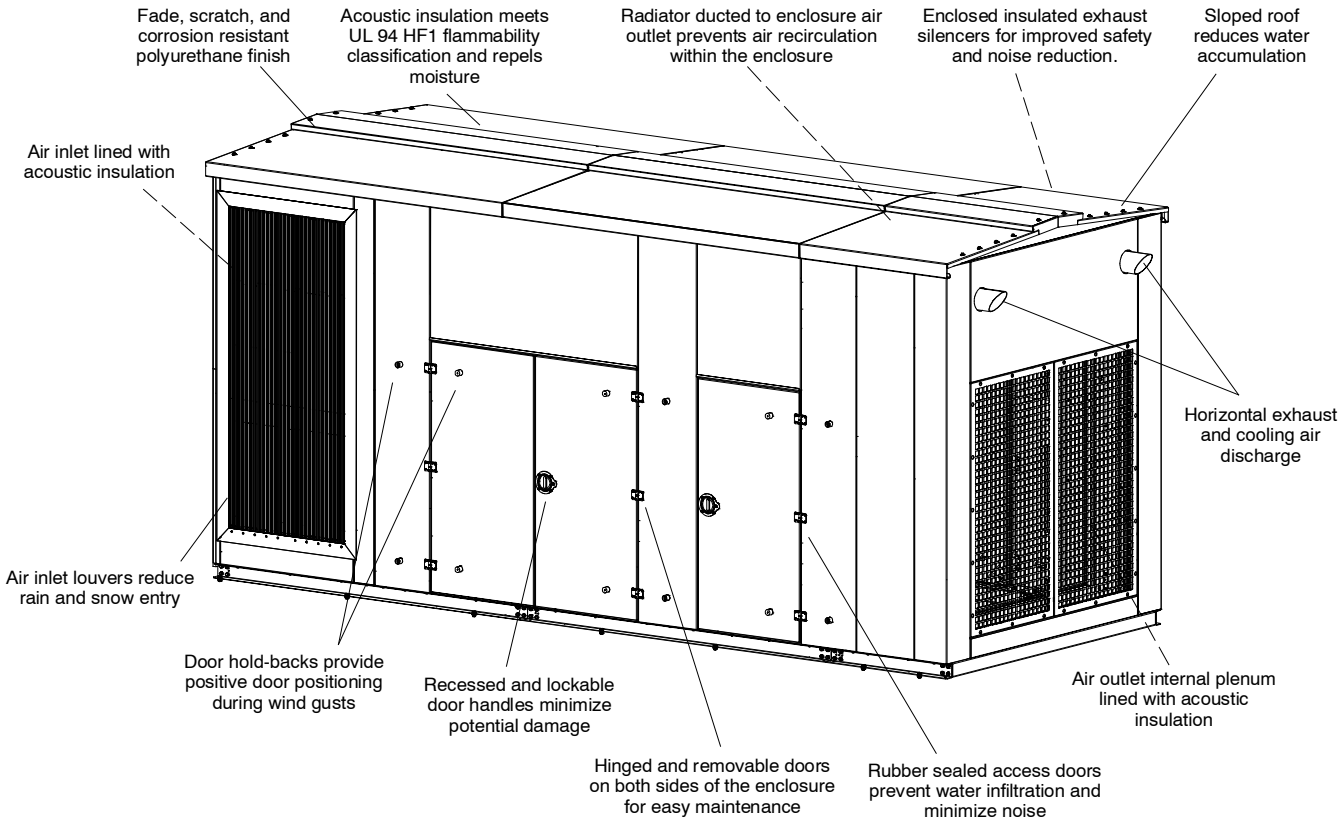
Sound Level 2 Enclosure Standard Features

- Includes all of the sound level 1 enclosure features with the addition of up to 51 mm (2 in.) acoustic insulation material, intake sound baffles, secondary silencers, and vertical air discharge with rain caps.
- Vertical outlet hood with 90 degree angles to redirect air and reduce noise.
- Sound level 2 enclosure is certified to 186 mph (299 kph) wind load rating for KD800-2500 models.

Subbase Fuel Tank Features

- The fuel tank has a Power Armor Plus™ textured epoxy-based rubberized coating.
- The above-ground rectangular secondary containment tank mounts directly to the generator set, below the generator set skid (subbase).
- Both the inner and outer tanks have UL-listed emergency relief vents.
- Flexible fuel lines are provided with subbase fuel tank selection.
- The containment tank's construction protects against fuel leaks or ruptures. The inner (primary) tank is sealed inside the outer (secondary) tank. The outer tank contains the fuel if the inner tank leaks or ruptures.
- The above ground secondary containment subbase fuel tank meets UL 142 requirements.
- State tanks with varying capacities are available. Florida Dept. of Environmental Protection (FDEP) File No. EQ-634 approved.

Aluminum Sound Enclosures



Note: Sample sound level 1 (SL1) enclosure shown; other models are similar.
Enclosure ships assembled on lifting base.

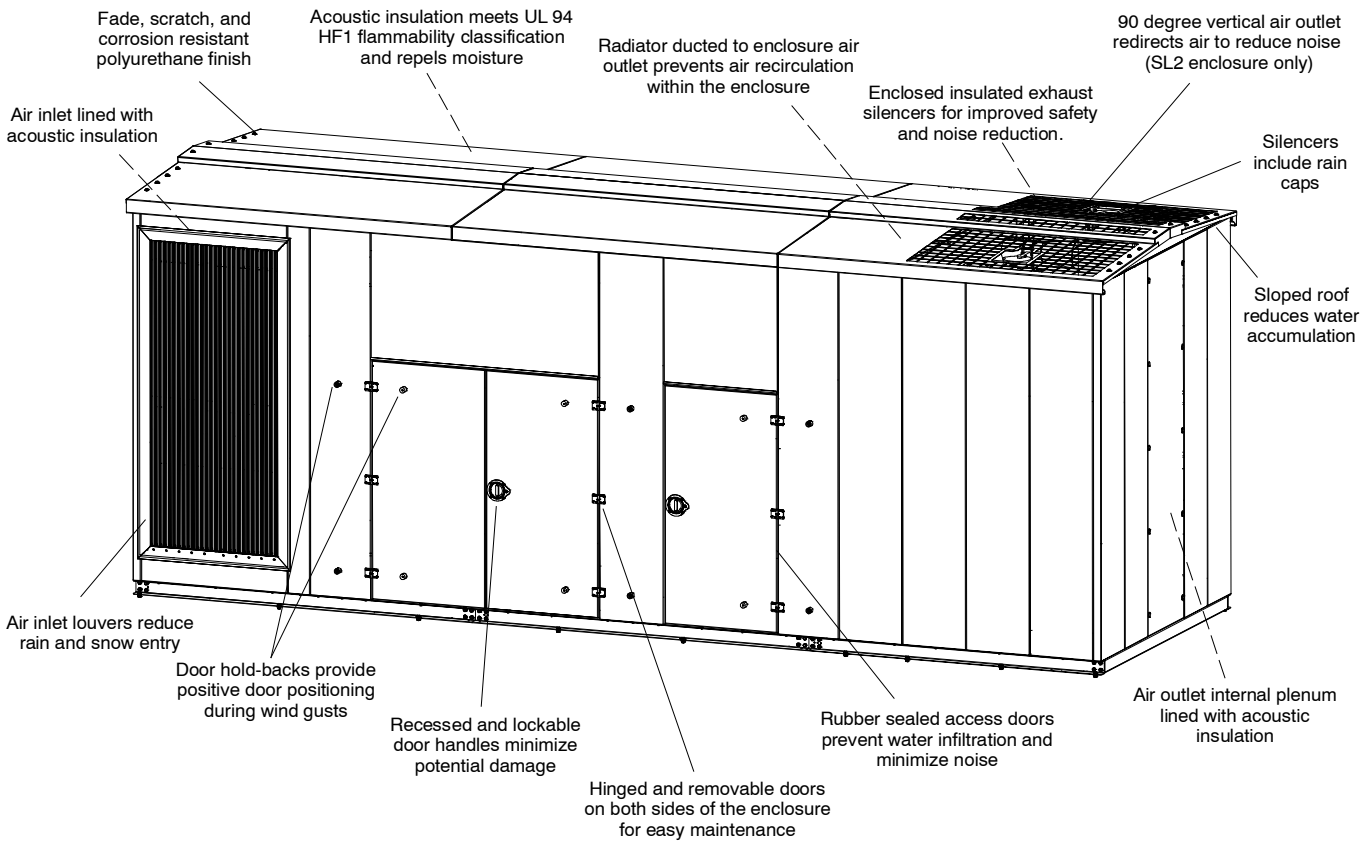
ADV- 8927

Level 1 Sound Enclosure Features

- Heavy-duty formed panels, solid construction. Preassembled package offering corrosion resistant, dent resilient structure mounting directly to lift base or fuel tank.
- Polyurethane enamel paint. Superior finish, durability, and appearance.
- The enclosure has a sloped roof to reduce the buildup of moisture and debris.
- Internal exhaust silencers offering maximum component life and operator safety.

  NOTE: Installing an additional length of exhaust tail pipe may increase backpressure levels. Please refer to the generator set spec sheet for the maximum backpressure value.
- Service access. Multiple personnel doors for easy access to generator set control and servicing of the fuel fill, fuel gauge, oil fill, and battery.
- Interchangeable modular panel construction. Allows complete serviceability or replacement without compromising enclosure design.
- Bolted panels facilitate service, future modification upgrades, or field replacement.
- Cooling/combustion air intake. Fixed air intake louvers.
- Sound-attenuating design using critical silencers. Acoustic insulation UL 94 HF1 listed for flame resistance.
- Horizontal air discharge. Sound level 1 (SL1) enclosures use a horizontal design that directs exhaust and cooling air out the end of the enclosure.

Aluminum Sound Enclosures



Note: Sample sound level 2 (SL2) enclosure shown; other models are similar.

Enclosure ships assembled on lifting base.

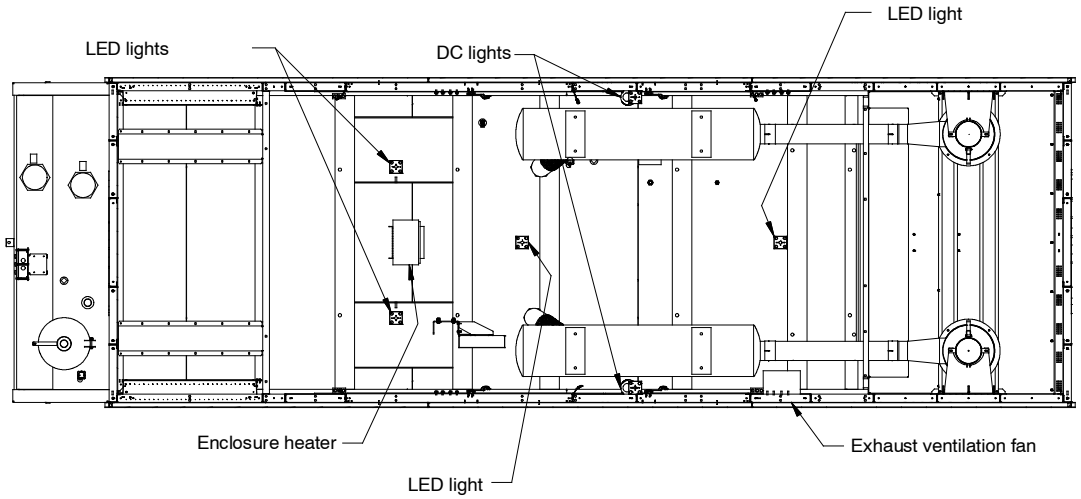
ADV- 8927

Level 2 Sound Enclosure Features

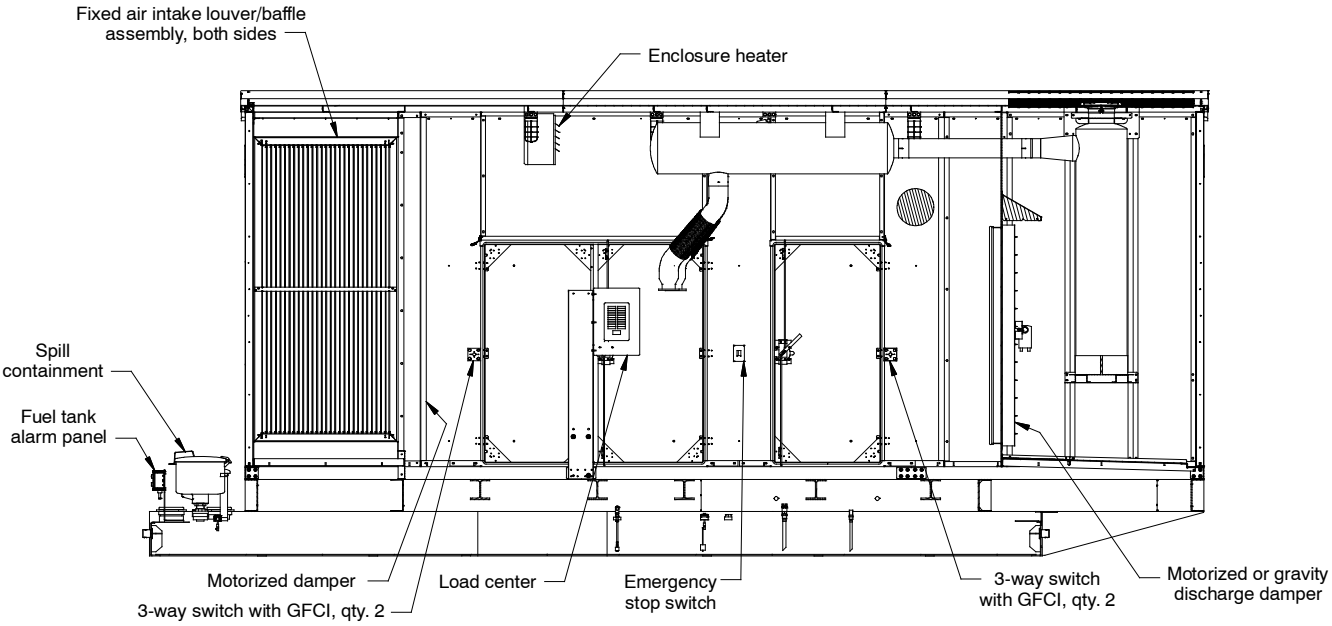
- Heavy-duty formed panels, solid construction. Preassembled package offering corrosion resistant, dent resilient structure mounting directly to lift base or fuel tank.
- Polyurethane enamel paint. Superior finish, durability, and appearance.
- The enclosure has a sloped roof to reduce the buildup of moisture and debris.
- Internal exhaust silencers offering maximum component life and operator safety.
- Service access. Multiple personnel doors on both sides for easy access to generator set control and servicing of the fuel fill, fuel gauge, oil fill, and battery.
- Interchangeable modular panel construction. Allows complete serviceability or replacement without compromising enclosure design.
- Bolted panels facilitate service, future modification upgrades, or field replacement.
- Cooling/combustion air intake. Fixed air intake louvers.
- Sound-attenuating design using additional secondary silencers and up to 51 mm (2 inches) of added acoustic insulation, UL 94 HF1 listed for flame resistance.
- Vertical air discharge. Sound level 2 (SL2) models use a vertical air discharge design that redirects exhaust and cooling air up and above the enclosure to reduce noise.

Aluminum Sound Enclosure Options

Top view of SL2 enclosure, shown with roof removed for illustration only:



Side view of SL2 enclosure, shown with side panels removed for illustration only:



Note: Sample sound level 2 (SL2) enclosure shown; other models are similar.

ADV-8919-5

Aluminum Sound Enclosure Options

Basic Electrical Package (BEP)

Distribution Panel/Load Center. Prewired AC power distribution of all factory-installed features including block heater, two GFCI-protected internal 120-volt service receptacles, internal lighting, and commercial grade wall switches. Single-phase or three-phase load center powered by building source power and protected by a main circuit breaker, rated for 100, 125, or 200 amps as noted, with capacity and circuit positions for future expansion. AC power distribution installed in accordance with NEC and all wiring within EMT thin wall conduit. LED AC lights located within UL-listed fixtures designed for wet locations.

- ❑ BEP, single-phase, 120/208, 60 Hz or 120/240 VAC, 60 Hz. Includes 100 amp electrical panel, two 3-way switches, four LED lights, and two GFCI receptacles.
- ❑ BEP, three-phase, 120/208, 60 Hz or 120/240VAC, 60 Hz. Includes 125 amp electrical panel, two 3-way switches, four LED lights, and two GFCI receptacles.
- ❑ BEP, 200 amp, single-phase, 120/208, 60 Hz or 120/240 VAC, 60 Hz. Includes 200 amp electrical panel, two 3-way switches, four LED lights, and two GFCI receptacles.
- ❑ BEP, 200 amp, three-phase, 120/208, 60 Hz or 120/240VAC, 60 Hz. Includes 200 amp electrical panel, two 3-way switches, four LED lights, and two GFCI receptacles.

DC Light Package

DC Light Package (DLP). Prewired, internal DC light package offering an economical alternative light source within the enclosure, as a complement to the BEP or a source of light when AC power is not available. Battery drain limited with fuse protection and controlled through a 0- 60 minute, spring-wound, no-hold timer.
Available in LED.

Electrical Accessories

Wiring Kits. Electrical wiring for accessories. BEP required.

- ❑ Alternator heater wiring (KD1250- 2500 only)
- ❑ Block heater wiring, single-phase
- ❑ Block heater wiring, three-phase
- ❑ Battery charger wiring

Emergency Stop Switch

- ❑ Generator set emergency stop switch, qty. 1.

Stepdown Transformers. 100 amp BEP required, 60 Hz only. KD1250- 2500 only.

- ❑ Single-phase, 120/240 V
- ❑ Three-phase, 120/208 V

Disconnect Switches. Disconnect switch for stepdown transformer. 60 Hz only.

- ❑ Single-phase
- ❑ Three-phase

Enclosure Heater

Heater, 3.7/5 kW Ceiling Mounted. Electrical utility heater prewired to load center internal to enclosure. Rated at 17100 Btu. Includes adjustable louvers offering down flow and horizontal air tuning, built-in thermostat with automatic fan delay controls.

- ❑ Heater kit with 1 heater, single/three phase, 208/240 VAC, 60 Hz. BEP required.
- ❑ Heater kit with 2 heaters, for KD1250- 2500 only, single/three phase, 208/240 VAC, 60 Hz. 200 amp BEP required.

Exhaust Fan

- ❑ Exhaust Ventilation Fan. Mounted inside the enclosure. BEP required.

Motorized Inlet Louvers. 60 Hz only; BEP required.

- ❑ Aluminum construction
- ❑ Insulated aluminum construction
- ❑ Galvanized construction

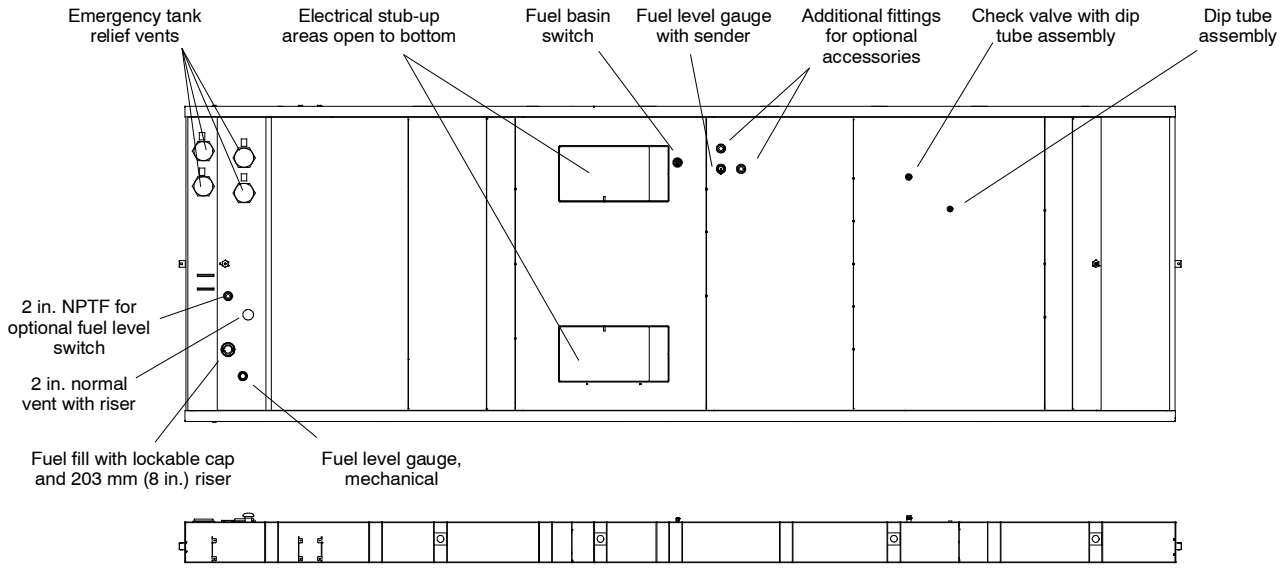
Motorized Outlet Louvers. 60 Hz only; BEP required.

- ❑ Aluminum construction
- ❑ Insulated aluminum construction
- ❑ Galvanized construction

Gravity Air Outlet

- ❑ Aluminum construction

Subbase Fuel Tank



Note: Sample model shown, other models are similar.

ADV-8927

Subbase Fuel Tank Standard Features

- Extended operation. State tanks with various capacities for multiple hour requirements.
- UL listed. Secondary containment generator set base tank meeting UL 142 requirements.
- NFPA compliant. Designed to comply with the installation standards of NFPA 30 and NFPA 37.
- Integral external lift lugs. Enables crane with spreader-bar lifting of the complete package (empty tank, mounted generator set, and enclosure) to ensure safety.
- Emergency pressure relief vents. Vents ensure adequate venting of inner and outer tank under extreme pressure and/or emergency conditions.
- Normal vent with cap. Vent is raised above lockable fuel fill.
- Fuel level gauge with sender.
- Mechanical fuel level gauge.
- Leak detection switch. Annunciates a contained primary tank fuel leak condition at generator set control.
- Electrical stub-up area open to bottom.
- Additional 2 in. NPT fittings for optional accessories.

Subbase Fuel Tank Options

Bottom Clearance

❑ I-beams, provide 102 mm (4 in.) of ground clearance (not available with OSHPD or IBC seismic certification)

Emergency Vent Options

❑ 127 mm (5 in.), IBC

❑ 152.4 mm (6 in.), IBC KD800-1000 12 hr. tank only

Fuel in Basin Options

❑ Fuel in basin switch, Florida Dept. of Environmental Protection (FDEP) File No. EQ-682 approved

❑ 100% engine fluid containment

Fuel Supply Options

❑ Fire safety valve (installed on fuel supply line)

❑ Ball valve (installed on fuel supply line)

Fuel Fill Options

❑ Fill pipe extension to within 152 mm (6 in.) of bottom of fuel tank

❑ 18.9 L (5 gallon) spill containment

❑ 18.9 L (5 gallon) spill containment with 95% shutoff

❑ 18.9 L (5 gallon) spill containment fill to within 152 mm (6 in.) of bottom of fuel tank

❑ 18.9 L (5 gallon) spill containment, OSHPD/IBC

❑ 18.9 L (5 gallon) spill containment with 95% shutoff, OSHPD/IBC

❑ 28.4 L (7.5 gallon) spill containment, Florida Dept. of Environmental Protection (FDEP) File No. EQ-345 approved

❑ 28.4 L (7.5 gallon) spill containment with 95% shutoff, Florida Dept. of Environmental Protection (FDEP) File No. EQ-345/EQ-257 approved

High Fuel Level Switch

❑ High fuel level switch, 24V

❑ High fuel level switch, 24V, Florida Dept. of Environmental Protection (FDEP) File No. EQ-682 approved

❑ Fuel tank panel, 3 alarm, 24 V

❑ Fuel tank panel, 3 alarm, 24 V, Florida Dept. of Environmental Protection (FDEP) File No. EQ-682 approved

Normal Vent Options

❑ 3.7 m (12 ft.) above grade (without spill containment)

❑ 3.7 m (12 ft.) above grade (with spill containment)

Freestanding Stairs

❑ Stairs only, single door access

❑ Stairs with platform, single door access

❑ Stairs with catwalk, 2 door access, door length only

❑ Stairs with catwalk, 2 door access, full length of enclosure

Tank Marking Options

❑ Decal, Combustible Liquids - Keep Fire Away (qty. 2)

❑ Decal, NFPA 704 identification (qty. 2)

❑ Decal, tank number and safe fuel fill height (qty. 2)

Enclosure and Subbase Fuel Tank Specifications

Fuel Tank Capacity, L (gal.)	Est. Fuel Supply Hours at 60 Hz with Full Load (nominal)	Max. Dimensions, mm (in.)			Max. Weight, † kg (lb.)	Fuel Tank Height, mm (in.)	Sound Pressure Level at 60 Hz with Full Load, dB(A) ‡
		Length	Width §	Height			
KD800 SL1 Sound Enclosure with Internal Silencer and State Code Subbase Fuel Tank *							
Lifting Base	0	6582 (259)	2616 (103)	3350 (132)	10184 (22452)	—	90
3475 (918)	12	7309 (288)		3706 (146)	13772 (30362)	356 (14.0)	
6621 (1749)	24			3934 (155)	14252 (31421)	584 (23.0)	
10573 (2793)	48			4264 (168)	14831 (32698)	914 (36.0)	
15740 (4158)	72	9144 (360)		4366 (172)	16242 (35808)	1016 (40.0)	
KD800 SL2 Sound Enclosure with Internal Silencer and State Code Subbase Fuel Tank *							
Lifting Base	0	7707 (303)	2616 (103)	3350 (132)	10587 (23340)	—	75
3475 (918)	12	8434 (332)		3706 (146)	14175 (31250)	356 (14.0)	
6621 (1749)	24			3934 (155)	14655 (32309)	584 (23.0)	
10573 (2793)	48			4290 (169)	15234 (33586)	915 (36.0)	
15740 (4158)	72	9144 (360)		4366 (172)	16645 (36696)	1016 (40.0)	
KD900 SL1 Sound Enclosure with Internal Silencer and State Code Subbase Fuel Tank *							
Lifting Base	0	6582 (259)	2616 (103)	3350 (132)	10497 (23343)	—	91
3475 (918)	12	7309 (288)		3706 (146)	14085 (31253)	356 (14.0)	
6621 (1749)	24			3934 (155)	14565 (32312)	584 (23.0)	
12969 (3426)	48	8400 (331)		4293 (169)	16348 (36243)	940 (37.0)	
19381 (5120)	72	11050 (435)		4369 (172)	17527 (38840)	1016 (40.0)	
KD900 SL2 Sound Enclosure with Internal Silencer and State Code Subbase Fuel Tank *							
Lifting Base	0	7707 (303)	2616 (103)	3350 (132)	10900 (24231)	—	75
3475 (918)	12	8434 (332)		3706 (146)	14488 (32141)	356 (14.0)	
6621 (1749)	24			3934 (155)	14968 (33200)	584 (23.0)	
12969 (3426)	48			4290 (169)	16751 (37131)	940 (37.0)	
19381 (5120)	72	11050 (435)		4366 (172)	17930 (39728)	1016 (40.0)	
KD1000 SL1 Sound Enclosure with Internal Silencer and State Code Subbase Fuel Tank *							
Lifting Base	0	6582 (259)	2616 (103)	3350 (132)	10810 (23833)	—	92
3475 (918)	12	7309 (288)		3706 (146)	14398 (31743)	356 (14.0)	
6621 (1749)	24			3934 (155)	14878 (32802)	584 (23.0)	
12969 (3426)	48	8400 (331)		4290 (169)	16661 (36733)	940 (37.0)	
19381 (5120)	72	11050 (435)		4366 (172)	17840 (39330)	1016 (40.0)	
KD1000 SL2 Sound Enclosure with Internal Silencer and State Code Subbase Fuel Tank *							
Lifting Base	0	7707 (303)	2616 (103)	3353 (132)	11213 (24721)	—	76
3475 (918)	12	8434 (332)		3706 (146)	14801 (32631)	356 (14.0)	
6621 (1749)	24			3934 (155)	15281 (33690)	584 (23.0)	
12969 (3426)	48			4290 (169)	17064 (37621)	940 (37.0)	
19381 (5120)	72	11050 (435)		4366 (172)	18243 (40218)	1016 (40.0)	
KD1250/1500 SL1 Sound Enclosure with Internal Silencers and State Code Subbase Fuel Tank *							
Lifting Base	0	8831 (348)	3033 (119)	3579 (141)	17116 (37748)	—	93
5863 (1549)	18/15	9594 (378)		3960 (156)	22326 (49234)	381 (15.0)	
9860 (2605)	30/25			4138 (163)	22808 (50296)	559 (22.0)	
11204 (2960)	34/28			4214 (166)	22973 (50661)	635 (25.0)	
19214 (5076)	58/48	11113 (438)		4468 (176)	25277 (55741)	889 (35.0)	
21985 (5808)	66/55			4570 (180)	25684 (56637)	991 (39.0)	
KD1250/1500 SL2 Sound Enclosure with Internal Silencer and State Code Subbase Fuel Tank *							
Lifting Base	0	10420 (410)	3033 (119)	3579 (141)	18031 (39764)	—	79
5863 (1549)	18/15	11147 (439)		3960 (156)	23241 (51250)	381 (15.0)	
9860 (2605)	30/25			4138 (163)	23723 (52312)	559 (22.0)	
11204 (2960)	34/28			4214 (166)	23888 (52677)	635 (25.0)	
19214 (5076)	58/48			4468 (176)	26192 (57757)	889 (35.0)	
21985 (5808)	66/55			4570 (180)	26599 (58653)	991 (39.0)	

***** Data in table is for reference only. Height includes enclosure, lift base, and tank (if equipped). Refer to your authorized Kohler distributor for enclosure and subbase fuel tank specification details.

† Max. weight includes the generator set (wet) with the largest alternator option, enclosure, silencers, lift base, and tank (no fuel).

‡ Log average sound pressure level of 8 measured positions around the perimeter of the unit at a distance of 7 m (23 ft.). Refer to TIB-114 for details. Enclosed generator set sound data for some models was not available at time of print.

§ An additional 940 mm (37 inches) of clearance on each side for opening and closing the access doors is recommended.

NOTE: If the Est. Fuel Supply Hours column shows more than one number, the numbers represent each model in that range.

Enclosure and Subbase Fuel Tank Specifications, continued

Fuel Tank Capacity, L (gal.)	Est. Fuel Supply Hours at 60 Hz with Full Load (nominal)	Max. Dimensions, mm (in.)			Max. Weight, † kg (lb.)	Fuel Tank Height, mm (in.)	Sound Pressure Level at 60 Hz with Full Load, dB(A) ‡
		Length	Width §	Height			
KD1250-A/1350 SL1 Sound Enclosure with Internal Silencers and State Code Subbase Fuel Tank *							
Lifting Base	0	8831 (348)	3033 (119)	3579 (141)	17116 (37748)	—	93
5863 (1549)	18/17	9594 (378)		3960 (156)	22326 (49234)	381 (15.0)	
9860 (2605)	30/29			4138 (163)	22808 (50296)	559 (22.0)	
11204 (2960)	34/32			4214 (166)	22973 (50661)	635 (25.0)	
19214 (5076)	58/56	11113 (438)		4468 (176)	25277 (55741)	889 (35.0)	
21985 (5808)	67/64			4570 (180)	25684 (56637)	991 (39.0)	
KD1250-A/1350 SL2 Sound Enclosure with Internal Silencer and State Code Subbase Fuel Tank *							
Lifting Base	0	10420 (410)	3033 (119)	3579 (141)	18031 (39764)	—	76
5863 (1549)	18/17	11147 (439)		3960 (156)	23241 (51250)	381 (15.0)	
9860 (2605)	30/29			4138 (163)	23723 (52312)	559 (22.0)	
11204 (2960)	34/32			4214 (166)	23888 (52677)	635 (25.0)	
19214 (5076)	58/56			4468 (176)	26192 (57757)	889 (35.0)	
21985 (5808)	67/64			4570 (180)	26599 (58653)	991 (39.0)	
KD1600 SL1 Sound Enclosure with Internal Silencers and State Code Subbase Fuel Tank *							
Lifting Base	0	8831 (348)	3033 (119)	3579 (141)	17343 (38248)	—	94
5863 (1549)	14	9594 (378)		3960 (156)	22553 (49734)	381 (15.0)	
9860 (2605)	23			4138 (163)	23035 (50796)	559 (22.0)	
11204 (2960)	26			4214 (166)	23200 (51161)	635 (25.0)	
19214 (5076)	45	11113 (438)		4468 (176)	25504 (56241)	889 (35.0)	
21985 (5808)	52			4570 (180)	25911 (57137)	991 (39.0)	
KD1600 SL2 Sound Enclosure with Internal Silencer and State Code Subbase Fuel Tank *							
Lifting Base	0	10420 (410)	3033 (119)	3579 (141)	18258 (40264)	—	79
5863 (1549)	14	11147 (439)		3960 (156)	23468 (51750)	381 (15.0)	
9860 (2605)	23			4138 (163)	23950 (52812)	559 (22.0)	
11204 (2960)	26			4214 (166)	24115 (53177)	635 (25.0)	
19214 (5076)	45			4468 (176)	26419 (58257)	889 (35.0)	
21985 (5808)	52			4570 (180)	26826 (59153)	991 (39.0)	
KD1750 SL1 Sound Enclosure with Internal Silencers and State Code Subbase Fuel Tank *							
Lifting Base	0	8831 (348)	3033 (119)	3579 (141)	17343 (38248)	—	95
5863 (1549)	13	9594 (378)		3960 (156)	22553 (49734)	381 (15.0)	
9860 (2605)	21			4138 (163)	23035 (50796)	559 (22.0)	
11204 (2960)	24			4214 (166)	23200 (51161)	635 (25.0)	
19214 (5076)	42	11113 (438)		4468 (176)	25504 (56241)	889 (35.0)	
21985 (5808)	48			4570 (180)	25911 (57137)	991 (39.0)	
KD1750 SL2 Sound Enclosure with Internal Silencer and State Code Subbase Fuel Tank *							
Lifting Base	0	10420 (410)	3033 (119)	3579 (141)	18258 (40264)	—	79
5863 (1549)	13	11147 (439)		3960 (156)	23468 (51750)	381 (15.0)	
9860 (2605)	21			4138 (163)	23950 (52812)	559 (22.0)	
11204 (2960)	24			4214 (166)	24115 (53177)	635 (25.0)	
19214 (5076)	42			4468 (176)	26419 (58257)	889 (35.0)	
21985 (5808)	48			4570 (180)	26826 (59153)	991 (39.0)	

* Data in table is for reference only. Height includes enclosure, lift base, and tank (if equipped). Refer to your authorized Kohler distributor for enclosure and subbase fuel tank specification details.

† Max. weight includes the generator set (wet) with the largest alternator option, enclosure, silencers, lift base, and tank (no fuel).

‡ Log average sound pressure level of 8 measured positions around the perimeter of the unit at a distance of 7 m (23 ft.). Refer to TIB-114 for details. Enclosed generator set sound data for some models was not available at time of print.

§ An additional 940 mm (37 inches) of clearance on each side for opening and closing the access doors is recommended.

NOTE: If the Est. Fuel Supply Hours column shows more than one number, the numbers represent each model in that range.

Enclosure and Subbase Fuel Tank Specifications, continued

Fuel Tank Capacity, L (gal.)	Est. Fuel Supply Hours at 60 Hz with Full Load (nominal)	Max. Dimensions, mm (in.)			Max. Weight, † kg (lb.)	Fuel Tank Height, mm (in.)	Sound Pressure Level at 60 Hz with Full Load, dB(A) ‡
		Length	Width §	Height			
KD2000/2250/2500 SL1 Sound Enclosure with Internal Silencers and State Code Subbase Fuel Tank *							
Lifting Base	0	10774 (424)	3488 (137)	4141 (163)	33073 (72909)	—	90
8577 (2266)	15/14/13	11465 (451)		4522 (178)	40485 (89252)	381 (15)	
14130 (3733)	25/22/22			4700 (185)	41216 (90861)	559 (22)	
16451 (4346)	29/26/25			4776 (188)	41497 (91483)	635 (25)	
KD2000/2250/2500 SL2 Sound Enclosure with Internal Silencer and State Code Subbase Fuel Tank *							
Lifting Base	0	12766 (503)	3488 (137)	4141 (163)	35121 (77426)	—	78
8577 (2266)	15/14/13	13491 (531)		4522 (178)	42533 (93766)	381 (15)	
14130 (3733)	25/22/22			4700 (185)	43264 (95378)	559 (22)	
16451 (4346)	29/26/25			4776 (188)	43545 (95997)	635 (25)	

***** Data in table is for reference only. Height includes enclosure, lift base, and tank (if equipped). Refer to your authorized Kohler distributor for enclosure and subbase fuel tank specification details.

† Max. weight includes the generator set (wet) with the largest alternator option, enclosure, silencers, lift base, and tank (no fuel).

‡ Log average sound pressure level of 8 measured positions around the perimeter of the unit at a distance of 7 m (23 ft.). Refer to TIB-114 for details. Enclosed generator set sound data for some models was not available at time of print.

§ An additional 940 mm (37 inches) of clearance on each side for opening and closing the access doors is recommended.

NOTE: If the Est. Fuel Supply Hours column shows more than one number, the numbers represent each model in that range.

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Phone 920-457-4441, Fax 920-459-1646
For the nearest sales and service outlet in the US and Canada, phone 1-800-544-2444
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Fault and Status Conditions	Fault LEDs	Fault Horn	System Ready LED	Generator Running LED	Communication Status LED
Overcrank Shutdown	Red	On	Red	Off	Green
High Engine Temperature Warning *	Yellow	On	Red	Green	Green
High Engine Temperature Shutdown	Red	On	Red	Off	Green
Low Oil Pressure Warning *	Yellow	On	Red	Green	Green
Low Oil Pressure Shutdown	Red	On	Red	Off	Green
Overspeed Shutdown	Red	On	Red	Off	Green
Emergency Stop *	Red	On	Red	Off	Green
Low Coolant Level/Aux. Shutdown	Red	On	Red	Off	Green
Low Coolant Temperature *	Yellow	On	Red	Off	Green
Low Cranking Voltage	Yellow	On	Red	Off	Green
Low Fuel—Level or Pressure *	Yellow	On	Red	Green or Off	Green
Not-In-Auto	Red	On	Red	Green or Off	Green
Common Fault	Red	On	Green	Green or Off	Green
Battery Charger Fault (1) *	Yellow	On	Red	Green or Off	Green
Battery Charger Fault (2) *	Yellow	On	Green	Green or Off	Green
High Battery Voltage *	Yellow	Off	Green	Green or Off	Green
Low Battery Voltage *	Yellow	Off	Green	Green or Off	Green
User Input #1 (Warning)	Yellow	Off	Green	Green or Off	Green
User Input #1 (Shutdown)	Red	On	Green	Off	Green
User Input #2 (Warning)	Yellow	Off	Green	Green or Off	Green
User Input #2 (Shutdown)	Red	On	Green	Off	Green
User Input #3 (Warning) (1) †	Yellow	Off	Green	Green or Off	Green
User Input #3 (Shutdown) (1) †	Red	On	Green	Off	Green
User Input #4 (Warning) (1)	Yellow	Off	Green	Green or Off	Green
User Input #4 (Shutdown) (1)	Red	On	Green	Off	Green
User Input #5 (Warning) (1)	Yellow	Off	Green	Green or Off	Green
User Input #5 (Shutdown) (1)	Red	On	Green	Off	Green
EPS Supplying Load	Yellow	Off	Green	Green	Green
Communications Status (Fault mode)	—	Off	Green or Red	Green or Off	Red
ATS Fault (RSA III with ATS Controls only)	Red	On	Red or Yellow	Green or Off	Green

Green LEDs appear as steady on when activated.
Yellow LEDs slow flash when activated except steady on with EPS supplying load and high battery voltage.
Red LEDs slow flash when activated except fast flash with loss of communication and not-in-auto.

Specifications

- LED indicating lights for status, warning, and/or shutdown.
- Power source with circuit protection: 12- or 24-volt DC
- Power source with120/208 VAC, 50/60 Hz adapter (option)
- Power draw: 200 mA
- Humidity range: 0% to 95% noncondensing
- Operating temperature range: - 20°C to +70°C (- 4°F to +158°F)
- Storage temperature range: - 40°C to +85°C (- 40°F to +185°F)
- Standards:
  - NFPA 110, level 1
  - UL 508 recognized
  - CE directive
  - NFPA 99
  - ENS 61000- 4- 4
  - EN6II-4-4 fast transient immunity
- RS-485 Modbus® isolated port @ 9.6/19.2/38.4/57.6 kbps (default is 19.2 kbps)
- USB device port
- NEMA 1 enclosure

(1) All generator set controllers except Decision-Maker® 3+ controller.
(2) Decision-Maker® 3+ controller only.
* May require optional kit or user-provided device to enable function and LED indication.
† Digital input #3 is factory-set for high battery voltage on the Decision-Maker® 3+ controller.
Modbus® is a registered trademark of Schneider Electric.

ATS Controls (RSA III with ATS controls only)

- ATS position LED (normal or emergency)
- Power source indicator LED (normal or emergency)
- ATS fault LED
- Key-operated lock/unlock switch for Test feature
- Test pushbutton

NFPA Requirements

- NFPA 110 compliant
- Engine functions:
  - High battery voltage warning *
  - High engine temperature shutdown
  - High engine temperature warning *
  - Low battery voltage warning *
  - Low coolant level/aux. shutdown
  - Low coolant temperature warning *
  - Low cranking voltage
  - Low fuel warning (level or pressure) *
  - Low oil pressure shutdown
  - Low oil pressure warning *
  - Overcrank shutdown
  - Overspeed shutdown
- General functions:
  - Audible alarm silence
  - Battery charger fault *
  - Lamp test
  - Master switch not-in-auto

Fault and Status LEDs and Lamp Test Switch

Alarm Horn. Horn sounds giving a minimum 90 dB at 0.1 m (0.3 ft.) audible alarm when a warning or shutdown fault condition exists except on high/low battery voltage or EPS supplying load.

Alarm Silenced. Red LED on lamp test switch lights when alarm horn is deactivated by alarm silence switch.

Alarm Silence Switch. Lamp test switch quiets the alarm during servicing. The horn will reactivate upon additional faults.

ATS Fault. Red LED lights when ATS fails to transfer.

Battery Charger Fail. LED lights if battery charger malfunctions. Requires battery charger with alarm contact.

Battery Voltage Hi/Lo. LED flashes if battery or charging voltage drops below preset level. LED lights steady if battery voltage exceeds preset level.

Common Fault. LED lights when a single or multiple common faults occur.

Communication Status. Green LED lights indicating annunciator communications functional. Red LED indicates communication fault.

EPS Supplying Load. LED lights when the Emergency Power System (EPS) generator set is supplying the load (APM402, APM603, APM802, and Decision-Maker® 550, 3000, 3500, 6000, and 8000 controllers) or when transfer switch is in the emergency position (Decision-Maker® 3+ controller).

Emergency Stop. LED lights and engine stops when emergency stop is made. May require a local emergency stop switch on some Decision-Maker® 3+ controllers.

Generator Running. LED lights when generator set is in operation.

High Engine Temperature. Red LED lights if engine has shut down because of high engine coolant temperature. Yellow LED lights if engine coolant temperature approaches shutdown range. Requires warning sender on some models.

Lamp Test (Switch). Switch tests all the annunciator indicator LEDs and horn.

Low Coolant Level/Aux. LED lights when engine coolant level is below acceptable range on radiator-mounted generator sets only. When used with a Decision-Maker® 3+ controller, the LED indicates low coolant level or an auxiliary fault shutdown. Requires user-supplied low coolant level switch on remote radiator models.

Low Coolant Temperature. LED lights if optional engine block heater malfunctions and/or engine coolant temperature is too low. Requires prealarm sender on some models.

Low Cranking Voltage. LED lights if battery voltage drops below preset level during engine cranking.

Low Fuel (Level or Pressure). LED lights if fuel level in tank approaches empty with diesel models or fuel pressure is low on gas models. Requires customer-supplied switch.

Low Oil Pressure. Red LED lights if generator set shuts down because of insufficient oil pressure. Yellow LED lights if engine oil pressure approaches shutdown range. Requires warning sender on some models.

Not In Auto. LED lights when the generator set controller is not set to automatic mode.

Overcrank. LED lights and cranking stops if engine does not start in either continuous cranking or cyclic cranking modes.

Overspeed. LED lights if generator set shuts down because of overspeed condition.

System Ready. Green LED lights when generator set master switch is in AUTO position and the system senses no faults. Red LED indicates system fault.

User-Defined Digital Inputs #1-#5. Monitors five digital auxiliary inputs (can be configured as warnings or shutdowns). User-defined digital inputs are selected via the RSA III master for local or remote (generator set or ATS). The user-defined digital input can be assigned via PC using SiteTech™ setup software.

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Accessories

- ❑ Power source adapter kit 120/208 VAC, 50/60 Hz.
- ❑ Modbus®/Ethernet converter GM41143-KP2 for serial to Ethernet communication.
- ❑ Communication module GM32644-KA1 or GM32644-KP1 is required with Decision-Maker® 3+ controllers.

Modbus® is a registered trademark of Schneider Electric.

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Generator Set Controller

The APM603 generator set controller provides advanced control, system monitoring, and system diagnostics for a single generator set or paralleling multiple generator sets. The APM603 interfaces the generator set to other power system equipment and network management systems using standard industry network communications. It uses a patented digital voltage regulator and unique software logic to manage alternator thermal overload protection as well as serves as an overcurrent protective relay, features normally requiring additional hardware. The APM603 controller meets NFPA 110, Level 1.

Display, Interface, and Accessibility

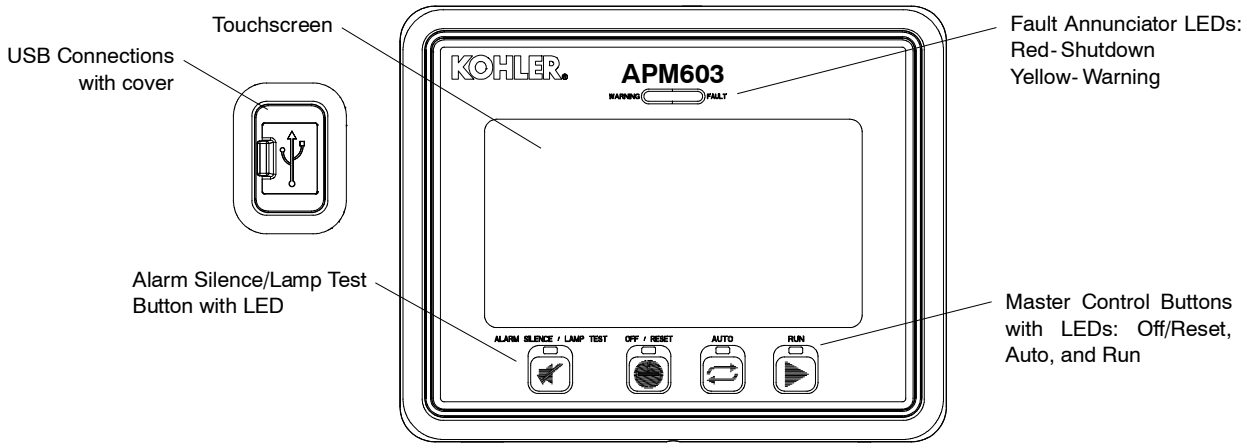
- A 7-inch color TFT touchscreen for easy local access to data.
  - Home screen can be customized to show critical data at a glance.
  - Create a custom favorites list for quick access to important data
- Measurements are selectable in metric or English units.
- Supports Modbus® protocol through serial bus and Ethernet networks, and supports SNMP and BACnet® through Ethernet networks.

Global Support

- Sales, installation, and service support from more than 800 Kohler and SDMO service providers around the world.

On- board Diagnostics

- Immediate visibility of warnings and faults with text description and code display.
  - 15 seconds of critical data are captured around each warning and fault
  - Critical data can be viewed on the display and downloaded
- Store up to 10,000 events locally along with historical data logging of successful starts.
  - Accurate time stamp from real-time clock
  - Event log can be downloaded
- Data logging of customized parameter list for report generation and advanced troubleshooting.
  - Store to external USB drive for easy transfer to another device



Controller Features

AC Output Voltage Regulator Adjustment	Maximum of ±10% of the system voltage
Alarm Silence	For NFPA-110 application or user convenience
Alternator Protection	Generator set overload and short circuit protection
Cyclic Cranking	Provides automatic restart after a failed start attempt with programmable on/off time and number of attempts
ECU Diagnostics	Displays engine ECU fault codes and descriptions for engine troubleshooting
Engine Start Aid	Control for an optional engine starting aid
Environmentally Sealed Membrane Keypad	Three master control buttons with LEDs: Off/Reset, Auto, and Run
Patented High-Speed RMS Digital Voltage Regulator	±0.25% no-load to full-load regulation with three-phase RMS sensing
Lamp Test	Verifies functionality of the indicator LEDs
Real-time Clock	Includes battery back-up to retain date and time through controller power cycle
Remote Reset	Allows remote fault resets and restarting of the generator set
Remote Monitoring Panel	Compatible with the Kohler® Remote Serial Annunciator
Run Time Hourmeter	Displays generator set run time
Run Relay	Indicates that the generator set is running
Time Delay Engine Cooldown (TDEC)	Time delay before the generator set shuts down
Time Delay Engine Start (TDES)	Time delay before the generator set starts

Communication

USB Port	(1) Mini-USB port for PC connection (1) USB port for storage device
Serial (RS-485) Port	(1) Non-isolated for RSA III (1) Isolated for Modbus devices (1) Isolated for paralleling communication
Ethernet Port	(1) RJ45 for Modbus TCP, SNMP, and BACnet

Controller Specifications

Nominal voltage	12 or 24 VDC protected against reverse battery connection
Power	800 mAmps at 12 VDC 400 mAmps at 24 VDC
Operating Temperature	-40°C to 70°C (-40°F to 158°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Humidity	5% to 95% non-condensing
Display Size, W x H	154 x 86 mm (6.0 x 3.4 inches)
Protection Index	IP65 Front

Paralleling Features

- Isochronous control with real and reactive load sharing with other APM603 controller equipped generator sets
  - Supports paralleling up to 8 generators
- Random first-on logic to prevent two or more generator sets from closing to a dead bus and provides the fastest response for a single generator online
- Automatic synchronizer with dead bus closing
- Soft loading and unloading for generator management
- Protective relay functions:
  - Synch check (25C)
  - Over current (51)
  - Over frequency (81O)
  - Over power (32O)
  - Over voltage (59)
  - Reverse power (32R)
  - Reverse reactive power (32RQ)
  - Under frequency (81U)
  - Under voltage (27)
- Generator management to allow the start and stop of generators based on load demand or state of other generators
  - Fuel level
  - Run time
  - Manual order
  - Time of day
  - Efficiency
- Simplified paralleling system view from any generator controller in the system

Overcurrent Protective Device

- Provides protection against line-to-line and line-to-neutral faults
- Uses thermal and instantaneous current limit settings for alternator protection
- Includes a maintenance mode for arc flash reduction per NEC 240.87

Load Management Features

- Programmable outputs included to command the connect and disconnect of loads based on generator or paralleling system state
  - Loads connected based on available capacity
  - Loads disconnected at system startup
  - Loads disconnected based on a maximum kW setting or underfrequency setting
- Supports up to 16 prioritized load steps per system
  - Can be used on a single generator system
  - Can be combined in a paralleling system for a total system load control capability
- Simplified load management system view from any generator controller in the system
- Requires input/output module option

Advanced Programmable I/O

- Configurable inputs and outputs can be programmed for customer specific use
- PLC-like capability for applying logic to customize generator system behavior

Troubleshooting Features

- 15 seconds of key data automatically captured around each warning and shutdown
  - Data can be exported for detailed analysis
  - Data can be viewed on controller for convenient on-site troubleshooting support
- Configurable data logger will allow you to select parameters to monitor
  - Data stored to USB device for flexibility on amount of data stored and ability to export for detailed analysis
  - Data capture controlled by user to allow capturing specific data required

NFPA 110 Requirements

In order to meet NFPA 110, Level 1 requirements, the generator set controller monitors the engine/generator functions/faults shown below.

- Engine functions:
  - Overcrank
  - Low coolant temperature warning
  - High coolant temperature warning
  - High coolant temperature shutdown
  - Low oil pressure shutdown
  - Low oil pressure warning
  - High engine speed
  - Low fuel (level or pressure) *
  - Low coolant level
  - EPS supplying load
  - High battery voltage
  - Low battery voltage
- General functions:
  - Master switch not in auto
  - Battery charger fault *
  - Lamp test
  - Contacts for local and remote common alarm
  - Audible alarm silence button
  - Remote emergency stop *

* Function requires optional input sensors or kits and is engine dependent, see Engine Data.

Standards

The generator set controller has been tested and verified for compliance with the following standards.

- NFPA 99
- NFPA 110, Level 1
- CSA 282-09
- UL 6200
- ASTM B117 (salt spray test)

Controller Functions

The controller displays warning, shutdown, and status messages. **All functions are available as relay outputs.**
Warning causes the yellow fault LED to show and sounds the alarm horn, signaling an impending problem.
Shutdown causes the red fault LED to show, sounds the alarm horn, and stops the generator set.

The controller communicates with the engine ECU and supports a large number of warning and shutdown events that are not listed here. This table highlights the items required for NFPA 110.

Event	Warning	Shutdown
Alternator Thermal Protection †		●
Battery Charger Fault *	▲	
CAN Option Board1 Comm Loss	▲	
Critically Low Fuel Level (diesel) *	▲	
ECU Diagnostic Event	▲	
ECU Mismatch Shutdown †		●
Fuel Leak Alarm (diesel) *	▲	
High Battery Voltage Warning	▲	
High Coolant Temperature Shutdown †		●
High Coolant Temperature Warning	▲	
High Fuel Level Warning (diesel) *	▲	
High Oil Temperature Shutdown †		●
High Oil Temperature Warning	▲	
Local Emergency Stop Shutdown †		●
Loss ECU Comms Shutdown †		●
Loss of Signal Low Coolant Level Voltage	▲	
Low Battery Voltage Warning	▲	
Low Coolant Level Shutdown		●
Low Coolant Temperature Warning	▲	
Low Fuel Level Shutdown (diesel) * †		●
Low Fuel Level Warning (diesel) * †	▲	
Low Fuel Pressure Warning (gas) * †	▲	
Low Oil Pressure Shutdown †		●
Low Oil Pressure Warning	▲	
Low RTC (clock) Battery Voltage	▲	
Maintenance Reminder1	▲	
Maintenance Reminder2	▲	
Maintenance Reminder3	▲	
Maximum Power Shutdown †		●
Maximum Power Warning	▲	
Not In Auto Alarm	▲	
Over Crank Shutdown †		●
Over Current Shutdown (L1, L2, L3) †		●
Over Current Warning (L1, L2, L3)	▲	
Over Frequency Shutdown †		●
Over Frequency Warning	▲	
Over Power Shutdown †		●
Over Power Warning	▲	
Over Speed Shutdown †		●
Over Voltage Shutdown (L-L, L-N, each phase)		●
Over Voltage Warning (L-L, L-N, each phase)	▲	

Event	Warning	Shutdown
Remote Emergency Stop Shutdown †		●
Reverse Power Shutdown †		●
Reverse VAR Shutdown †		●
Under Frequency Shutdown †		●
Under Frequency Warning	▲	
Under Voltage Shutdown (L-L, L-N, each phase) †		●
Under Voltage Warning (L-L, L-N, each phase)	▲	
Weak Cranking Battery	▲	
Status Messages		
Auto Button Pressed		
EPS Supplying Load		
Generator Running		
Generator Started		
Generator Stopped		
GFCI Warning *		
Load Shed Overload		
Load Shed Under Frequency		
Off Button Pressed		
RSA Event Programmable Digital Inputs, 1-8		
Run Button Pressed		

* Function requires optional input sensors or kits
† Items included with common fault shutdown

John Deere Engine-Powered Models

Inputs and Outputs

Standard Dedicated User Inputs	Input Type
Auxiliary Fault (Shutdown)	Digital Input
Auxiliary Warning	
Battery Charger Fault	
Breaker Closed *	
Breaker Open *	
Excitation Over Voltage (350 kW and up)	
Fuel Leak Alarm	
Low Fuel Level Switch	
Remote Emergency Stop	
Remote Engine Start	Two-wire input
Speed Bias	Analog Voltage Input, Scalable up to +/- 10 VDC
Voltage Bias	

Standard Dedicated User Outputs	Output Type
Close Breaker *	Relay Driver Output
Common Failure	
Run	
Trip Breaker / Shunt Trip *	
* Only with remote- mounted electrically operated circuit breakers.	

Optional Configurable User Inputs and Outputs	
User Configurable Inputs	2 Analog, 0- 5 VDC 4 Dry Contact Digital
User Configurable Relay Outputs	14 NO/NC Relays 1 Common Fault Relay
Note: Programmable I/O is configurable by a Kohler-authorized technician	

JD Engine Data

The following John Deere engine data is displayed on the APM603 controller.

Parameter
Engine Model Number
Engine Serial Number
ECU Serial Number
Coolant Temperature
Engine Speed
Fuel Pressure
Fuel Consumption Rate
Oil Pressure
Run Time Hours

KD Models

Inputs and Outputs

Standard Dedicated User Inputs	Input Type
Auxiliary Fault (Shutdown)	Digital Input
Auxiliary Warning	
Battery Charger Fault	
Breaker Closed *	
Breaker Tripped/ Open *	
Fuel Leak Alarm	
Fuel Level	
Idle Switch	
Key Switch Enable	
Low Fuel Level Switch	
Low Oil Level	
Remote Emergency Stop	
Remote Reset	
Remote Engine Start	Two-wire input
Speed Bias	Analog Voltage Input, Scalable up to +/- 10 VDC
Voltage Bias	

Standard Dedicated User Outputs	Output Type
Close Breaker *	Relay Driver Output
Common Failure	
Common Warning	
EPS Supplying Load	
Generator Running	
Horn	
Low Coolant Temperature	
Not in Auto	
System Ready	
Trip Breaker / Shunt Trip *	
* Only with remote- mounted electrically operated circuit breakers.	

Optional Configurable User Inputs and Outputs	
User Configurable Inputs	16 Dry Contact Digital
User Configurable Relay Outputs	8 NO/NC Relays
Note: Programmable I/O is configurable by a Kohler-authorized technician.	

KD Engine Data

The following Kohler Diesel engine data is displayed on the APM603 controller.

Parameter
Engine Model Number
Engine Serial Number
Ambient Temperature
Charge Air Pressure
Charge Air Temperature
Common Rail Fuel Pressure
Coolant Level
Coolant Temperature
Crankcase Pressure
Engine Speed
Fuel Consumption Rate
Fuel Pressure
Fuel Temperature
Intercooler Coolant Temperature (K175 engines only)
Oil Temperature
Oil Pressure
Run Time Hours

KOHLER CO., Kohler, Wisconsin 53044 USA
Phone 920-457-4441, Fax 920-459-1646
For the nearest sales and service outlet in the US and Canada, phone 1-800-544-2444
KOHLERPower.com

Doosan Engine-Powered Models

Inputs and Outputs

Standard Dedicated User Inputs	Input Type
Auxiliary Fault (Shutdown)	Digital Input
Auxiliary Warning	
Battery Charger Fault	
Breaker Closed *	
Breaker Tripped/Open *	
Emergency Stop, Local	
Emergency Stop, Remote	
Excitation Over Voltage	
Ground Fault Relay	
Fuel Type	
Low Fuel Pressure	
Remote Engine Start	Two-wire input
Speed Bias	Analog Voltage Input, Scalable up to +/- 10 VDC
Voltage Bias	

Standard Dedicated User Outputs	Output Type
Close Breaker *	Relay Driver Output
Common Failure	
Common Warning	
Crank	
High Coolant Temperature	
Horn	
Run	
Trip Breaker / Shunt Trip *	
* Only with remote- mounted electrically operated circuit breakers.	

Optional Configurable User Inputs and Outputs	
User Configurable Inputs	2 Analog, 0- 5 VDC 4 Dry Contact Digital
User Configurable Relay Outputs	14 NO/NC Relays 1 Common Fault Relay
Note: Programmable I/O is configurable by a Kohler-authorized technician	

Doosan Engine Data

The following Doosan engine data is displayed on the APM603 controller.

Parameter
Ambient Temperature
Coolant Temperature
ECU Runtime Hours
Engine Intake Air Pressure
Engine Intake Air Temperature
Engine Intercooler Temperature
Engine Speed
Fuel Pressure
Mechanical Engine Load
Oil Pressure
Oil Temperature

Availability is subject to change without notice. Kohler Co. reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever. Contact your local Kohler® generator set distributor for availability.

APM603 Available Options

- ❑ **Common Failure Relay** provides a relay output to signal a generator set fault.
- ❑ **Battery Charger** available with 6 amp, 10 amp, and 20 amp output for 12 and 24V DC voltage output. (Availability is generator model dependent.) The 10 amp and 20 amp models provide NFPA 110 charging and alarming capability.
- ❑ **Electrically Operated Circuit Breakers**
  - For paralleling systems
  - Available generator-mounted or remote-mounted
  - 24VDC
- ❑ **Ground Fault Relay** provides a relay output to signal a ground fault is detected.
- ❑ **Input/Output Module** for John Deere and Doosan powered models provides:
  - 2 analog inputs (0- 5 VDC)
  - 4 digital input connections with connection to ground
  - 14 relay output connections (Form C, rated 10A, 120V)
  - 1 common fault relay output (NO, rated 2A, 24VDC)
- ❑ **Input/Output Module** for Kohler Diesel (KD) models provides:
  - 16 digital input connections with connection to ground
  - 8 relay output connections (Form C, rated 8A, 240 VAC or rated 0.5 A, 48 VDC)
- ❑ **Key Switch** to allow selection of RUN, OFF and AUTO modes. Lockable in the AUTO position by removing the key.
- ❑ **Remote Emergency Stop Switch** available as a wall mounted panel to remotely shut down the generator set.
- ❑ **Remote Monitoring Panel.** The Kohler® Remote Serial Annunciator (RSA) enables the operator to monitor the status of the generator set from a remote location, which may be required for NFPA 99 and NFPA 110 installations, and up to four Automatic transfer switches.
- ❑ **Shunt Trip Wiring** provides relay outputs to trip a shunt trip circuit breaker and to signal the common fault shutdowns. Contacts rated at 10 amps at 28 VDC or 120 VAC.

DISTRIBUTED BY:

KOHLER®

KD1250-A

60 Hz. Diesel Generator Set
Tier 2 EPA Certified for Stationary Emergency Applications
EMISSION OPTIMIZED DATA SHEET

ENGINE INFORMATION

Model:	KD36V16	Bore:	135 mm (5.31 in.)
Nameplate kW @ 1800 RPM:	1391	Stroke:	157 mm (6.18 in.)
Type:	4-Cycle, 16-V Cylinder	Displacement:	36 L (2197 cu. in.)
Aspiration:	Turbocharged, Intercooled	EPA Family:	MLHAL45.0ESP
Compression ratio:	15:0:1	EPA Certificate:	MLHAL45.0ESP-002
Emission Control Device:	Direct Diesel Injection, Engine Control Module, Turbocharger, Charge Air Cooler		

EXHAUST EMISSION DATA:	**EPA D2 Cycle 5-mode weighted**
HC	0.05 g/kWh
NO_x (Oxides of Nitrogen as NO_2)	5.72 g/kWh
CO (Carbon Monoxide)	0.66 g/kWh
PM (Particulate Matter)	0.14 g/kWh

TEST METHODS AND CONDITIONS

Test Methods:
Steady-State emissions recorded per EPA CFR 40 Part 89, and ISO8178-1 during operation at rated engine speed (+/-2%) and stated constant load (+/-2%) with engine temperatures, pressures and emission rates stabilized.

Fuel Specification:
40-48 Cetane Number, 0.05 Wt. % max. Sulfur; Reference ISO8178-5, 40CFR86.1313-98 Type 2-D and ASTM D975 No. 2-D.

Reference Conditions:
25 °C (77 °F) Air Inlet Temperature, 40 °C (104 °F) Fuel Inlet Temperature, 100 kPa (29.53 in Hg) Barometric Pressure; 10.7 g/kg (75 grains H2O/lb.) of dry air Humidity (required for NOx correction); Intake Restriction set to maximum allowable limit for clean filter; Exhaust Back pressure set to maximum allowable limit.

Data was taken from a single engine test according to the test methods, fuel specification and reference conditions stated above and is subjected to instrumentation and engine-to-engine variability. Tests conducted with alternate test methods, instrumentation, fuel or reference conditions can yield different results.

Data and specifications subject to change without notice.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2021 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT

OFFICE OF TRANSPORTATION AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: **Liebherr Machines Bulle SA**
(U.S. Manufacturer or Importer)

Certificate Number: MLHAL45.0ESP-002

Effective Date: 11/05/2020

Expiration Date: 12/31/2021

Byron J. Bunker, Division Director
Compliance Division

Issue Date: 11/05/2020

Revision Date: N/A

Model Year: 2021
Manufacturer Type: Original Engine Manufacturer
Engine Family: MLHAL45.0ESP

Mobile/Stationary Indicator: Stationary
Emissions Power Category: 560<kW<=2237
Fuel Type: Diesel
After Treatment Devices: No After Treatment Devices Installed
Non-after Treatment Devices: Electronic Control

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Part 60, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and produced in the stated model year.

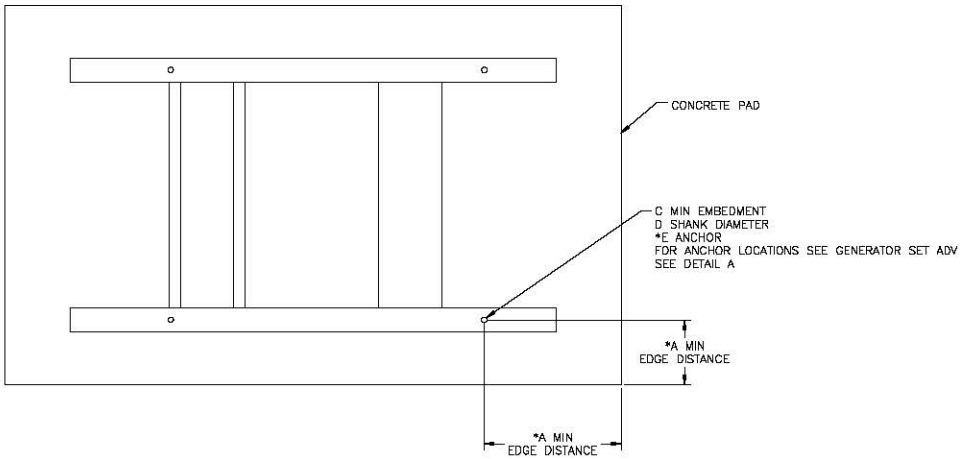
This certificate of conformity covers only those new compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60.

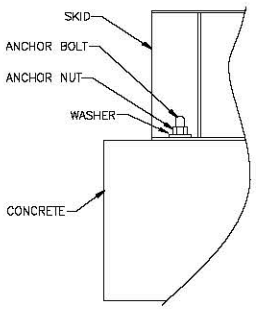
It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 60. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Part 60.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.

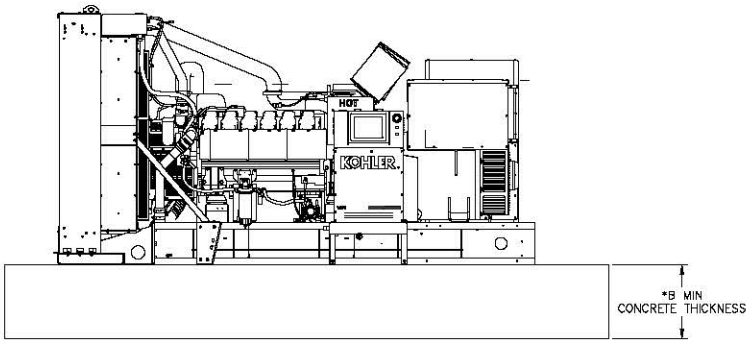
HORIZNATAL DESIGN ≤ 1.500g, (Sds≤2.0, z/h=0.0) (Sds≤.667g, z/h≤1.0) PER IBC 2015 CODE						
Model	Anchor Quantity	A Min	B Min	C Min	D	E Anchor
KD800	10	330 [13.0]	254 [10.0]	195 [7.7]	22.4 [.88]	HIT-HY200 + HAS - EB7
KD900	10	330 [13.0]	254 [10.0]	195 [7.7]	22.4 [.88]	HIT-HY200 + HAS - EB7
KD1000	10	330 [13.0]	254 [10.0]	195 [7.7]	22.4 [.88]	HIT-HY200 + HAS - EB7
KD1250	10	457 [18.0]	381 [15.0]	297 [11.7]	22.4 [.88]	HIT-HY200 + HAS - EB7
KD1250-A	10	432 [17.0]	356 [14.0]	246 [9.7]	22.4 [.88]	HIT-HY200 + HAS - EB7
KD1350	10	432 [17.0]	356 [14.0]	246 [9.7]	22.4 [.88]	HIT-HY200 + HAS - EB7
KD1500	10	457 [18.0]	381 [15.0]	297 [11.7]	22.4 [.88]	HIT-HY200 + HAS - EB7
KD1600	10	457 [18.0]	381 [15.0]	297 [11.7]	22.4 [.88]	HIT-HY200 + HAS - EB7
KD1750	10	457 [18.0]	381 [15.0]	297 [11.7]	22.4 [.88]	HIT-HY200 + HAS - EB7

REV	DATE	REVISION	BY
-	6-1-17	NEW DRAWING [CT170196]	SSS
A	12-6-18	(D-6,7,8) TABLE UPDATED; SEE SHEET 2, 3, 4, 5 & 6	
		[CT192351]	SLR





DETAIL A



FOR KD800-KD1750 OPEN GENSET SKID MOUNTED DIRECTLY TO CONCRETE

NOTE:
1) SPECIAL INSPECTION PER IBC SECTION 1704 IS REQUIRED ON ALL INSTALLATIONS. ALL ANCHORS MUST BE INSTALLED TO MEET COMPLIANCE.

2) NO OTHER ANCHORS ARE ALLOWED WITHIN MINIMUM SPACING DISTANCE WITHOUT ADVANCED APPROVAL OF THE STRUCTURAL PROJECT ENGINEER OF RECORD.

3) REFER TO VMA-50771-01C FOR CERTIFICATION REPORT.

4) *SEE NOTES ON SHEET 6

METRIC CAD FILE

DIMENSIONS IN [ ] ARE INCH EQUIVALENT

KD SERIES SEISMIC INSTRUCTION

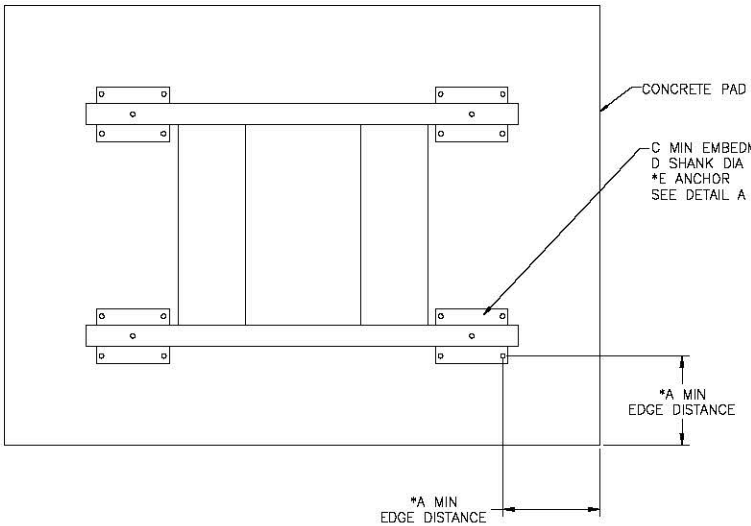
KOHLER CO.
POWER SYSTEMS, KOHLER, WI 53044 U.S.A.

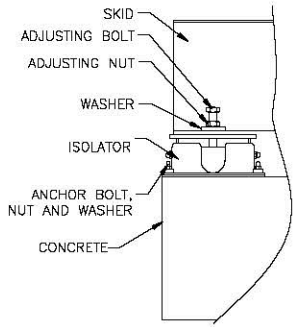
APPROVALS		DATE
DRAWN	SSS	8-1-17
CHECKED	JDZ	8-1-17
APPROVED	TAS	8-1-17

TITLE: DIMENSION PRINT SEISMIC INSTRUCTION
SCALE: DWG NO: ADV-8870 REV: D
SHEET 1 of 6
ORIG. MFR.
PLOTTED DATE

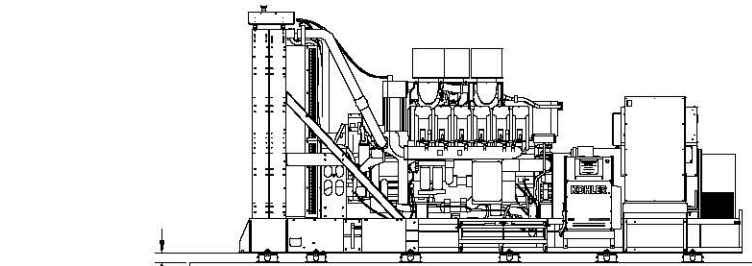
REV	DATE	REVISION	BY
–	8-1-17	NEW DRAWING [DT175196]	SSS
A	12-6-18	[D-6,7,8] TABLE UPDATED; [D-2] NOTES UPDATED; SEE SHEET 1, 3, 4, 5 & 6 [DT182391]	SLR

HORIZNATAL DESIGN ≤ 1.500g, (Sds≤2.0, z/h=0.0) (Sds≤.667g, z/h≤1.0) PER IBC 2015 CODE						
Model	Anchor Quantity	A Min	B Min	C Min	D	E Anchor
KD2000	72	610 [24.0]	533 [21.0]	335 [13.2]	19.1 [.75]	HIT-HY200 + HAS – EB7
KD2000 REMOTE RAD	72	610 [24.0]	610 [24.0]	353 [13.9]	19.1 [.75]	HIT-HY200 + HAS – EB7
KD2250	72	610 [24.0]	533 [21.0]	335 [13.2]	19.1 [.75]	HIT-HY200 + HAS – EB7
KD2250 REMOTE RAD	72	610 [24.0]	610 [24.0]	353 [13.9]	19.1 [.75]	HIT-HY200 + HAS – EB7
KD2500	72	610 [24.0]	533 [21.0]	335 [13.2]	19.1 [.75]	HIT-HY200 + HAS – EB7
KD2500 REMOTE RAD	72	610 [24.0]	610 [24.0]	353 [13.9]	19.1 [.75]	HIT-HY200 + HAS – EB7
KD2800	108	508 [20.0]	432 [17.0]	325 [12.8]	19.1 [.75]	HIT-HY200 + HAS – EB7
KD2800 REMOTE RAD	84	584 [23.0]	584 [23.0]	376 [14.8]	19.1 [.75]	HIT-HY200 + HAS – EB7
KD3000	108	508 [20.0]	432 [17.0]	325 [12.8]	19.1 [.75]	HIT-HY200 + HAS – EB7
KD3000 REMOTE RAD	84	584 [23.0]	584 [23.0]	376 [14.8]	19.1 [.75]	HIT-HY200 + HAS – EB7
KD3250	108	508 [20.0]	432 [17.0]	325 [12.8]	19.1 [.75]	HIT-HY200 + HAS – EB7
KD3250 REMOTE RAD	84	584 [23.0]	584 [23.0]	376 [14.8]	19.1 [.75]	HIT-HY200 + HAS – EB7





DETAIL A



NOTE:
1) SPECIAL INSPECTION PER IBC SECTION 1704 IS REQUIRED ON ALL INSTALLATIONS. ALL ANCHORS MUST BE INSTALLED TO MEET COMPLIANCE

2) NO OTHER ANCHORS ARE ALLOWED WITHIN MINIMUM SPACING DISTANCE WITHOUT ADVANCED APPROVAL OF THE STRUCTURAL PROJECT ENGINEER OF RECORD.

3) REFER TO SPRING ISOLATOR SPECIFICATION 11B0B0000XX FOR PLACEMENT AND SETUP.

4) REFER TO VMA-50771-D1C FOR CERTIFICATION REPORT

5) *SEE NOTES ON SHEET 6

FOR KD2000-KD2500 OPEN AND REMOTE RADIATOR SKID MOUNTED TO CONCRETE VIA KOHLER SEISMIC ISOLATORS

METRIC CAD FILE

KD SERIES SEISMIC INSTRUCTION

UNLESS OTHERWISE SPECIFIED: – 1) DIMENSIONS ARE IN MILLIMETERS 2) TOLERANCES ARE: X.XX ± 0.25, X.X ± 1.0, X ± 1.5, ANGLES ± 0.30°. SURFACE FINISH 125. THIRD ANGLE PROJECTION

APPROVALS		DATE
DRAWN	SSS	8-1-17
CHECKED	JDZ	8-1-17
APPROVED	TAS	8-1-17

KOHLER CO.
POWER SYSTEMS, KOHLER, WI 53044 U.S.A.

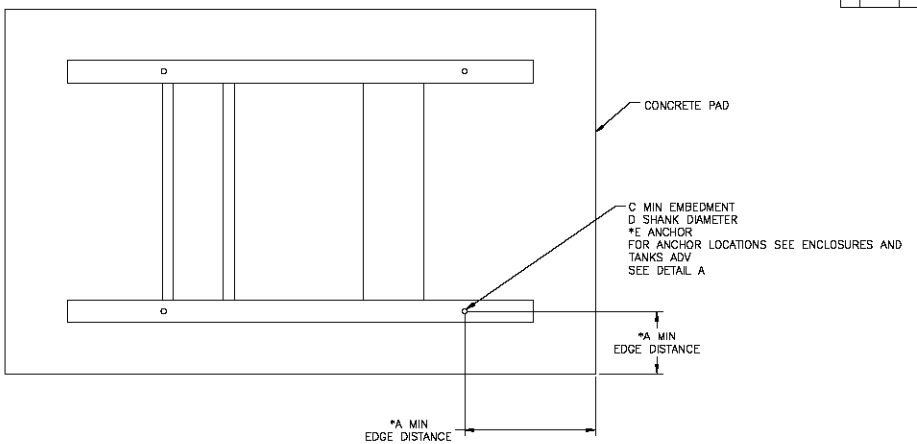
TITLE: DIMENSION PRINT SEISMIC INSTRUCTION

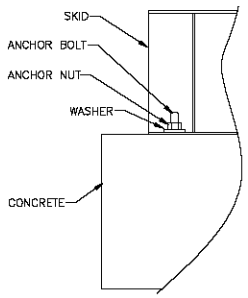
SIZE: D | DWG NO.: ADV-8870 | REV: D | SHEET: 2-6

FILENAME

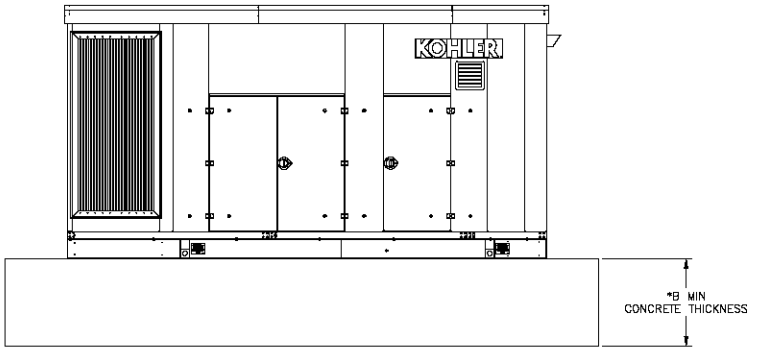
HORIZNATAL DESIGN ≤ 1.500g, (Sds≤2.0, z/h=0.0) (Sds≤.667g, z/h≤1.0) PER IBC 2015 CODE						
Model	Anchor Quantity	A Min	B Min	C Min	D	E Anchor
KD800	10	432 [17.0]	356 [14.0]	264 [10.4]	22.2 [.88]	HIT-HY200 + HAS -EB7
KD900	10	432 [17.0]	356 [14.0]	264 [10.4]	22.2 [.88]	HIT-HY200 + HAS -EB7
KD1000	10	432 [17.0]	356 [14.0]	264 [10.4]	22.2 [.88]	HIT-HY200 + HAS -EB7
KD1250	16	406 [16.0]	330 [13.0]	221 [8.7]	22.2 [.88]	HIT-HY200 + HAS -EB7
KD1250-A	16	406 [16.0]	330 [13.0]	221 [8.7]	22.2 [.88]	HIT-HY200 + HAS -EB7
KD1350	16	406 [16.0]	330 [13.0]	221 [8.7]	22.2 [.88]	HIT-HY200 + HAS -EB7
KD1500	16	406 [16.0]	330 [13.0]	221 [8.7]	22.2 [.88]	HIT-HY200 + HAS -EB7
KD1600	16	406 [16.0]	330 [13.0]	221 [8.7]	22.2 [.88]	HIT-HY200 + HAS -EB7
KD1750	16	406 [16.0]	330 [13.0]	221 [8.7]	22.2 [.88]	HIT-HY200 + HAS -EB7
KD2000	20	432 [17.0]	330 [13.0]	244 [9.6]	19.1 [.75]	HIT-HY200 + HAS -EB7
KD2250	20	432 [17.0]	330 [13.0]	244 [9.6]	19.1 [.75]	HIT-HY200 + HAS -EB7
KD2500	20	432 [17.0]	330 [13.0]	244 [9.6]	19.1 [.75]	HIT-HY200 + HAS -EB7

REF	DATE	REVISION	BY
–	8-1-17	NEW DRAWING [CT170196]	SSS
A	12-6-18	(D-6,7,8) TABLE UPDATED; SEE SHEET 1, 2, 4, 5 & 6	
		[CT192361]	SLR





DETAIL A



FOR KD800-KD2500 WITH SL1 ENCLOSURE, NO TANK
REFER TO ENCLOSURE & TANKS ADV FOR MOUNTING LOCATIONS

NOTE:
1) SPECIAL INSPECTION PER IBC SECTION 1704 IS REQUIRED ON ALL INSTALLATIONS. ALL ANCHORS MUST BE INSTALLED TO MEET COMPLIANCE

2) NO OTHER ANCHORS ARE ALLOWED WITHIN MINIMUM SPACING DISTANCE WITHOUT ADVANCED APPROVAL OF THE STRUCTURAL PROJECT ENGINEER OF RECORD.

3) REFER TO VMA-50771-01C FOR CERTIFICATION REPORT.

4) *SEE NOTES ON SHEET 6

METRIC CAD FILE

DIMENSIONS IN [ ] ARE INCH EQUIVALENT

KD SERIES SEISMIC INSTRUCTION

KOHLER CO.
POWER SYSTEMS, KOHLER, WI 53044 U.S.A.

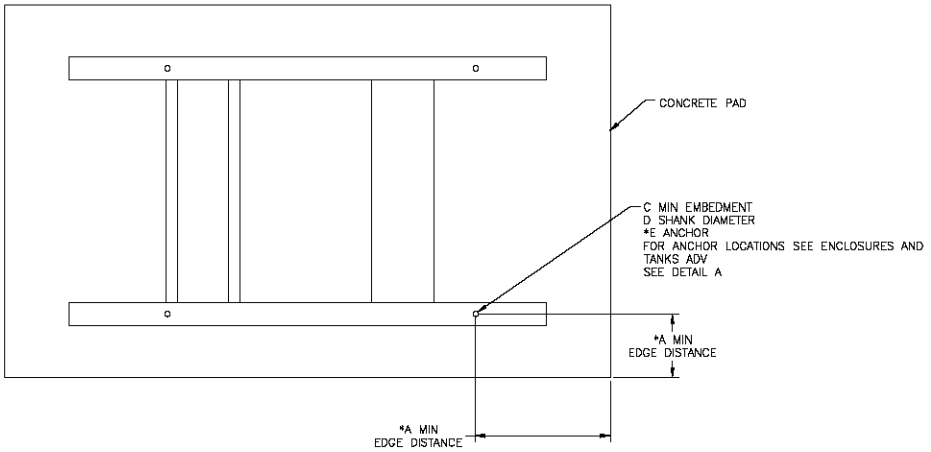
APPROVALS	DATE
SSS	8-1-17
JDZ	8-1-17
TAS	8-1-17

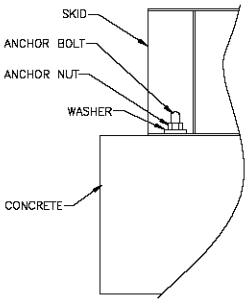
TITLE: DIMENSION PRINT SEISMIC INSTRUCTION
SIZE: D | DWG NO: ADV-8870 | SHEET: 3-6

REV	DATE	REVISION	BY
–	8-1-17	NEW DRAWING [CT170196]	SSS
A	12-6-18	(D-6,7,8) TABLE UPDATED; SEE SHEET 1, 2, 3, 5 & 6	
		[CT192351]	SLR

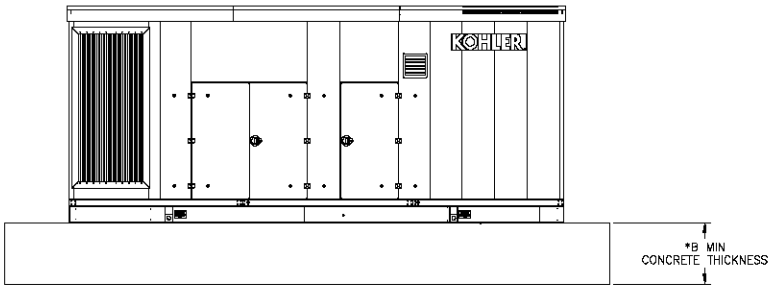
HORIZNATAL DESIGN ≤ 1.500g, (Sds≤2.0, z/h=0.0) (Sds≤.667g, z/h≤1.0) PER IBC 2015 CODE

Model	Anchor Quantity	A Min	B Min	C Min	D	E Anchor
KD800	14	381 [15.0]	305 [12.0]	211 [8.3]	22.2 [.88]	HIT-HY20D + HAS - EB7
KD900	14	381 [15.0]	305 [12.0]	211 [8.3]	22.2 [.88]	HIT-HY20D + HAS - EB7
KD1000	14	381 [15.0]	305 [12.0]	211 [8.3]	22.2 [.88]	HIT-HY20D + HAS - EB7
KD1250	16	406 [16.0]	330 [13.0]	221 [8.7]	22.2 [.88]	HIT-HY20D + HAS - EB7
KD1250-A	16	406 [16.0]	330 [13.0]	221 [8.7]	22.2 [.88]	HIT-HY20D + HAS - EB7
KD1350	16	406 [16.0]	330 [13.0]	221 [8.7]	22.2 [.88]	HIT-HY20D + HAS - EB7
KD1500	16	406 [16.0]	330 [13.0]	221 [8.7]	22.2 [.88]	HIT-HY20D + HAS - EB7
KD1600	16	406 [16.0]	330 [13.0]	221 [8.7]	22.2 [.88]	HIT-HY20D + HAS - EB7
KD1750	16	406 [16.0]	330 [13.0]	221 [8.7]	22.2 [.88]	HIT-HY20D + HAS - EB7
KD2000	20	483 [19.0]	533 [21.0]	188 [7.4]	19.1 [.75]	HIT-HY20D + HAS - EB7
KD2250	20	483 [19.0]	533 [21.0]	188 [7.4]	19.1 [.75]	HIT-HY20D + HAS - EB7
KD2500	20	483 [19.0]	533 [21.0]	188 [7.4]	19.1 [.75]	HIT-HY20D + HAS - EB7





DETAIL A



FOR KD800-KD2500 WITH SL2 ENCLOSURE, NO TANK
REFER TO ENCLOSURE & TANKS ADV FOR MOUNTING LOCATIONS

NOTE:
1) SPECIAL INSPECTION PER IBC SECTION 1704 IS REQUIRED ON ALL INSTALLATIONS. ALL ANCHORS MUST BE INSTALLED TO MEET COMPLIANCE

2) NO OTHER ANCHORS ARE ALLOWED WITHIN MINIMUM SPACING DISTANCE WITHOUT ADVANCED APPRDVAL OF THE STRUCTURAL PROJECT ENGINEER OF RECORD.

3) REFER TO VMA-50771-01C FOR CERTIFICATION REPORT.

4) *SEE NOTES ON SHEET 6

METRIC CAD FILE

DIMENSIONS IN [ ] ARE INCH EQUIVALENT

KD SERIES SEISMIC INSTRUCTION

KOHLER CO.
POWER SYSTEMS, KOHLER, WI 53044 U.S.A.

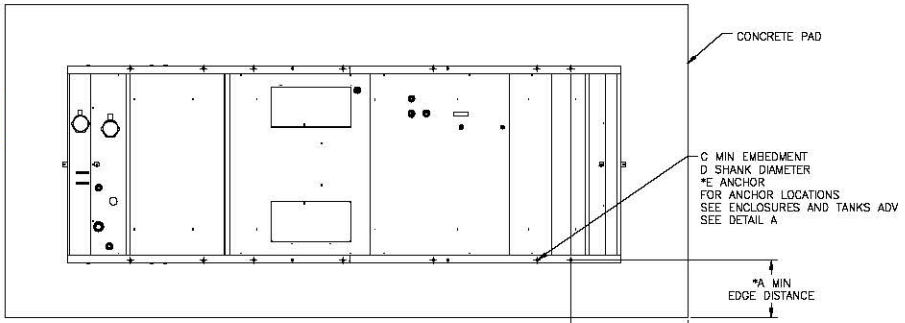
APPROVALS	DATE
DRAWN SSS	8-1-17
CHECKED JDZ	8-1-17
APPROVED TAS	8-1-17

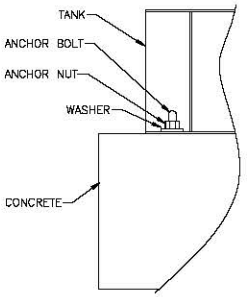
TITLE: DIMENSION PRINT SEISMIC INSTRUCTION
SCALE | DWG NO. ADV-8870 | SHEET 4-8 | REV D

HORIZNATAL DESIGN ≤ 1.500g, (Sds≤2.0, z/h=0.0) (Sds≤.667g, z/h≤1.0) PER IBC 2015 CODE

Model	Fuel Tank Capacity [Liters]	Fuel Tank Capacity [Gallons]	Anchor Quantity	A Min	B Min	C Min	D	E Anchor
KD800	3475, 6620, 10572, 12969, 15740	918, 1749, 2793, 3426, 4158	20	406 [16.0]	330 [13.0]	112 [4.4]	22.2 [.88]	HIT-HY200 + HAS - EB7
KD800	19381	5120	24	457 [18.0]	356 [14.0]	239 [9.4]	22.2 [.88]	HIT-HY200 + HAS - EB7
KD900	3475, 6620, 10572, 12969, 15740	918, 1749, 2793, 3426, 4158	20	406 [16.0]	330 [13.0]	112 [4.4]	22.2 [.88]	HIT-HY200 + HAS - EB7
KD900	19381	5120	24	457 [18.0]	356 [14.0]	239 [9.4]	22.2 [.88]	HIT-HY200 + HAS - EB7
KD1000	3475, 6620, 10572, 12969, 15740	918, 1749, 2793, 3426, 4158	20	406 [16.0]	330 [13.0]	112 [4.4]	22.2 [.88]	HIT-HY200 + HAS - EB7
KD1000	19381	5120	24	457 [18.0]	356 [14.0]	239 [9.4]	22.2 [.88]	HIT-HY200 + HAS - EB7
KD1250	5863, 9861, 11203	1549, 2605, 2960	18	356 [14.0]	254 [10.0]	173 [6.8]	22.2 [.88]	HIT-HY200 + HAS - EB7
KD1250	19215, 21986	5076, 5808	24	330 [13.0]	229 [9.0]	94 [3.7]	22.2 [.88]	HIT-HY200 + HAS - E
KD1250-A	5863, 9861, 11203	1549, 2605, 2960	18	356 [14.0]	254 [10.0]	173 [6.8]	22.2 [.88]	HIT-HY200 + HAS - EB7
KD1250-A	19215, 21986	5076, 5808	24	330 [13.0]	229 [9.0]	94 [3.7]	22.2 [.88]	HIT-HY200 + HAS - E
KD1350	5863, 9861, 11203	1549, 2605, 2960	18	356 [14.0]	254 [10.0]	173 [6.8]	22.2 [.88]	HIT-HY200 + HAS - EB7
KD1350	19215, 21986	5076, 5808	24	330 [13.0]	229 [9.0]	94 [3.7]	22.2 [.88]	HIT-HY200 + HAS - E
KD1500	5863, 9861, 11203	1549, 2605, 2960	18	356 [14.0]	254 [10.0]	173 [6.8]	22.2 [.88]	HIT-HY200 + HAS - EB7
KD1500	19215, 21986	5076, 5808	24	330 [13.0]	229 [9.0]	94 [3.7]	22.2 [.88]	HIT-HY200 + HAS - E
KD1600	5863, 9861, 11203	1549, 2605, 2960	18	356 [14.0]	254 [10.0]	173 [6.8]	22.2 [.88]	HIT-HY200 + HAS - EB7
KD1600	19215, 21986	5076, 5808	24	330 [13.0]	229 [9.0]	94 [3.7]	22.2 [.88]	HIT-HY200 + HAS - E
KD1750	5863, 9861, 11203	1549, 2605, 2960	18	356 [14.0]	254 [10.0]	173 [6.8]	22.2 [.88]	HIT-HY200 + HAS - EB7
KD1750	19215, 21986	5076, 5808	24	330 [13.0]	229 [9.0]	94 [3.7]	22.2 [.88]	HIT-HY200 + HAS - E
KD2000	8578, 14131, 16383	2266, 3733, 4328	24	610 [24.0]	533 [21.0]	432 [17]	22.2 [.88]	HIT-RE500V3 + HAS-EB7
KD2250	8578, 14131, 16383	2266, 3733, 4328	24	610 [24.0]	533 [21.0]	432 [17]	22.2 [.88]	HIT-RE500V3 + HAS-EB7
KD2500	8578, 14131, 16383	2266, 3733, 4328	24	610 [24.0]	533 [21.0]	432 [17]	22.2 [.88]	HIT-RE500V3 + HAS-EB7

REV	DATE	REVISION	BY
–	6-1-17	NEW DRAWING [CT170196]	SSS
A	12-6-18	(D-5,6,7,8) TABLE UPDATED; SEE SHEET 1, 2, 3, 4 & 6 [CT182351]	SLR





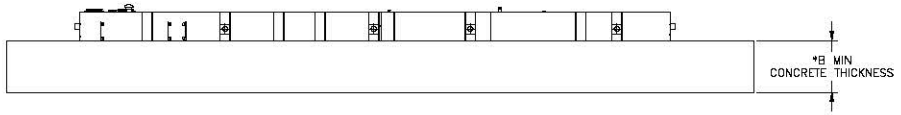
DETAIL A

NOTE:
1) SPECIAL INSPECTION PER IBC SECTION 1704 IS REQUIRED ON ALL INSTALLATIONS. ALL ANCHORS MUST BE INSTALLED TO MEET COMPLIANCE

2) NO OTHER ANCHORS ARE ALLOWED WITHIN MINIMUM SPACING DISTANCE WITHOUT ADVANCED APPROVAL OF THE STRUCTURAL PROJECT ENGINEER OF RECORD.

3) REFER TO VMA-50771-01C FOR CERTIFICATION REPORT.

4) *SEE NOTES ON SHEET 6



FOR KD800-KD2500 ON TANK, (TO BE USED FOR UNITS WITH NO ENCLOSURE, SL1 OR SL2 ENCLOSURE) REFER TO ENCLOSURE & TANKS ADV FOR MOUNTING LOCATIONS

KD SERIES SEISMIC INSTRUCTION

METRIC CAD FILE

DIMENSIONS IN [ ] ARE INCH EQUIVALENT

KOHLER CO.
POWER SYSTEMS, KOHLER, WI 53044 U.S.A.
THIS DRAWING, IN DESIGN AND DETAIL, IS KOHLER CO. PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH KOHLER CO. WORK. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.

APPROVALS	DATE
SSS	8-1-17
JDZ	8-1-17
TAS	8-1-17

TITLE: DIMENSION PRINT SEISMIC INSTRUCTION
SIZE: D | DWG NO: ADV-8870 | REV: D | SHEET: 5-6

REV	DATE	REVISION	BY
–	6-1-17	NEW DRAWING [DT176196]	SSS
A	12-6-18	SEE SHEET 1, 2, 3, 4 & 5 [DT192361]	SLR

SEISMIC INSTALLATION REQUIREMENTS:

The following are requirements for seismic installation:

1. The design of post-installed anchors in concrete used for the component anchorage is pre-qualified for seismic applications in accordance with ADI 355.2 and documented in a report by a reputable testing agency. (ex. The Evaluation Service Report issued by the International code Council)
2. Anchors must be installed to an embedment depth as recommended in the pre-qualification test report as defined in Note 1.
3. Anchors must be installed in minimum 4000 psi compressive strength normal weight concrete. Concrete aggregate must comply with ASTM C33. Installation in structural lightweight concrete is not permitted unless otherwise approved by the structural engineer of record.
4. Anchors must be installed to the torque specification as recommended by the anchor manufacturer to obtain maximum loading
5. Anchors must be installed in the locations specified the Kohler ADV dimension print.
6. Anchor bolt design loads or specific anchors are specified on seismic Kohler ADV.
7. Concrete floor slab and concrete housekeeping pads must be designed and rebar reinforced for seismic applications in accordance with ACI 318.
8. All housekeeping pad thickness must be designed in accordance with pre-qualification test report as defined in Note 1 or a minimum of 1.5x the anchor embedment depth, whichever is smaller.
9. All housekeeping pads must be doweled or cast into the building structural floor slab and designed for seismic application per ACI 318 and as approved by the structural engineer of record
10. Wall mounted equipment must be installed to a rebar reinforced structural concrete wall that is seismically designed and approved by the engineer of record to resist the added seismic loads from the components being anchored to the wall.
11. Floor mounted equipment (with or without housekeeping pad) must be installed to a rebar reinforced structural concrete floor that is seismically designed and approved by the engineer of record to resist the added seismic loads from components being anchored to the floor.
12. When installing to a floor or wall, rebar interference must be considered.
13. Attaching seismic certified equipment to any floor or wall other than those constructed of structural concrete and designed to accept the seismic loads form said equipment is not permitted by this specification and beyond the scope of this certification.
14. Attaching seismic certified equipment to any concrete block walls or cinder block walls is not permitted by this specification and beyond the scope of this certification.
15. For installations upon rooftop, steel dunnage shall be coordinated with the Structural Engineer of Record.
16. Installation upon only rooftop curb shall be coordinated with the curb manufacturer and the Structural Engineer of Record. Any curb or concrete pad that supports the RTU unit is beyond the scope of this certification.
17. Anchor locations, size, type and load requirements are specified on the installation drawing. Mounting requirements details such as brand, type, embedment depth, edge spacing, anchor spacing, concrete strength, wall bracing, and special inspection must be outlined and approved by the project Structural Engineer of Record to withstand the seismic anchor loads as defined on the seismic installation drawing. The installing contractor is responsible for the proper installation of all anchors and mounting hardware, observing the mounting requirement details outlined by the Engineer of Record. Contact Kohler if a detail Seismic Installation Calculation Package is required.
18. Electrical wiring, piping, duct and other connections to the equipment is the responsibility of the installing contractor. It is necessary that these remain in tact, functional and do not inhibit the functionality of the generator set after a seismic event. Adequate slack shall be allowed cable and piping to allow for motions of set during a seismic event.

*19. Concrete pad dimensions are minimum values to satisfy only the anchor bolt requirements. The pad must be designed by the project structural engineer of record.

*20. Anchor bolt and concrete recommendations are for the maximum seismic design levels shown. If the specific application has a lower level, thinner concrete or alternate anchors may be acceptable. Consult Kohler.

METRIC CAD FILE

KD SERIES SEISMIC INSTRUCTION

UNLESS OTHERWISE SPECIFIED –
1) DIMENSIONS ARE IN MILLIMETERS
2) TOLERANCES ARE:
X.XX ± 0.25
X.X ± 1.0
X ± 1.5
ANGLES ± 0.50°
THIRD ANGLE PROJECTION
SURFACE FINISH MAX.

APPROVALS		DATE
DRAWN	SSS	6-1-17
CHECKED	JDZ	6-1-17
APPROVED	TAS	6-1-17

TITLE: DIMENSION PRINT
SEISMIC INSTRUCTION

SIZE: D | DWG NO.: ADV-8870 | REV: D | SHEET: 6-6

FILENAME

TECHNICAL INFORMATION BULLETIN

Generator Set Sound Data Sheet

			Sound Pressure Data in dB(A)			
Generator Set Model	**Hz**	**Load**	**Raw Exhaust**	**Open Unit, Isolated Exhaust**	**Level 1 Sound Enclosure**	**Level 2 Sound Enclosure**
KD1250-A	60	100% Load	117.4	96.9	93.4	75.5
		No Load	107.1	95.3	92.8	75.1

Note: Sound pressure data is the logarithmic average of eight perimeter measurement points at a distance of 7 m (23 ft.), except Raw Exhaust data which is a single measurement point at 1 m (3.3 ft.) from the mouth of a straight pipe exhaust.

KD1250-A	**60 Hz**

				Sound Pressure Levels, dB(A)								
				Octave Band Center Frequency (Hz)								Overall Level
Load	Distance, m (ft)	Enclosure	Measurement Clock Position	63	125	250	500	1000	2000	4000	8000	
100% Load	7 (23)	Level 2 Sound	3:00	62.5	64.3	68.5	74.0	64.6	59.8	53.7	52.7	76.1
			1:30	63.8	69.3	71.2	71.7	66.4	60.5	54.4	50.8	76.5
			12:00-Engine	56.1	65.4	69.9	72.0	68.6	61.0	54.3	45.2	75.8
			10:30	63.3	66.5	71.1	68.8	65.5	60.0	53.7	48.9	75.1
			9:00	59.7	66.1	66.8	69.5	62.7	59.8	53.1	52.1	73.4
			7:30	57.7	67.3	70.1	76.4	64.2	58.7	53.4	54.0	78.0
			6:00-Alternator	57.1	61.1	72.2	66.9	62.6	58.9	53.5	53.8	74.2
			4:30	51.5	62.5	66.3	68.3	59.1	51.8	54.6	40.9	71.5
			8 -pos. log avg.	60.4	66.0	69.9	72.0	65.0	59.4	53.9	51.3	75.5

				Sound Pressure Levels, dB(A)								
				Octave Band Center Frequency (Hz)								Overall Level
Load	Distance, m (ft)	Enclosure	Measurement Clock Position	63	125	250	500	1000	2000	4000	8000	
100% Load	7 (23)	Level 1 Sound	3:00	58.4	83.4	72.7	85.4	73.1	71.8	66.4	55.4	88.0
			1:30	55.2	87.1	86.8	93.9	91.1	85.6	81.1	76.8	97.2
			12:00-Engine	70.3	78.9	78.7	96.6	95.4	89.6	84.7	78.9	99.8
			10:30	64.2	84.4	83.0	85.8	80.6	77.4	74.4	65.3	90.2
			9:00	53.1	79.4	73.6	81.6	70.4	63.6	59.8	51.1	84.3
			7:30	57.5	81.0	71.8	82.3	63.8	59.6	53.8	52.7	85.0
			6:00-Alternator	60.7	58.2	71.4	68.9	68.4	59.7	55.4	54.8	75.0
			4:30	54.8	84.1	74.9	78.1	69.0	64.9	58.1	51.4	85.6
			8 -pos. log avg.	63.2	82.9	80.3	90.1	87.9	82.3	77.6	72.1	93.4

				Sound Pressure Levels, dB(A)								
				Octave Band Center Frequency (Hz)								Overall Level
Load	Distance, m (ft)		Measurement Clock Position	63	125	250	500	1000	2000	4000	8000	
100% Load	7 (23)	Open Unit, Isolated Exhaust	3:00	60.9	80.3	85.2	98.5	89.6	88.3	84.8	86.0	100.0
			1:30	53.3	75.5	85.8	92.6	91.9	86.8	83.6	88.2	97.3
			12:00-Engine	63.4	80.1	84.7	89.3	90.3	85.8	80.2	76.8	94.6
			10:30	60.1	81.5	86.3	89.8	89.6	87.5	84.0	83.7	95.7
			9:00	58.1	80.8	85.5	93.9	88.1	88.3	85.2	85.8	97.3
			7:30	61.4	81.7	82.7	90.7	88.6	87.0	84.6	90.6	96.4
			6:00-Alternator	63.0	77.1	86.7	86.7	89.2	82.8	82.0	91.2	95.6
			4:30	59.4	82.6	84.5	90.9	89.2	87.7	83.6	84.8	95.9
			8 -pos. log avg.	60.8	80.5	85.3	93.0	89.7	87.0	83.7	87.5	96.9

			Sound Pressure Levels, dB(A)								
			Octave Band Center Frequency (Hz)								Overall Level
Load	Distance, m (ft)	Exhaust	63	125	250	500	1000	2000	4000	8000	
100% Load	1 (3.3)	Raw Exhaust (No Silencer)	93.9	106.1	109.4	112.9	107.9	108.4	105.3	107.7	117.4

KOHLER CO., Kohler, Wisconsin 53044 USA
Phone 920-457-4441, Fax 920-459-1646
For the nearest sales and service outlet in the US and Canada, phone 1-800-544-2444
KOHLERPower.com

KD1250-A	60 Hz

Load	Distance, m (ft)	Enclosure	Measurement Clock Position	Sound Pressure Levels, dB(A)								
				Octave Band Center Frequency (Hz)								Overall Level
				63	125	250	500	1000	2000	4000	8000	
No Load	7 (23)	Level 2 Sound	3:00	46.5	60.5	67.7	76.2	64.6	57.7	50.3	45.8	77.2
			1:30	52.5	62.7	63.7	69.2	66.0	58.8	51.5	45.7	72.4
			12:00 - Engine	49.7	64.5	69.0	72.1	69.3	59.6	50.8	43.8	75.6
			10:30	51.1	58.2	69.6	66.7	65.5	58.3	51.2	43.9	72.8
			9:00	48.7	60.1	65.6	74.1	64.2	58.0	50.4	45.1	75.3
			7:30	47.9	64.4	68.9	76.4	63.5	57.2	50.0	46.5	77.6
			6:00 - Alternator	47.9	60.6	71.4	69.1	62.2	56.5	49.5	46.7	74.0
			4:30	51.1	61.8	64.6	71.0	57.7	49.7	42.7	35.3	72.5
			8 - pos. log avg.	49.8	62.1	68.2	73.0	65.1	57.6	50.1	45.0	75.1

Load	Distance, m (ft)	Enclosure	Measurement Clock Position	Sound Pressure Levels, dB(A)								
				Octave Band Center Frequency (Hz)								Overall Level
				63	125	250	500	1000	2000	4000	8000	
No Load	7 (23)	Level 1 Sound	3:00	53.4	70.2	73.2	81.3	72.7	69.4	63.1	53.8	82.9
			1:30	52.2	73.3	87.2	94.8	89.7	82.9	78.2	71.9	96.8
			12:00 - Engine	61.4	75.6	80.0	95.7	95.8	88.9	84.2	78.0	99.4
			10:30	57.1	71.9	81.2	89.3	80.1	75.2	71.4	64.9	90.6
			9:00	51.6	67.8	75.0	80.5	69.9	63.1	58.8	51.6	82.1
			7:30	55.9	70.5	71.7	81.5	62.2	57.5	50.4	43.2	82.3
			6:00 - Alternator	55.0	56.4	69.9	70.8	64.5	56.4	51.7	42.4	74.1
			4:30	60.5	70.1	71.3	73.9	70.2	64.8	58.2	49.3	78.0
			8 - pos. log avg.	57.3	71.4	80.2	90.0	87.9	81.1	76.4	70.1	92.8

Load	Distance, m (ft)	Measurement Clock Position	Sound Pressure Levels, dB(A)								
			Octave Band Center Frequency (Hz)								Overall Level
			63	125	250	500	1000	2000	4000	8000	
No Load	7 (23)	3:00	60.9	79.8	84.6	96.1	89.9	86.8	81.7	77.4	97.9
		1:30	52.4	75.6	85.4	92.8	90.2	84.5	80.1	76.0	95.7
		12:00 - Engine	54.3	79.8	85.6	88.7	90.1	84.9	78.7	72.6	94.2
		10:30	56.0	81.8	84.3	92.2	88.7	85.9	81.1	76.2	95.3
		9:00	57.7	81.3	86.4	92.2	88.4	86.6	82.3	78.6	95.6
		7:30	59.0	81.7	81.9	89.0	89.0	85.2	81.1	75.9	93.8
		6:00 - Alternator	57.3	76.0	87.1	87.3	86.1	78.6	75.6	70.0	92.1
		4:30	63.8	82.9	83.4	91.1	90.2	86.8	81.1	75.3	95.3
		8 - pos. log avg.	59.0	80.5	85.1	92.0	89.2	85.4	80.6	75.9	95.3

Open Unit, Isolated Exhaust

Load	Distance, m (ft)	Exhaust	Sound Pressure Levels, dB(A)								
			Octave Band Center Frequency (Hz)								Overall Level
			63	125	250	500	1000	2000	4000	8000	
No Load	1 (3.3)	Raw Exhaust (No Silencer)	88.0	96.5	99.2	103.2	98.1	95.6	93.6	96.2	107.1

Availability is subject to change without notice. Kohler Co. reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever. Contact your local Kohler® generator set distributor for availability.

MECHANICAL EQUIPMENT - NOISE EMISSION

Building	Unit	Make	Model	Sound Power (LwA)	15' Sound Pressure (dBA)	25' Sound Pressure (dBA)	60' Sound Pressure (dBA)	100' Sound Pressure (dBA)
Building X	AC-X1	AAON	RQ-3	75	54	49	42	37
	AC-X2	AAON	RQ-5	80	59	55	47	43
	AC-X3	AAON	RN-7	80	59	55	47	43
	AC-X4	AAON	RQ-2	75	54	49	42	37
	AC-X5	AAON	RQ-3	75	54	49	42	37
	AC-X6	AAON	RN-7	80	59	55	47	43
	AC-X7	AAON	RQ-2	75	54	49	42	37
	AC-X8	AAON	RN-20	91	69	65	57	53
	AC-X9	AAON	RQ-3	75	54	49	42	37
	AC-X10	AAON	RQ-3	75	54	49	42	37
	AC-X11	AAON	RN-15	91	69	65	57	53
	AC-X12	AAON	RN-15	91	69	65	57	53
	AC-X13	AAON	RN-15	91	69	65	57	53

Building	Unit	Make	Model	Airflow (CFM)	Cooling Capacity (MBH)	Sound Power (LwA)	5' Sound Pressure (dBA)
Building A	AC-A1*	AAON	RZA-240	44,000	2,373	-	-
	AC-A2*	AAON	RZA-240	44,000	2,373	-	-
	AC-A3*	AAON	RZA-160	28,000	1,626	-	-
	AC-A4*	AAON	RZA-220	39,000	2,070	-	-
	EF-A1.1	Greenheck	USF	17,600	-	93	82
	EF-A1.2	Greenheck	USF	17,600	-	93	82
	EF-A1.3	Greenheck	USF	17,600	-	93	82
	EF-A1.4	Greenheck	USF	17,600	-	93	82
	EF-A1.5	Greenheck	USF	17,600	-	93	82
	EF-A2.1	Greenheck	USF	16,750	-	94	82
	EF-A2.2	Greenheck	USF	16,750	-	94	82
	EF-A2.3	Greenheck	USF	16,750	-	94	82
	EF-A2.4	Greenheck	USF	16,750	-	94	82

**Sound data not available*

Building	Unit	Make	Model	Airflow (CFM)	Cooling Capacity (MBH)	Sound Power (LwA)	5' Sound Pressure (dBA)
Building B	AC-B1*	AAON	RZA-220	39,000	2,070	-	-
	AC-B2*	AAON	RZA-120	22,000	1,230	-	-
	AC-B3*	AAON	RZA-120	22,000	1,230	-	-
	EF-B1.1	Greenheck	USF	13,000	-	91	80
	EF-B1.2	Greenheck	USF	13,000	-	91	80
	EF-B1.3	Greenheck	USF	13,000	-	91	80
	EF-B2.1	Greenheck	USF	14,670	-	93	82
	EF-B2.2	Greenheck	USF	14,670	-	93	82
	EF-B2.3	Greenheck	USF	14,670	-	93	82

**Sound data not available*

Building	Unit	Make	Model	Airflow (CFM)	Cooling Capacity (MBH)	Sound Power (LwA)	5' Sound Pressure (dBA)
Building C	AC-C1*	AAON	RZA-240	44,000	2,373	-	-
	AC-C2*	AAON	RZA-240	44,000	2,373	-	-
	AC-C3*	AAON	RZA-160	28,000	1,626	-	-
	AC-C4*	AAON	RZA-220	39,000	2,070	-	-
	EF-C1.1	Greenheck	USF	17,600	-	93	82
	EF-C1.2	Greenheck	USF	17,600	-	93	82
	EF-C1.3	Greenheck	USF	17,600	-	93	82
	EF-C1.4	Greenheck	USF	17,600	-	93	82
	EF-C1.5	Greenheck	USF	17,600	-	93	82
	EF-C2.1	Greenheck	USF	16,750	-	94	82
	EF-C2.2	Greenheck	USF	16,750	-	94	82
	EF-C2.3	Greenheck	USF	16,750	-	94	82
	EF-C2.4	Greenheck	USF	16,750	-	94	82

**Sound data not available*

(100% OSA) AIR HANDLING UNIT SCHEDULE

MARK	MANUFACTURER & MODEL NO.	LOCATION	SERVICE	AIRFLOW (CFM)	E.A.P. (IN.)	FILTER DIRTY ALLOWANCE IN W.G.	FAN QTY	CONFIGURATION	HP/FAN	VFD MANUFACTURER	VFD QTY	BYPASS	COOLING COIL EAT DB	EAT WB	LAT DB	LAT WB	MAX WPD (FT HD)	HEATING COIL EAT (°F)	MIN LAT (°F)	EWT (°F)	LWT (°F)	GPM	MAX WPD (FT HD)	PRE-FILTER RATING	FINAL FILTER	ELECTRICAL	EMERGENCY POWER	OPERATING WEIGHT (LBS)	REMARKS
AC-A1	AAON	BLDG A ROOF	-	[illegible]	[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]	4	YES	[illegible]	71	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AC-A2	AAON	BLDG A ROOF	-	[illegible]	[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]	4	YES	[illegible]	71	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AC-A3	AAON	BLDG A ROOF	-	[illegible]	[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]	4	YES	[illegible]	71	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AC-A4	AAON	BLDG A ROOF	-	[illegible]	[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]	4	YES	[illegible]	71	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

REMARKS:
1. SEE ELECTRICAL COORDINATION NOTE.
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]
7. [illegible]
8. [illegible]
9. [illegible]
10. [illegible]
11. [illegible]
12. [illegible]

LABORATORY EXHAUST FAN SCHEDULE

SYSTEM	MARK	MANUFACTURER & MODEL NO.	LOCATION	SERVICE	TYPE	SYSTEM AIRFLOW (CFM)	DESIGN AIRFLOW (CFM)	ARRANGEMENT / CONFIGURATION	MIN FAN AIRFLOW (CFM)	ESP (IN.)	FAN (RPM)	MOTOR (RPM)	V/PH/HZ	HP	EMERGENCY POWER	OPER. WT. (LBS)	REMARKS
[illegible]	[illegible]	GREENHECK [illegible]	BLDG A ROOF	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	GREENHECK [illegible]	BLDG A ROOF	-	[illegible]		[illegible]		[illegible]	[illegible]	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	GREENHECK [illegible]	BLDG A ROOF	-	[illegible]		[illegible]		[illegible]	[illegible]	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	GREENHECK [illegible]	BLDG A ROOF	-	[illegible]		[illegible]		[illegible]	[illegible]	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	GREENHECK [illegible]	BLDG A ROOF	-	[illegible]		[illegible]		[illegible]	[illegible]	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	GREENHECK [illegible]	BLDG A ROOF	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	GREENHECK [illegible]	BLDG A ROOF	-	[illegible]		[illegible]		[illegible]	[illegible]	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	GREENHECK [illegible]	BLDG A ROOF	-	[illegible]		[illegible]		[illegible]	[illegible]	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	GREENHECK [illegible]	BLDG A ROOF	-	[illegible]		[illegible]		[illegible]	[illegible]	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

REMARKS:
1. SEE ELECTRICAL COORDINATION NOTE.
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]
7. [illegible]
8. [illegible]

NOTES FOR ELEC COORDINATION

1. MECHANICAL EQUIPMENT IS AVAILABLE IN VARIOUS ELECTRICAL CONFIGURATIONS ([illegible], ETC). ACTUAL ELECTRICAL CONNECTIONS AND REQUIREMENTS TO EQUIPMENT ARE TO BE DETERMINED BY THE ELECTRICAL ENGINEER. ANY REFERENCE ON THE MECHANICAL PLANS FOR ELECTRICAL NEEDS ARE FOR GENERAL REFERENCE. ELECTRICAL PLANS SHALL BE REFERENCED FOR ELECTRICAL NEEDS AND REQUIREMENTS.

HEATING HOT WATER CONDENSING BOILER

MARK	MANUFACTURER & MODEL NO.	LOCATION	SERVICE	HEAT SOURCE	INPUT (MBH)	OUTPUT (MBH)	EWT (DEG. F)	LWT (DEG. F)	EFFICIENCY @ DESIGN	TURN DOWN	V/PH/HZ	MCA	EMERGENCY POWER	OPER. WEIGHT (LBS)	REMARKS
[illegible]	LOCHINVAR CREST	BLDG A ROOF	HHW	NATURAL GAS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	TBD	NO	[illegible]	1, 2, 3, 4, 5, 6, 7, 8
[illegible]	LOCHINVAR CREST	BLDG A ROOF	HHW	NATURAL GAS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	TBD	NO	[illegible]	1, 2, 3, 4, 5, 6, 7, 8
[illegible]	LOCHINVAR CREST	BLDG A ROOF	HHW	NATURAL GAS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	TBD	NO	[illegible]	1, 2, 3, 4, 5, 6, 7, 8
[illegible]	LOCHINVAR CREST	BLDG A ROOF	HHW	NATURAL GAS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	TBD	NO	[illegible]	1, 2, 3, 4, 5, 6, 7, 8
[illegible]	LOCHINVAR CREST	BLDG A ROOF	HHW	NATURAL GAS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	TBD	NO	[illegible]	1, 2, 3, 4, 5, 6, 7, 8
[illegible]	LOCHINVAR [illegible]	BLDG A ROOF	HHW	NATURAL GAS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	TBD	NO	[illegible]	1, 2, 3, 4, 5, 6, 7, 9

REMARKS:
1. [illegible]
2. [illegible]
3. PROVIDE CATEGORY IV STAINLESS STEEL FLUE VENT [illegible]
4. ALL VENT TERMINATIONS [illegible] TO BUILDING.
5. [illegible]
6. [illegible]
7. [illegible]
8. SEE ELECTRICAL COORDINATION NOTE.
9. [illegible]

HHW PUMP SCHEDULE

MARK	MANUFACTURER & MODEL NO.	SERVICE	LOCATION	TYPE	DESIGN FLOW (GPM)	[illegible]	[illegible]	RPM	V/PH/HZ	VFD	HP	EMERGENCY POWER	OPER. WT. (LBS)	REMARKS
[illegible]	BELL & GOSSETT [illegible]	HEATING HOT WATER	BLDG A ROOF	BASE MOUNTED END SUCTION	[illegible]	[illegible]	[illegible]	[illegible]	-	YES	[illegible]	NO	[illegible]	1, 2, 3
[illegible]	BELL & GOSSETT [illegible]	HEATING HOT WATER	BLDG A ROOF	BASE MOUNTED END SUCTION	[illegible]	[illegible]	[illegible]	[illegible]	-	YES	[illegible]	NO	[illegible]	1, 2, 3
[illegible]	BELL & GOSSETT [illegible]	HEATING HOT WATER	BLDG A ROOF	BASE MOUNTED END SUCTION	[illegible]	[illegible]	[illegible]	[illegible]	-	YES	[illegible]	NO	[illegible]	1, 2, 3
[illegible]	BELL & GOSSETT [illegible]	HEATING HOT WATER	BLDG A ROOF	BASE MOUNTED END SUCTION	[illegible]	[illegible]	[illegible]	[illegible]	-	YES	[illegible]	NO	[illegible]	1, 2, 3, 4

REMARKS:
1. SEE ELECTRICAL COORDINATION NOTE.
2. [illegible]
3. [illegible]
4. [illegible]

CHEMICAL POT FEEDER SCHEDULE

MARK	MANUFACTURER & MODEL NO.	LOCATION	SERVICE	TYPE	CAPACITY (GAL)	WT (LBS)	REMARKS
[illegible]	[illegible]	BLDG A ROOF	HHW LOOP	[illegible]	-	-	FLOOR MOUNTED

AIR AND DIRT SEPARATOR SCHEDULE

MARK	MANUFACTURER & MODEL NO.	LOCATION	SERVICE	MAX FLOW RATE (GPM)	PIPE SIZE IN	PIPE SIZE OUT	OPER. WT. (LBS)	REMARKS
[illegible]	[illegible]	BLDG A ROOF	HHW LOOP	-	-	-	-	1

REMARKS:
1. [illegible]

EXPANSION TANK

MARK	MANUFACTURER & MODEL NO.	SERVICE	LOCATION	TANK VOLUME (GALLONS)	ACCEPTANCE VOLUME (GALLONS)	OPER. WT. (LBS)	REMARKS
[illegible]	BELL AND GOSSETT -	HHW LOOP	BLDG A ROOF	-	-	-	[illegible]

ALEXANDRIA REAL ESTATE EQUITIES
1100 RANCHO CONEJO BLVD
THOUSAND OAKS, CA 91320

[redacted]

[illegible] South Figueroa Street
Los Angeles, California [illegible]
United States
Tel [illegible]
Fax [illegible]

Date | Description

Seal / Signature

NOT FOR CONSTRUCTION

Project Name
FLAGSHIP LIFE-SCIENCE CAMPUS

Project Number

Description
MECHANICAL SCHEDULES
BUILDING A

Scale

M0.002-A

NOTES FOR ELEC COORDINATION

1. MECHANICAL EQUIPMENT IS AVAILABLE IN VARIOUS ELECTRICAL CONFIGURATIONS [illegible] ACTUAL ELECTRICAL CONNECTIONS AND REQUIREMENTS TO EQUIPMENT ARE TO BE DETERMINED BY THE ELECTRICAL ENGINEER. ANY REFERENCE ON THE MECHANICAL PLANS FOR ELECTRICAL NEEDS ARE FOR GENERAL REFERENCE. ELECTRICAL PLANS SHALL BE REFERENCED FOR ELECTRICAL NEEDS AND REQUIREMENTS.

VARIABLE REFRIGERANT FLOW (VRF) SYSTEM SCHEDULE

AIR COOLED VRF CONDENSING UNITS

SYSTEM	MANUFACTURER & MODEL NO.	SYSTEM CLG. CAP. SYSTEM (TONS)	SYSTEM CLG. CAP. CONNECTED (TONS)	SYSTEM HTG. CAP. SYSTEM (MBH)	SYSTEM EFFICIENCY [illegible]	SYSTEM EFFICIENCY [illegible]	SYSTEM EFFICIENCY COP	REFRIG.	OUTDOOR MODULE MARK	MODEL	ELECTRICAL DATA V/PH/HZ	ELECTRICAL DATA MCA	ELECTRICAL DATA MOCP	OPER. WT. (LBS)	REMARKS
VRF-1	[illegible]	-	[illegible]	-	-	-	-	-	VRF A1	-	-	-	-	-	①②③④⑤⑥
									VRF TBD	FINAL EQUIPMENT QUANTITY AND [illegible] TBD					
VRF-2	[illegible]	-	[illegible]	-	-	-	-	-	VRF A1	-	-	-	-	-	①②③④⑤⑥
									VRF TBD	FINAL EQUIPMENT QUANTITY AND [illegible] TBD					
VRF-3	[illegible]	-	[illegible]	-	-	-	-	-	VRF A1	-	-	-	-	-	①②③④⑤⑥
									VRF TBD	FINAL EQUIPMENT QUANTITY AND [illegible] TBD					
VRF-4	[illegible]	-	[illegible]	-	-	-	-	-	VRF A1	-	-	-	-	-	①②③④⑤⑥
									VRF TBD	FINAL EQUIPMENT QUANTITY AND [illegible] TBD					
VRF-5	[illegible]	-	14	-	-	-	-	-	VRF A1	-	-	-	-	-	①②③④⑤⑥
									VRF TBD	FINAL EQUIPMENT QUANTITY AND [illegible] TBD					
VRF-6	[illegible]	-	12	-	-	-	-	-	VRF A1	-	-	-	-	-	①②③④⑤⑥
									VRF TBD	FINAL EQUIPMENT QUANTITY AND [illegible] TBD					
VRF-7	[illegible]	-	[illegible]	-	-	-	-	-	VRF A1	-	-	-	-	-	①②③④⑤⑥
									VRF TBD	FINAL EQUIPMENT QUANTITY AND [illegible] TBD					
VRF-8	[illegible]	-	[illegible]	-	-	-	-	-	VRF A1	-	-	-	-	-	①②③④⑤⑥
									VRF TBD	FINAL EQUIPMENT QUANTITY AND [illegible] TBD					
VRF-9	[illegible]	-	TBD	-	-	-	-	-	VRF A1	-	-	-	-	-	①②③④⑤ ⑦
									VRF TBD	FINAL EQUIPMENT QUANTITY AND [illegible] TBD					
VRF-10	[illegible]	-	TBD	-	-	-	-	-	VRF A1	-	-	-	-	-	①②③④⑤ ⑦
									VRF TBD	FINAL EQUIPMENT QUANTITY AND [illegible] TBD					

REMARKS:

1. [illegible]
2. [illegible]
3. VRF SYSTEM SEQUENCE OF OPERATION SHALL BE DEFERRED TO THE INSTALLING VRF MANUFACTURER.
4. [illegible]
5. [illegible]
6. [illegible]
7. [illegible]

MAKE-UP AIR UNIT SCHEDULE

MARK	MANUFACTURER & MODEL NO.	LOCATION	AREA SERVED	AIRFLOW (CFM)	ESP (IN.)	HP (BHP)	FILTER	DIRECT EXPANSION (COOLING) EAT (°F) DB	EAT (°F) WB	LAT (°F) DB	LAT (°F) WB	CAPACITY (MBH) TOTAL	CAPACITY (MBH) SENSIBLE	EER ([illegible])	GAS HEATING EAT (°F)	LAT (°F)	INPUT (MBH)	OUTPUT (MBH)	ELECTRICAL V/PH/HZ	MCA	MOCP	EMERGENCY POWER	OPERATING WEIGHT (LBS)	REMARKS
[illegible] A1	[illegible]	BLDG A ROOF	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	[illegible]	[illegible]	[illegible]	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	①②③④⑤⑥⑦

REMARKS:

1. SEE ELECTRICAL COORDINATION NOTE.
2. PROVIDE OUTDOOR UNIT CABINET, ALUMINUM COILS WITH COASTAL COATING PROTECTION ([illegible] SALT SPRAY TEST).
3. PROVIDE [illegible] VIBRATION ISOLATION CURB.
4. PROVIDE WITH MANUFACTURER VFD FOR SUPPLY AIR FAN. PROVIDE WITH MANUFACTURER VFD FOR CONDENSER FAN.
5. ALL VARIABLE FREQUENCY DRIVES SERVING EQUIPMENT WITHIN THE BUILDING SHALL BE PROCURED FROM THE SAME MANUFACTURER.
6. PROVIDE SMOKE DETECTOR IN SUPPLY AIR AND INTERLOCK WITH UNIT CONTROLS AND FIRE ALARM SYSTEM PER CBC [illegible].
7. [illegible]

GENERAL EXHAUST FAN SCHEDULE

MARK	MANUFACTURER & MODEL NO.	LOCATION	AREA SERVED	TYPE	AIRFLOW (CFM)	ESP (IN.)	FAN (RPM)	ELECTRICAL V/PH/HZ	HP	FLA (AMPS)	EMERGENCY POWER	OPERATING WEIGHT (LBS)	REMARKS
EF A1	GREENHECK [illegible]	BLDG A ROOF	CORE RESTROOMS	CENTRIFUGAL DOWNBLAST	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	①②

REMARKS:

1. SEE ELECTRICAL COORDINATION NOTE.
2. PROVIDE WITH MANUFACTURER ROOF CURB, BACKDRAFT DAMPER, [illegible] AND DISCONNECT SWITCH.

SPLIT DX SYSTEM - COOLING ONLY

MARK	MANUFACTURER & MODEL NO.	AREA SERVED	NOMINAL TONS	AIRFLOW (CFM)	OUTSIDE AIRFLOW (CFM)	ESP (IN.)	NOMINAL COOLING MBH	SEER ([illegible])	ELECTRICAL V/PH/HZ	MCA	MOCP	EMERGENCY POWER	OPERATING WEIGHT (LBS)	REMARKS
ACCU A1	SAMSUNG [illegible]	ELEV MACH RM [illegible]	[illegible]	[illegible]	N/A	N/A	[illegible]	[illegible]	[illegible]	21.4	[illegible]	TBD	[illegible]	①②③
AFCU A1	SAMSUNG [illegible]								POWERED FROM CONDENSING UNIT				[illegible]	
ACCU A2	SAMSUNG [illegible]	[illegible]	[illegible]	[illegible]	N/A	N/A	[illegible]	[illegible]	[illegible]	21.4	[illegible]	TBD	[illegible]	①②③
AFCU A2	SAMSUNG [illegible]								POWERED FROM CONDENSING UNIT				[illegible]	
ACCU A3	SAMSUNG [illegible]	ELEC [illegible]	[illegible]	[illegible]	N/A	N/A	[illegible]	[illegible]	[illegible]	21.4	[illegible]	TBD	[illegible]	①②③
AFCU A3	SAMSUNG [illegible]								POWERED FROM CONDENSING UNIT				[illegible]	
ACCU A4	SAMSUNG [illegible]	ELEV MACH RM [illegible]	[illegible]	[illegible]	N/A	N/A	[illegible]	[illegible]	[illegible]	21.4	[illegible]	TBD	[illegible]	①②③
AFCU A4	SAMSUNG [illegible]								POWERED FROM CONDENSING UNIT				[illegible]	
ACCU A5	SAMSUNG [illegible]	[illegible]	[illegible]	[illegible]	N/A	N/A	[illegible]	[illegible]	[illegible]	21.4	[illegible]	TBD	[illegible]	①②③
AFCU A5	SAMSUNG [illegible]								POWERED FROM CONDENSING UNIT				[illegible]	
ACCU A6	SAMSUNG [illegible]	[illegible]	[illegible]	[illegible]	N/A	N/A	[illegible]	[illegible]	[illegible]	21.4	[illegible]	TBD	[illegible]	①②③
AFCU A6	SAMSUNG [illegible]								POWERED FROM CONDENSING UNIT				[illegible]	
ACCU A7	SAMSUNG [illegible]	ELEC [illegible]	[illegible]	[illegible]	N/A	N/A	[illegible]	[illegible]	[illegible]	21.4	[illegible]	TBD	[illegible]	①②③
AFCU A7	SAMSUNG [illegible]								POWERED FROM CONDENSING UNIT				[illegible]	

REMARKS:

1. SEE ELECTRICAL COORDINATION NOTE.
2. OUTDOOR COILS SHALL HAVE COASTAL CORROSION PROTECTION ([illegible] SALT SPRAY TEST).
3. EMERGENCY POWER [illegible]

ALEXANDRIA REAL ESTATE EQUITIES
1100 RANCHO CONEJO BLVD
THOUSAND OAKS, CA 91320

[redacted]

[illegible] South Figueroa Street
Los Angeles, California [illegible]
United States
Tel [illegible]
Fax [illegible]

△ Date Description

Seal / Signature

NOT FOR CONSTRUCTION

Project Name
FLAGSHIP LIFE-SCIENCE CAMPUS
Project Number

Description
MECHANICAL SCHEDULES
BUILDING A

Scale

M0.003-A

(100% OSA) AIR HANDLING UNIT SCHEDULE

LABORATORY EXHAUST FAN SCHEDULE

HEATING HOT WATER CONDENSING BOILER

EXPANSION TANK

HHW PUMP SCHEDULE

NOTES FOR ELEC COORDINATION

VARIABLE REFRIGERANT FLOW (VRF) SYSTEM SCHEDULE

AIR COOLED VRF CONDENSING UNITS

CHEMICAL POT FEEDER SCHEDULE

AIR AND DIRT SEPARATOR SCHEDULE

MAKE-UP AIR UNIT SCHEDULE

GENERAL EXHAUST FAN SCHEDULE

ALEXANDRIA REAL ESTATE EQUITIES
1100 RANCHO CONEJO BLVD
THOUSAND OAKS, CA 91320

[redacted]

NOT FOR CONSTRUCTION

Project Name
FLAGSHIP LIFE-SCIENCE CAMPUS

Description
MECHANICAL SCHEDULES
BUILDING B

M0.002-B

NOTES FOR ELEC COORDINATION

1. [illegible]

VARIABLE REFRIGERANT FLOW (VRF) SYSTEM SCHEDULE

AIR COOLED VRF CONDENSING UNITS

SYSTEM	MANUFACTURER & MODEL NO.	SYSTEM CLG. CAP. SYSTEM (TONS)	CONNECTED (TONS)	[illegible] SYSTEM	[illegible]	[illegible]	[illegible]	REFRIG.	OUTDOOR MODULE MARK	MODEL	ELECTRICAL DATA V/PH/HZ	MCA	MOCP	OPER. WT. (LBS)	REMARKS
VRF-01	[illegible]	-	10	-	-	-	-	-	VRF	-	-	-	-	-	(1)(2)(3)(4)(5)(6)
									VRF	FINAL EQUIPMENT QUANTITY AND [illegible]					
VRF-02	[illegible]	-	15	-	-	-	-	-	VRF	-	-	-	-	-	(1)(2)(3)(4)(5)(6)
									VRF	FINAL EQUIPMENT QUANTITY AND [illegible]					
VRF-03	[illegible]	-	10	-	-	-	-	-	VRF	-	-	-	-	-	(1)(2)(3)(4)(5)(6)
									VRF	FINAL EQUIPMENT QUANTITY AND [illegible]					
VRF-04	[illegible]	-	8	-	-	-	-	-	VRF	-	-	-	-	-	(1)(2)(3)(4)(5)(6)
									VRF	FINAL EQUIPMENT QUANTITY AND [illegible]					
VRF-05	[illegible]	-	10	-	-	-	-	-	VRF	-	-	-	-	-	(1)(2)(3)(4)(5)(6)
									VRF	FINAL EQUIPMENT QUANTITY AND [illegible]					
VRF-06	[illegible]	-	10	-	-	-	-	-	VRF	-	-	-	-	-	(1)(2)(3)(4)(5)(6)
									VRF	FINAL EQUIPMENT QUANTITY AND [illegible]					
VRF-07	[illegible]	-	TBD	-	-	-	-	-	VRF	-	-	-	-	-	(1)(2)(3)(4)(5) (7)
									VRF	FINAL EQUIPMENT QUANTITY AND [illegible]					
VRF-08	[illegible]	-	TBD	-	-	-	-	-	VRF	-	-	-	-	-	(1)(2)(3)(4) (7)
									VRF	FINAL EQUIPMENT QUANTITY AND [illegible]					

REMARKS:

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]
7. [illegible]

MAKE-UP AIR UNIT SCHEDULE

MARK	MANUFACTURER & MODEL NO.	LOCATION	AREA SERVED	AIRFLOW (CFM)	ESP (IN.)	HP (BHP)	FILTER	DIRECT EXPANSION (COOLING) EAT (°F) DB	WB	LAT (°F) DB	WB	CAPACITY TOTAL	SENSIBLE	EER	GAS HEATING EAT (°F)	LAT (°F)	INPUT	OUTPUT	ELECTRICAL V/PH/HZ	MCA	MOCP	EMERGENCY POWER	OPERATING WEIGHT (LBS)	REMARKS
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	71	[illegible]	[illegible]	-	-	[illegible]	[illegible]	[illegible]	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	(1)(2)(3)(4)(5)(6)(7)

REMARKS:

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. ALL VARIABLE FREQUENCY DRIVES [illegible]
6. [illegible]
7. [illegible]

GENERAL EXHAUST FAN SCHEDULE

MARK	MANUFACTURER & MODEL NO.	LOCATION	AREA SERVED	TYPE	AIRFLOW (CFM)	ESP (IN.)	RPM	ELECTRICAL V/PH/HZ	HP	FLA	EMERGENCY POWER	OPERATING WEIGHT (LBS)	REMARKS
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	(1)(2)

REMARKS:

1. SEE ELECTRICAL COORDINATION NOTE.
2. [illegible]

SPLIT DX SYSTEM - COOLING ONLY

MARK	MANUFACTURER & MODEL NO.	AREA SERVED	NOMINAL TONS	AIRFLOW (CFM)	OUTSIDE AIRFLOW (CFM)	ESP (IN.)	NOMINAL COOLING MBH	SEER	ELECTRICAL V/PH/HZ	MCA	MOCP	EMERGENCY POWER	OPERATING WEIGHT (LBS)	REMARKS
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	N/A	N/A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	TBD	[illegible]	(1)(2)(3)
[illegible]	[illegible]								POWERED FROM CONDENSING UNIT				[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	N/A	N/A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	TBD	[illegible]	(1)(2)(3)
[illegible]	[illegible]								POWERED FROM CONDENSING UNIT				[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	N/A	N/A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	TBD	[illegible]	(1)(2)(3)
[illegible]	[illegible]								POWERED FROM CONDENSING UNIT				[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	N/A	N/A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	TBD	[illegible]	(1)(2)(3)
[illegible]	[illegible]								POWERED FROM CONDENSING UNIT				[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	N/A	N/A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	TBD	[illegible]	(1)(2)(3)
[illegible]	[illegible]								POWERED FROM CONDENSING UNIT				[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	N/A	N/A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	TBD	[illegible]	(1)(2)(3)
[illegible]	[illegible]								POWERED FROM CONDENSING UNIT				[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	N/A	N/A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	TBD	[illegible]	(1)(2)(3)
[illegible]	[illegible]								POWERED FROM CONDENSING UNIT				[illegible]	

REMARKS:

1. SEE ELECTRICAL COORDINATION NOTE.
2. [illegible]
3. [illegible]

ALEXANDRIA REAL ESTATE EQUITIES

1100 RANCHO CONEJO BLVD
THOUSAND OAKS, CA 91320

[redacted]

[illegible] South Figueroa Street
Los Angeles, California [illegible]
United States

Tel [illegible]
Fax [illegible]

NOT FOR CONSTRUCTION

Project Name
FLAGSHIP LIFE-SCIENCE CAMPUS

Description
MECHANICAL SCHEDULES
BUILDING B

M0.003-B

(100% OSA) AIR HANDLING UNIT SCHEDULE

MARK	MANUFACTURER & MODEL NO.	LOCATION	SERVICE	AIRFLOW (CFM)	E.S.P. (IN.)	FILTER BANK ALLOWANCE IN W.C.	FAN QTY	CONFIGURATION	HP/FAN	VFD MANUFACTURER	VFD QTY	BYPASS	COOLING COIL EAT DB	EAT WB	LAT DB	LAT WB	[illegible]	HEATING COIL	FILTERS	ELECTRICAL	OPERATING WEIGHT (LBS)	REMARKS
AC C1	AAON	BLDG C ROOF	-	[illegible]	[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]	71	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1 2 3 4 5 6 7 8 9 10 11 12
AC C2	AAON	BLDG C ROOF	-	[illegible]	[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]	71	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1 2 3 4 5 6 7 8 9 10 11 12
AC C3	AAON	BLDG C ROOF	-	[illegible]	[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]	71	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1 2 3 4 5 6 7 8 9 10 11 12
AC C4	AAON	BLDG C ROOF	-	[illegible]	[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]	71	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1 2 3 4 5 6 7 8 9 10 11 12

REMARKS:
1. SEE ELECTRICAL COORDINATION NOTE.
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]
7. [illegible]
8. [illegible]
9. [illegible]
10. [illegible]
11. [illegible]
12. [illegible]

LABORATORY EXHAUST FAN SCHEDULE

SYSTEM	MARK	MANUFACTURER & MODEL NO.	LOCATION	SERVICE	TYPE	SYSTEM AIRFLOW (CFM)	DESIGN AIRFLOW (CFM)	[illegible]	[illegible]	ESP (IN.)	[illegible]	[illegible]	ELECTRICAL V/PH/HZ	HP	EMERGENCY POWER	OPER. WT. (LBS)	REMARKS
EF-C1	[illegible]	GREENHECK	BLDG C ROOF	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	GREENHECK	BLDG C ROOF	-	[illegible]		[illegible]		[illegible]	4	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	GREENHECK	BLDG C ROOF	-	[illegible]		[illegible]		[illegible]	4	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	GREENHECK	BLDG C ROOF	-	[illegible]		[illegible]		[illegible]	4	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	GREENHECK	BLDG C ROOF	-	[illegible]		[illegible]		[illegible]	4	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
EF-C2	[illegible]	GREENHECK	BLDG C ROOF	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	GREENHECK	BLDG C ROOF	-	[illegible]		[illegible]		[illegible]	4	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	GREENHECK	BLDG C ROOF	-	[illegible]		[illegible]		[illegible]	4	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	GREENHECK	BLDG C ROOF	-	[illegible]		[illegible]		[illegible]	4	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

REMARKS:
1. SEE ELECTRICAL COORDINATION NOTE.
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]
7. [illegible]
8. [illegible]

HEATING HOT WATER CONDENSING BOILER

MARK	MANUFACTURER & MODEL NO.	LOCATION	SERVICE	HEAT SOURCE	INPUT (MBH)	OUTPUT (MBH)	EWT	LWT	EFFICIENCY	TURN DOWN	ELECTRICAL V/PH/HZ	MCA	EMERGENCY POWER	OPER. WEIGHT (LBS)	REMARKS
[illegible]	LOCHINVAR	BLDG C ROOF	HHW	NATURAL GAS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1 2 3 4 5 6 7 8
[illegible]	LOCHINVAR	BLDG C ROOF	HHW	NATURAL GAS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1 2 3 4 5 6 7 8
[illegible]	LOCHINVAR	BLDG C ROOF	HHW	NATURAL GAS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1 2 3 4 5 6 7 8
[illegible]	LOCHINVAR	BLDG C ROOF	HHW	NATURAL GAS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1 2 3 4 5 6 7 8
[illegible]	LOCHINVAR	BLDG C ROOF	HHW	NATURAL GAS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1 2 3 4 5 6 7 8
[illegible]	LOCHINVAR	BLDG C ROOF	HHW	NATURAL GAS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1 2 3 4 5 6 7 8

REMARKS:
1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]
7. [illegible]
8. SEE ELECTRICAL COORDINATION NOTE.
9. [illegible]

NOTES FOR ELEC COORDINATION

1. MECH/ELEC EQUIPMENT IS AVAILABLE IN VARIOUS ELECTRICAL CONFIGURATIONS (480/3/60, 208/3/60, ETC). ACTUAL ELECTRICAL CONNECTIONS AND REQUIREMENTS TO EQUIPMENT ARE TO BE DETERMINED BY THE ELECTRICAL ENGINEER. ANY REFERENCE ON THE MECHANICAL PLANS FOR ELECTRICAL NEEDS ARE FOR GENERAL REFERENCE. ELECTRICAL PLANS SHALL BE REFERENCED FOR ELECTRICAL NEEDS AND REQUIREMENTS.

HHW PUMP SCHEDULE

MARK	MANUFACTURER & MODEL NO.	SERVICE	LOCATION	TYPE	DESIGN FLOW (GPM)	[illegible]	[illegible]	RPM	ELECTRICAL V/PH/HZ	VFD	HP	EMERGENCY POWER	OPER. WT. (LBS)	REMARKS
[illegible]	BELL & GOSSETT	HEATING HOT WATER	BLDG C ROOF	BASE MOUNTED END SUCTION	[illegible]	[illegible]	[illegible]	[illegible]	-	YES	[illegible]	NO	[illegible]	1 2 3
[illegible]	BELL & GOSSETT	HEATING HOT WATER	BLDG C ROOF	BASE MOUNTED END SUCTION	[illegible]	[illegible]	[illegible]	[illegible]	-	YES	[illegible]	NO	[illegible]	1 2 3
[illegible]	BELL & GOSSETT	HEATING HOT WATER	BLDG C ROOF	BASE MOUNTED END SUCTION	[illegible]	[illegible]	[illegible]	[illegible]	-	YES	[illegible]	NO	[illegible]	1 2 3
[illegible]	BELL & GOSSETT	HEATING HOT WATER	BLDG C ROOF	BASE MOUNTED END SUCTION	[illegible]	[illegible]	[illegible]	[illegible]	-	YES	[illegible]	NO	[illegible]	1 2 3 4

REMARKS:
1. SEE ELECTRICAL COORDINATION NOTE.
2. [illegible]
3. [illegible]
4. [illegible]

CHEMICAL POT FEEDER SCHEDULE

MARK	MANUFACTURER & MODEL NO.	LOCATION	SERVICE	TYPE	CAPACITY (GAL)	WT (LBS)	REMARKS
[illegible]	GRISWOLD [illegible]	BLDG C ROOF	HHW LOOP	[illegible]	-	-	FLOOR MOUNTED

AIR AND DIRT SEPARATOR SCHEDULE

MARK	MANUFACTURER & MODEL NO.	LOCATION	SERVICE	MAX. FLOWRATE (GPM)	PIPE SIZE (INCHES) IN	OUT	OPER. WT. (LBS)	REMARKS
[illegible]	SPIROTHERM	BLDG C ROOF	HHW LOOP	-	-	-	-	1

REMARKS:
1. [illegible]

EXPANSION TANK

MARK	MANUFACTURER & MODEL NO.	SERVICE	LOCATION	TANK VOLUME (GALLONS)	ACCEPTANCE VOLUME (GALLONS)	OPER. WT. (LBS)	REMARKS
[illegible]	BELL AND GOSSETT	HHW LOOP	BLDG C ROOF	-	-	-	[illegible]

ALEXANDRIA REAL ESTATE EQUITIES
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THOUSAND OAKS, CA 91320

[redacted]

[illegible]

Seal / Signature

NOT FOR CONSTRUCTION

Project Name
FLAGSHIP LIFE-SCIENCE CAMPUS
Project Number

Description
MECHANICAL SCHEDULES
BUILDING C

Scale

M0.002-C

NOTES FOR ELEC COORDINATION

1. MECHANICAL EQUIPMENT IS AVAILABLE IN VARIOUS ELECTRICAL CONFIGURATIONS [illegible] ETC. ACTUAL ELECTRICAL CONNECTIONS AND REQUIREMENTS TO EQUIPMENT ARE TO BE DETERMINED BY THE ELECTRICAL ENGINEER. ANY REFERENCE ON THE MECHANICAL PLANS FOR ELECTRICAL NEEDS ARE FOR GENERAL REFERENCE. ELECTRICAL PLANS SHALL BE REFERENCED FOR ELECTRICAL NEEDS AND REQUIREMENTS.

VARIABLE REFRIGERANT FLOW (VRF) SYSTEM SCHEDULE

AIR COOLED VRF CONDENSING UNITS

SYSTEM	MANUFACTURER & MODEL NO.	SYSTEM CLG. CAP. – SYSTEM (TONS)	SYSTEM CLG. CAP. – CONNECTED (TONS)	HTG. CAP. – SYSTEM (MBH)	SYSTEM EFFICIENCY – [illegible]	SYSTEM EFFICIENCY – [illegible]	SYSTEM EFFICIENCY – COP	REFRIG.	OUTDOOR MODULE – MARK	MODEL	ELECTRICAL DATA – V/PH/HZ	MCA	MOCP	OPER. WT. (LBS)	REMARKS
[illegible]	[illegible]	-	[illegible]	-	-	-	-	-	VRF CU-1	-	-	-	-	-	(1)(2)(3)(4)(5)(6)
									VRF TBD	FINAL EQUIPMENT QUANTITY AND [illegible]					
[illegible]	[illegible]	-	[illegible]	-	-	-	-	-	VRF CU-1	-	-	-	-	-	(1)(2)(3)(4)(5)(6)
									VRF TBD	FINAL EQUIPMENT QUANTITY AND [illegible]					
[illegible]	[illegible]	-	16	-	-	-	-	-	VRF CU-1	-	-	-	-	-	(1)(2)(3)(4)(5)(6)
									VRF TBD	FINAL EQUIPMENT QUANTITY AND [illegible]					
[illegible]	[illegible]	-	[illegible]	-	-	-	-	-	VRF CU-1	-	-	-	-	-	(1)(2)(3)(4)(5)(6)
									VRF TBD	FINAL EQUIPMENT QUANTITY AND [illegible]					
[illegible]	[illegible]	-	14	-	-	-	-	-	VRF CU-1	-	-	-	-	-	(1)(2)(3)(4)(5)(6)
									VRF TBD	FINAL EQUIPMENT QUANTITY AND [illegible]					
[illegible]	[illegible]	-	12	-	-	-	-	-	VRF CU-1	-	-	-	-	-	(1)(2)(3)(4)(5)(6)
									VRF TBD	FINAL EQUIPMENT QUANTITY AND [illegible]					
[illegible]	[illegible]	-	15	-	-	-	-	-	VRF CU-1	-	-	-	-	-	(1)(2)(3)(4)(5)(6)
									VRF TBD	FINAL EQUIPMENT QUANTITY AND [illegible]					
[illegible]	[illegible]	-	[illegible]	-	-	-	-	-	VRF CU-1	-	-	-	-	-	(1)(2)(3)(4)(5)(6)
									VRF TBD	FINAL EQUIPMENT QUANTITY AND [illegible]					
[illegible]	[illegible]	-	TBD	-	-	-	-	-	VRF CU-1	-	-	-	-	-	(1)(2)(3)(4)(5) (7)
									VRF TBD	FINAL EQUIPMENT QUANTITY AND [illegible]					
[illegible]	[illegible]	-	TBD	-	-	-	-	-	VRF CU-1	-	-	-	-	-	(1)(2)(3)(4)(5) (7)
									VRF TBD	FINAL EQUIPMENT QUANTITY AND [illegible]					

REMARKS:

1. BASIS OF DESIGN [illegible] HEAT RECOVERY SYSTEM. [illegible] SHALL BE SUBMITTED WITH [illegible]
2. [illegible] CONTROLS [illegible] INTEGRATION CONTROLLER [illegible] AND CONTROLS CONTRACTOR SHALL COORDINATE REQUIREMENTS FOR INTEGRATION PRIOR TO ORDERING EQUIPMENT.
3. VRF SYSTEM SEQUENCE OF OPERATION SHALL BE DEFERRED TO THE INSTALLING VRF MANUFACTURER.
4. VRF SYSTEM SHALL BE PROVIDED WITH FULL PORT ISOLATION VALVES FOR "SHUT OFF DUTY" AT REFRIGERANT CONNECTION POINTS, VRF OUTDOOR MODULES, AND HR MODULE POINTS.
5. PROVIDE COASTAL AIR COATINGS WITH A PROTECTION COATING RATED FOR A MINIMUM [illegible] HR SALT SPRAY TEST. COATED EQUIPMENT INCLUDES BUT IS NOT LIMITED TO OUTDOOR/HEAT RECOVERY MODULES.
6. VRF PIPING SHALL BE INSTALLED IN FUTURE BUILD-OUT. SEE VRF SCOPE OF WORK NOTES.
7. FAN COIL UNITS, HEAT RECOVERY BOXES, PIPING LAYOUTS, AND OTHER ASSOCIATED VRF SYSTEM ITEMS WILL BE INCLUDED IN FUTURE PHASES OF DEVELOPMENT.

MAKE-UP AIR UNIT SCHEDULE

MARK	MANUFACTURER & MODEL NO.	LOCATION	AREA SERVED	AIRFLOW (CFM)	ESP (IN.)	HP (BHP)	FILTER	DX COOLING – EAT (°F) DB	EAT WB	LAT (°F) DB	LAT WB	CAPACITY (MBH) TOTAL	CAPACITY SENSIBLE	EER (IEER)	GAS HEATING – EAT (°F)	LAT (°F)	INPUT (MBH)	OUTPUT (MBH)	ELECTRICAL – V/PH/HZ	MCA	MOCP	EMERGENCY POWER	OPERATING WEIGHT (LBS)	REMARKS
MAU C1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	71	[illegible]	[illegible]	-	-	[illegible]	[illegible]	[illegible]	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	(1)(2)(3)(4)(5)(6)(7)

REMARKS:

1. SEE ELECTRICAL COORDINATION NOTE.
2. PROVIDE OUTDOOR UNIT CABINET, ALUMINUM COILS WITH COASTAL COATING PROTECTION (MINIMUM OF [illegible] HR SALT SPRAY TEST).
3. PROVIDE WITH [illegible] VIBRATION ISOLATION CURB.
4. PROVIDE WITH MANUFACTURER VFD FOR SUPPLY AIR FAN. PROVIDE WITH MANUFACTURER VFD FOR CONDENSER FAN.
5. ALL VARIABLE FREQUENCY DRIVES SERVING EQUIPMENT WITHIN THE BUILDING SHALL BE PROCURED FROM THE SAME MANUFACTURER.
6. PROVIDE SMOKE DETECTOR IN SUPPLY AIR AND INTERLOCK WITH UNIT CONTROLS AND FIRE ALARM SYSTEM PER CBC [illegible].
7. PROVIDE UNIT WITH [illegible] WITH A MINIMUM LEAVING AIR TEMPERATURE OF [illegible].

GENERAL EXHAUST FAN SCHEDULE

MARK	MANUFACTURER & MODEL NO.	LOCATION	AREA SERVED	TYPE	AIRFLOW (CFM)	ESP (IN.)	RPM	ELECTRICAL – V/PH/HZ	HP	FLA	EMERGENCY POWER	OPERATING WEIGHT (LBS)	REMARKS
EF C1	GREENHECK [illegible]	BLDG C ROOF	CORE RESTROOMS	CENTRIFUGAL DOWNBLAST	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	(1)(2)

REMARKS:

1. SEE ELECTRICAL COORDINATION NOTE.
2. PROVIDE WITH MANUFACTURER ROOF CURB, BACKDRAFT DAMPER, BIRDSCREEN, [illegible] AND DISCONNECT SWITCH.

SPLIT DX SYSTEM - COOLING ONLY

MARK	MANUFACTURER & MODEL NO.	AREA SERVED	NOMINAL TONS	AIRFLOW (CFM)	OUTSIDE AIRFLOW (CFM)	ESP (IN.)	NOMINAL COOLING MBH (AT [illegible])	SEER (EER)	ELECTRICAL – V/PH/HZ	MCA	MOCP	EMERGENCY POWER	OPERATING WEIGHT (LBS)	REMARKS
[illegible]	SAMSUNG [illegible]	ELEV MACH RM [illegible]	1	[illegible]	N/A	N/A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	TBD	[illegible]	(1)(2)(3)
[illegible]	SAMSUNG [illegible]								POWERED FROM CONDENSING UNIT				[illegible]	
[illegible]	SAMSUNG [illegible]	DATA [illegible]	1	[illegible]	N/A	N/A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	TBD	[illegible]	(1)(2)(3)
[illegible]	SAMSUNG [illegible]								POWERED FROM CONDENSING UNIT				[illegible]	
[illegible]	SAMSUNG [illegible]	ELEC [illegible]	1	[illegible]	N/A	N/A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	TBD	[illegible]	(1)(2)(3)
[illegible]	SAMSUNG [illegible]								POWERED FROM CONDENSING UNIT				[illegible]	
[illegible]	SAMSUNG [illegible]	ELEV MACH RM [illegible]	1	[illegible]	N/A	N/A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	TBD	[illegible]	(1)(2)(3)
[illegible]	SAMSUNG [illegible]								POWERED FROM CONDENSING UNIT				[illegible]	
[illegible]	SAMSUNG [illegible]	[illegible]	1	[illegible]	N/A	N/A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	TBD	[illegible]	(1)(2)(3)
[illegible]	SAMSUNG [illegible]								POWERED FROM CONDENSING UNIT				[illegible]	
[illegible]	SAMSUNG [illegible]	DATA [illegible]	1	[illegible]	N/A	N/A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	TBD	[illegible]	(1)(2)(3)
[illegible]	SAMSUNG [illegible]								POWERED FROM CONDENSING UNIT				[illegible]	
[illegible]	SAMSUNG [illegible]	ELEC [illegible]	1	[illegible]	N/A	N/A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	TBD	[illegible]	(1)(2)(3)
[illegible]	SAMSUNG [illegible]								POWERED FROM CONDENSING UNIT				[illegible]	

REMARKS:

1. SEE ELECTRICAL COORDINATION NOTE.
2. OUTDOOR COILS SHALL HAVE COASTAL COATING PROTECTION (MINIMUM OF [illegible] HOUR SALT SPRAY TEST).
3. EMERGENCY POWER TO BE REQUIRED FOR ANY SYSTEMS SERVING SPACES WITH [illegible] REQUIREMENTS TO BE DETERMINED IN LATER PHASES OF DEVELOPMENT.

ALEXANDRIA REAL ESTATE EQUITIES

1100 RANCHO CONEJO BLVD
THOUSAND OAKS, CA 91320

[redacted]

[illegible] South Figueroa Street, Los Angeles, California [illegible], United States — Tel [illegible] Fax [illegible]

△ Date Description

Seal / Signature

NOT FOR CONSTRUCTION

Project Name
FLAGSHIP LIFE-SCIENCE CAMPUS
Project Number

Description
MECHANICAL SCHEDULES
BUILDING C

Scale

M0.003-C

SOUND ATTENUATOR SCHEDULE

Mark	Manufacturer & Model No.	Equipment Served	Max Airflow (CFM)	Max P.D. (in)	Decibel Attenuation in Octave Band								Silencer Length (ft)	Operating Weight (lbs)	Remarks
					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			
[illegible]	TBD	[illegible]	-	[illegible]	-	-	-	-	-	-	-	-	[illegible]	TBD	1

REMARKS:
1. -

NOTES FOR ELEC COORDINATION

1. MECHANICAL EQUIPMENT IS AVAILABLE IN VARIOUS ELECTRICAL CONFIGURATIONS [illegible]. ACTUAL ELECTRICAL CONNECTIONS AND REQUIREMENTS TO EQUIPMENT ARE TO BE DETERMINED BY THE ELECTRICAL ENGINEER. ANY REFERENCE ON THE MECHANICAL PLANS FOR ELECTRICAL [illegible]. ELECTRICAL PLANS SHALL BE REFERENCED FOR ELECTRICAL NEEDS AND REQUIREMENTS.

DX PACKAGE AIR HANDLING UNIT SCHEDULE

Mark	Manufacturer & Model No.	Location	Service	Nominal Tonnage	Airflow (CFM)	E.S.P. (in)	Filter & Coil Allowance	HP	Remarks
[illegible]	AAON [illegible]	BLDG A ROOF	-	3	-	1.5	[illegible]	3.0	1 2 3 4 5
[illegible]	AAON [illegible]	BLDG A ROOF	-	6	-	1.5	[illegible]	3.0	1 2 3 4 5 6 7
[illegible]	AAON [illegible]	BLDG A ROOF	-	7	-	1.5	[illegible]	3.0	1 2 3 4 5 6 7
[illegible]	AAON [illegible]	BLDG A ROOF	-	3	-	1.5	[illegible]	1.0	1 2 3 4 5
[illegible]	AAON [illegible]	BLDG A ROOF	-	3	-	1.5	[illegible]	2.0	1 2 3 4 5
[illegible]	AAON [illegible]	BLDG A ROOF	-	7	-	1.5	[illegible]	3.0	1 2 3 4 5 6 7
[illegible]	AAON [illegible]	BLDG A ROOF	-	3	-	1.5	[illegible]	1.0	1 2 3 4 5
[illegible]	AAON [illegible]	BLDG A ROOF	-	20	-	1.5	[illegible]	10.0	1 2 3 4 5 6 7
[illegible]	AAON [illegible]	BLDG A ROOF	-	3	-	1.5	[illegible]	3.0	1 2 3 4 5
[illegible]	AAON [illegible]	BLDG A ROOF	-	3	-	1.5	[illegible]	3.0	1 2 3 4 5
[illegible]	AAON [illegible]	BLDG A ROOF	-	15	-	1.5	[illegible]	7.5	1 2 3 4 5 6 7
[illegible]	AAON [illegible]	BLDG A ROOF	-	15	-	1.5	[illegible]	7.5	1 2 3 4 5 6 7
[illegible]	AAON [illegible]	BLDG A ROOF	-	15	-	1.5	[illegible]	7.5	1 2 3 4 5 6 7

REMARKS: [illegible]

MAKE-UP AIR UNIT SCHEDULE

[illegible]

GENERAL EXHAUST FAN SCHEDULE

[illegible]

SPLIT DX SYSTEM SCHEDULE

[illegible]

AIR DISTRIBUTION DEVICE SCHEDULE

[illegible]

ALEXANDRIA REAL ESTATE EQUITIES
1100 RANCHO CONEJO BLVD
THOUSAND OAKS, CA 91320

[redacted]

[illegible] South Figueroa Street
Los Angeles, California 90071
United States
Tel [illegible]
Fax [illegible]

NOT FOR CONSTRUCTION

Project Name
FLAGSHIP LIFE-SCIENCE CAMPUS

Description
MECHANICAL SCHEDULES
AMENITY BUILDING - THE ALEXANDRIA

Scale

M0.002-X

Bericht (CadnaA Run w Project 051422.cna)

Gruppentabelle Tag und Nacht

Name	Expression	Partial Sum Level											
		R1		R2		R3		R4		R5		R6	
		Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night

Source			Partial Level											
Name	M.	ID	R1		R2		R3		R4		R5		R6	
			Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
HVAC Noise - Bldg. X			39.0	39.0	37.5	37.5	35.4	35.4	35.4	35.4	36.0	36.0	36.0	36.0
HVAC Noise - Bldg. A			34.6	34.6	32.3	32.3	28.6	28.6	28.1	28.1	27.7	27.7	26.4	26.4
HVAC Noise - Bldg. B														
HVAC Noise - Bldg. C														
Truck Loading - C			18.2	18.2	18.3	18.3	17.5	17.5	19.8	19.8	28.9	28.9	29.9	29.9
Truck Loading - A			36.6	36.6	36.1	36.1	32.9	32.9	29.7	29.7	29.0	29.0	27.9	27.9
Generator - Bldg C			21.9	21.9	22.1	22.1	21.1	21.1	22.7	22.7	25.4	25.4	33.0	33.0
Generator - Bldg A			37.7	37.7	36.6	36.6	34.0	34.0	31.9	31.9	31.6	31.6	22.8	22.8
Generator - Bldg. B			21.8	21.8	22.2	22.2	21.4	21.4	23.2	23.2	25.8	25.8	33.5	33.5
Truck Loading - B			18.2	18.2	18.6	18.6	18.0	18.0	28.3	28.3	30.3	30.3	31.5	31.5

Schallquellen

Punktquellen

Name	M.	ID	Result. PWL			Lw / Li			Correction			Sound Reduction		Attenuation	Operating T	
			Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special
			(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m²)		(min)	(min)
HVAC Noise - Bldg. X			121.5	121.5	121.5	Lw	121.5		0.0	0.0	0.0					
HVAC Noise - Bldg. A			108.9	108.9	108.9	Lw	108.9		0.0	0.0	0.0					
HVAC Noise - Bldg. B			0.0	0.0	0.0	Lw	105.9	0.0	0.0	0.0	0.0					
HVAC Noise - Bldg. C			0.0	0.0	0.0	Lw	108.4	0.0	0.0	0.0	0.0					
Truck Loading - C			101.0	101.0	101.0	Lw	101		0.0	0.0	0.0					
Truck Loading - A			101.0	101.0	101.0	Lw	101		0.0	0.0	0.0					
Generator - Bldg C			103.8	103.8	103.8	Lw	103.8		0.0	0.0	0.0					
Generator - Bldg A			103.8	103.8	103.8	Lw	103.8		0.0	0.0	0.0					
Generator - Bldg. B			103.8	103.8	103.8	Lw	103.8		0.0	0.0	0.0					
Truck Loading - B			101.0	101.0	101.0	Lw	101		0.0	0.0	0.0					

Linienquellen

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Correction			Sound Reduction		Attenuation	Ope
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m²)		(min)

Flächenquellen

Name	M.	ID	Result. PWL			Result. PWL"			Lw / Li			Correction			Sound Reduction		Attenuation	Ope
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m²)		(min)

Flächenquellen vertikal

Name	M.	ID	Result. PWL			Result. PWL"			Lw / Li			Correction			Sound Reduction		Attenuation	Ope
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m²)		(min)

Schienen

Name	M.	ID	Lm,E		Train Class	Add.Level				Vmax
			Day	Night		Dfb	Dbr	Dbü	Dra	
			(dBA)	(dBA)		(dB)	(dB)	(dB)	(dB)	(km/h)

Zugklassen

Name	M.	ID	Lm,E		Train Class									Add.Level				Vmax
			Day	Night	Type	p	Number of Trains			v	l	Dfz	Dae	Lm,E,i (dB)		Dfb	Dbr	Dbü	Dra	
			(dBA)	(dBA)		(%)	Day	Evening	Night	(km/h)	(m)	(dB)	(dB)	Day	Night	(dB)	(dB)	(dB)	(dB)	(km/h)

Name	Lm,E		Train Class									
	Day	Night	Type	p	Number of Trains			v	l	Dfz	Dae	Lm,E,i (dB)	
	(dBA)	(dBA)		(%)	Day	Evening	Night	(km/h)	(m)	(dB)	(dB)	Day	Night

Parkplätze

Name	M.	ID	Type	Lwa			Event Data						Penalty Type		Penalty Surface		A
				Day	Special	Night	Ref. Quantity	Number B	No. Spaces/RefQ	Events/h/RefQ			Kpa	Type	Kstro	Surface	
				(dBA)	(dBA)	(dBA)				Day	Special	Night	(dB)		(dB)		

Strassen

Name	M.	ID	Lme			Count Data		exact Count Data						Speed Limit		SCS	Surface		Grad
			Day	Evening	Night	DTV	Str.class.	M			p (%)			Auto	Truck	Dist.	Dstro	Type	
			(dBA)	(dBA)	(dBA)			Day	Evening	Night	Day	Evening	Night	(km/h)	(km/h)		(dB)		(%

Ampeln

Name	M.	ID	Active			Height	Coordinates		
			Day	Evening	Night	Begin	X	Y	Z
						(m)	(m)	(m)	(m)

Immissionspunkte

Name	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
			Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
R1		R1	43.4	43.4	0.0	0.0		x	Total	205.50	a	497.50	634.28	205.50
R2		R2	42.2	42.2	0.0	0.0		x	Total	205.50	a	549.86	641.30	205.50
R3		R3	39.6	39.6	0.0	0.0		x	Total	205.50	a	618.15	648.35	205.50
R4		R4	38.9	38.9	0.0	0.0		x	Total	205.50	a	637.77	705.46	205.50
R5		R5	39.7	39.7	0.0	0.0		x	Total	205.50	a	630.79	778.50	205.50
R6		R6	40.7	40.7	0.0	0.0		x	Total	205.50	a	624.71	839.37	205.50

Gebietsausweisungen

Name	M.	ID	Type	Persons
				(1/km²)

Hindernisse

Schirme

Name	M.	ID	Absorption		Z-Ext.	Cantilever		Height			
			left	right		horz.	vert.	Begin		End	
					(m)	(m)	(m)	(m)		(m)	

Name	M.	ID	Absorption		Z-Ext.	Cantilever		Height			
			left	right		horz.	vert.	Begin		End	
					(m)	(m)	(m)	(m)		(m)	
Mechanical Screen - Bldg X											
Mechanical Screen - Bldg A											
Mechanical Screen - Bldg. B											
Mechanical Screen - Bldg. C											

Häuser

Name	M.	ID	RB	Residents	Absorption	Height	
						Begin	
						(m)	
			x	0			
Bldg X			x	0			
Bldg A			x	0			
			x	0			

Bewuchs

Name	M.	ID	Height
			(m)

Bebauung

Name	M.	ID	Type	Attenuation	B	m	Height
				dB/100m	%	1/m	(m)

Geometriedaten

Geometrie Linienquellen

Name	Height				Coordinates			
	Begin		End		x	y	z	Ground
	(m)		(m)		(m)	(m)	(m)	(m)

Geometrie Flächenquellen

Name	Height				Coordinates			
	Begin		End		x	y	z	Ground
	(m)		(m)		(m)	(m)	(m)	(m)

Geometrie Parkplätze

Name	Height				Coordinates			
	Begin		End		x	y	z	Ground
	(m)		(m)		(m)	(m)	(m)	(m)

Geometrie Straßen

Name	Height				Coordinates				Dist	LSlope
	Begin		End		x	y	z	Ground	(m)	(%)
	(m)		(m)		(m)	(m)	(m)	(m)		

Geometrie Schienen

Name	Height				Coordinates			
	Begin		End		x	y	z	Ground
	(m)		(m)		(m)	(m)	(m)	(m)

Geometrie Schirme

Name	M.	ID	Absorption		Z-Ext.	Cantilever		Height				Coordinates			
			left	right		horz.	vert.	Begin		End		x	y	z	Ground
					(m)	(m)	(m)	(m)		(m)		(m)	(m)	(m)	(m)
												486.66	602.90	211.83	210.00

Name	M.	ID	Absorption		Z-Ext.	Cantilever		Height		Coordinates			
			left	right		horz.	vert.	Begin	End	x	y	z	Ground
					(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)
										483.14	640.59	211.83	210.00
										636.89	655.85	211.83	210.00
										611.79	902.50	211.83	210.00
Mechanical Screen - Bldg X										340.34	754.27	223.70	215.00
										352.26	754.39	223.70	215.00
										352.39	771.92	223.70	215.00
										376.10	771.78	223.70	215.00
										375.96	789.62	223.70	215.00
										339.16	790.02	223.70	215.00
										339.17	754.53	223.70	215.00
Mechanical Screen - Bldg A										394.25	693.30	235.00	220.70
										493.60	699.66	235.00	220.70
										492.33	721.37	235.00	220.70
										392.77	714.74	235.00	220.70
										394.09	693.41	235.00	220.70
Mechanical Screen - Bldg. B										515.88	736.23	235.00	220.70
										542.32	738.46	235.00	220.70
										536.19	810.85	235.00	220.70
										509.01	808.94	235.00	220.70
										515.51	736.32	235.00	220.70
Mechanical Screen - Bldg. C										395.73	834.68	235.00	220.70
										486.26	831.41	235.00	220.70
										486.05	809.63	235.00	220.70
										394.56	813.33	235.00	220.70
										395.63	835.34	235.00	220.70

Geometrie Häuser

Name	M.	ID	RB	Residents	Absorption	Height	Coordinates			
						Begin	x	y	z	Ground
						(m)	(m)	(m)	(m)	(m)
			x	0			365.87	847.85	220.70	210.00
							495.73	843.78	220.70	210.00
							494.74	797.24	220.70	210.00
							364.70	801.49	220.70	210.00
Bldg X			x	0			335.57	790.96	215.00	210.00
							381.23	790.75	215.00	210.00
							381.66	736.78	215.00	210.00
							335.63	736.52	215.00	210.00
Bldg A			x	0			361.66	726.60	220.70	210.00
							494.56	733.67	220.70	210.00
							497.22	688.93	220.70	210.00
							364.39	678.80	220.70	210.00
			x	0			503.65	814.30	220.70	210.00
							543.67	817.51	220.70	210.00
							549.26	734.33	220.70	210.00
							509.39	730.93	220.70	210.00

Geometrie Höhenlinien

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)

Geometrie Bruchkanten

Name	M.	ID	Coordinates	
			x	y
			(m)	(m)

Bericht (CadnaA Run w Project Nighttime 052022.cna)

Gruppentabelle Tag und Nacht

Name	Expression	Partial Sum Level											
		R1		R2		R3		R4		R5		R6	
		Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night

Source			Partial Level											
Name	M.	ID	R1		R2		R3		R4		R5		R6	
			Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
HVAC Noise - Bldg. X			39.0	39.0	37.5	37.5	35.4	35.4	35.4	35.4	36.0	36.0	36.0	36.0
HVAC Noise - Bldg. A			34.6	34.6	32.3	32.3	28.6	28.6	28.1	28.1	27.7	27.7	26.4	26.4
HVAC Noise - Bldg. B														
HVAC Noise - Bldg. C														
Generator - Bldg C			21.9	21.9	22.1	22.1	21.1	21.1	22.7	22.7	25.4	25.4	33.0	33.0
Generator - Bldg A			37.7	37.7	36.6	36.6	34.0	34.0	31.9	31.9	31.6	31.6	22.8	22.8
Generator - Bldg. B			21.8	21.8	22.2	22.2	21.4	21.4	23.2	23.2	25.8	25.8	33.5	33.5

Schallquellen

Punktquellen

Name	M.	ID	Result. PWL			Lw / Li			Correction			Sound Reduction		Attenuation	Operating T	
			Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special
			(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m²)		(min)	(min)
HVAC Noise - Bldg. X			121.5	121.5	121.5	Lw	121.5		0.0	0.0	0.0					
HVAC Noise - Bldg. A			108.9	108.9	108.9	Lw	108.9		0.0	0.0	0.0					
HVAC Noise - Bldg. B			0.0	0.0	0.0	Lw	105.9	0.0	0.0	0.0	0.0					
HVAC Noise - Bldg. C			0.0	0.0	0.0	Lw	108.4	0.0	0.0	0.0	0.0					
Generator - Bldg C			103.8	103.8	103.8	Lw	103.8		0.0	0.0	0.0					
Generator - Bldg A			103.8	103.8	103.8	Lw	103.8		0.0	0.0	0.0					
Generator - Bldg. B			103.8	103.8	103.8	Lw	103.8		0.0	0.0	0.0					

Linienquellen

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Correction			Sound Reduction		Attenuation	Ope
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m²)		(min)

Flächenquellen

Name	M.	ID	Result. PWL			Result. PWL"			Lw / Li			Correction			Sound Reduction		Attenuation	Ope
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m²)		(min)

Flächenquellen vertikal

Name	M.	ID	Result. PWL			Result. PWL"			Lw / Li			Correction			Sound Reduction		Attenuation	Ope
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m²)		(min)

Schienen

Name	M.	ID	Lm,E		Train Class	Add.Level				Vmax
			Day	Night		Dfb	Dbr	Dbü	Dra	
			(dBA)	(dBA)		(dB)	(dB)	(dB)	(dB)	(km/h)

Zugklassen

Name	M.	ID	Lm,E		Train Class									Add.Level				Vmax
			Day	Night	Type	p	Number of Trains			v	l	Dfz	Dae	Lm,E,i (dB)		Dfb	Dbr	Dbü	Dra	
			(dBA)	(dBA)		(%)	Day	Evening	Night	(km/h)	(m)	(dB)	(dB)	Day	Night	(dB)	(dB)	(dB)	(dB)	(km/h)

Name	Lm,E		Train Class									
	Day	Night	Type	p	Number of Trains			v	l	Dfz	Dae	Lm,E,i (dB)	
	(dBA)	(dBA)		(%)	Day	Evening	Night	(km/h)	(m)	(dB)	(dB)	Day	Night

Parkplätze

Name	M.	ID	Type	Lwa			Event Data						Penalty Type		Penalty Surface		A
				Day	Special	Night	Ref. Quantity	Number B	No. Spaces/RefQ	Events/h/RefQ			Kpa	Type	Kstro	Surface	
				(dBA)	(dBA)	(dBA)				Day	Special	Night	(dB)		(dB)		

Strassen

Name	M.	ID	Lme			Count Data		exact Count Data						Speed Limit		SCS	Surface		Grac
			Day	Evening	Night	DTV	Str.class.	M			p (%)			Auto	Truck	Dist.	Dstro	Type	
			(dBA)	(dBA)	(dBA)			Day	Evening	Night	Day	Evening	Night	(km/h)	(km/h)		(dB)		(%

Ampeln

Name	M.	ID	Active			Height	Coordinates		
			Day	Evening	Night	Begin	X	Y	Z
						(m)	(m)	(m)	(m)

Immissionspunkte

Name	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
			Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
R1		R1	42.3	42.3	0.0	0.0		x	Total	205.50	a	497.50	634.28	205.50
R2		R2	40.9	40.9	0.0	0.0		x	Total	205.50	a	549.86	641.30	205.50
R3		R3	38.5	38.5	0.0	0.0		x	Total	205.50	a	618.15	648.35	205.50
R4		R4	37.9	37.9	0.0	0.0		x	Total	205.50	a	637.77	705.46	205.50
R5		R5	38.3	38.3	0.0	0.0		x	Total	205.50	a	630.79	778.50	205.50
R6		R6	39.4	39.4	0.0	0.0		x	Total	205.50	a	624.71	839.37	205.50

Gebietsausweisungen

Name	M.	ID	Type	Persons
				(1/km²)

Hindernisse

Schirme

Name	M.	ID	Absorption		Z-Ext.	Cantilever		Height			
			left	right		horz.	vert.	Begin		End	
					(m)	(m)	(m)	(m)		(m)	
Mechanical Screen - Bldg X											
Mechanical Screen - Bldg A											
Mechanical Screen - Bldg. B											
Mechanical Screen - Bldg. C											

Häuser

Name	M.	ID	RB	Residents	Absorption	Height
						Begin
						(m)
			x	0		
Bldg X			x	0		
Bldg A			x	0		
			x	0		

Bewuchs

Name	M.	ID	Height
			(m)

Bebauung

Name	M.	ID	Type	Attenuation	B	m	Height
				dB/100m	%	1/m	(m)

Geometriedaten

Geometrie Linienquellen

Name	Height		Coordinates			
	Begin	End	x	y	z	Ground
	(m)	(m)	(m)	(m)	(m)	(m)

Geometrie Flächenquellen

Name	Height		Coordinates			
	Begin	End	x	y	z	Ground
	(m)	(m)	(m)	(m)	(m)	(m)

Geometrie Parkplätze

Name	Height		Coordinates			
	Begin	End	x	y	z	Ground
	(m)	(m)	(m)	(m)	(m)	(m)

Geometrie Straßen

Name	Height		Coordinates				Dist	LSlope
	Begin	End	x	y	z	Ground	(m)	(%)
	(m)	(m)	(m)	(m)	(m)	(m)		

Geometrie Schienen

Name	Height		Coordinates			
	Begin	End	x	y	z	Ground
	(m)	(m)	(m)	(m)	(m)	(m)

Geometrie Schirme

Name	M.	ID	Absorption		Z-Ext.	Cantilever		Height		Coordinates			
			left	right		horz.	vert.	Begin	End	x	y	z	Ground
					(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)
										486.66	602.90	211.83	210.00
										483.14	640.59	211.83	210.00
										636.89	655.85	211.83	210.00
										611.79	902.50	211.83	210.00
Mechanical Screen - Bldg X										340.34	754.27	223.70	215.00
										352.26	754.39	223.70	215.00
										352.39	771.92	223.70	215.00
										376.10	771.78	223.70	215.00
										375.96	789.62	223.70	215.00
										339.16	790.02	223.70	215.00
										339.17	754.53	223.70	215.00

Name	M.	ID	Absorption		Z-Ext.	Cantilever		Height		Coordinates			
			left	right		horz.	vert.	Begin	End	x	y	z	Ground
					(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)
Mechanical Screen - Bldg A										394.25	693.30	235.00	220.70
										493.60	699.66	235.00	220.70
										492.33	721.37	235.00	220.70
										392.77	714.74	235.00	220.70
										394.09	693.41	235.00	220.70
Mechanical Screen - Bldg. B										515.88	736.23	235.00	220.70
										542.32	738.46	235.00	220.70
										536.19	810.85	235.00	220.70
										509.01	808.94	235.00	220.70
										515.51	736.32	235.00	220.70
Mechanical Screen - Bldg. C										395.73	834.68	235.00	220.70
										486.26	831.41	235.00	220.70
										486.05	809.63	235.00	220.70
										394.56	813.33	235.00	220.70
										395.63	835.34	235.00	220.70

Geometrie Häuser

Name	M.	ID	RB	Residents	Absorption	Height	Coordinates			
						Begin	x	y	z	Ground
						(m)	(m)	(m)	(m)	(m)
			x	0			365.87	847.85	220.70	210.00
							495.73	843.78	220.70	210.00
							494.74	797.24	220.70	210.00
							364.70	801.49	220.70	210.00
Bldg X			x	0			335.57	790.96	215.00	210.00
							381.23	790.75	215.00	210.00
							381.66	736.78	215.00	210.00
							335.63	736.52	215.00	210.00
Bldg A			x	0			361.66	726.60	220.70	210.00
							494.56	733.67	220.70	210.00
							497.22	688.93	220.70	210.00
							364.39	678.80	220.70	210.00
			x	0			503.65	814.30	220.70	210.00
							543.67	817.51	220.70	210.00
							549.26	734.33	220.70	210.00
							509.39	730.93	220.70	210.00

Geometrie Höhenlinien

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)

Geometrie Bruchkanten

Name	M.	ID	Coordinates	
			x	y
			(m)	(m)