

Model 6410/6411  
Precipitation Gauge  
Wind Screen



User's  
Manual



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# INTRODUCTION

The Models 6410 and 6411 Precipitation Gauge Wind Screens are used to obtain improved accuracy of precipitation measurements. The Alter Type Wind Screen has 32 free swinging leaves evenly spaced around a 4811 diameter ring. Updrafts at the gauge are minimized because of the deflection of the wind by the inward movement of the leaves. The top of the screen also generates a turbulent air movement over the gauge orifice permitting precipitation to settle into the gauge that would otherwise be lost. Rigid posts are provided for mounting the shield with the top approximately 1/211 above the gauge top. The Model 6410 has legs for gauges up to 2411 tall and the Model 6411 has legs for gauges up to 36" tall.

An accessory kit Model 64102 is available for installing the wind screen onto wooden decks or platforms. The kit includes floor flanges into which the wind screen legs are installed.

# THEORY OF OPERATION

The Alter type wind screen prevents strong updrafts from forming on the sides of the rain gauge which distort the trajectories of precipitation particles falling towards the gauge. The wind screen also induces turbulent motion which aids in breaking up stream lines over the gauge orifice and thus improves the catch. Significant increases in the catch are especially noted when the precipitation particles are very small.

# INSTALLATION

This instrument is thoroughly tested and fully calibrated at the factory and is ready for installation. Please refer to the return authorization card included in the packing box if damage has occurred. Also, notify All Weather Inc.

Follow the plan as indicated for placement of the legs of the wind screen. Note that one leg has a cut-away sleeve for the screen quadrant. Also note that the screen quadrant has a short support 'leg. This is

the gate quadrant. The short leg of the gate quadrant should be located at the cut-away sleeve on the leg. This short leg of the gate quadrant can be then lifted out of the sleeve easily and swung to the outside to allow access to the rain gauge.

The rain gauge mounting elevation should be adjusted such that the top of the gauge is about 11211 from the top of the screen.

# CALIBRATION

This instrument does not require calibration. Refer to the rain gauge manual for its calibration.

# MAINTENANCE

No routine maintenance is required. Replace any parts that become damaged. Wire brush and paint any areas of rust.

# WARRANTY

Unless specified otherwise, All Weather Inc. (the Company) warrants its products to be free from defects in material and workmanship under normal use and service for one year from date of shipment, subject to the following conditions:

- a. The obligation of the Company under this warranty is limited to repairing or replacing items or parts which have been returned to the Company and which upon examination are disclosed, to the Company's satisfaction, to have been defective in material or workmanship at time of manufacture.
- b. The claimant shall pay the cost of shipping any part or instrument to the Company. If the Company determines the part to be defective in material or workmanship, the Company shall prepay the cost of shipping the repaired instrument to the claimant. Under no circumstances will the Company reimburse claimant for cost incurred in removing and/or reinstalling replacement parts.
- c. This warranty shall not apply to any Company products which have been subjected to misuse, negligence, or accident.
- d. This warranty and the Company's obligation thereunder is in lieu of all other warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, consequential damages, and all other obligations or liabilities.

No other person or organization is authorized to give any other warranty or to assume any additional obligation on the Company's behalf, unless made in writing and signed by an authorized officer of the Company.

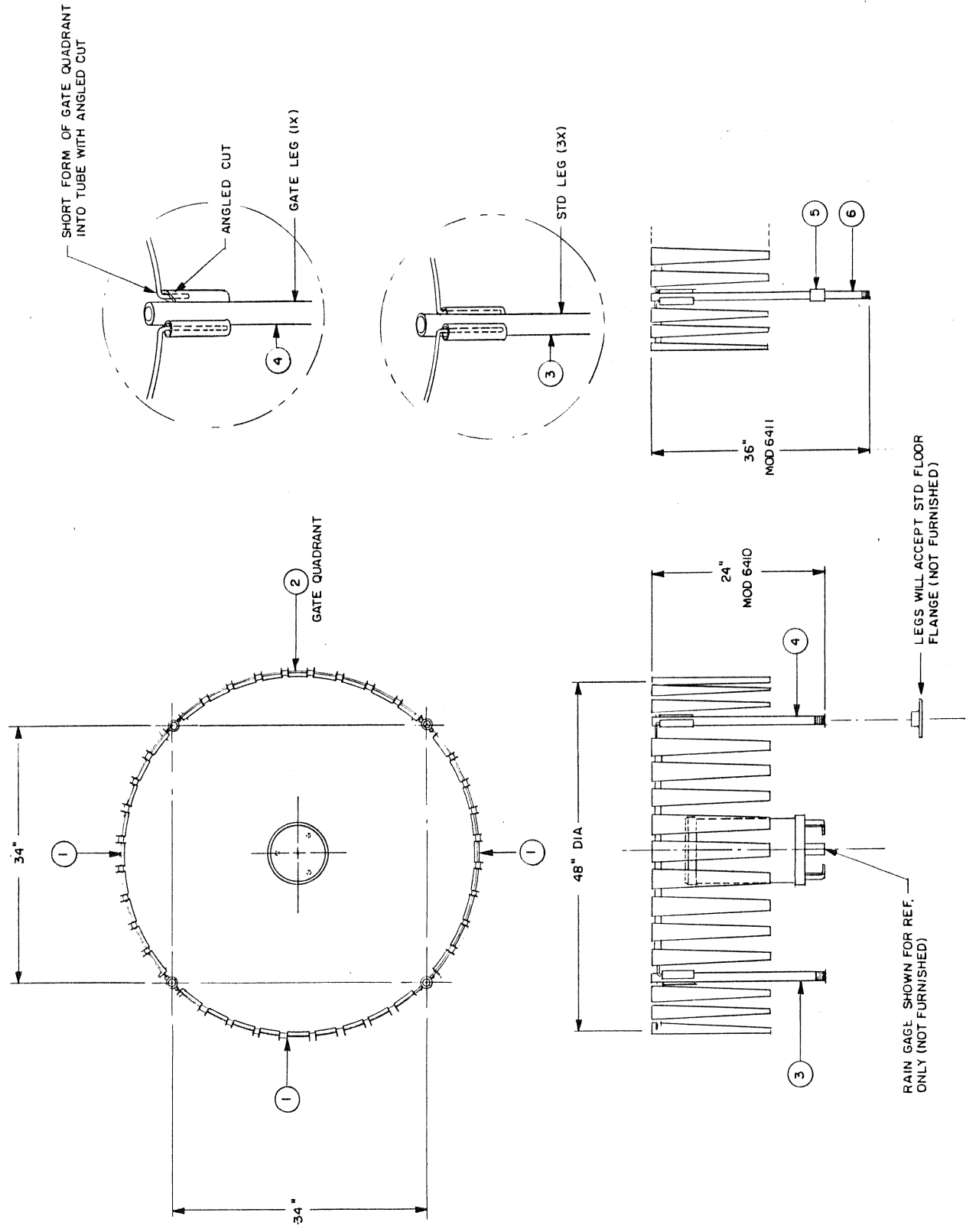


# SPECIFICATIONS

Wind screen type .....	Alter
Number of leaves .....	32
Ring diameter .....	48"
Leaves .....	3-1/2"W x 16"L
Legs:	
Model 6410 .....	24"
Model 6411 .....	36"
Weight/Shipping .....	30 lbs/35 lbs

# PARTS LISTS AND DRAWINGS

The following pages include a parts list and reference drawings to assist in installation and maintenance of this instrument.



WEATHERMEASUREMENTS  
**QUALIMETRICS, Inc.**  
 3713 College Green Avenue  
 Sacramento, California 95818 U.S.A.

TOLERANCES UNLESS OTHERWISE NOTED:  
 XXX ± .006 XX ± .010 FRACTIONS = 1/32  
 ANGLES ± ½° CONCENTRICITY = .003 TIR

MATL  
 SEE BILL MATL

FINISH  
 GALVANIZED

REV	ECN	DATED	QTY	NEXT	ASM
A	-	3-11-83			

NOMENCLATURE  
 ASSEMBLY DWG WIND SCREEN  
 PRECIPITATION GAGE

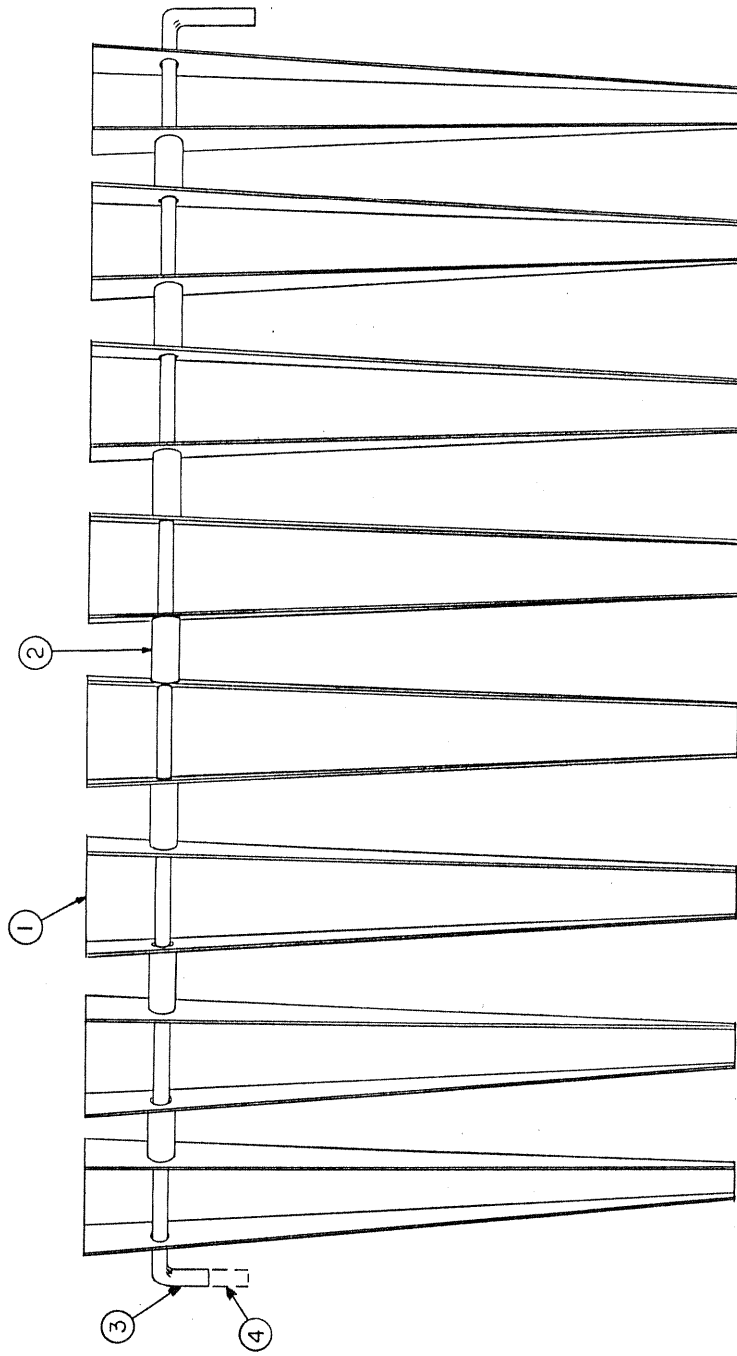
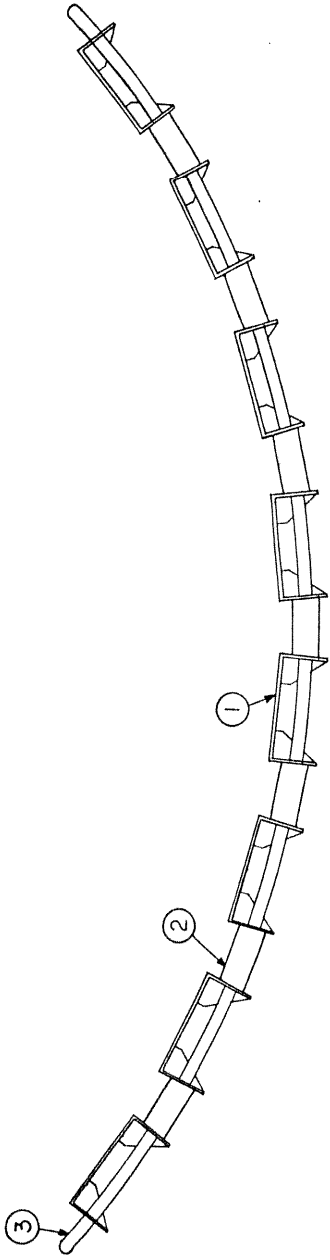
MOD. USAGE 6410

BY: GEARHEART  
 DT 3-11-83

SCALE  
 NO. 6410-03

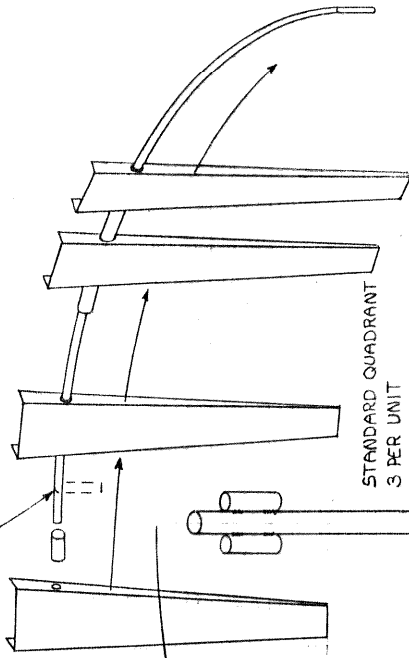
SHEET 1 OF 2

C

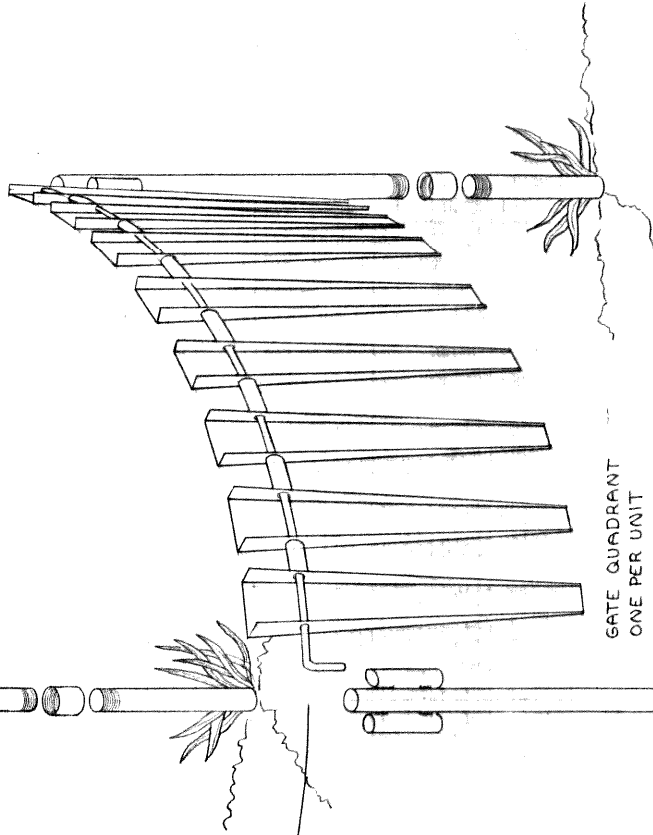


REV	ECN	DATED	QTY	NEXT	ASM	TOLERANCES UNLESS OTHERWISE NOTED: XXX = ± .005, XX = ± .010, FRACTIONS = ± .02 ANGLES ± ½° CONCENTRICITY = .003 TIR	<b>QUALIMETRICS, Inc.</b> WEATHERMEASURE / WEATHERTRONICS Instruments and Systems Division 3213 Orange Grove Avenue Sacramento, California 95830 - U.S.A.
						MATL	NOMENCLATURE <b>WIND SCREEN</b> QUADRANT ASSEMBLY
						FINISH	
						ENGR	MOD. USAGE 6410 BY GT DT 3-16-83
						APPRO	SCALE Ø DWG NO. 6410-03 SHEET 2 OF 2

BEND AFTER ASSEMBLY

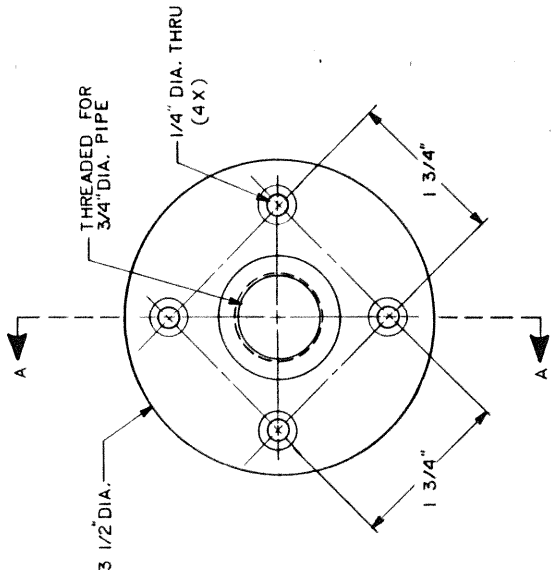


STANDARD QUADRANT  
3 PER UNIT



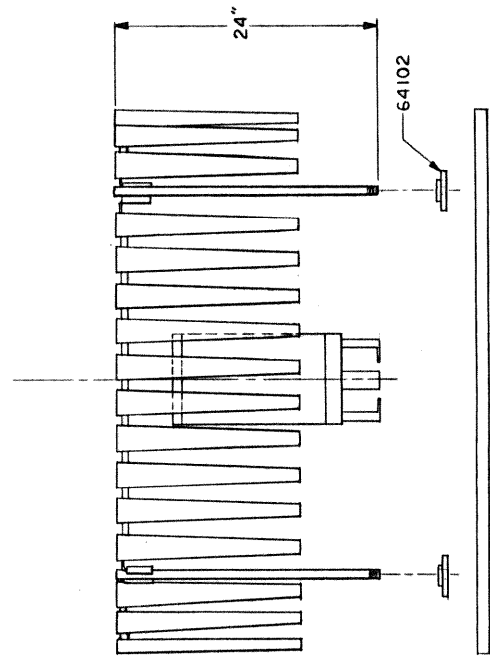
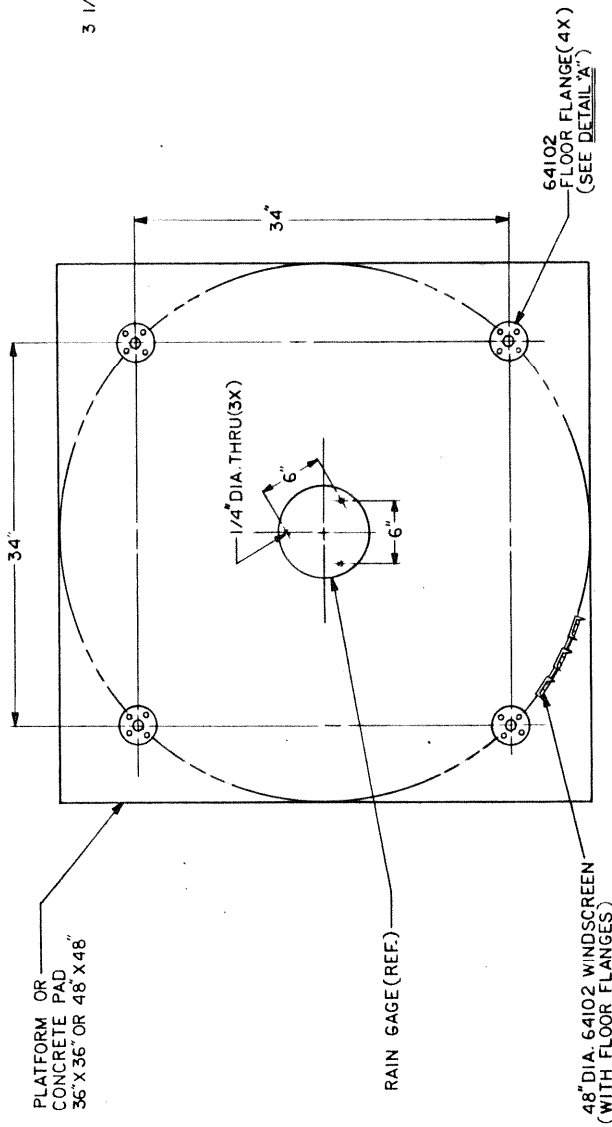
GATE QUADRANT  
ONE PER UNIT

ITEM	PART NO.	SUFFIX	QTY.	UNIT	DESCRIPTION	REFERENCE NO.
BILL OF MATERIALS						
<b>WEATHERTRONICS</b> 2777 Del Monte Bl. West Sacramento, CA 95691 Telephone (916) 371-2660						
<b>TITLE</b> AUXILIARY WINDSCREEN ASM. <b>SCALE</b> 1/8" = 1'-0" <b>DATE</b> 8-10-75 <b>REV.</b> 1						
<b>REVISIONS</b> NO.   DATE   BY   DESCRIPTION						
<b>APPROVALS</b> DESIGNER: _____ DATE: _____ CHECKED: _____ DATE: _____ DRAWN: _____ DATE: _____ INSP. BY: _____ DATE: _____						



SECTION A-A

DETAIL "A" (FLOOR FLANGE)



TOLERANCES UNLESS OTHERWISE NOTED:  
XXX - ± .005 XX - ± .010 FRACTIONS - ± .02  
ANGLES ± 1/8° CONCENTRICITY - .003 TIR

REV	ECON	DATED	QTY	NEXT	ASMT	MATL	FINISH	ENGR	APPRO	DT	DT	SCALE	DWG NO.	SHEET	OF
													64102-003	1	1

QUALIMETRICS, Inc.  
NOMENCLATURE ASSEMBLY MOUNTING KIT FOR WINDSCREEN LEGS MODEL 64102  
MOD. USAGE 64102  
BY K. WEBER  
DT 10/14/85  
SCALE NONE  
DWG NO. 64102-003  
SHEET 1 OF 1

QUALIMETRICS, INC.  
BILL OF MATERIALS LISTING

11/13/85  
PAGE 1

MASTER PART # 6410-  
DESCRIPTION 24" WIND SCREEN

COMPONENT PART # \ DESCRIPTION	QTY	REFERENCE
ECN- ENGR. CHANGE NOTICE	0	2378
MAN- MANUAL	1	6410-001
T801681- LEG WELD'D ASSY, FIXED QUAD	3	
T801682- LEG, WELD'D ASSY, GATE QUAD	1	
T960725- STD QUADRANT ASSY	3	
T960726- GATE QUADRANT ASSY	1	

10/15/98 35  
4.28.3

\*\* QUALIMETRICS, INC. \*\*  
BILL OF MATERIAL INQUIRY - 6411

10/15/98 PAGE 1  
1:39 PM (R070IZ)

LINE NO	RUN/ SET UP	COMPONENT	QTY EACH	UOM
10		ECN ENGR CHANGE NUMBER 3416	.0000	EA
20		SPC SPECIFICATION DWG TAB ON 6410-003	.0000	EA
30		6410 WIND SCREEN 24	1.0000	EA
40		6410-001 MANUAL USERS 6410	1.0000	EA
50		64101 EXTENDER LEGSST	1.0000	ST
9005	.0000 .0000	KIT		



10/15/98 35  
4.28.3

\*\* QUALIMETRICS, INC. \*\*  
BILL OF MATERIAL INQUIRY - 64101

10/15/98 PAGE 1  
1:39 PM (R070IZ)

LINE NO	RUN/ SET UP	COMPONENT	QTY EACH	UOM
10		T703206 THRD COUPLING 3/4 PIPE	4.0000	EA
20		T703207 NIPPLE GAL 3/4 X11	4.0000	EA
9005	.0000 .0000	KIT	2.0000	ST

10/15/98 35  
4.28.3

\*\* QUALIMETRICS, INC. \*\*  
BILL OF MATERIAL INQUIRY - 64102

10/15/98 PAGE 1  
1:37 PM (R070IZ)

LINE NO	RUN/ SET UP	COMPONENT	QTY EACH	UOM
10		ECN ENGR CHANGE NUMBER #2719	.0000	EA
20		M007040 SCR WOOD #14 X2.000 FLT SS SLT	16.0000	EA
30		M026511 FLANGE FLOOR 3/4	4.0000	EA
40		T721622 SCR SHT METL #10 X1.000 PAN SS	16.0000	EA
9005	.0000 .0000	KIT		ST



**allweatherinc**

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6410-001  
ECN 2409  
October, 1985