P

8 inch Coaxial Loudspeaker



Overview

The Prophile™ P is an ultra-compact, high efficiency coaxial loudspeaker that packs the output of a traditional 8 inch, horn-loaded HF loudspeaker into a much more compact enclosure. Its horizontal orientation, small vertical dimension, and trapezoidal shape allow it to be positioned extremely close to ceilings and under balconies. The P's low profile also makes it very useful as a front fill system when placed on the edge of or installed into a stage apron.

Fulcrum Acoustic's **TQ**™ processing is an integral part of the P design. Sound, innovative acoustical design combined with state of the art digital processing leads to exceptional clarity and precise transient response, even at very high sound pressure levels. The required digital signal processing can be provided by one of many supported platforms.

The P is an excellent option any time extremely limited space is available. Its high efficiency results in impressive levels, and its 100° x 100° coverage and coaxial design make it especially effective in close quarters. Low frequency extension to below 100 Hz enables it to integrate well with subwoofers and at 16 ohms, the P is an ideal choice for low impedance distributed systems where a high loudspeaker-to-amplifier ratio is desirable.

Technologies

The Prophile P includes a neodymium-based coaxial transducer which allows the compression driver diaphragm to be positioned very close to the woofer voice coil. This allows the system to maintain coherent summation and consistent off axis response through a passive crossover, allowing it to be powered with a single amplifier channel.

Performance Specifications[1]

Operating Mode
Single-amplified w/ DSP

Operating Range[2]
90 Hz to 20 kHz

Nominal Beamwidth
100° x 100°

Transducers
HF/LF: Coaxial 1.7" titanium diaphragm compression driver; 8.0" woofer, 2.0" voice coil; single neodymium magnet

Power Handling @ Nominal Impedance[3]
63 V / 250 W @ 16 Ω

Nominal Sensitivity @ Input Voltage[4] (whole space)
101 dB @ 4.00 V

Nominal Maximum SPL (peak / continuous)
131 dB / 125 dB

Equalized Sensitivity @ Input Voltage[5]
95 dB @ 4.00 V

Equalized Maximum SPL[6] (peak / continuous)
125 dB / 119 dB

Recommended Power Amplifier
250 W to 500 W @ 16 Ω

Physical Specifications

Connections
(2) Neutrik NL4 Speakon
Pin 1+/-: Full Range
Pin 2+/-: No Connection

Mounting / Suspension Points
(2) M6 x 1.0 yoke points

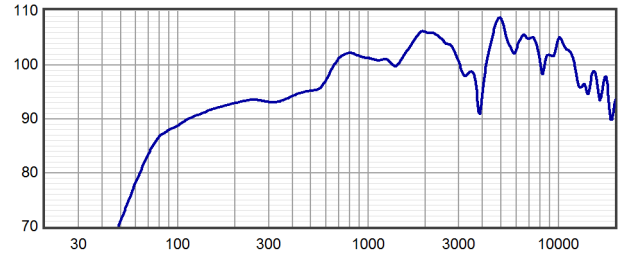
Dimensions / Weight
See pages 5 & 6

Finish
Black painted enclosure w/ matte black grille, or
White painted enclosure w/ matte white grille

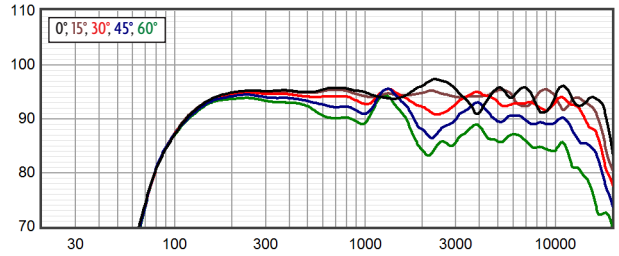
Options

YK-P yoke bracket, Terminal strip input, Custom color finish, Weather-resistant (WR) enclosure & hardware

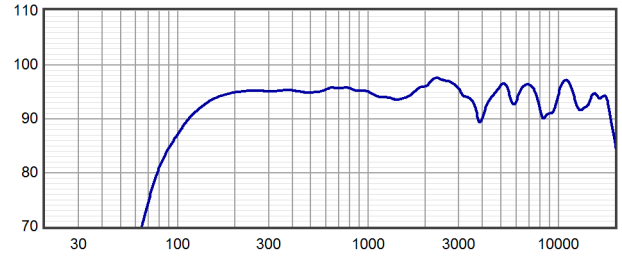
Axial Sensitivity (dB SPL, 4.0 V @ 1 m)[7, 8]



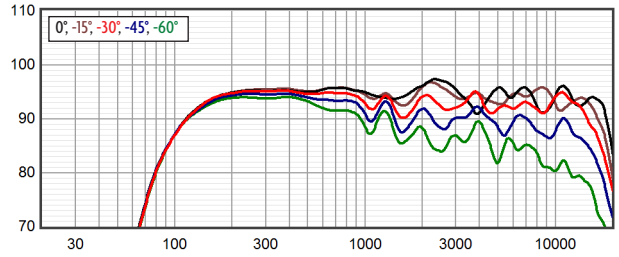
Horizontal Off Axis Response[7, 11]



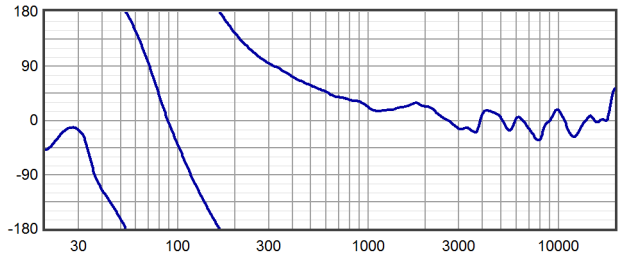
Axial Processed Response (dB)[7, 9]



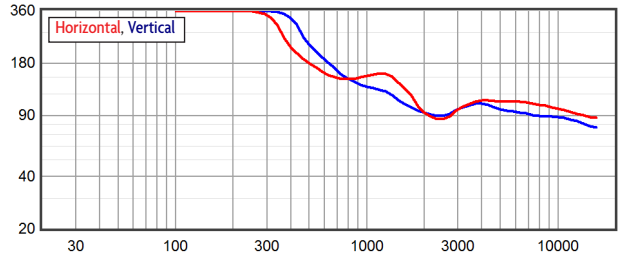
Vertical Off Axis Response[7, 11]



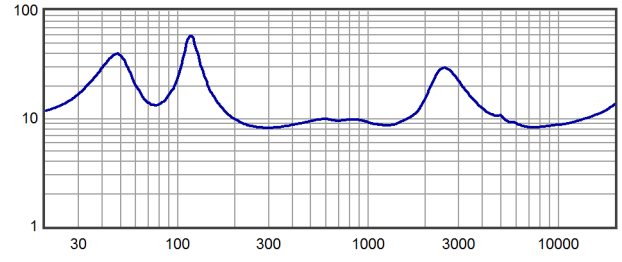
Axial Processed Phase Response (degrees)[7, 10]



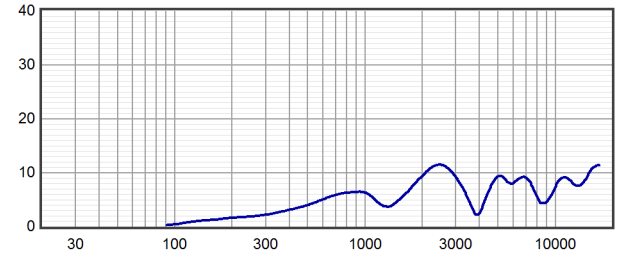
Beamwidth[7, 12]



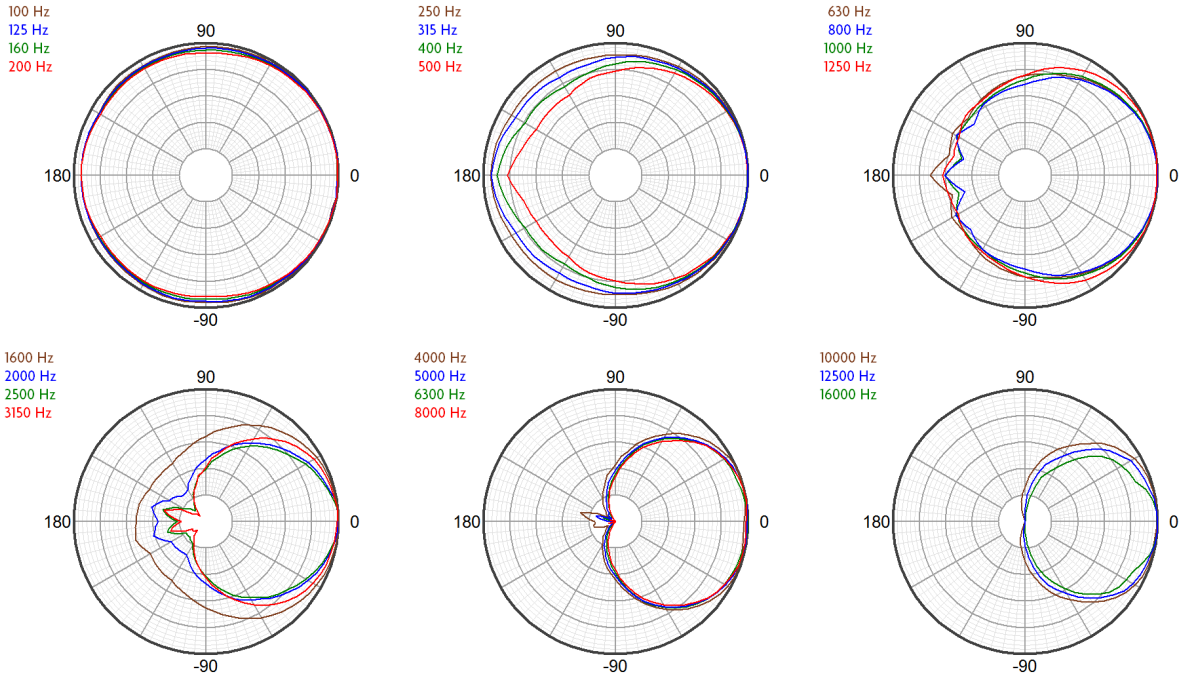
Impedance (ohms)



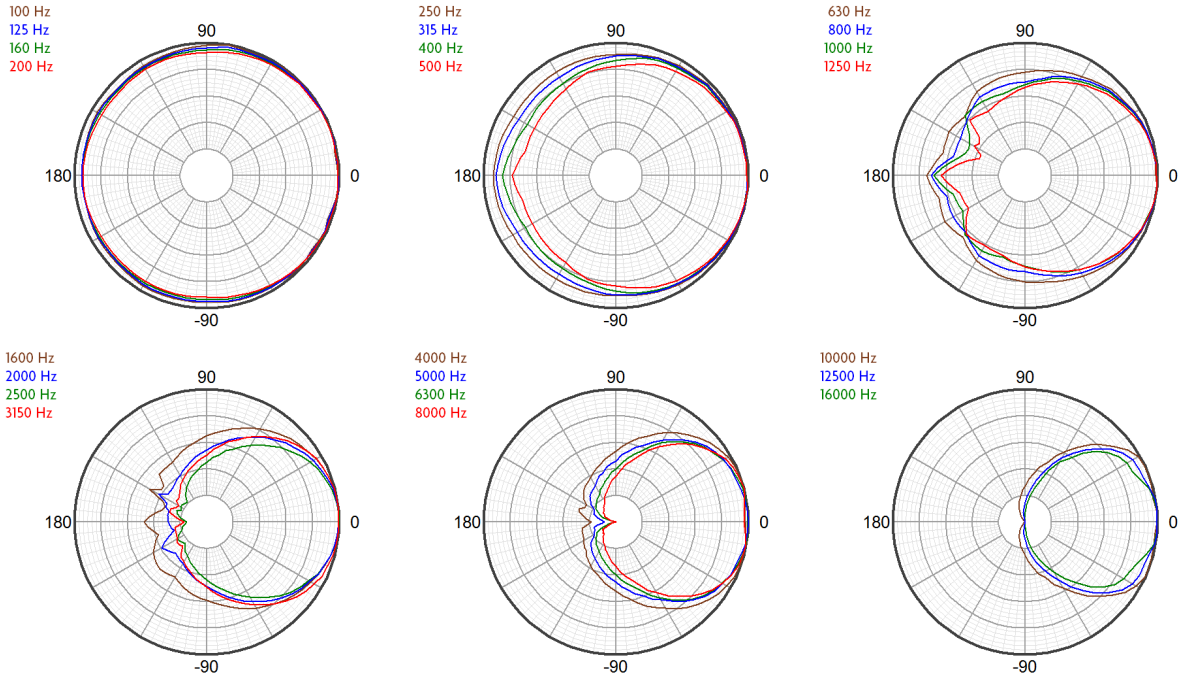
Directivity Index (dB)[13]



Horizontal Polar Response (30 dB Scale, 6 dB per Major Division)

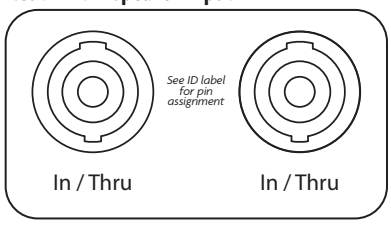


Vertical Polar Response (30 dB Scale, 6 dB per Major Division)



Connections

Neutrik NL4 Speakon Input



Mechanical Specification Drawings

2D and 3D DWG dimensional drawings are available for download at www.fulcrum-acoustic.com/resources

Notes

[1] **Performance Specifications** *All acoustic specifications rounded to nearest whole number. External DSP with Fulcrum Acoustic-provided settings is required to achieve the specified performance.*

[2] **Operating Range** *The frequency range within which the processed response is within 10 dB of the average.*

[3] **Power Handling** *Based on the AES power handling of the transducers.*

[4] **Nominal Sensitivity** *The 1-meter-referenced SPL produced by a 1 watt band limited pink noise signal, with no processing applied.*

[5] **Equalized Sensitivity** *The 1-meter-referenced SPL produced when an EIA-426-B signal is applied to an equalized loudspeaker system, at a level which produces a total power of 1 watt, in sum, to the loudspeaker subsections.*

[6] **Equalized Maximum SPL** *The 1-meter-referenced SPL produced when an EIA-426-B signal is applied to an equalized loudspeaker system, at a level which drives at least one subsection to its rated power.*

[7] **Resolution** *All response graphs are subjected to 1/6 octave cepstral smoothing with a gaussian weighting function.*

[8] **Axial Sensitivity** *The SPL plotted against frequency for a 1 watt swept sine wave, referenced to 1 m with no signal processing.*

[9] **Axial Processed Response** *The axial magnitude response with recommended signal processing applied.*

[10] **Axial Processed Phase Response** *The axial phase response with recommended signal processing applied, and latency removed.*

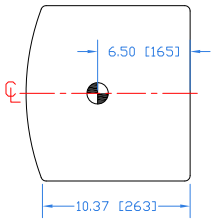
[11] **Horizontal / Vertical Off Axis Responses** *The magnitude response at various angles off axis, with recommended signal proceessing applied.*

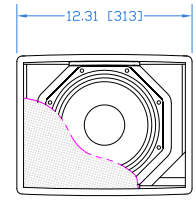
[12] **Beamwidth** *The angle between the -6 dB points in a loudspeaker's polar response.*

[13] **Directivity Index (D_i)** *The ratio of the on-axis sound pressure squared to the spherical average of the sound pressure squared at a particular frequency expressed in dB. To convert the directivity index to directivity factor (Q) use the formula* $10^{Di/10}$.

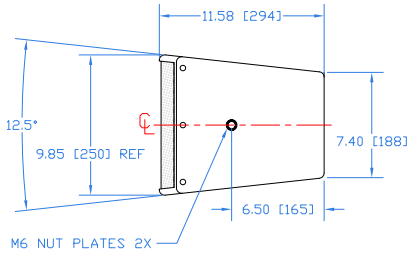
Notes:
1. Net Weight = Approx. 16.0 lb / 7.3 kg
2. Symbol ⊙ = M6 x 1.0 nut plate
3. Symbol ⊕ = CoG

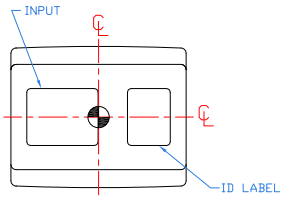
REVISIONS		
REV	DESCRIPTION	APPR / DATE
2	MOVED SIDE NUT PLATES, REMOVED PI ANGLES, ADDED OMNIMOUNT 30 POINTS, ADDED COG, UPDATED WEIGHT	RAF 12/22/09
3	ADD SHIPPING WEIGHT	RAF 12/8/11
4	OMNIMOUNT TO "THIRD PARTY" IN NOTE 4	RAF 1/13/12
5	REMOVE PAN/TILT MOUNT POINTS	RAF 7/28/16
6	ADD MTG PT THREAD PITCH TO NOTES	RAF 7/27/20
7	UPDATE NOTES	RAF 8/21/25

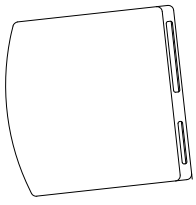




GRILLE PARTIALLY SHOWN





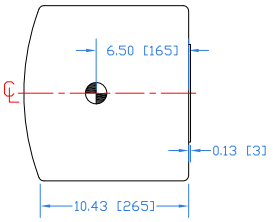


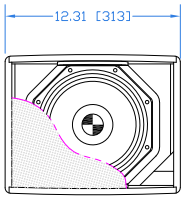
THIRD ANGLE PROJECTION	UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS ARE IN INCHES TOLERANCE IN INCHES .X±.1 .XX±.015 .XXX±.005 FRACTIONS ±1/32 ANGLES ±1/2° (X.XX) = REF DIMS NO TOLERANCE IMPLIED TSC = THEORETICAL SHARP CORNER DIMENSIONS ACROSS CENTERLINES TO BE SYMETRICAL	STATUS PRODUCTION	FULCRUM ACOUSTIC, LLC 1 MAIN STREET, WHITINSVILE, MA 01588 USA
THIS DRAWING IS THE PROPERTY OF FULCRUM ACOUSTIC, AND SHALL NOT BE COPIED, REPRODUCED, OR USED AS THE BASIS FOR MANUFACTURE OR SALE OF APPARATUS WITHOU WRITTEN AUTHORIZATION. DO NOT SCALE DRAWING.		APPROVALS / DATE DRAWN: DWG 4/29/09 CHECKED: RAF 5/6/09 DES ENG: MFG ENG:	TITLE: Mechanical Spec, P B SHEET 1 OF 1 SCALE: 1:12 DWG. NO. 820-100-019 REV 7

Drawing is reduced. Do not scale.

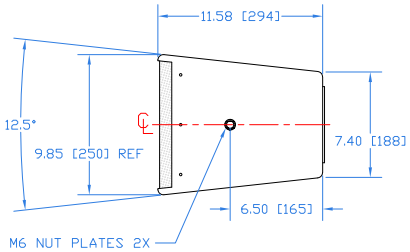
Notes:
1. Net Weight = Approx. 16.0 lb / 7.3 kg
2. Symbol ⊙ = M6 x 1.0 nut plate
3. Symbol ⊕ = CoG

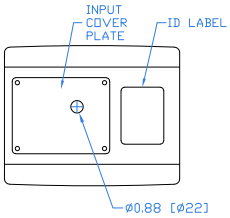
REVISIONS		
REV	DESCRIPTION	APPR / DATE
1	NEW ISSUE	RAF 1/14/16
2	REMOVE PAN/TILT MOUNT POINTS	RAF 7/28/16
3	UPDATE INPUT LOCATION & COVER PLATE	RAF 7/29/16
4	UPDATE NOTES, INPUT COVER PLATE	RAF 8/21/25

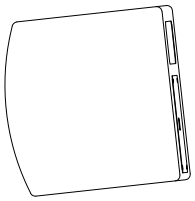




GRILLE PARTIALLY SHOWN





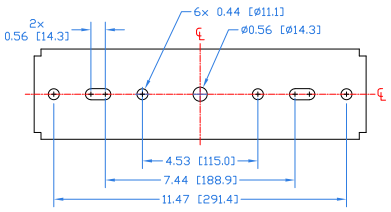


THIRD ANGLE PROJECTION	UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS ARE IN INCHES TOLERANCE IN INCHES .X±.1 .XX±.015 .XXX±.005 FRACTIONS ±1/32 ANGLES ±1/2° (X.XX) = REF DIMS NO TOLERANCE IMPLIED TSC = THEORETICAL SHARP CORNER DIMENSIONS ACROSS CENTERLINES TO BE SYMETRICAL	STATUS PRODUCTION	FULCRUM ACOUSTIC, LLC 1 MAIN STREET, WHITINSVILE, MA 01588 USA
		APPROVALS / DATE	TITLE: Mechanical Spec, P-WR
		DRAWN: RAF 1/14/16	
		CHECKED: DWG 1/14/16	
		DES ENG:	B SHEET 1 OF 1 SCALE: 1:12
THIS DRAWING IS THE PROPERTY OF FULCRUM ACOUSTIC, AND SHALL NOT BE COPIED, REPRODUCED, OR USED AS THE BASIS FOR MANUFACTURE OR SALE OF APPARATUS WITHOU WRITTEN AUTHORIZATION. DO NOT SCALE DRAWING.		MFG ENG:	DWG. NO. 820-100-092 REV 4

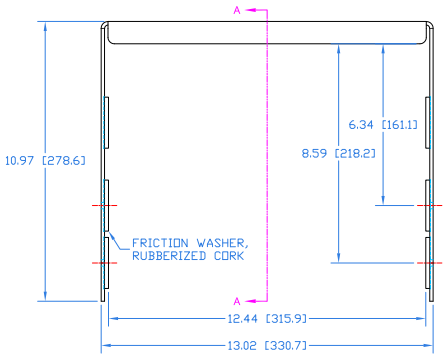
Drawing is reduced. Do not scale.

Notes:
1. Fits: Prophile P
2. Net Weight: Approx. 5.3 lb / 2.4 kg
3. Material: 10 GA ASTM A36 steel
4. Includes 2x each M6 socket head cap screws, split washers, and flat washers

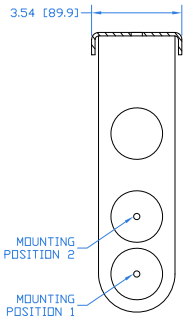
REVISIONS		
REV	DESCRIPTION	APPR / DATE
1	NEW ISSUE	06/26/20
2	UPDATE DIMS	12/15/20
3	UPDATE NOTES, ADD WASHERS	01/18/21
4	UPDATE WASHERS	08/05/25



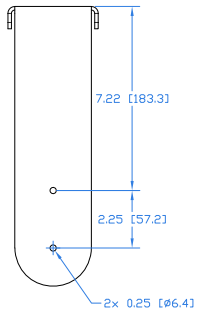
TOP



FRONT



SECTION A-A



RIGHT SIDE

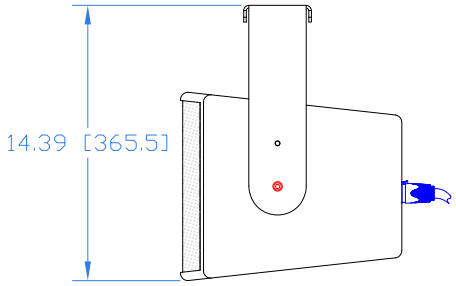
THIRD ANGLE PROJECTION	UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS ARE IN INCHES TOLERANCE IN INCHES .X±.1 .XX±.015 .XXX±.005 FRACTIONS ±1/32 ANGLES ±1/2° (X.XX) = REF DIMS NO TOLERANCE IMPLIED TSC = THEORETICAL SHARP CORNER DIMENSIONS ACROSS CENTERLINES TO BE SYMETRICAL	STATUS: RELEASED	FULCRUM ACOUSTIC, LLC 1 MAIN STREET, WHITINSVILLE, MA 01588 USA
THIS DRAWING IS THE PROPERTY OF FULCRUM ACOUSTIC, AND SHALL NOT BE COPIED, REPRODUCED, OR USED AS THE BASIS FOR MANUFACTURE OR SALE OF APPARATUS WITHOU WRITTEN AUTHORIZATION. DO NOT SCALE DRAWING.	APPROVALS / DATE DRAWN: RAF 06/23/20 CHECKED: DWG 06/30/20 DES ENG: MFG ENG:		TITLE: Mechanical Spec, YK-P Yoke Bracket A SHEET 1 OF 1 SCALE: 1:6 DWG. NO. 820-300-026 REV 4

Drawing is reduced. Do not scale.

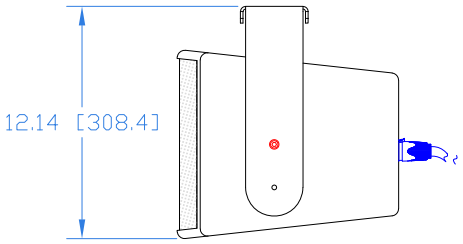
Notes:
The YK-P yoke bracket is designed to mount the Prophile P loudspeaker in a horizontal orientation. It is fitted with two mounting holes which allow the installer to vary the distance between the loudspeaker enclosure and the mounting surface.

Note that the range of motion is restricted when the enclosure is mounted closer to the yoke. The maximum range of motion is achieved when the enclosure is mounted to the holes nearest the end of the bracket arms.

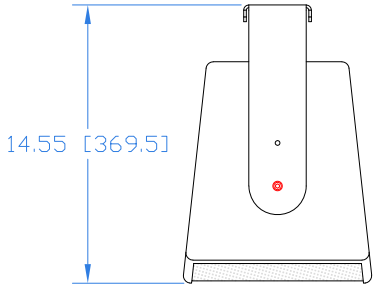
REVISIONS		
REV	DESCRIPTION	APPR / DATE
1	NEW ISSUE	RAF 6/23/20
2	UPDATE DIMS	RAF 12/15/20
3	CHANGE DRAWING ORIENTATION	RAF 8/5/25

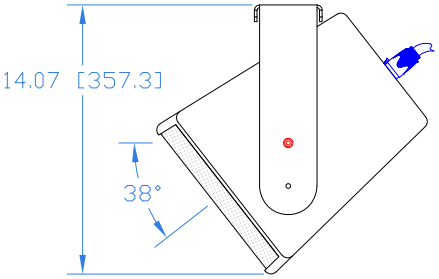


MOUNTING POSTION 1



MOUNTING POSTION 2





THIRD ANGLE PROJECTION	UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS ARE IN INCHES TOLERANCE IN INCHES .X±.1 .XX±.015 .XXX±.005 FRACTIONS ±1/32 ANGLES ±1/2° (X.XX) = REF DIMS NO TOLERANCE IMPLIED TSC = THEORETICAL SHARP CORNER DIMENSIONS ACROSS CENTERLINES TO BE SYMETRICAL	STATUS RELEASED	FULCRUM ACOUSTIC, LLC 1 MAIN STREET, WHITINSVILLE, MA 01588 USA
		APPROVALS / DATE	
		DRAWN: RAF 06/23/20	TITLE: Mechanical Spec, YK-P + Prophile P Assembly
		CHECKED: DWG 06/30/20	
		DES ENG:	A SHEET 1 OF 1 SCALE: 1:8
THIS DRAWING IS THE PROPERTY OF FULCRUM ACOUSTIC, AND SHALL NOT BE COPIED, REPRODUCED, OR USED AS THE BASIS FOR MANUFACTURE OR SALE OF APPARATUS WITHOU WRITTEN AUTHORIZATION. DO NOT SCALE DRAWING.		MFG ENG:	DWG. NO. 820-300-027 REV 3

Drawing is reduced. Do not scale.