

Chace Air Indicator Kit

HM-34

INTRODUCTION

The Chace Air Indicator has been found effective for determining the approximate air content of freshly mixed concrete. It should not be considered suitable for replacing other, more accurate air content tests such as the gravimetric or pressure methods.

NOTE: These instructions are intended to address general operating procedures for this device. For exact test protocol, please refer to AASHTO T 199.

FEATURES

- Glass Indicator Vial
- Rubber Stopper with Sample Cup
- Plastic Squeeze Bottle
- Cleaning Brush
- Plastic Case

OPERATING INSTRUCTIONS

Obtain a sample of concrete mortar by passing a quantity of fresh concrete through a No.10 sieve. **DO NOT** wet the sieve cloth prior to screening.

Pick up the mortar with a small spatula or narrow knife blade and fill the Sample Cup. Consolidate the mortar in the cup in accordance with the AASHTO test procedure. Strike off the mortar flush with the top of the cup and clean the sides of the cup and stopper.

With a finger over the stem opening of the Glass Indicator Vial, fill with 70% Aqueous Isopropyl Alcohol from the Squeeze Bottle to the reference line on the large end of the vial.

Insert the Stopper with sample in the vial and invert. Adjust liquid level to top line of stem ensuring that all air bubbles are removed and the stopper is firmly in place.

Place a finger over the stem opening and gently rock the Indicator from vertical to horizontal several times until all mortar has been washed out of the cup into the alcohol.

With the indicator held vertically, carefully remove finger from the stem opening and count the number of stem spaces from the top line to the new liquid level. For mixes with 15 cubic feet of mortar per cubic yard, the number of spaces directly represents the percent air content. For different mortar contents, adjust using the Conversion Table (see Figure 1). It is also possible to develop correlations with pressure or gravimetric meters.



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Upon test completion, invert the Indicator to flush out sand particles from between the stopper and glass to prevent jamming when removing the stopper. Wash and clean the assembly immediately after each use with clean water.

CONVERSION TABLE

For mortar contents other than 15 cubic feet (ft³) per cubic yard, multiply stem readings by the following constants.

10ft ³ = 0.67	16ft ³ = 1.07	22ft ³ = 1.46
11ft ³ = 0.73	17ft ³ = 1.13	23ft ³ = 1.52
12ft ³ = 0.80	18ft ³ = 1.20	24ft ³ = 1.59
13ft ³ = 0.86	19ft ³ = 1.26	25ft ³ = 1.66
14ft ³ = 0.93	20ft ³ = 1.33	26ft ³ = 1.72
15ft ³ = 1.00	21ft ³ = 1.39	27ft ³ = 1.78

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