

## Accubutes, Rating Factors, and Inventory

On occasion, we've received questions asking why our ACCUBUTE Instrument Transformers don't have a greater Rating Factor (RF) . We'd like to show how conventional IT's having higher RF values hold no advantage in this regard. In fact, ACCUBUTE range is equal to or superior, and accuracy is always superior to, any conventional IT with rating factors up to 3.0 ! An example will help clarify the issue...

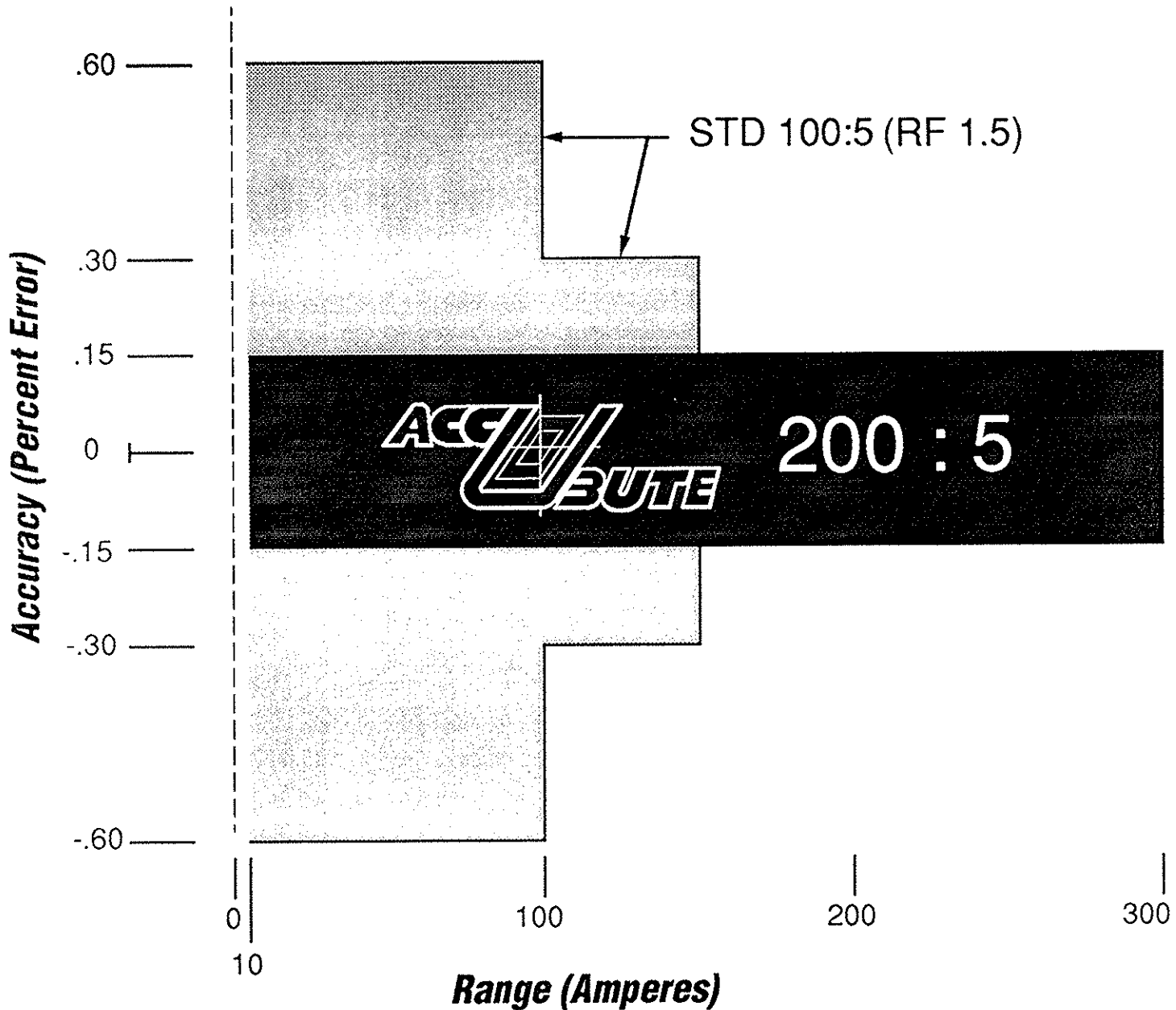
If you use a conventional 0.3 accuracy class 100:5 CT with a RF of 3.0, ANSI C57.13-1978 performance allows +/- 0.3% accuracy from 100 to 300 amps of primary current, and +/- 0.6% accuracy from 10 to 100 amps. Conventional thinking may lead the user to compare this transformer with a 100:5 ACCUBUTE , and be disappointed to find ACCUBUTE's RF of 1.5 limits its maximum current to 150 Amperes.

We suggest you consider a 200:5 ACCUBUTE with an RF = 1.5 ! ACCUBUTE accuracy is *certified* from 5% of rated current to the maximum current indicated by the Rating Factor. In our example, this means the ACCUBUTE has +/- 0.15% accuracy from 10 Amps ( $200 * 5\%$ ) through 300 Amps ( $200 * 1.5$  ). That matches the dynamic range of the conventional CT discribed above, (10 Amps to 300 Amps) and provides superior accuracy at the same time. Note that this accuracy improvement is greatest (up to 4 times) where you need it the most; between 10 and 100 amps. Utility studies indicate that most metering is done at the light load end of a typical system. Keep this information in mind when someone suggests that ACCUBUTE's are disadvantaged when it comes to Rating Factors. With ACCUBUTE's superior performance over a wide dynamic range, you can easily specify the very highest accuracy metering systems commercially available . In addition, this ACCUBUTE performance advantage may help reduce the capital you tie up in inventory.

The following charts may be helpful to visualize how the above information can be used to your advantage by reducing inventory stocking and ordering requirements. You will then know how the ACCUBUTE performance advantage translates into an ACCUBUTE economic advantage.

# Accubute Inventory Reduction :

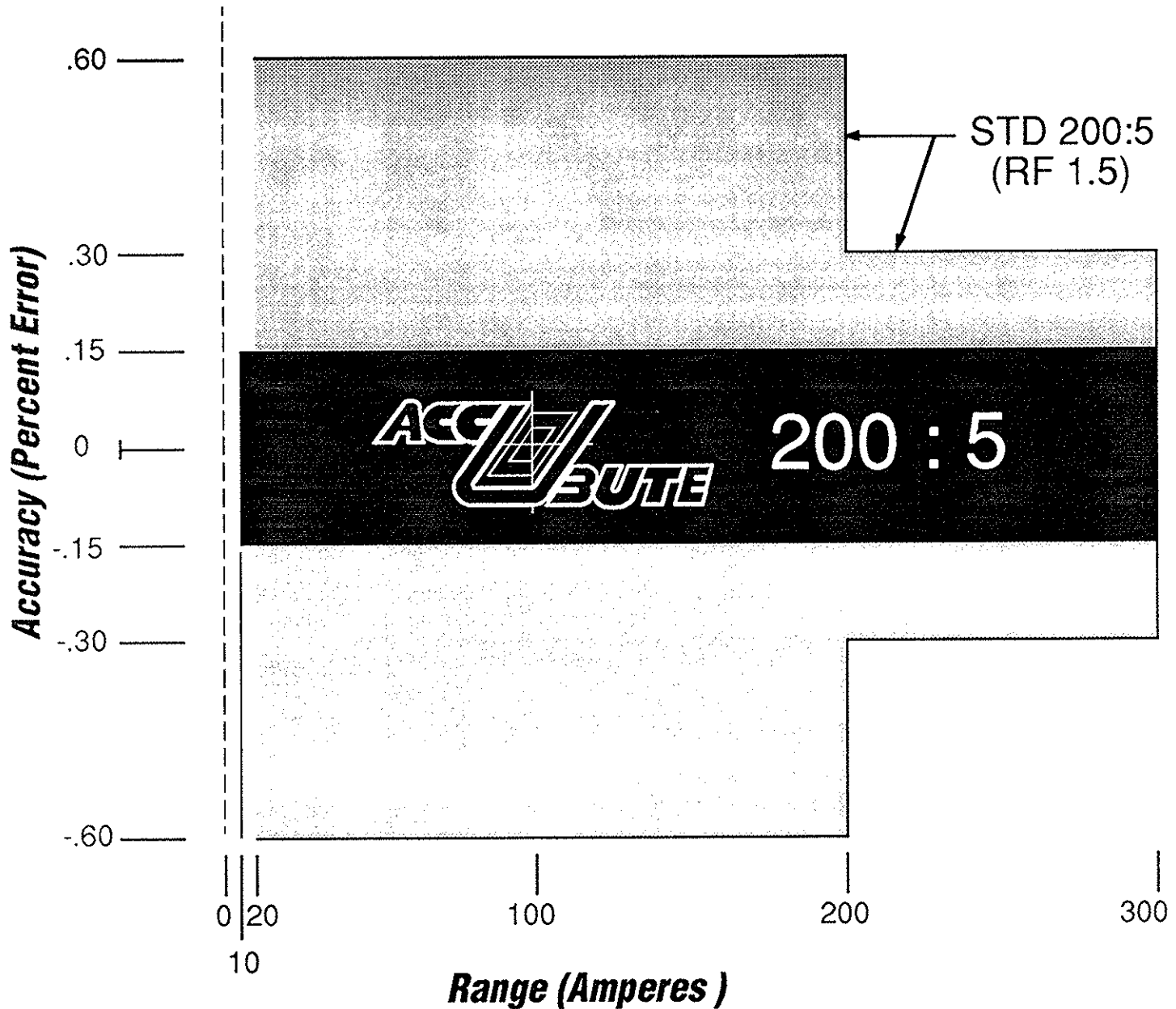
Example 1: Accubute 200:5 vs STD 100:5



**ACCUBUTE** : Greater Range  
Superior Accuracy

# Accubute Inventory Reduction :

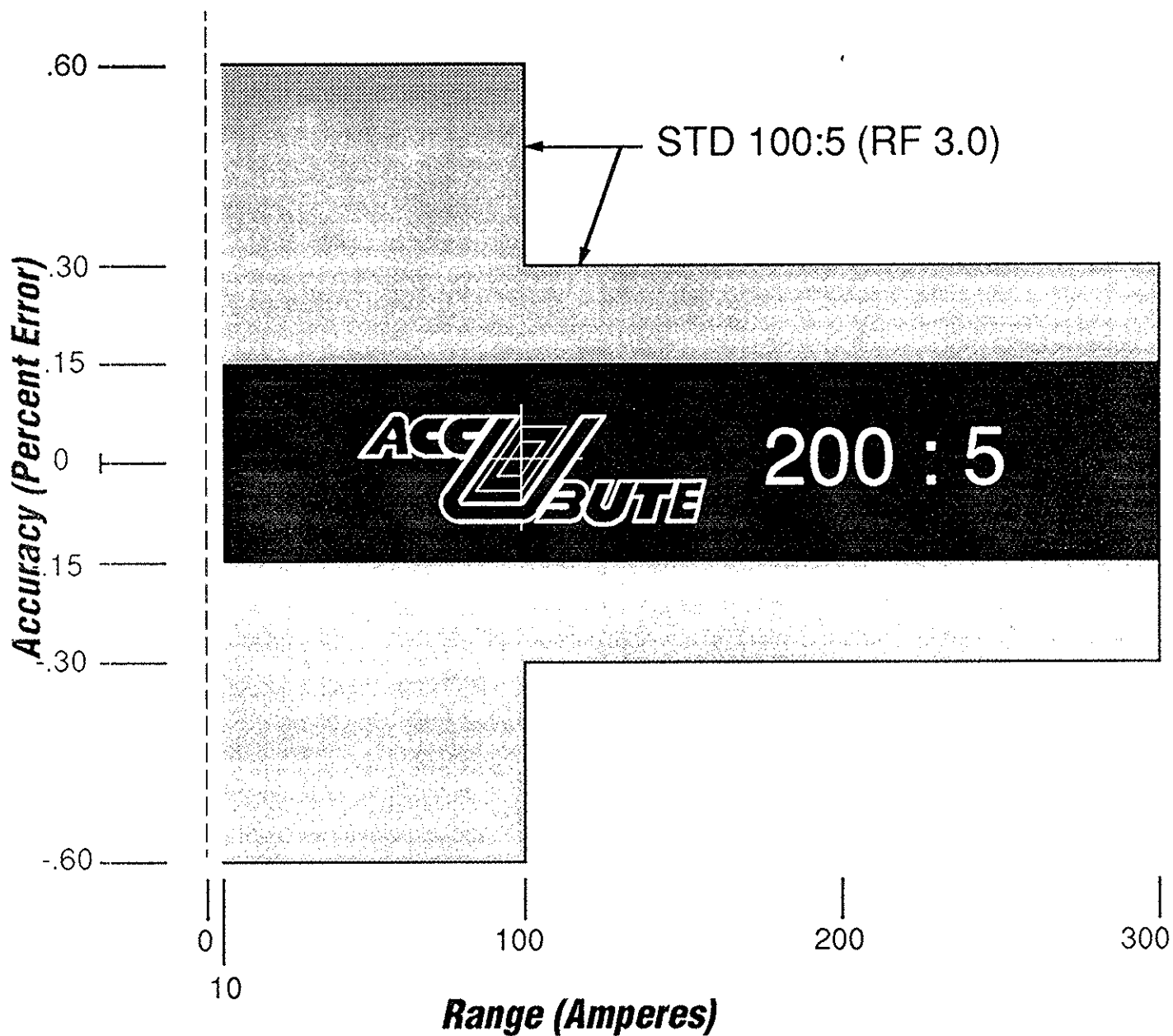
Example 2: Accubute 200:5 vs STD 200:5



**ACCUBUTE: Greater Range Superior Accuracy**

# Accubute Inventory Reduction :

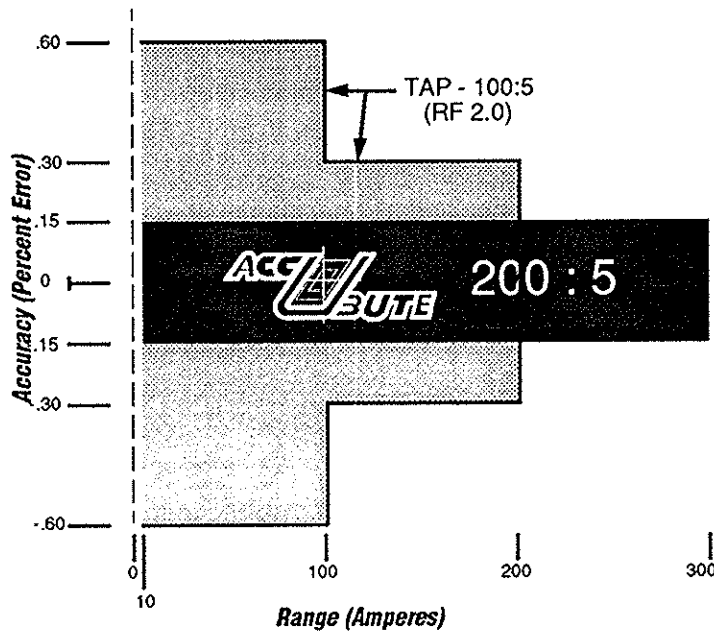
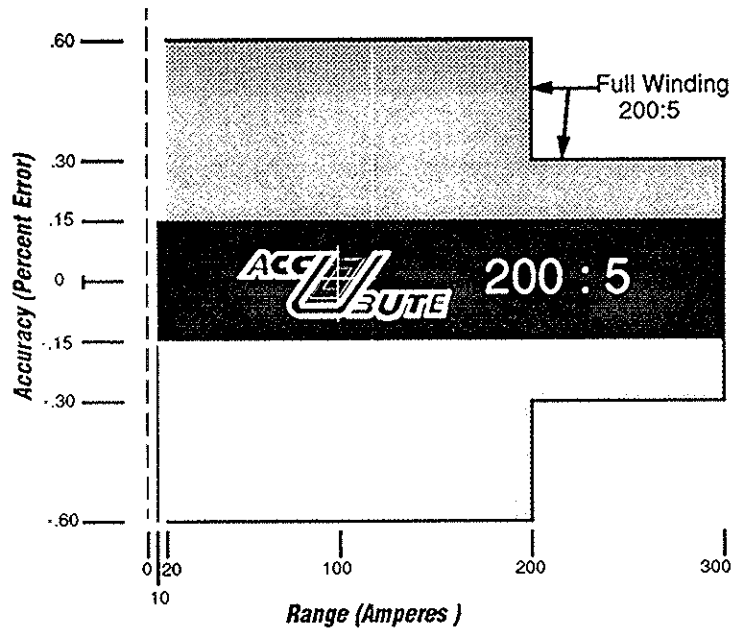
Example 3: Accubute 200:5 vs STD 100:5 , RF = 3



**ACCUBUTE** : Equivalent Range  
Superior Accuracy

# Accubute Inventory Reduction :

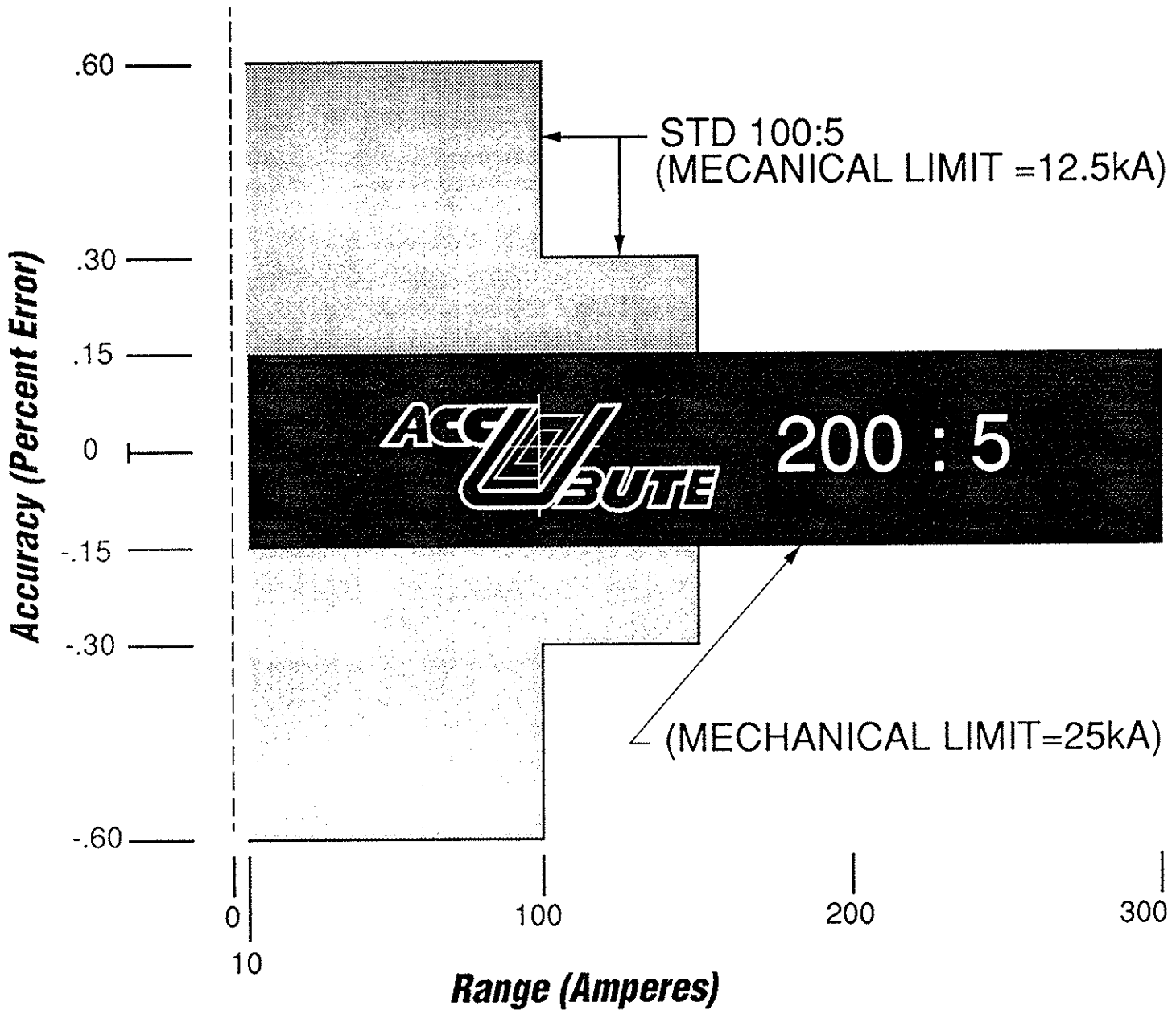
## Example 4: Accubute 200:5 vs STD (Tapped) 100/200:5



**ACCUBUTE** : No Tap Changes  
Superior Accuracy

# Accubute Inventory Reduction :

**Example 5: Need to Meter at Low Current (10A)  
But Require High Mechanical Limit (16kA)**



**ACCUBUTE : High Mechanical Limit  
Superior Accuracy**

# ***Accubute Inventory Reduction :***

## ***Summary***

**ACCUBUTE** CAN REDUCE  
STOCKING REQUIREMENTS  
BY 2-3 TIMES

**ACCUBUTE** CURRENT RANGE  
IS EQUAL OR GREATER THAN  
CONVENTIONAL TRANSFORMERS

**ACCUBUTE** ELIMINATES  
COSTLY SERVICE CALLS FOR  
LOAD GROWTH TAP CHANGES

**ACCUBUTE** PROVIDES A  
HIGHER MECHANICAL LIMIT FOR A  
GIVEN LOW CURRENT METERING  
REQUIREMENT

**ACCUBUTE** ACCURACY IS  
SUPERIOR ... TAILORED FOR  
ELECTRONIC METERS