



UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

DIVISION OF
CORPORATION FINANCE

Mail Stop 3030

August 11, 2016

Via E-mail

Susan K. Carter
Senior Vice President
and Chief Financial Officer
Ingersoll-Rand Public Limited Company
170/175 Lakeview Drive
Airsides Business Park
Swords, Co. Dublin
Ireland

**Re: Ingersoll-Rand Public Limited Company
Form 10-K for Fiscal Year Ended December 31, 2015
Filed February 12, 2016
Form 8-K Filed July 27, 2016
File No. 001-34400**

Dear Ms. Carter:

We have reviewed your July 15, 2016 response to our comment letter and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to these comments within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing your response to these comments, we may have additional comments. Unless we note otherwise, our references to prior comments are to comments in our June 30, 2016 letter.

Form 8-K Filed July 27, 2016

1. We note that you present free cash flow in the Highlights on the first page of your earnings release, a bullet point discussion of an adjusted income tax rate on the second page and bullet point discussions of segment adjusted operating margins on the second and third pages without also presenting the comparable GAAP measures with equal or greater prominence, as required by Item 10(e)(1)(i)(A) of Regulation S-K, which is inconsistent with the updated Compliance and Disclosure Interpretations issued on May 17, 2016. Please review that guidance when preparing future earnings releases.

2. On page 4 you present a measure of forecasted free cash flow without a quantitative reconciliation or disclosing why a quantitative reconciliation cannot be provided without unreasonable efforts, which is inconsistent with the updated Compliance and Disclosure Interpretations issued on May 17, 2016. Please review that guidance when preparing future earnings releases.
3. In Table 5 you present a measure of EBITDA that appears to be inconsistent with the definition in Exchange Act Release No. 47226 and with the updated Compliance and Disclosure Interpretations issued on May 17, 2016. In future releases, please revise the title so that your measure is distinguished from EBITDA as conventionally defined.
4. We note that in Table 5 of your earnings release you reconcile segment, corporate and total company EBITDA to operating income and not to net income, which is inconsistent with the guidance in Question 103.02 of the updated Compliance and Disclosure Interpretations issued on May 17, 2016. Please review that guidance when preparing future earnings releases.

You may contact Andri Carpenter at (202) 551-3645 or Gary Todd, Senior Accountant, at (202) 551-3605 with any questions. You may also reach me at (202) 551-3676.

Sincerely,

/s/Gary Todd for

Brian Cascio
Accounting Branch Chief
Office of Electronics and Machinery