Apples & GRG -
What They Have in Common

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(Editor's Note: The following article is the first in a series that will examine glass reinforced gypsum, a growing market segment for the wall and ceiling contractor. Opinions presented here are those of the author. Reader response is welcome.)

Many drywall, plastering and interior contractors are understandably becoming increasingly concerned with the stability of the GRG manufacturers with whom they are about to do business. They tell me that they often wonder whether their chosen supplier will even be around to deliver their ordered goods.

Here are some questions that should be asked of a manufacturer when requesting a quotation, or even more importantly, prior to order placement.

The bottom line these days, certainly, follows the old, time-worn cliche “you get what you pay for.” Although a very important consideration, don’t let the cheapest material supply price be the only criteria for your selection of a manufacturer.

Quality

Quality should be an all-encompassing consideration. Unfortunately, buyers/users of GRG often assess quality solely by the caliber of the surface finish of the material.

A comprehensive North American survey, conducted recently (and
still ongoing) by DecoForm Corp., shows that most GRG installation contractors consider “promised delivery” and “product quality” to be principal components in choosing a supplier. Everyone who responded to the questionnaire had experienced a few problems with GRG products and/or manufacturers. Some problems were major, and many were schedule related.

More attention must be placed on the ease of installing GRG components. A considerable amount of time and money can be spent by the installing contractor, who must work with poorly engineered and/or manufactured GRG components.

The term “Comparing Apples to Apples” applies well to GRG products today. The manufacture of GRG components is extremely labor-intensive when compared to the costs of the raw materials used.

A tooling department of skilled craftsmen with specialized equipment is required in order to produce custom and standard shapes on a timely basis. A well trained engineering department is the key when quality shop drawings are required, as they are for most projects.

Beyond the prescribed materials required for GRG production, others may be introduced during project lay up, as deemed necessary by the manufacturer. As a cost saving measure, some manufacturers may omit necessary reinforcing materials such as wood or metal and then wonder why lines and edges do not remain straight. Many components, in fact, are not manufactured straight in the first place.

GRG manufacturers have their own unique way of assembling a quotation, and one manufacturer may include or exclude some items in the process. For example, a manufacturer may quote freight as an extra or as an estimated amount or exclude it entirely. They may charge extra for tooling. Some don’t pay commission to their sales agents for the tooling. These are simply contrary ways of conducting business. The point is that they are all set up differently from quote to quote and project to project.

When quoting unusually tall columns, some manufacturers may prefer to quote the stacking sections as shorter lengths than those quoted by other manufacturers, possibly creating more work for the installer without his knowledge. Given the hectic pace at the time of bidding, this may not be obvious at the time the quotations are received. The problem then is that the lower price is carried and the winning contractor may then have no option but to use the products of that manufacturer.

These days, most contractors cannot afford a time to look into such details when they must submit a price in a hurry, especially when GRG represents only 5% or 10% of their potential contract dollar amount. It’s the same old story; the buyer must educate himself so as to be aware of the techniques and appreciate the
differences between the various manufacturers.

GRG profiles designed into a project are often insufficiently detailed on architectural drawings. Fastening details and product reinforcements are almost never addressed. Much of what is detailed, in fact, is left up to the installing contractor to decipher and interpret. Given his understandable lack of knowledge regarding the engineering of GRG components, much by default is then left to the expertise and discretion of the material supplier.

With interpretation comes short cuts in product design. Such “false economies” lead to a greatly increased potential for poor design and the manufacture of inferior products.

The dilemma facing the GRG supplier is that if his products are manufactured in a manner which would make them easier to install, his production costs would be significantly higher than those of his competition, who may have decided to take a short cut approach.

Competition in all segments of construction is so fierce today that no one can afford to “over design.” Many installers overlook the fact that the combined supply/installated price may in fact be cheaper, due to fewer site problems and less site labor. As such they do not plug in a legitimate, lower labor factor, subscribing instead to the adage that all GRG is created equal.

So long as installing contractors believe that all GRG is created equal,

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GRG manufacturers are compelled to produce components as inexpensively as possible, most often at the expense of quality and installation ease.

You Want the Product - When? . . . No Problem.

How many contractors have been promised delivery dates that went by the board? According to DecoForm’s survey results, this is one of the GRG industry’s greatest problems. Delivering a product within the period negotiated is definitely a form of quality. It displays the serviceability of the company with whom the order is placed.

Shipments received on time may not impress the buyer/installer, but
late deliveries would probably diminish the reputation of that manufacturer’s service quality. It is the bad jobs that we all tend to remember. GRG manufacturers cannot afford more bad press, and late deliveries will attract more bad press than most any other problem.

It is very important that the buyer abide by his commitment to accept goods that are ready to be shipped, according to the contracted delivery schedule. There are few things worse for a manufacturer than working among finished products that restrict his production and cash flow. It must be a team effort between both the manufacturer and the customer. Generally, GRG components are made to order and as such are neither held in inventory nor supplied off the shelf.

Product Design

How can product design vary from manufacturer to manufacturer? Taking a simple column cover as an example, most contractors would confirm that the installation of column halves shown in Fig. 1 (see page 45) would require less site labor than those in Fig. 2. Remember that glued column halves require the installation crew to return the next day to fill the joint since an overnight cure is required. Mechanically fastened halves require no such dwell time, which in turn means no shifting of scaffolding etc., etc.

We all know that a column half rarely assembles exactly flush with the opposing half. Therefore it is much easier for the installer to blend drywall compound over a three inch wide, drywall bevel style seam, than to attempt to disguise a misaligned butt joint. It is, however, easier and cheaper for a GRG manufacturer to produce column halves with the butt joint detail since integral, more expensive, wood or metal reinforcing strips would not be required. Removing the part from the mold is also much easier.

The questions that must be asked are:

--Which option contributes more to the ease of installation?
--Which method would result in a superior visual finish and in less time?
--Which fastening details does the...
manufacturer supply as standard?

--Has the supplier made the manufacture of the parts easier at his customer’s installation expense?

--Which would be the option of preference if the tape joint version carried no premium in price?

Another example of a manufacturer designing a product with the installer in mind is evident in simple (wall to ceiling) curved light reflects. Architectural drawings often show little more than a schematic profile of the reflector with minimal detail. Again it’s up to the GRG manufacturer to interpret and decide exactly what will be supplied. Obviously, the supplier is compelled to use a less expensive option since he was awarded the job based on his low price.

It takes discipline on the part of the GRG manufacturer to price, design and build a superior product, when he knows he will be accepted or rejected based solely on his material supplied price.

As illustrated in Figs. 3 and 4 (see page 51), a reflector can be supplied simply as 90 degrees of a circle or conversely with extensions that take the profile beyond the critical, taped tangent of the curvature. Taping at the tangential center-line is difficult and has the potential of being highly visible, especially when cross lit. The labor required to install properly engineered components will often compensate for the difference in the material supply costs of the less expensive alternative.
Again, the method that favors the installer is more costly to the manufacturer, both for tooling and additional square footage of material. An eight foot long reflector with the addition of the taping extensions adds four additional square feet of material to the part. Based on, say, $4.50 per square foot, the price of the improved option has legitimately increased by $18.00. However, the cheaper version (Fig. 4) will likely be supplied, unless the buyer knows which questions to ask. By the same token, if the buyer does not want the extensions he should inform the manufacturer accordingly and vice versa. It is up to the installing contractor to decide whether such a design will save him money.

Bulkheads, molding, cornices and light troughs similar to the one outlined in Fig. 5 (see page 54) are often an installer’s nightmare when it comes to maintaining the straightness of horizontal lines. If the GRG parts are not received straight at the jobsite, the installer must compensate either by investing time straightening them, or applying spackling compound over extended lengths between joints. One thing is for certain, a section that is loaded on the truck warped will not likely be off-loaded straight at the site.

The fact is, that straightness can be dramatically improved by the manufacturer with the introduction of integrally positioned, continuous metal angle. A few manufacturers do this, but most do not. To some it is seen as an unnecessary expense which would increase the selling price, rendering them somewhat less competitive or reducing their profit margin. Should a manufacturer implement these features or not? Does the installer care? Does the installer realize that there are differences to consider?

Unless the bidding contractors know enough to adjust the installation portion of their costs accordingly, the manufacturer who supplies parts that are easier/cheaper to install will appear to be charging a premium when in fact he is trying to help his customer by building more easily installed, higher quality products.

The point is that the installed price is most often less as a result of buying the slightly more expensive component. The higher quality is a bonus in
The Wounds of Competition

Although it should not be the case, one of the first casualties of competition in the GRG industry is the scaling down or elimination of in-house quality control, assuming such a program existed in the first place. Less time is assigned to this station in an attempt to reduce overall costs and meet contract commitments.

This can result in an increase in the number of product/site related problems, and the contractor inevitably spends more time than anticipated in completing the installation.

Time delays for the installer may result in backcharges to the manufacturer who, as you recall, was awarded the project in the first place as the low bidder.

Often the field support is simply not available from the manufacturer.

Comparative shopping of GRG is both wise and necessary

who low-balled the job in the first place. Manufacturers learn the hard way, often too late, that the cheapest form of quality control is that which is conducted in house . . . cheapest for the manufacturer and, when the project is complete, for the installer.

Surface Quality

As stated earlier, surface quality is perceived to be the most obvious form of quality since it deals with aesthetic values—those touchy, feely sorts of things. After all, GRG is a decorative product.

When all is said and done, GRG isn’t much more than the union of water, gypsum powder and glassfi-
watch dog.

Surface quality has a lot to do with the amount of time spent on the piece in production. The manufacturer has the option of spending the required time at the layup stage or alternatively at the patching station after the part has been removed from the mold. However, the finish of a patched surface is suspect and is rarely as good as that of the originally cast surface. Also, patching repairs are often easily detected on the job site by the installing contractor or architect—but often only after the product has been primed or painted.

An inexperienced manufacturer may not spend the time to lay up the parts correctly or patch them sufficiently. If the manufacturer doesn’t take the time to do the job right the first time, the installer usually ends up spending time fixing it on-site.

Service

Unlike earlier days of GRG production, manufacturers can no longer afford to give the installer the on-site assistance he would like to provide. The manufacturer cannot afford to build-in the cost of a sitevisit due to his low profit margins, as a result of fierce competition for the project in the first place. This makes it particularly hard on first time installers who rely on the expertise of a solid manufacturer to guide them along.

It is common knowledge among manufacturers that the
rice per square foot of factory supplied GRG components is approximately half that of 10 years ago, in spite of the increases in materials and labor.

GRG manufacturing entry costs are comparatively low, but the ability to grow as business pressures escalate is the real trick. The demise of not only new manufacturers but also some of the larger, more established companies continues. Contractors, as I mentioned earlier, wonder whether the manufacturer with whom they place an order will be in business long enough to deliver it. A sad commentary, but it is reality.

Expertise

The truth is that there are only two raw material suppliers who produce a gypsum powder acceptable for GRG production as we know it today. Likewise there are only a few suppliers of glass fiber suitable for the GRG industry.

Most claims of physical property superiority are due to the overactive glands of those responsible for the marketing of the various GRG manufacturers, since the same basic raw materials are used by each. In fact, additives introduced to improve some physical properties may adversely affect others.

The eventual quality of the finished products is more the result of the expertise of the personnel employed by the manufacturer. Companies of professional status, with a concern for the customer’s needs, will ultimately prevail.

In Closing

Comparing apples to apples is becoming a science. Potential buyers of GRG products must ask not only the brand and origin of the apples they are about to purchase but also their size, weight and age. Are they half or full round apples? Does the price include delivery? Are taxes in or out?

Buyer beware! Comparative shopping is both wise and necessary.

The GRG Shopping List

(A Buyer’s Guide)

Bidding considerations when comparing GRG manufacturer’s quotations:

Column Covers

--Request a copy of their proposed and/or standard attachment details.
--Where heights are greater than 9 feet, ask as to the number of sections (lifts) to be supplied.
--Where appropriate, ask whether the shaft is supplied with integral base or capital vs. separate units.
--Are their built-in tape joints with integral reinforcement other than glass fiber--such as wood or metal (Figs. 1 and 2)?
--Are column halves designed to be mechanically fastened, or are they to be attached using adhesives?
--Do their columns incorporate integral, horizontal, radial metal reinforcing channels on larger diameters (over 28” diameter)?
Reflectors--Light Troughs--Moldings

--Do their reflectors incorporate vertical and/or horizontal extensions (Figs. 3 and 4) that result in installation savings?
--Be sure corner conditions are included.
--Do they build in additional reinforcing (such as wood or metal) to maintain the straightness of visually sensitive lines (Fig. 5)?
--If applicable, ask whether they have included additional footage for wastage.
--Inquire as to the unit length(s) and the number of parts (longer or specific lengths may represent less site labor).
--If your project would be better served by using specific unit lengths, ask them to supply pricing on those lengths.
--Do their components incorporate tape joint bevels?
--Do their fastening locations incorporate thickened areas reinforced with wood or metal to prevent screws from pulling through?

General
--Are transportation costs included?
--Do they have a local agent?
--Do they supply comprehensive shop drawings?
--Do they provide a standard parts catalog that features typical drywall and installation details?
--Does their standard parts catalog offer cost saving options over the specified profiles?
--Inquire as to the expertise of the manufacturer.
--Are you confident that all of the manufacturers are quoting "apples for apples" prices?

In writing this article my intention was not to damn the industry of which I have been a member since its virtual introduction to North America. Rather, it is in fact my love of the industry and the concerns expressed by its customers that dictates the contents. I have attempted to provide an honest, candid observation.