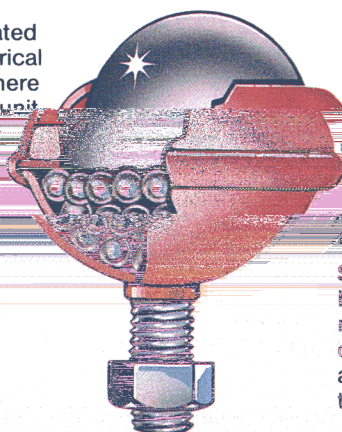


TECHNICAL INFORMATION

The following applies to all Ball Units unless mentioned in the appropriate section.

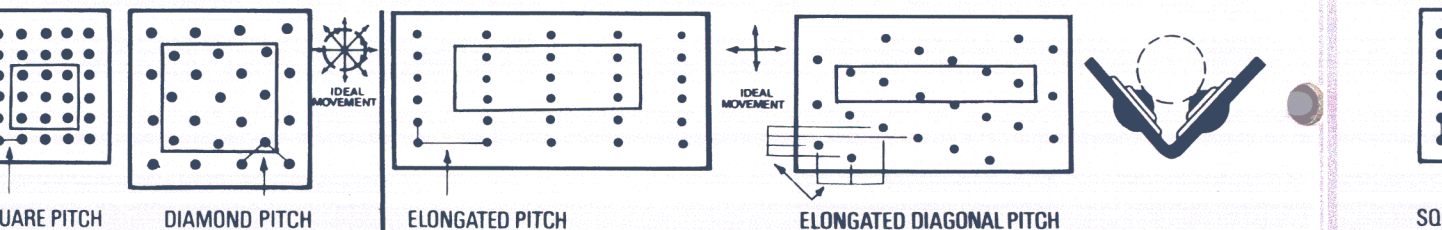
ALWAYSE Ball Units consist of a large ball seated on a quantity of small bearings in a hemispherical cup. NOT JUST A SINGLE RING OF BALLS. There are from 80 to 150 bearings according to ball unit size. This design enables the large ball to rotate freely and instantaneously in ANY direction. Extremely heavy loads can be moved with the minimum of effort.



TO DETERMINE BALL UNITS CAPACITY the weight of the article to be conveyed should be divided by 3. The result gives the maximum load which can be carried by a single unit. If several ball units are levelled accurately then a larger number than 3 may be applied. The surface hardness and condition of the article to be conveyed should be taken into consideration to avoid undue ball penetration.

SPACING OF BALL UNITS. The pitch is obtained by dividing the narrowest dimension by 3.5 i.e. narrowest dimension 14" divided by 3.5 = pitch of 4" between ball centres, this ensures 3 units are beneath the narrowest dimension at any one time.

SOME BALL UNIT ARRANGEMENTS



TYPE	MATERIALS	TYPE	MATERIALS
	Carbon steel bearings. 60-66 Hrc		Stainless bearings. 420, 440, 55, 521H
			AISI 304 (EN10028)
	Nylon large ball, ferrous bearings and shell		Stainless bearings. 55-58 Hrc Ferrous steel pressings

LUBRICATION. Each Ball Unit is PRE-LUBRICATED during manufacture and normally does not require further attention. In certain applications we will advise on lubrication. Greasing or oiling points can be incorporated in some units.

CLEANING. A suitable cleaning or release fluid should be used if dirty conditions prevail. Paraffin or suitable detergent for machine cleaning will do. Always clean the unit before use.

SHOCK LOADS. When calculating loads bear in mind the possibility of impact from dropping, incorrect levels etc. Spring loading will considerably reduce wear and tear to the Ball Units where they are subject to continuous harsh loading.

RETRACTABLE BALL UNITS. Ball Units can be made retractable by means other than spring loading. Pneumatic or electrically operated units are available.

LEVELLING. can be effected by fitting rubber pads under each unit. This allows any unit standing proud to be depressed to the mean level eliminating the possibility of excessive loading on a few units. Details on request.

LOCKING. Spring loaded Ball Units permit an empty container to move freely into position, then stand firmly when loaded.

CLEANING. Most designs of **ALWAYSE** Ball Units have holes in the base of the bearing cup.

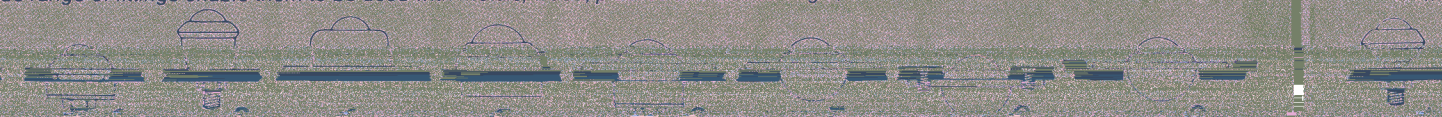
SEAL. A seal is incorporated to help resist ingress of dirt and swarf etc. Either Polyurethane foam or felt. Although it can be replaced.

TEMPERATURE. (Minimum - 30°C to maximum 70°C continuous or 100°C intermittent), do not affect the running of the units but special seals may have to be fitted to suit prevailing conditions. Sealed conditions without seal 150°C-200°C is possible.

DESIGN. Ball Units are available in a wide range of sizes and materials.

CASTORS. Many Castor applications can be solved with Ball Transfers.

Illustrated below are various methods of fixing the standard range of 'Always' Ball Units. A wide range of fittings enable them to be used with metals, wood, plastics and slotted angle, etc.



Consult our Technical Department for further details.

Specifications subject to change without prior notice providing the product capabilities are not reduced.

We cannot accept liability for any verbal recommendations.

15 Nm
MAX TORQUE
ALL UNITS