

WARRANTY INFORMATION

1. EXCLUSIVE WRITTEN LIMITED WARRANTY

ALL PRODUCTS SOLD ARE WARRANTED BY THE COMPANY (4B COMPONENTS LIMITED, (4B) BRAIME ELEVATOR COMPONENTS LIMITED, AND (4B) S.E.T.E.M. Sarl) HEREIN AFTER REFERRED TO AS 4B TO THE ORIGINAL PURCHASER AGAINST DEFECTS IN WORKMANSHIP OR MATERIALS UNDER NORMAL USE FOR ONE (1) YEAR AFTER DATE OF PURCHASE FROM 4B. ANY PRODUCT DETERMINED BY 4B AT ITS SOLE DISCRETION TO BE DEFECTIVE IN MATERIAL OR WORKMANSHIP AND RETURNED TO A 4B BRANCH OR AUTHORIZED SERVICE LOCATION, AS 4B DESIGNATES, SHIPPING COSTS PREPAID, WILL BE, AS THE EXCLUSIVE REMEDY, REPAIRED OR REPLACED AT 4B'S OPTION.

2. DISCLAIMER OF IMPLIED WARRANTY

NO WARRANTY OR AFFIRMATION OF FACT, EXPRESSED OR IMPLIED, OTHER THAN AS SET FORTH IN THE EXCLUSIVE WRITTEN LIMITED WARRANTY STATEMENT ABOVE IS MADE OR AUTHORIZED BY 4B. 4B SPECIFICALLY DISCLAIMS ANY LIABILITY FOR PRODUCT DEFECT CLAIMS THAT ARE DUE TO PRODUCT MISUSE, ABUSE OR MISAPPLICATIONS, AS AUTHORIZED BY LAW, 4B SPECIFICALLY DISCLAIMS ALL WARRANTIES THAT THE PRODUCT IS FIT OR MERCHANTABLE FOR A PARTICULAR PURPOSE.

3. NO WARRANTY "BY SAMPLE OR EXAMPLE"

ALTHOUGH 4B HAS USED REASONABLE EFFORTS TO ACCURATELY ILLUSTRATE AND DESCRIBE THE PRODUCTS IN ITS CATALOGS, LITERATURE, AND WEBSITES, SUCH ILLUSTRATIONS AND DESCRIPTIONS ARE FOR THE SOLE PURPOSE OF PRODUCT IDENTIFICATION AND DO NOT EXPRESS OR IMPLY A WARRANTY AFFIRMATION OF FACT, OF ANY KIND OR A WARRANTY OR AFFIRMATION OF FACT THAT THE PRODUCTS WILL CONFORM TO THEIR RESPECTIVE ILLUSTRATIONS OR DESCRIPTIONS. 4B EXPRESSLY DISCLAIMS ANY WARRANTY OR AFFIRMATION OF FACT, EXPRESSED OR IMPLIED, OTHER THAN AS SET FORTH IN THE EXCLUSIVE WRITTEN LIMITED WARRANTY STATEMENT ABOVE, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

4. LIMITATION OF DAMAGES

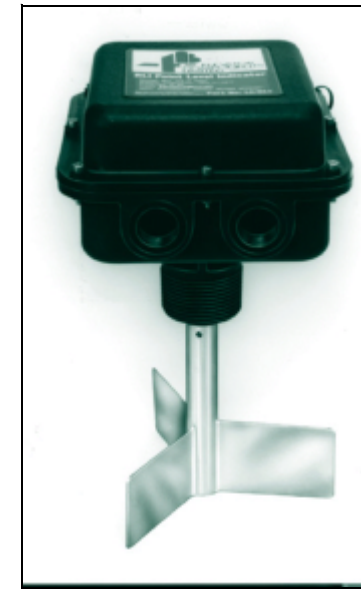
ANY LIABILITY FOR CONSEQUENTIAL, INCIDENTAL, SPECIAL, EXEMPLARY, OR PUNITIVE DAMAGES, OR FOR LOSS OF PROFIT WHETHER DIRECT OR INDIRECT, IS EXPRESSLY DISCLAIMED.



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INSTALLATION INSTRUCTIONS

TECHNICAL INFORMATION

ROTARY LEVEL INDICATOR - PART No. RTS1V0C

: Notes :

Dear 4B Customer:

Congratulations on your purchase. 4B appreciates your business and is pleased you have chosen our products to meet your needs.

Please read in its entirety and understand the literature accompanying the product before you place the product into service. Please read the safety precautions carefully before operating the product. With each product you purchase from 4B, there are some basic but important safety considerations you must follow to be sure your purchase is permitted to perform its design function and operate properly and safely, giving you many years of reliable service. Please read and understand the Customer Safety Responsibilities listed below. Failure to follow this safety directive and the Operation Manuals and other material furnished or referenced, may result in serious injury or death.

SAFETY NOTICE TO OUR CUSTOMERS

- A. In order to maximize efficiency and safety, selecting the right equipment for each operation is vital. The proper installation of the equipment, and regular maintenance and inspection is equally important in continuing the proper operation and safety of the product. The proper installation and maintenance of all our products is the responsibility of the user unless you have asked 4B to perform these tasks.
- B. All installation and wiring must be in accordance with Local and National Electrical Codes and other standards applicable to your industry. (Please see the article "Hazard Monitoring Equipment Selection, Installation and Maintenance" at www.go4b.com.) The installation of the wiring should be undertaken by an experienced and qualified professional electrician. Failure to correctly wire any product and/or machinery can result in the product or machine failing to operate as intended, and can defeat its design function.
- C. Periodic inspection by a qualified person will help assure your 4B product is performing properly. 4B recommends a documented inspection at least annually and more frequently under high use conditions.
- D. Please see the last page of this manual for all warranty information regarding this product.

CUSTOMER SAFETY RESPONSIBILITIES

1. READ ALL LITERATURE PROVIDED WITH YOUR PRODUCT

Please read all user, instruction and safety manuals to ensure that you understand your product operation and are able to safely and effectively use this product.

2. YOU BEST UNDERSTAND YOUR NEEDS

Every customer and operation is unique, and only you best know the specific needs and capabilities of your operation. Please call the 24-hour hotline at 309-698-5611 for assistance with any questions about the performance of products purchased from 4B. 4B is happy to discuss product performance with you at any time.

3. SELECT A QUALIFIED AND COMPETENT INSTALLER

Correct installation of the product is important for safety and performance. If you have not asked 4B to perform the installation of the unit on your behalf, it is critical for the safety of your operation and those who may perform work on your operation that you select a qualified and competent electrical installer to undertake the installation. The product must be installed properly to perform its designed functions. The installer should be qualified, trained, and competent to perform the installation in accordance with Local and National Electrical Codes, all relevant OSHA Regulations, as well as any of your own standards and preventive maintenance requirements, and other product installation information supplied with the product. You should be prepared to provide the installer with all necessary installation information to assist in the installation.

4. ESTABLISH AND FOLLOW A REGULAR MAINTENANCE AND INSPECTION SCHEDULE FOR YOUR 4B PRODUCTS

You should develop a proper maintenance and inspection program to confirm that your system is in good working order at all times. You will be in the best position to determine the appropriate frequency for inspection. Many different factors known to the user will assist you in deciding the frequency of inspection. These factors may include but are not limited to weather conditions; construction work at the facility; hours of operation; animal or insect infestation; and the real-world experience of knowing how your employees perform their jobs. The personnel or person you select to install, operate, maintain, inspect or perform any work whatsoever, should be trained and qualified to perform these important functions. Complete and accurate records of the maintenance and inspection process should be created and retained by you at all times.

5. RETAIN AND REFER TO THE OPERATION MANUAL FOR 4B'S SUGGESTED MAINTENANCE AND INSPECTION RECOMMENDATIONS

As all operations are different, please understand that your specific operation may require additional adjustments in the maintenance and inspection process essential to permit the monitoring device to perform its intended function. Retain the Operation Manual and other important maintenance and service documents provided by 4B and have them readily available for people servicing your 4B equipment. Should you have any questions, please call the 4B location who supplied the product or the 24-hour hotline number in the USA -309-698-5611.

6. SERVICE REQUEST AND ONLINE PRODUCT REGISTRATION

If you have questions or comments about the operation of your unit or require the unit to be serviced please contact the 4B location who supplied the product or send your request via fax (309-698-5615), email (4b-usa@go4b.com), or call us via our 24-hour hotline number in the USA - 309-698-5611. Please have available product part numbers, serial numbers, and approximate date of installation. In order to assist you, after the product has been placed into service, complete the Online Product Registration section which is accessed via our website www.go4b.com

RTS ROTOSAFE INDICATOR

The ROTOSAFE Indicator is designed to detect the presence or absence of bulk materials such as chemicals, grain, chips, granules and powders. It is ideal for indicating levels in bins and silos and as a blockage detector in spouts.

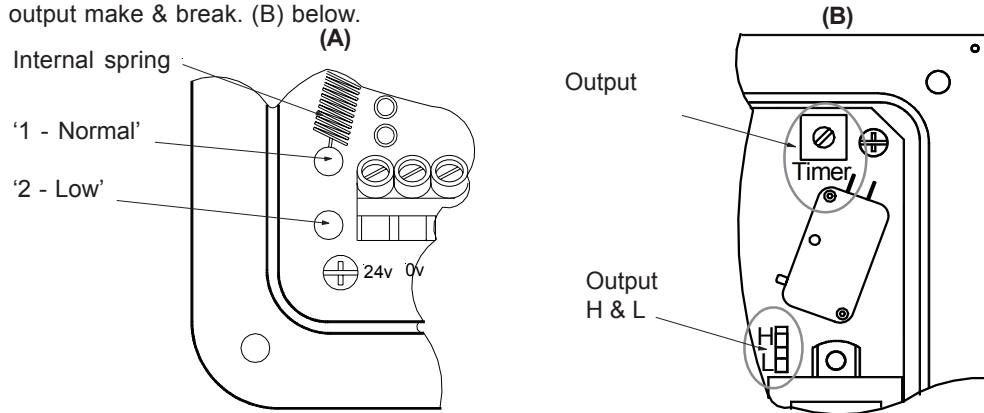
The detection of material is achieved by a rotating paddle. If the rotation of the paddle is impeded, the relay changes position and the paddle motor circuit is switched off.

The ROTOSAFE has an in-built rotation detection circuit. The output operates from 0 to 20 seconds after the motor has stalled. Users can test this facility to ensure correct operation, (see 'TEST FEATURE' below).

A user selectable, make/break output timer can also be set from 0-120 seconds. This will delay output operation for when the motor is stalled, and also when it starts rotating again.

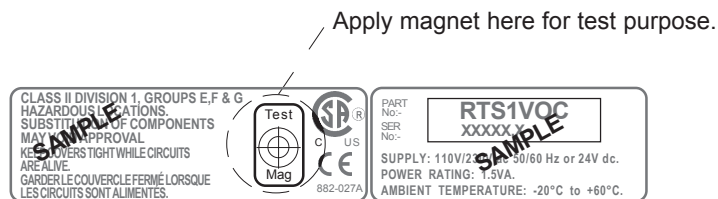
ROTATION SENSITIVITY, OUTPUT MODE, TIME DELAY

The ROTOSAFE unit has 2 sensitivity settings, '1 - Normal' and '2 - Low', the factory preset is set at '1 - Normal'. If, after fitting and whilst filling vessel, output operates too soon, remove the lid to the ROTOSAFE and fit the internal spring into position '2 - Low', (A) below. Output mode (relay state) can be selected by changing position of SW3 to required position (H or L). Output delay can be set via the timer control on the pcb, adjustable from 0 to 120 seconds on both output make & break. (B) below.



TEST FEATURE

The ROTOSAFE unit has a built in test feature which is operated by a magnet. With motor rotating and output 'ON', apply a magnet to the Code/Target label on the outside of the case. This will cause the motor to stall and the output to go off after a maximum time period of 20 seconds.

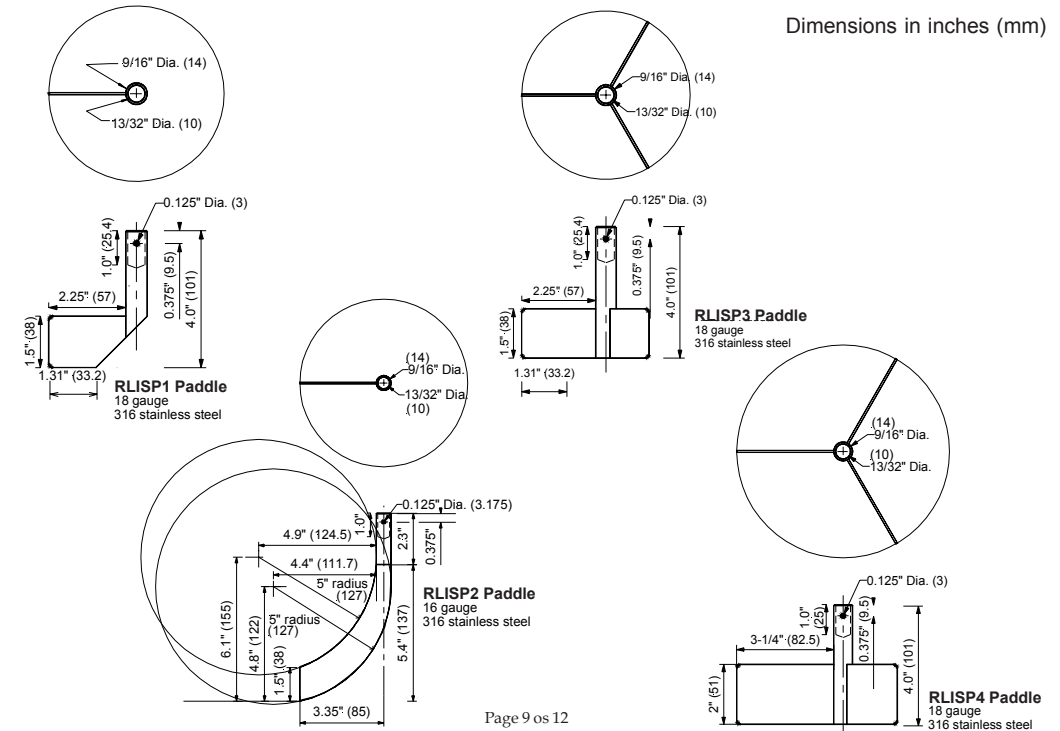


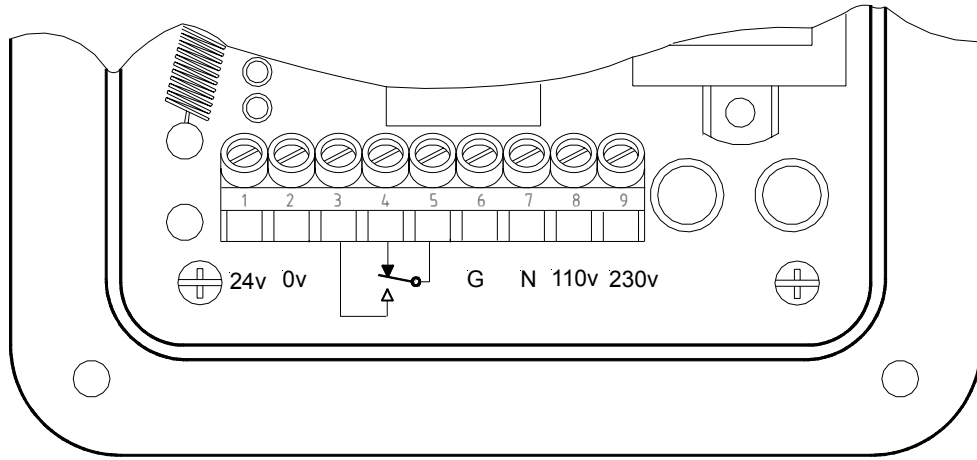
GENERAL SPECIFICATION

Supply:	24 V dc, 110/230 V ac 50/60 Hz. ±10%
Consumption:	1.8VA
Temperature:	-20°C to + 50°C (-4°F to + 122°F)
Output:	1 single pole, single throw relay rated at 3 Amps 250 Volts resistive.
Output Mode:	Selectable for High or Low mode (relay operation reversed) via switch setting on PCB.
Enclosure:	Flame retardant, glass fibre, reinforced nylon
Protection:	IP65 Nema 4, ATEX and CSA applied for
Conduit Entry:	2 conduit entries ½" NPT or PG11 option
Motor speed:	1 RPM.
Weight (less paddle):	0.95 kg (2.1 lbs)
Indication:	LED indication of Power ON, Motion, Output ON.
Sensitivity:	2 ranges selected via internal spring position. Factory set at 'Normal'.
Output Delay Time:	User selectable, 0-120 seconds on both make and break.

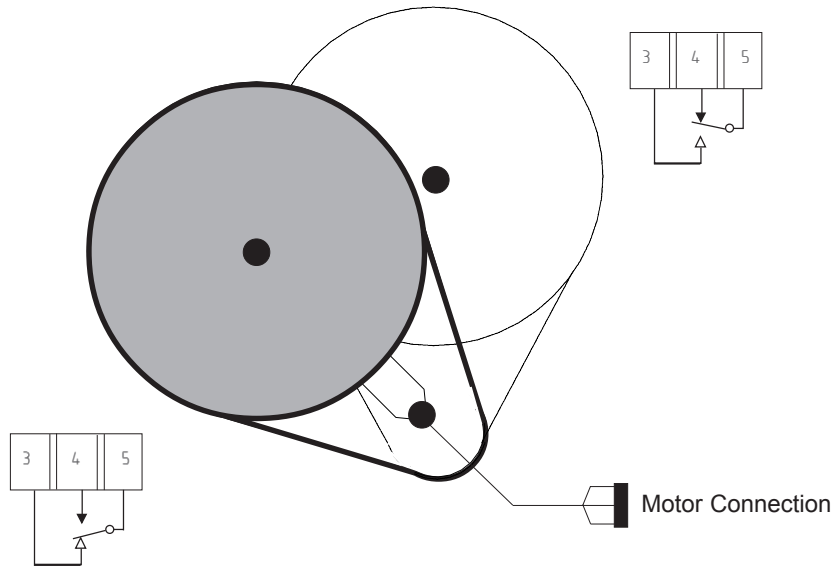
PADDLE SELECTION

Type RLISP1	Single vane paddle. For coal, stones and very high density materials over 1T/M ³ . Can be inserted through the 1 ¼" NPT half coupling (over 70 PCF)
Type RLISP2	Single vane paddle "Scimitar". For light materials such as powders, light grain or seed 0.4 to 0.8 T/M ³ . Can be inserted through the 1 ¼" NPT half coupling (30-70 PCF)
Type RLISP3	3 vane paddle. For grain, beans, oil seeds and meals 0.4 T/M ³ to 0.8 T/M ³ (30-70 PCF)
Type RLISP4	Large 3 vane paddle. For flour screening and very light materials 0.3 T/M ³ to 0.5 T/M ³ (under 30 PCF)



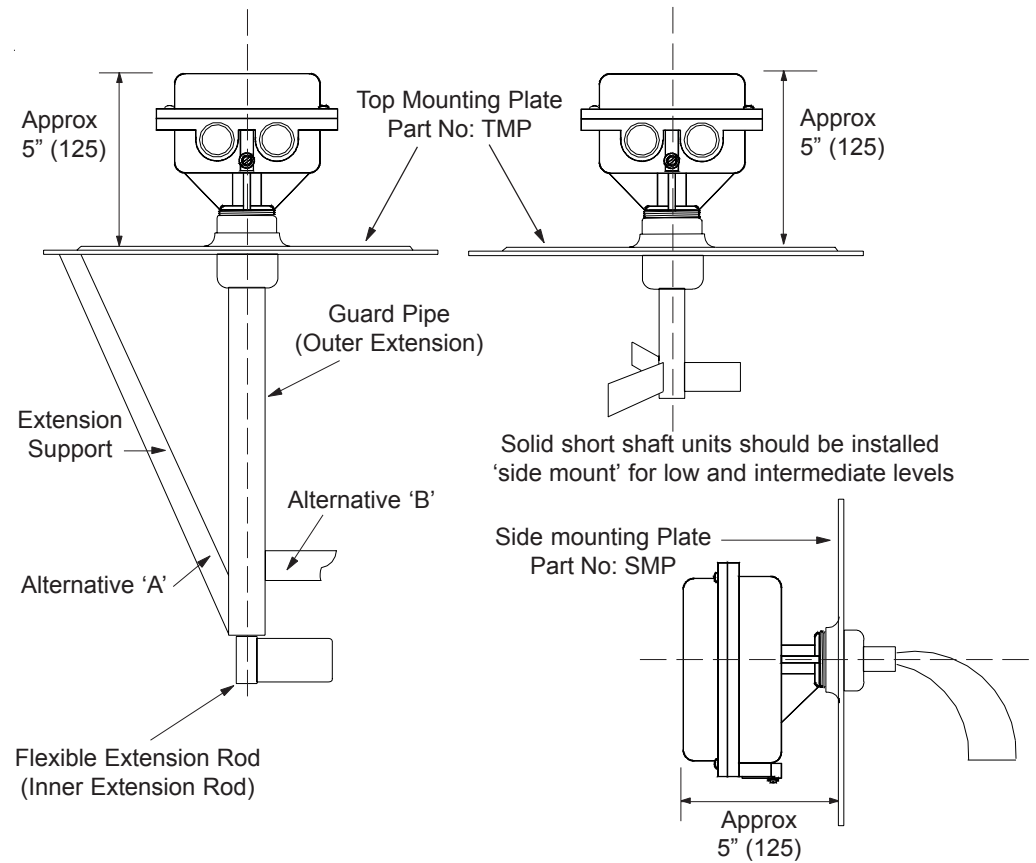


Warning: All wiring must be in accordance with local and national electrical codes and should be undertaken by a qualified electrician.



TOP MOUNT WITH EXTENSION

TOP MOUNT



Extension Rods and Guard Pipes can be provided for low level or when RTS's are mounted high in bin/silo roof

Extensions can be provided to a max. length of 4.2 mtrs (14 ft)

SIDE MOUNT WITH 'SCIMITAR'

(IMPORTANT NOTE: ALWAYS INSTALL WITH CONDUIT ENTRIES AT THE BOTTOM)

MOUNTING AND INSTALLATION

- 1) Install the ROTOSAFE where there is free flow of material both to and from the paddle, but out of the direct line of incoming material.
- 2) Install mounting plate or weld in 1 1/4" NPT coupling.
- 3) Fit a baffle above a side mounted paddle unit where the material bulk density exceeds 1000 kg/cu mtrl (60 lbs/cu.ft) or where the material tends to pack, bridge or has other detrimental flow characteristics.
- 4) When using extension pipes in excess of 2.5 mtrs (8 ft) support the guard pipe from the top or side of the bin. (See diagram page3).
- 5) If the bin is subject to frequent shock or vibration, select the area of least interference.
- 6) Do not congest the interior of the power pack with wiring. Ensure the motor assembly moves freely.
- 7) If fitting a ROTOSAFE facing upwards (in paddle direction) towards an inlet, then it would be advisable to fit a deflector plate over the paddle —drawing available on request.
- 8) When installing the ROTOSAFE please remember to remove protective polystyrene packing from by the gearbox.

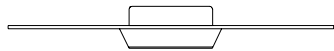
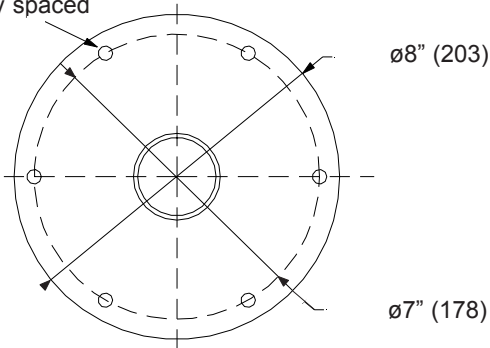
MOUNTING PLATES

Dimension shown in inches (mm)

Epoxy coated mild steel or stainless steel

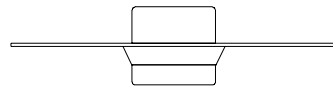
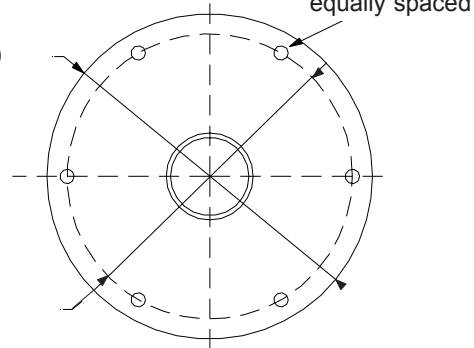
This style should be used for 'Side Mount'.
Part No: SMP

6 x $\phi 11/32$ " (9) holes
equally spaced



This style should be used for 'Top Mount'.
Part No: TMP

6 x $\phi 11/32$ " (9) holes
equally spaced



TOP MOUNT WITHOUT MOUNTING PLATE

- 1) Locate and cut hole in top of bin to fit outside diameter of 1 1/4" pipe coupling.
- 2) Position coupling halfway into bin and weld.
- 3) Screw ROTOSAFE unit into 1 1/4" coupling.
- 4) Cut a 10mm (3/8" dia.) shaft extension to the desired length and drill a 3mm (1/8" dia.) hole for the pin in each end.
- 5) Fit shaft coupler (RLISC1) and extension rod (RLIEX11-15) using stainless steel pins (RLISCP1) or screws with Nylock nuts.
- 6) Cut a 1 1/4" standard pipe shaft guard tube (RLIEX21-25) approximately 100mm (4") shorter than the overall length of the 10mm (3/8" dia.) rod extension.
- 7) Insert the shaft guard tube into the pipe coupling and tighten.
- 8) Pin the paddle to the shaft extension.

Extended paddle ROTOSAFE can be provided pre-assembled.

SIDE MOUNTING WITHOUT MOUNTING PLATE

- 1) Locate and cut hole into side of the bin to fit outside diameter 1 1/4" pipe coupling.
- 2) Weld one half of standard 1 1/4" pipe coupling to bin wall flush with inside of bin.
- 3) Screw ROTOSAFE unit into coupling.
- 4) Pin paddle onto the shaft.
- 5) Shaft and paddle should be shielded with a baffle in low and intermediate level positions.
- 6) A short shaft is recommended for side mounting, and if material is extremely heavy, only top mountings are recommended.

FLEXIBLE MOUNTING PLATE

Flexible mounting plates are necessary when a completely assembled unit is mounted on a curved or flat bin wall or roof from the outside. Cut a 140mm (6" dia.) hole in the bin then drill 6 holes around this to match the mounting plate. Bolt the plate in place with the unit attached. Plates are available in mild and stainless steel.