ENC 066b
January 1987

IMI
a subsidiary of IMI plc

Clamp Ring
6273-89

NORGREN®

† COMPRESSED AIR REGULATORS

OBSOLETE DOCUMENT
Technical Reference Only

SERIES R10

OLYMPIAN PLUG-IN DESIGN FOR 6mm, 8mm & 10mm O/D TUBING INSTALLATIONS

FEATURES

- Simplicity at its best — neat OLYMPIAN DESIGN for small air lines provides for very rapid installation and maintenance and dispenses with inter connecting unions, elbows and other fittings to save substantial material and lábour costs.
- Superior flow and regulation characteristics.
- Relieving or Non-Relieving types.
- Handsome plastic knob has Snap-Action lock to prevent accidental alteration of pressure setting.
  Can be tamperproofed.
- Floating valve pin, balanced valve and syphon tube for sensitive operations.
  Positive diaphragm stop.
- Unidaptor has two G⅛ gauge/auxiliary ports

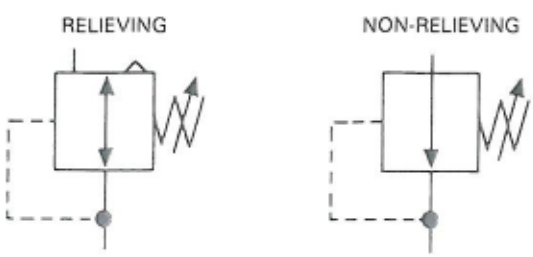
ORDER TABLE

REDIMOUNT REGULATORS ready for immediate installation. For Basic Units see table on page 2.

PORT SIZE	7 bar SPRING	
	RELIEVING	NON-RELIEVING
G⅛ G¼ G⅜	R10-100-RNKD R10-200-RNKD R10-300-RNKD	R10-100-NNKD R10-200-NNKD R10-300-NNKD
	10 bar SPRING	
G⅛ G¼ G⅜	R10-100-RNMD R10-200-RNMD R10-300-RNMD	R10-100-NNMD R10-200-NNMD R10-300-NNMD

Specify if required complete with T10 Shut-Off Valve fitted upstream.

INTERNATIONAL PNEUMATIC SYMBOLS



SPECIFICATIONS

PORT SIZES: G⅛, G¼, G⅜
Standard ports to ISO 1179. Accepts ISO 228 (BS 2779) Parallel, or ISO 7 (BS 21) Taper Connectors.
For alternative threads consult factory.

RELIEVING TYPE
Alternative Non-Relieving Models

ADJUSTMENT
BLACK PLASTIC KNOB WITH SNAP ACTION LOCK
Can be tamperproofed

REGULATED PRESSURES:
0.2– 7 bar (3–100 p.s.i.) Standard
0.4–10 bar (5–150 p.s.i.) Optional

MAXIMUM INLET PRESSURE:
20 bar (300 p.s.i.)

MAXIMUM TEMPERATURE:
80°C (175°F)

GAUGE PORTS: G⅛

Pressure Gauges must be ordered separately.

† For Compressed air only. Do not use with other gases

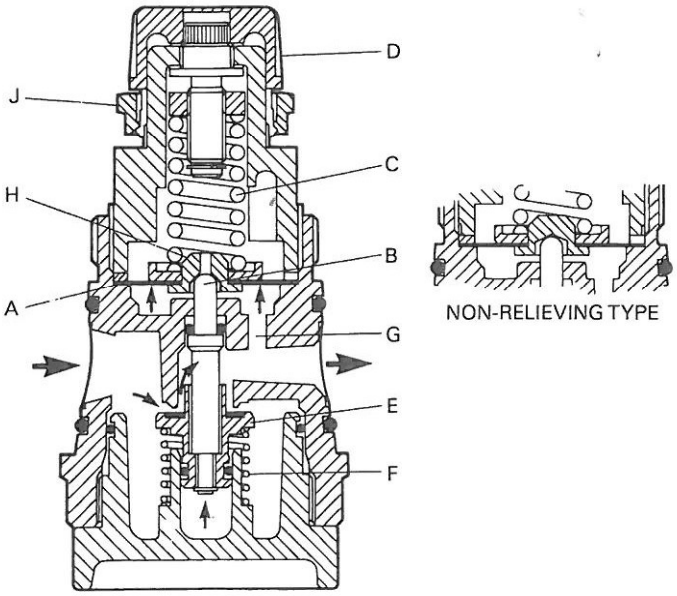
ACCESSORIES AND REPAIR KITS

	**T10 SHUT-OFF VALVE** Exhaust Type with provision for locking in OPEN or SHUT position	G⅛ T10-100-E2AD G¼ T10-200-E2AD G⅜ T10-300-E2AD
	**WALL MOUNTING BRACKET KITS** Two 'handed' brackets and necessary screws for mounting to vertical surface.	18-001-971
	Alternative inward facing 'handed' brackets and screws	18-001-970
	**PRESSURE GAUGES** 40mm dial with black case and R⅛ centre back connection. Dual calibration	0 – 1.6 bar 18-013-991 0 – 4 bar 18-013-990 0 – 10 bar 18-013-989 0 – 25 bar 18-013-908
	REPAIR KITS Relieving Models Non-Relieving Models	R10-100R R10-100N

OPERATION

Working elements of the regulator principally comprise a flexible diaphragm (A) which controls the position of valve pin (B), regulating spring (C) which is loaded by means of adjusting knob* (D), balanced valve (E) and valve spring (F).
The underside of the diaphragm is pressurised by outlet secondary air pressure through cast hole (G). When the adjusting knob is fully anti-clockwise no load is applied to the regulating spring, and the valve is shut. As the knob is turned clockwise it loads the spring which deflects the diaphragm and causes the valve pin to open the valve. As the secondary pressure downstream of the valve increases, so the pressure under the diaphragm increases and forces the diaphragm upwards until the load exerted by the regulated pressure equals the spring loading and so provides the selected pressure. When there is no-flow demand this state of equilibrium will allow the valve spring to close the valve. If there is a flow demand the balance will occur with the valve open just the amount necessary to compensate for the demand, thus maintaining the required regulated pressure.
On standard Relieving type models any excess build-up in regulated pressure is vented through the elastomeric relief seat (H) and out through the bonnet to atmosphere.

* Note: To adjust the pressure setting, lift the snap action locking ring (J) and turn the adjusting knob. After adjustment simply push down the ring to lock the setting.



RELIEVING TYPE

BASIC REGULATOR

(For Replacement, also Build-up of Combination Units)

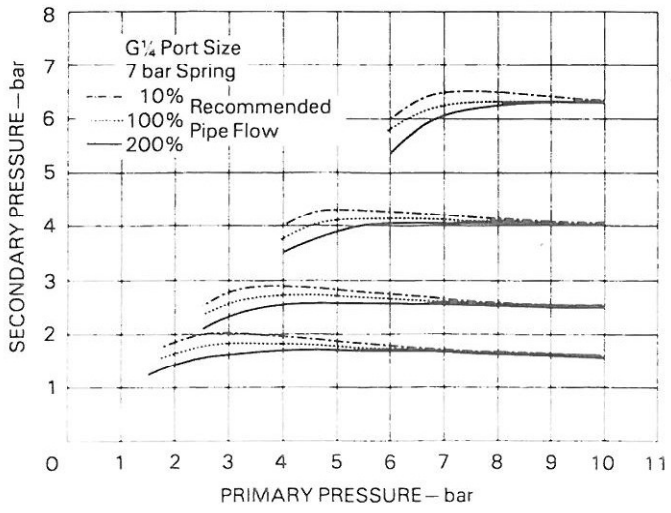
The main component of a Redimount Regulator. The Basic Regulator has plain UNTHREADED inlet and outlet ports with 'O' rings which seal with mating faces in the Unidaptor when the regulator is 'plugged-in'. THEY CAN BE USED IN ⅛, ¼ OR ⅜ UNIDAPTORS THEREBY PROVIDING A SUBSTANTIAL REDUCTION IN SPARES HOLDING REQUIREMENTS IN LARGE PLANTS.

ORDER TABLE—BASIC REGULATORS

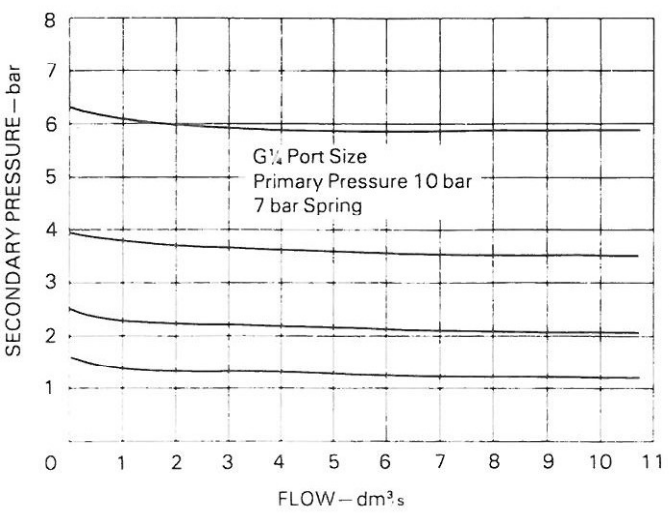
	7 bar Spring	10 bar Spring
RELIEVING	R10-000-RNKO	R10-000-RNMO
NON-RELIEVING	R10-000-NNKO	R10-000-NNMO

TYPICAL PERFORMANCE CHARACTERISTICS

REGULATION CHARACTERISTICS

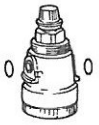


FLOW CHARACTERISTICS

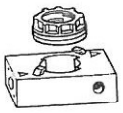


SIMPLE SERIES 10 OLYMPIAN CONCEPT

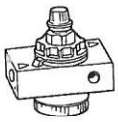
1. BASIC UNITS — Filters, Pressure-Regulators, Filter-Regulators and Oil-Fog or Micro-Fog Lubricators with 'O' Ring Seals.



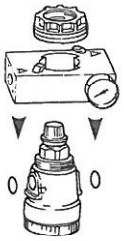
2. UNIDAPTORS — include clamp ring(s) Single or Double Unidaptors threaded ⅛, ¼ or ⅜ provide the frame ready to receive the Basic Units.



3. REDIMOUNTS — the items you order. Unidaptors with Selected Basic Units installed ready for immediate assembly into the air line.



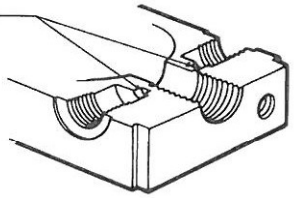
TO REMOVE A UNIT—
i) Shut off the compressed air — this is merely a ¼ turn of the Exhaust Shut-Off Valve if fitted (this valve also exhausts downstream systems) — alternatively use the nearest valve upstream and vent line.
ii) Unscrew the appropriate Clamp Ring and withdraw the unit. The Pressure Gauge (if fitted) remains with the Yoke Assembly.
iii) Inspect the unit.

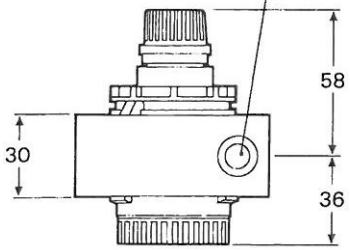


TO REPLACE A UNIT—
i) Position clamp ring under yoke retaining lugs.
ii) Check Unit 'O' Ring Seals are in position.
iii) Position Unit so that 'key' on top of upstream side of the body will fit into the slot in upstream side of yoke (arrows on yoke indicate direction of flow).
iv) Plug-in Unit. Screw up Clamp Ring hand tight.
v) Turn on Air supply.

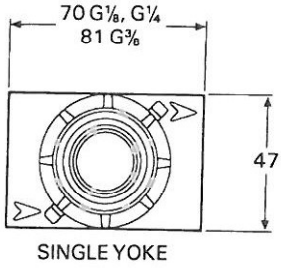
DIMENSIONS (mm) — Transparent and Metal Bowl Units

G⅛ Gauge or Auxiliary Ports.
Punch through Web to make port live.
G⅛, G¼ Ø4 Piercing Tool
G⅜ Ø3.2 Piercing Tool

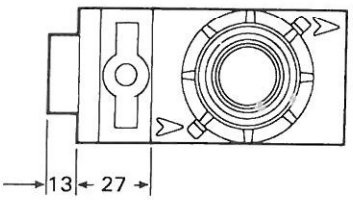




Ensure that a clearance of at least 212mm is left below pipe centre line to permit any unit to be installed and removed easily.

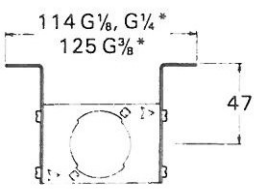


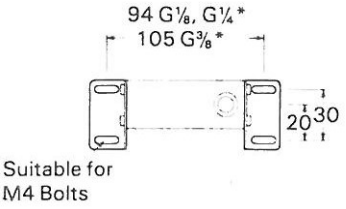
SINGLE YOKE



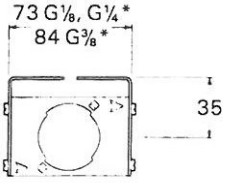
SINGLE YOKE AND T10 SHUT-OFF VALVE

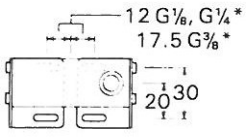
BRACKET MOUNTING (mm)





OUTWARD FACING





INWARD FACING

* Note : If Shut-Off Valve is fitted, add 27mm to dimensions

Maintenance and Parts over page .....