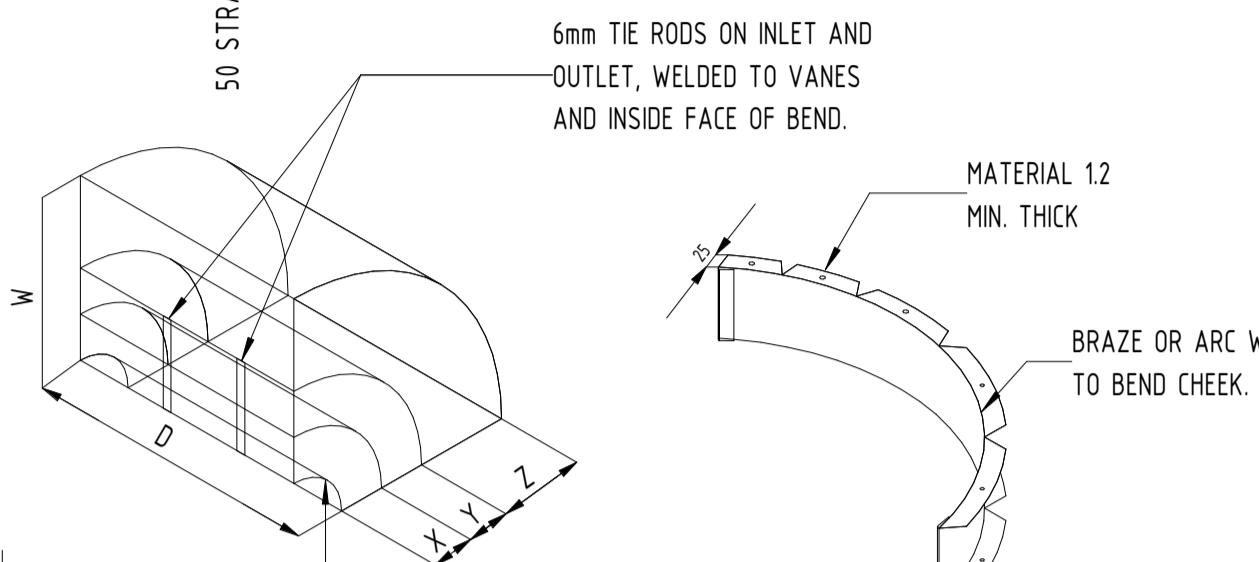
**BEND TYPE 1A - STANDARD RADIUS BEND**

$R = W/2$ (MIN) TO BE USED
 RADIUS ELBOWS WITH CENTRELINE RADIUS LESS THAN DUCT WIDTH SHALL HAVE TURNING VANES INSTALLED - REFER BEND TYPE 1B BELOW.

EXTENSION ON END OF RADIUS CAN BE MADE TO ANY LENGTH AS LONG AS IT CAN BE HANDLED ON SITE.



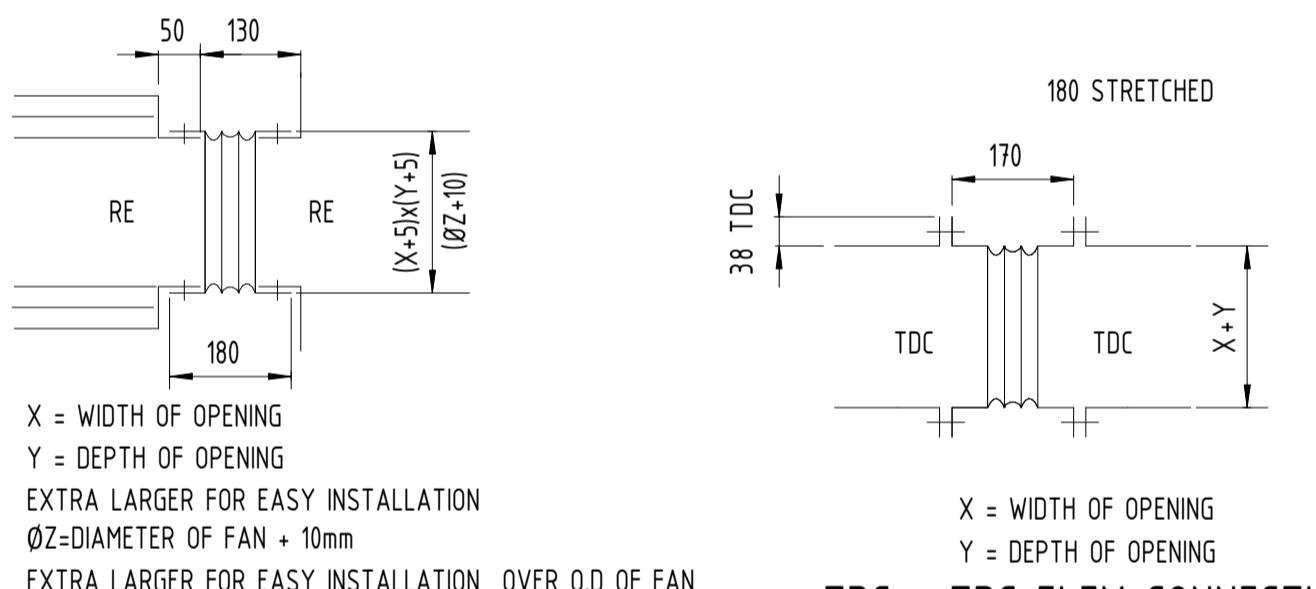
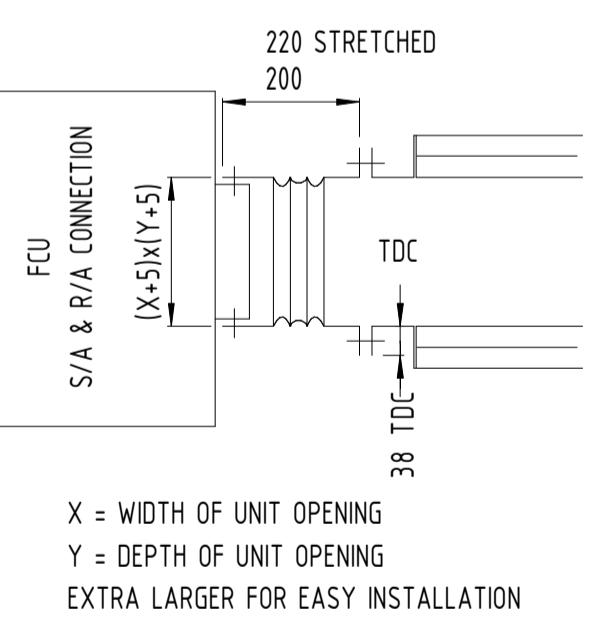
BEND DEPTH - D (mm)	NUMBER OF TIE RODS REQUIRED
0-600	NIL
601-1200	1
1201-1500	2
1501-1800	3

TURNING VANE DETAIL

NOTE:
 REFER TO AS 4254
 FIGURE 2.3(I) VANE CHART
 FIGURE 2.3(II) VANE CHART

BEND TYPE 1B - SHORT RADIUS BEND

($R/W < 1.0$) SHALL HAVE TURNING VANES AS FOLLOWS AND LOCATED IN ACCORDANCE WITH SMACNA STANDARDS.
 $R/W = 0.7 - 1.0$ 1 VANE
 $R/W = 0.6 - 0.69$ 2 VANES
 $R/W < 0.6$ 3 VANES

**RE - RE FLEX CONNECTION****RE - TDC FLEX CONNECTION****NOTES:**

ECONOFLEX BLACK VINYL FN100 OR EQUAL TYPE CONNECTION SUITED TO HIGH PRESSURE, HEATING AND A/C SYSTEMS. MUST BE FLAME RESISTANT UP TO 250°C. VERY HIGH RESISTANCE TO GREASE, OILS, ACIDS AND OXIDISING CHEMICALS.

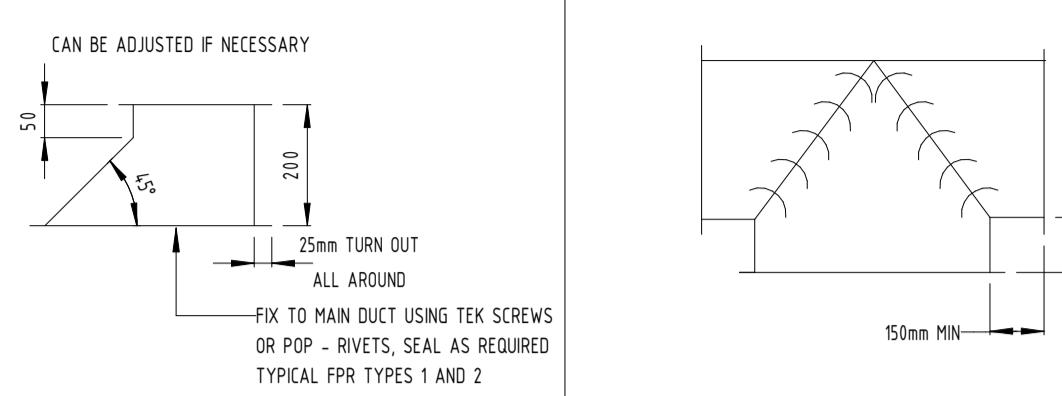
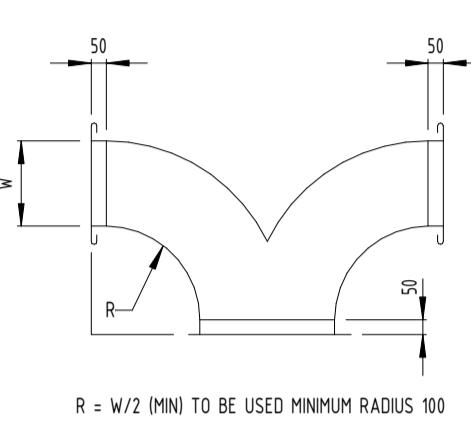
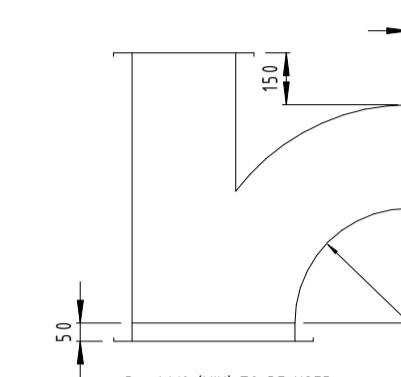
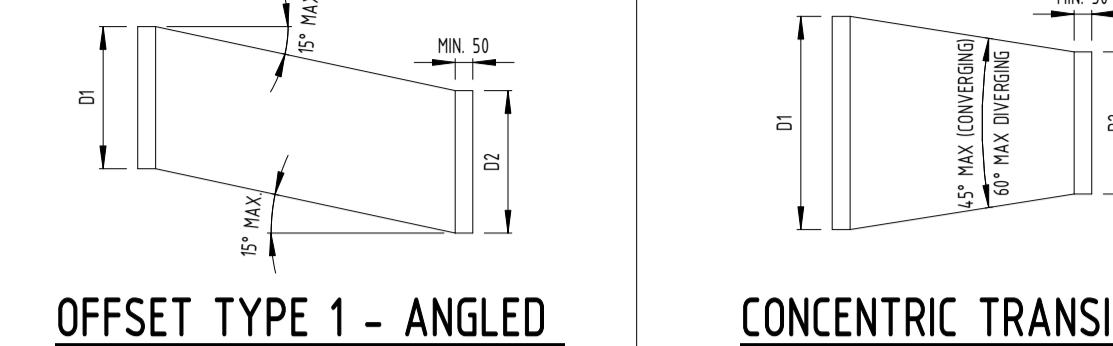
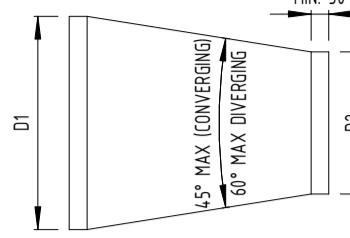
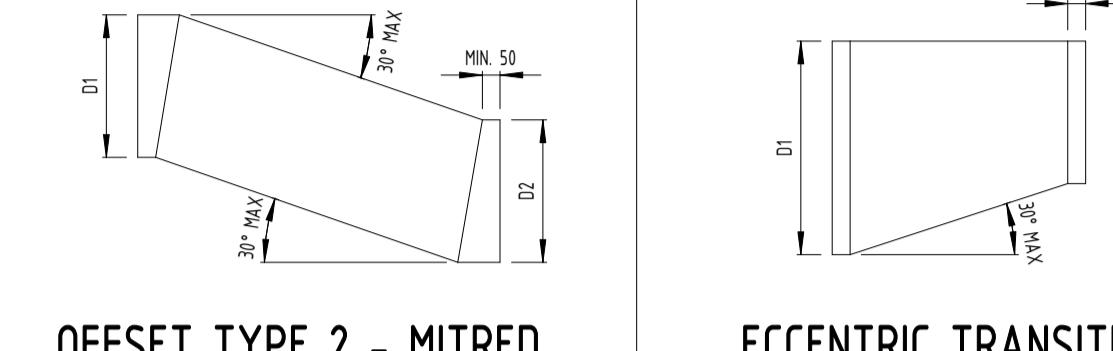
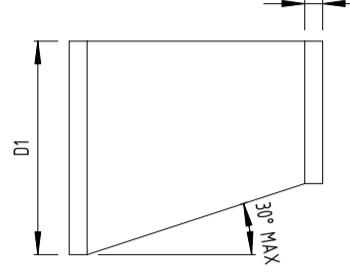
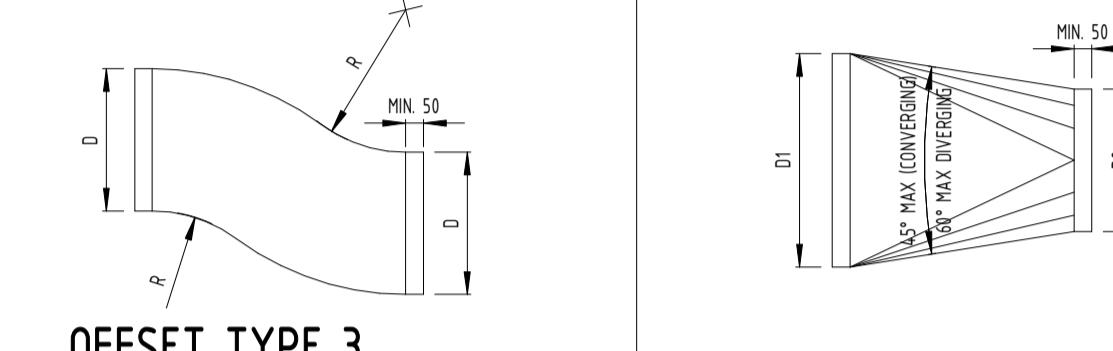
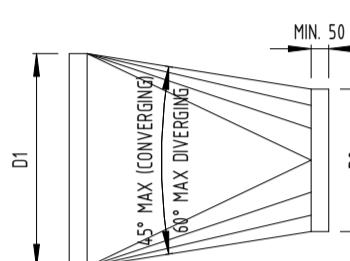
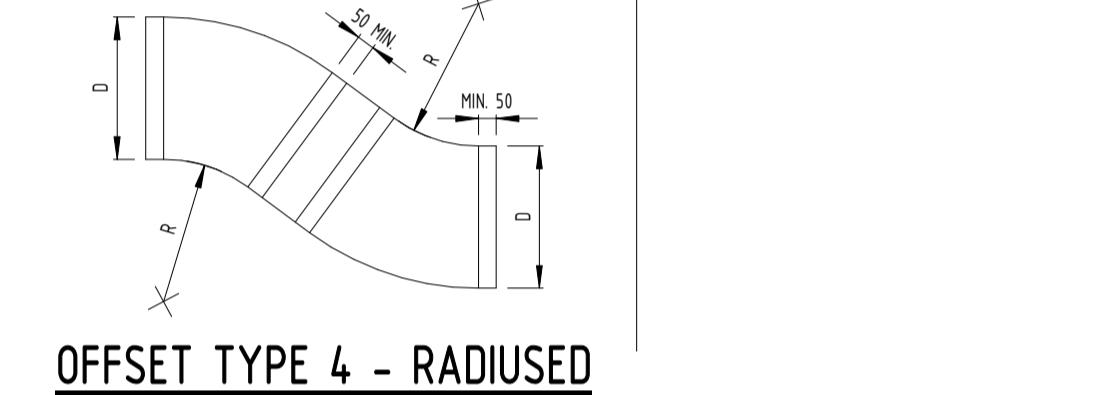
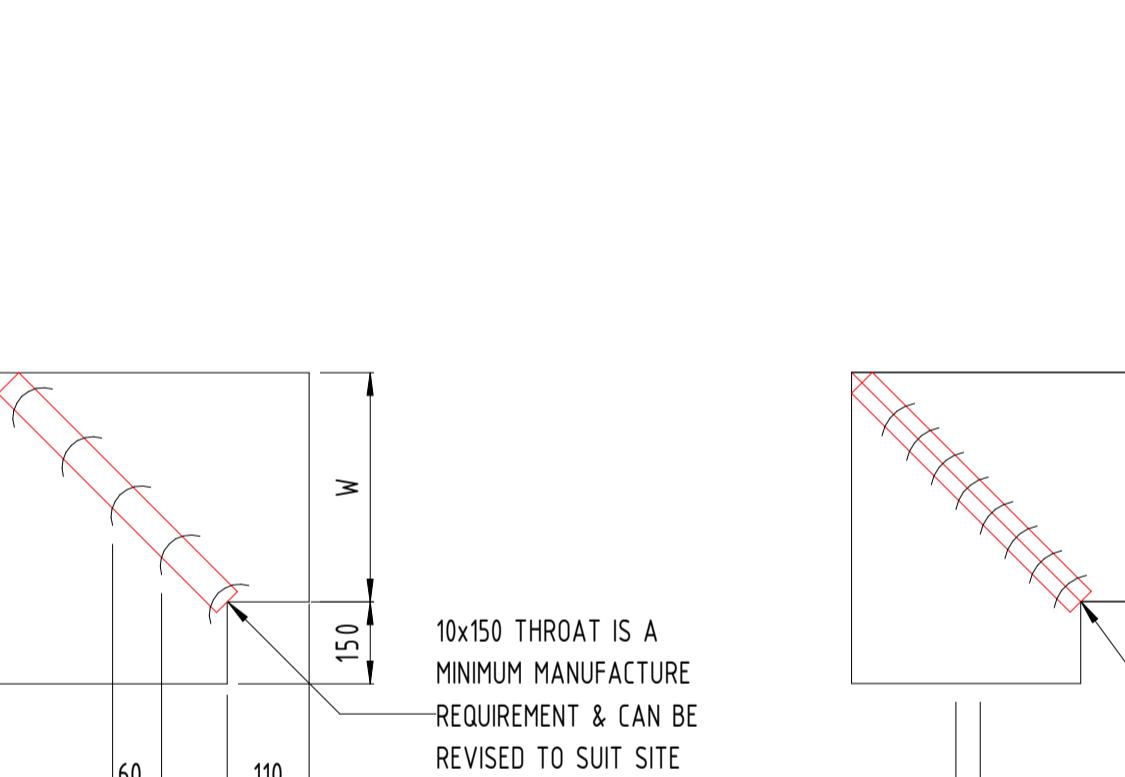
FOR AXIAL FANS, TRANSFORM FROM ROUND TO SQUARE AND INSTALL THE FLEXIBLE CONNECTION AT THE SQUARE END, WHERE POSSIBLE.

WHERE EXPOSED TO WEATHER PROVIDE WEATHER PROOF JACKET TO FLEXIBLE CONNECTION.

DUCTWORK & FAN TO BE SUPPORTED INDEPENDENTLY. DUCTWORK & FAN TO BE ALIGNED.
 USE HIGH TEMPERATURE MATERIAL FOR SMOKE EXHAUST SYSTEMS.

DUCT MATE FLANGE PREFERRED ON FAN OR PRE FRAB FLANGE RATHER THAN TDC TO MAXIMISE FLEX CONNECTION.

DUCTWORK FOR PHARMACEUTICAL ENVIRONMENTAL GRADES B, C & D SHALL HAVE A PROTECTIVE LAYER OF "BULLOCKS GENERAL PURPOSE FABRIC - GP-200 WIDE" INSTALLED OVER THE FLEXIBLE CONNECTION.

**SHOE TAKE OFF****RADIUS TEE****SQUARE TEE****SIDE BRANCH****OFFSET TYPE 1 - ANGLED****CONCENTRIC TRANSITION****OFFSET TYPE 2 - MITRED****ECCENTRIC TRANSITION****OFFSET TYPE 3 - RADIUSED ONE PIECE****SQUARE TO ROUND TRANSITION****OFFSET TYPE 4 - RADIUSED**

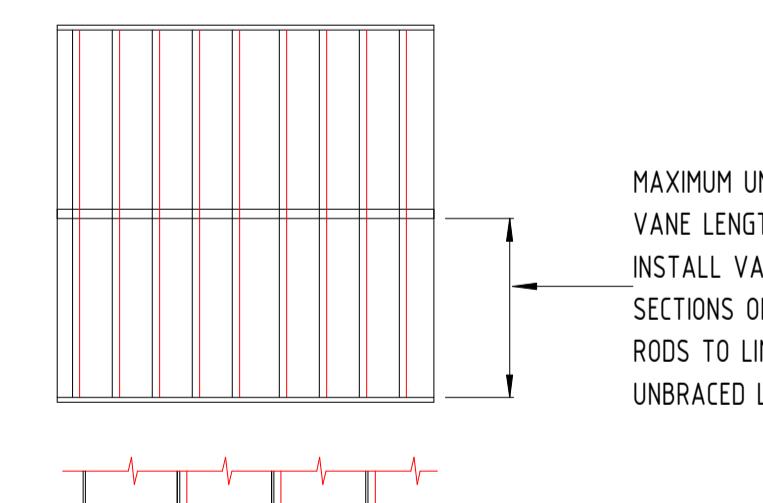
NOTE:
 SPLITTER DAMPERS, BALANCING DAMPERS OR VCDs REQUIRED ON ALL BRANCHES - REFER TO MECHANICAL FLOOR PLANS.

BEND TYPE 2A

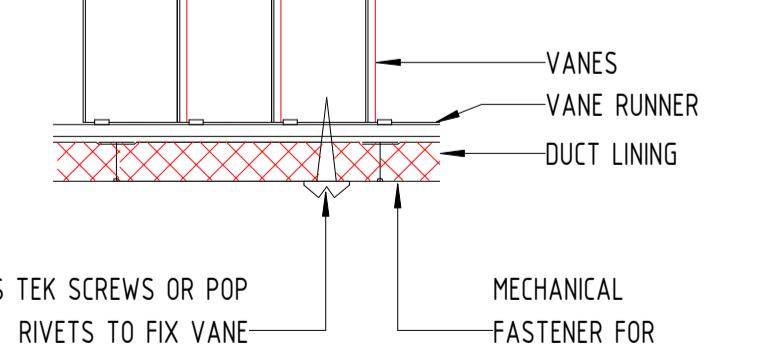
SINGLE THICKNESS TURNING VANES.

BEND TYPE 2B

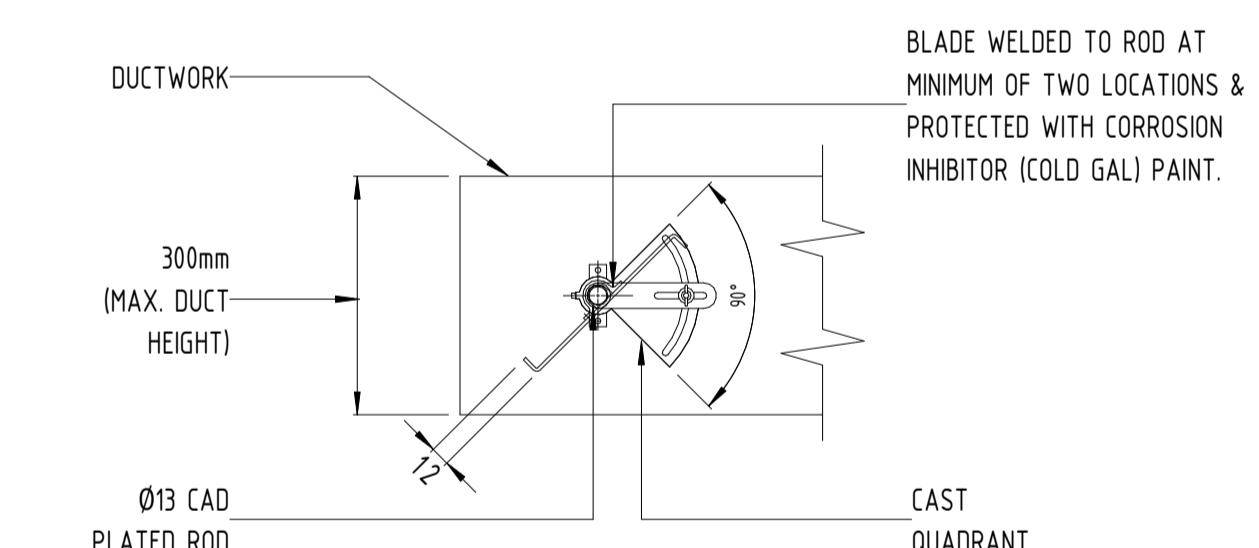
DOUBLE THICKNESS TURNING VANES.



MAXIMUM UNSUPPORTED VANE LENGTH = 900mm
 INSTALL VANES IN SECTIONS OR USE TIE RODS TO LIMIT THE UNBRACED LENGTH.



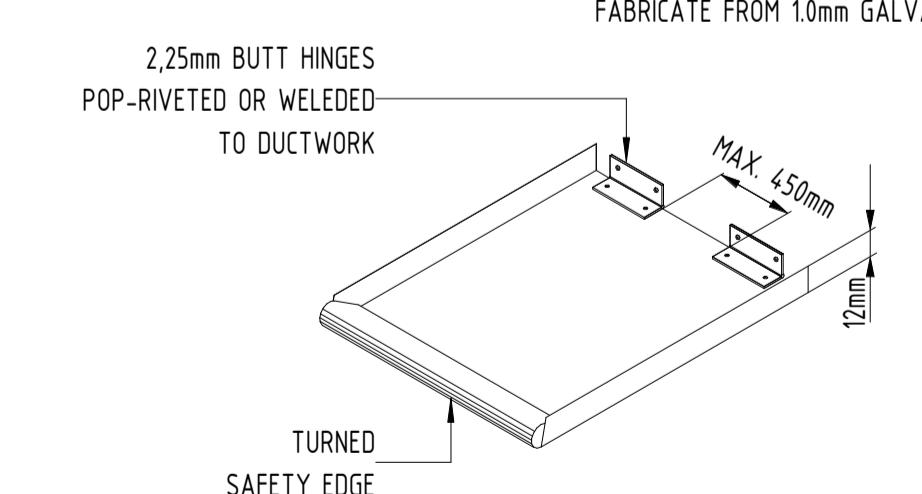
US TEK SCREWS OR POP RIVETS TO FIX VANE RUNNER TO DUCTWORK.
 MECHANICAL FASTENER FOR DUCT LINING

VANE RUNNER DETAILS INSTALLATION DETAIL

NOTE:
 BALANCING DAMPERS TO DUCT SIZE UP TO 900x300mm WILL BE SINGLE BLADE TYPE & OVER 900x300mm DAMPER WILL BE A PROPRIETARY OPPOSED BLADE VCD.

SINGLE BLADE DAMPER

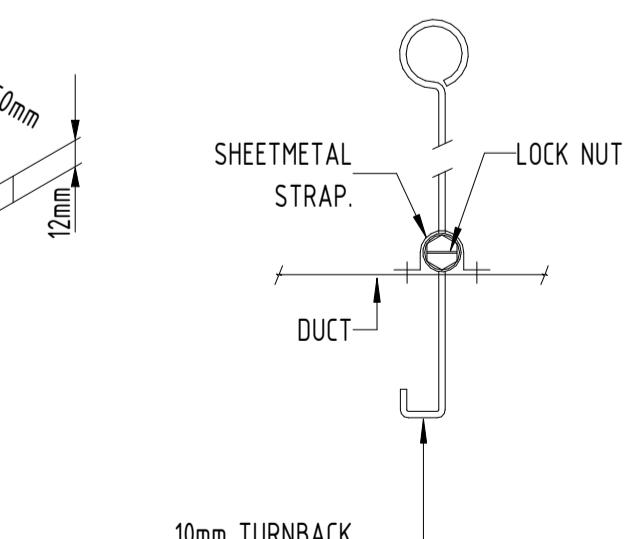
FABRICATE FROM 10mm GALVABOND



NOTE:
 SPLITTER DAMPER SHALL BE USED TO MAX. 900m WIDE APPROACH DUCT.

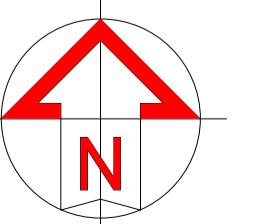
SPLITTER DAMPER

FABRICATE FROM 10mm GALV. STEEL



10mm TURNBACK TO FORM HOOK.

FABRICATE FROM 5.0mm GALV. STEEL ROD

**OES SAMPLE**

Enter address here

MECHANICAL SERVICES

MECHANICAL SERVICES DETAIL SHEET 02

APP.PM	DATE	DSGN CHECK	DATE
Approver	08.10.2023	Designer	08.10.2023
DRAWN	DATE	DRG CHECK	DATE
OES	08.10.2023	Checker	08.10.2023
PROJECT NUMBER		SCALE@A1	
-		NTS	
DRAWING NUMBER		ISSUE	
MES-XXXX-00-003			A