STEEL ARCH ROOF SUPPORT

- Engineered TH29 profile with balanced static values
- High load carrying capability
- High deformation tolerance
- Long service life
- Can be integrated with other support elements
- Ease of installation
STEEL ARCHES

APPLICATIONS

- Suitable for any rock or soil types
- Highly fractured rock in tunnels, roadways and underground chambers
- Ideal long service life permanent support
- Damaged excavation opening-up
- Mining through dykes and faults
- Custom designed and shaped to suit specific design requirements
- Reclaimable and reusable in some applications

IDEAL FOR USE IN

- Tunnel rehabilitation
- Void filling
- Pothole consolidation

A2 Y
Clamps required: G606/29 x 1 (pair)
- The Arch set forms the basic type of Arch most commonly used in the mining industry.
- The A2 Y is a yielding type used where ground conditions are poor and pressures uncertain.
When ordering please specify dimensions W and H.

A3 Y
Clamps required: G606/29 x 2 (pairs)
- The Arch set has a wide range of applications in various sizes.
- Can be used with steel lagging plates on the crown with timber on the side walls.
- Ensures continuous access where high pressures are experienced.
When ordering please specify dimensions W and H.

A4 Y
Clamps required: G606/29 x 2 (pairs)
- This Arch set with bowed legs is suitable for large developments or where sidewall pressures are encountered.
- Used in mining and civil engineering.
- Ideal for large civil tunnels as an initial elastic support lining.
When ordering please specify dimensions W, R and H.

R1 Y
Clamps required: G606/29 x 4 (pairs)
- Recommended for use where extreme pressures from different directions are experienced.
- Ideal for high pressure tunnels in Civil engineering construction.
When ordering please specify dimension R.
**STEEL ARCHES**

**AC1 Y**
Clamps required: G606/29 x 2 (pairs)

- A square set with almost all the advantages of an arch but used for rectangular and square excavations.
- Widely used in inclines and civil engineering.
- The arched crown and the long overlaps between legs and crown offer maximum deflection resistance.

When ordering please specify dimensions W, H and S.

**S3 Y**
Clamps required: G606/29 x 2 (pairs)

- A square set similar to S2, designed to be transported and used in awkward areas.
- Able to withstand sidewall pressure but not hanging wall pressure.
- Used in ventilation drives.

When ordering please specify dimensions W and H.

**S2 Y**
Clamps required: G606/29 x 1 (pair)

- A square set used for tunnel excavations.
- Simple and easy to erect.
- Ideal for use in friable ground.
- Able to withstand sidewall pressure but cannot withstand high hanging wall pressure.

When ordering please specify dimensions W and H.

**S6 Y**
Clamps required: G606/29 x 3 (pairs)

- A square set with all the advantages of the S3.
- Able to withstand sidewall and hanging wall pressure due to the telescopic legs.
- Widely used in mines where pressures are variable.

When ordering please specify dimensions W, H and L.

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**CLAMPS**

G606/29 and G405/29

G606/29 in two parts i.e G6 and G600 for yielding Arches.

Clamps to be Torque to 450Nm

Spanner sizes: G606/29 = 32

**Method of attachment**

**SPACERS**

a. Hot rolled channel

or;

b. Cold rolled channel
ADVANTAGES OF THE T H SECTION AND ITS CONNECTION

- High bearing capacity of overlapping joint due to closed connection
- Controlled yielding resistance due to favourable transformation of bolt preload in frictional forces
- Remaining large friction contact between section and connection
- Little settling between section and connection due to harmonised design
- Balanced statistical values - High buckling resistance under compressive stress
- High bearing capacity in the plastic range due to high kinetic energy

LAGGING PLATES

NORMAL TYPE

- Manufactured in steel plate; thickness can vary between 4mm depending on customer requirement
- Plates are folded to give additional strength and are seamed to each other by bolts
- Used in friable ground conditions

REINFORCED TYPE

- Manufactured as per the normal type but with steel angle welded on for strength
- Used in areas where large rock falls are anticipated

ANCILLARY EQUIPMENT

CRIbbing brACkET TO REtain TIMBER CRIBBING

BASE PLATE - DIMENSIONS VARIABLE WELDED TO BASE OF ARCH LEG

SPILING LANCE LENGTH NORMALLY 3 TIMES ARCH CENTRES PLUS 1.5M - USED TO CARRY SPIILING PROTECTION PLATES

LANCE BRACKET - USED TO SUPPORT SPIILING LANCE - 3

REQUIRED PER LANCE

DIMENSION TO SUIT POSITION OF LANCES