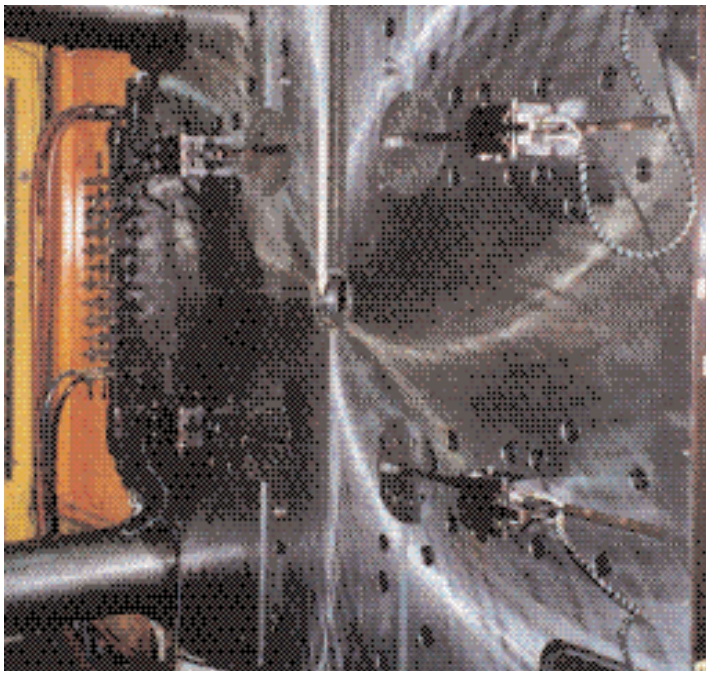
American Aerostar Corporation

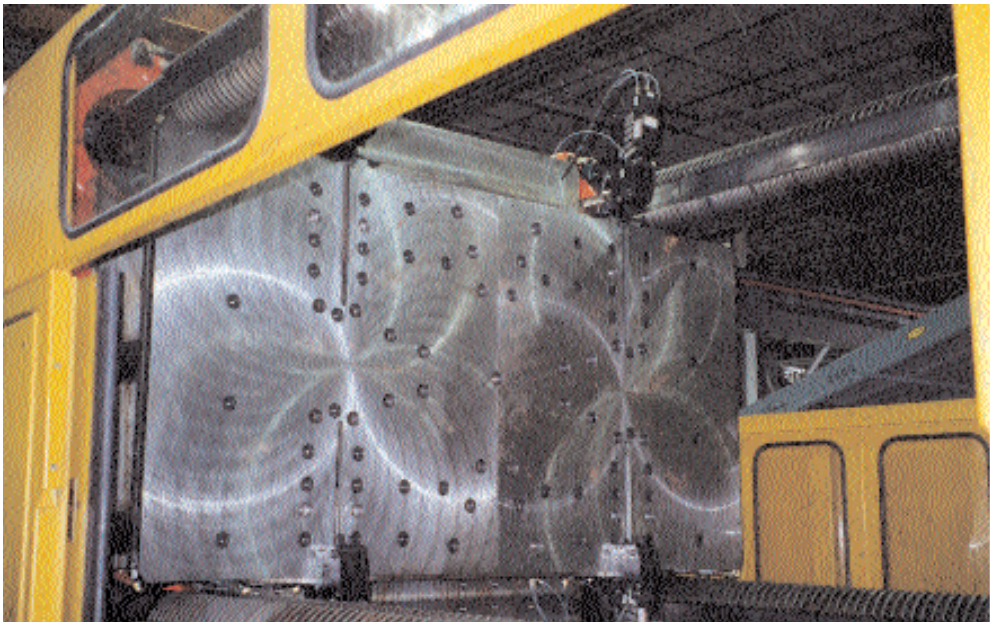
QMC for large machines

2000 ton and larger



Equipment shown:

- Model-980 Clamp
- Model-979 Clamp
- Model-954 Push/Pull Mechanism
- Model-145 Hydraulic Pump
- Model-141 Pump Control Module
- Platen Plates
- Turning Disks
- Slot L-Bracket
- T-slot Extenders
- Hydraulic Manifolds



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A leading manufacturer of equipment for Quick Mold Change

QMC System Overview

The QMC system includes:

Platen Plates which are mounted to the machine platens. The standard SPI threaded hole pattern is used to secure the platen plates. Stationary ('A') platen plates have a guide slot for locating the male mold locating ring.

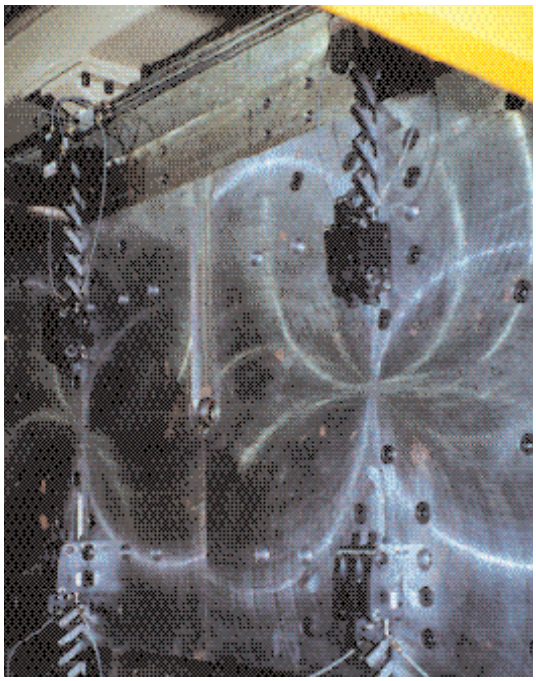
Clamps which travel horizontally or vertically (illustrated) in platen plate T-slots. Each clamp has a built in chck valve. The pilot circuit must be activated to open clamp (hence two hydraulic hoses are connected to each clamp).

Push/Pull Mechanism which moves the clamps to/away from mold. The unique design employs 'scissor' amplification for extended reach.

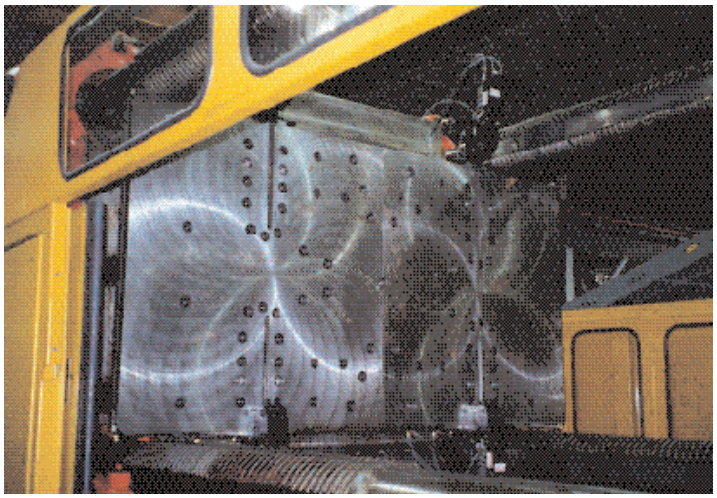
T-Slot Extenders which allow the clamps to be pulled outside the platen plate, if necessary, during mold exchange. Top mounted T-Slot Extenders may also be configured to pivot to move clamps out of the way during mold exchange.

Hydraulic Pump and **Control Module** to actuate/release the hydraulically powered and checked clamps, and to power the push/pull mechanism.

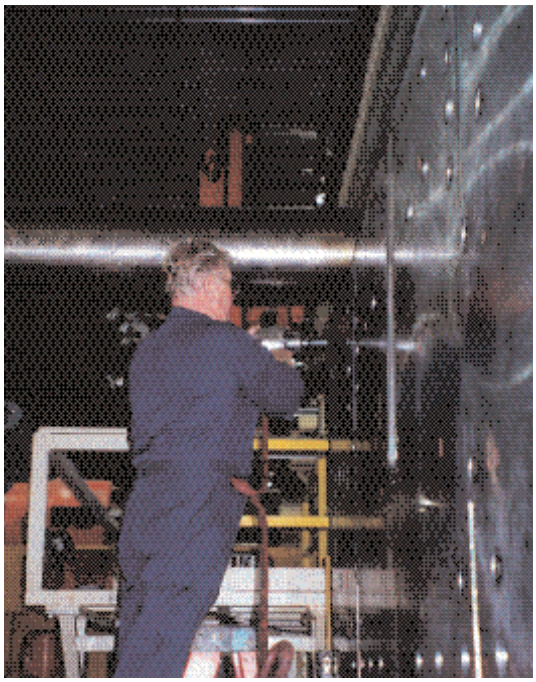
Hydraulic Manifolds to distribute hydraulic pressure.



The 'A' platen mounted clamps are shown fully advanced. Note 'scissor' action clamp push/pull mechanism and locating ring guide slot.

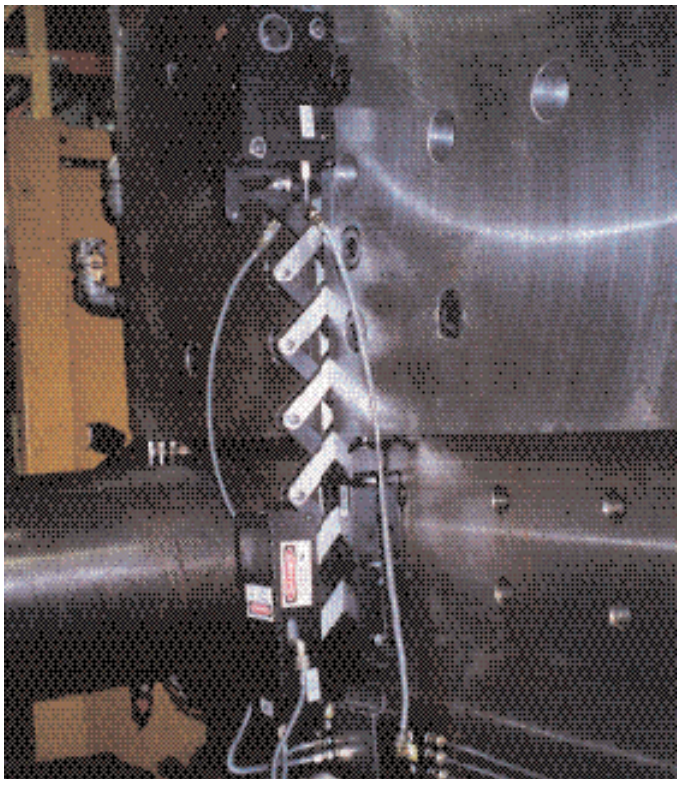


'B' platen on a 2500 ton Husky showing added T-slotted plate and hydraulic clamps in fully retracted positions. The clamps which are internally checked exert 140,000 lbs. of clamping force per platen at 5000 psi hydraulic pressure. The clamps also adjust to a 1/2" variation in clamp plate thickness. Note that the clamps at the top of the platen are retracted beyond the edge of the platen plate. Extended length T-Slot Extenders, which are capable of pivoting the clamp out of the way, are used in this application.

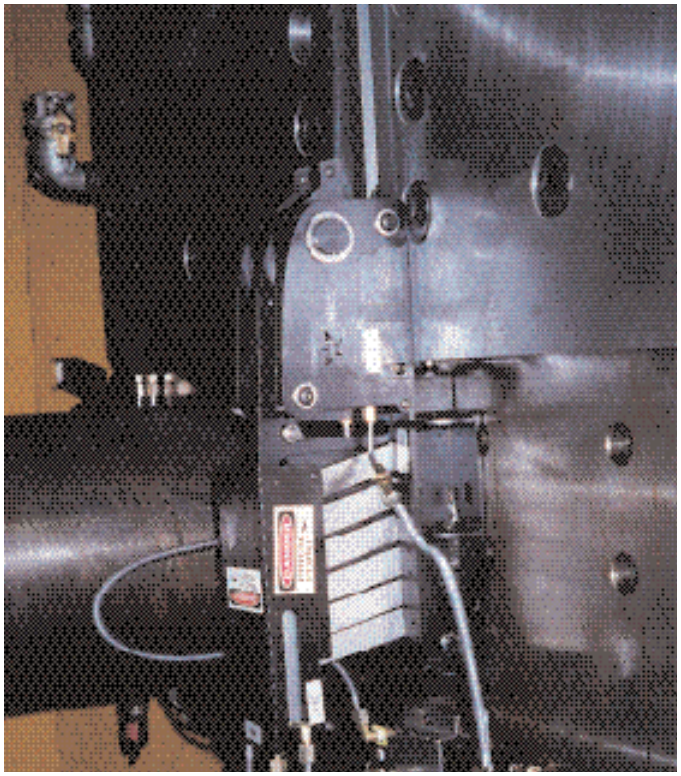


The platen plates were made in two 66" x 60" sections. Here the 'A' platen plates are shown being secured to the machine platen.

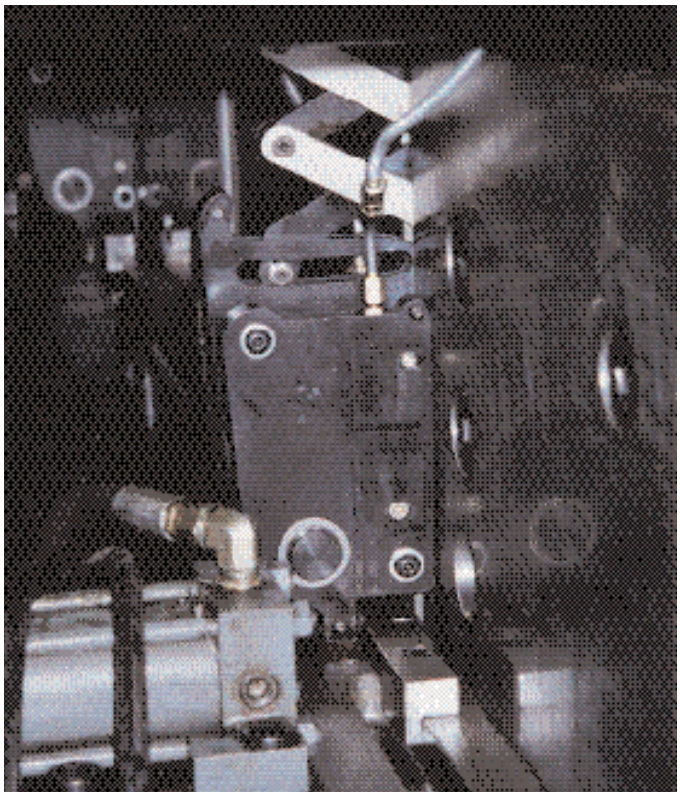
Closeup View of Key Components



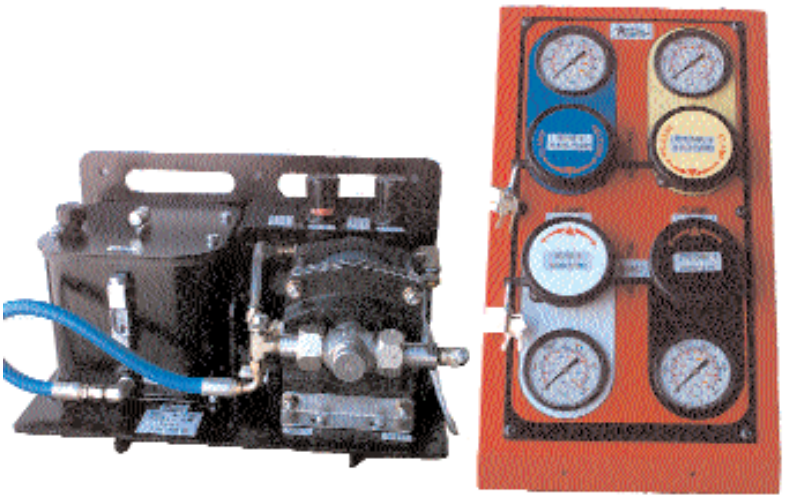
The 'scissor' push/pull mechanism is shown extended. Clamp advance shown is 19".



The 'scissor' push/pull mechanism is shown retracted into an 11" area.

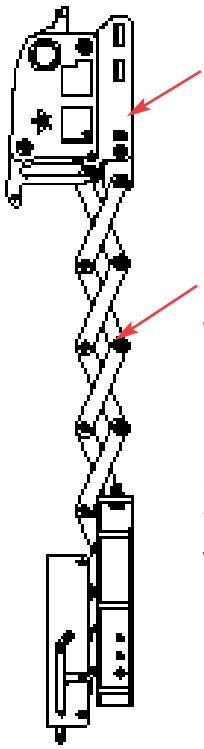


The 'A' and 'B' platen clamps are configured for different clamping heights and to fit most of the existing mold inventory. In this exception the mold is fitted with a simple L-bracket to increase the clamping height.



Various manually or PLC controlled hydraulic pumps are available. The Model-145 Hydraulic Pump with manually turned control valves and Model-141 Pump Control Module are shown here.

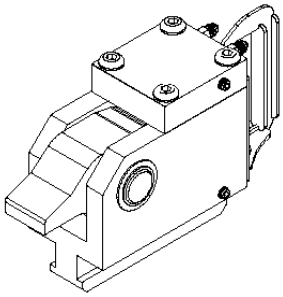
Large Systems - Key Components



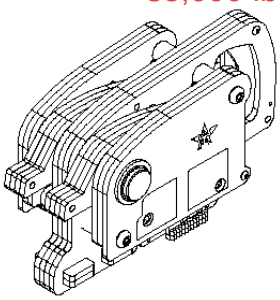
Model-980 Clamp
35,000 lbs. of clamping force

Model-954 Push/Pull Mechanism* with 'scissor' amplified reach. The number of linkages used determines clamp travel. The Model-954 may also be used to move clamps horizontally.
*Cannot be used in conjunction with turning disk.

Model-979 Clamp
24,000 lbs. clamping force



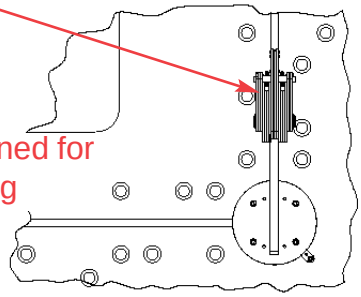
Model-980 Clamp
35,000 lbs. clamping force



Represented By:

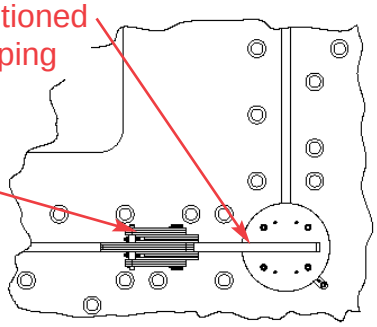
Model-980
Clamp shown
See front page
for photo

Turning Disk positioned for
Top/Bottom clamping



Turning Disk positioned
for Left/Right clamping

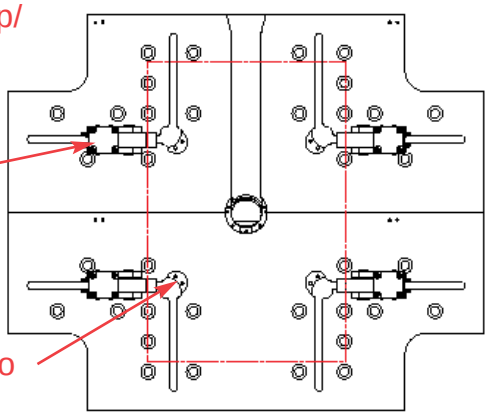
Model-980
Clamp shown



'A' Platen
Left/Right and Top/
Bottom Clamping

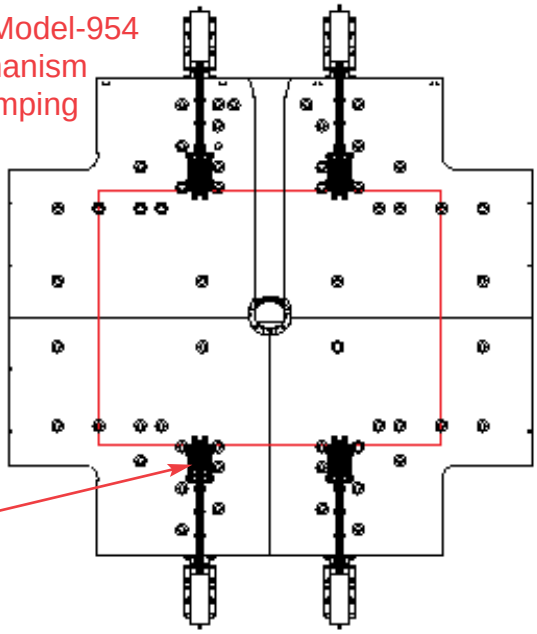
Model-979
Clamp shown

Cap is removed to
insert/remove
clamp



'A' Platen with Model-954
Push/Pull Mechanism
Top/Bottom clamping

Model-980
Clamp shown



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