

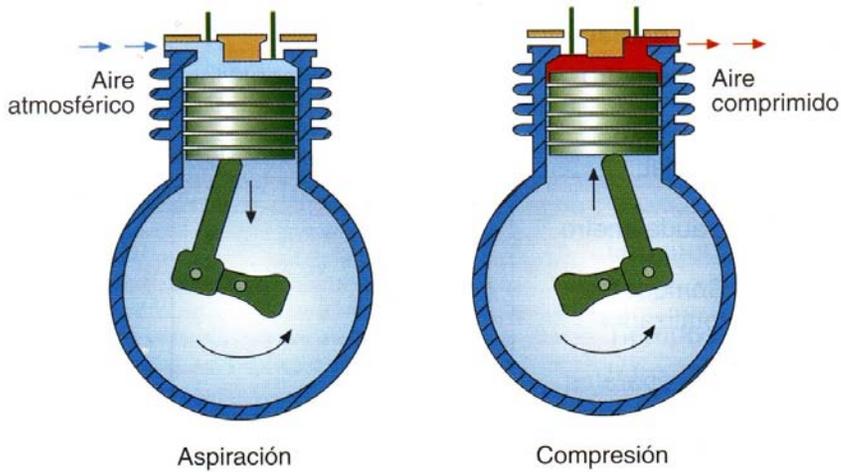
NEUMÁTICA

A thick, horizontal yellow brushstroke with a textured, painterly appearance, spanning across the width of the page below the word 'NEUMÁTICA'.

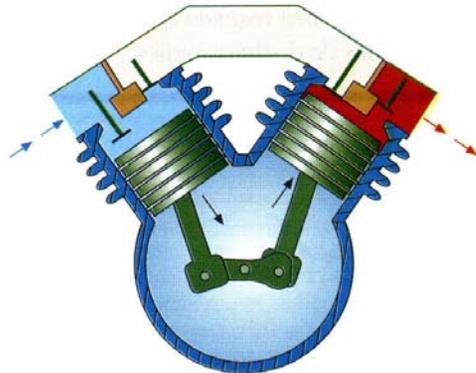
BACHILLERATO

TECNOLOGÍA INDUSTRIAL II

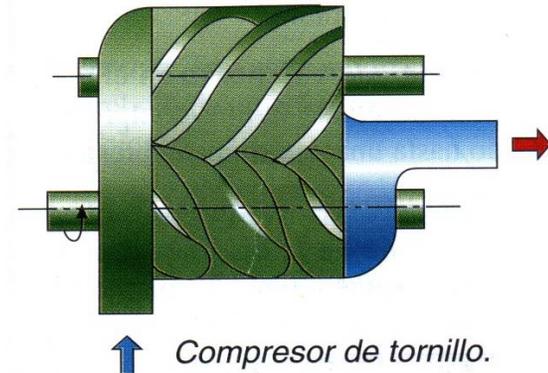
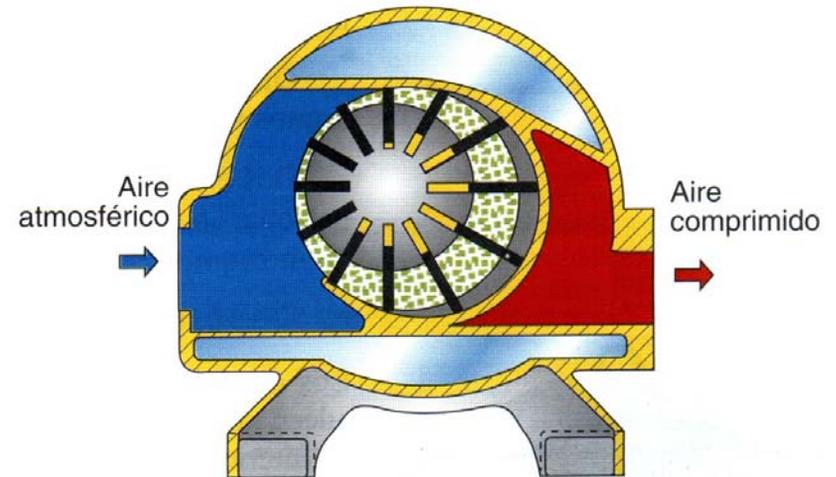
Compresores



Sección de un compresor de émbolo.



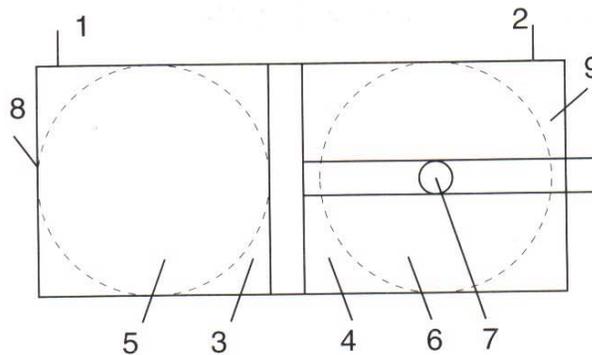
Compresor de émbolo de dos etapas.



Compresor de tornillo.

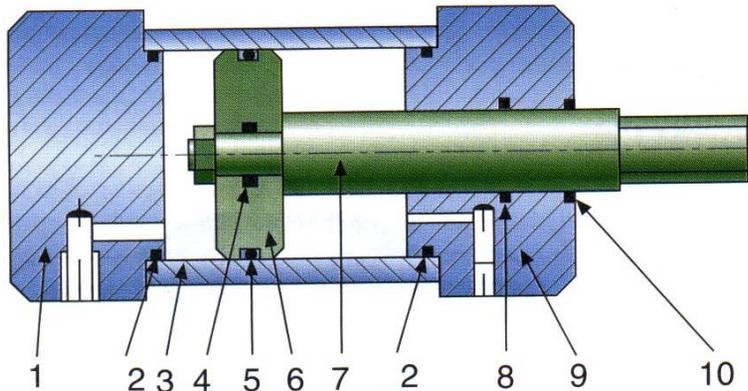
Cilindro Neumático

Partes de un cilindro neumático genérico.



1. Conexión para la entrada/salida.
2. Conexión para la entrada/salida.
3. Cara del fondo.
4. Cara de la cubierta.
5. Cara del émbolo.
6. Área anular.
7. Área del vástago.
8. Fondo.
9. Cubierta.

Partes de un cilindro neumático de doble efecto.

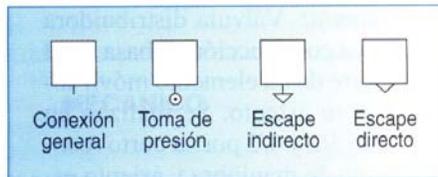


1. Tapa posterior.
2. Juntas.
3. Camisa.
4. Juntas estáticas del pistón.
5. Junta dinámica.
6. Émbolo.
7. Vástago.
8. Junta dinámica del vástago.
9. Tapa delantera.
10. Anillo rascador.

Válvulas



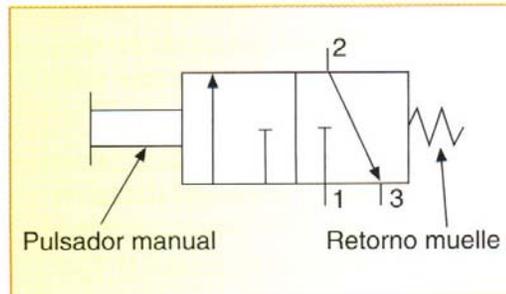
Válvulas de 2 y 3 posiciones y de 2 a 5 vías.



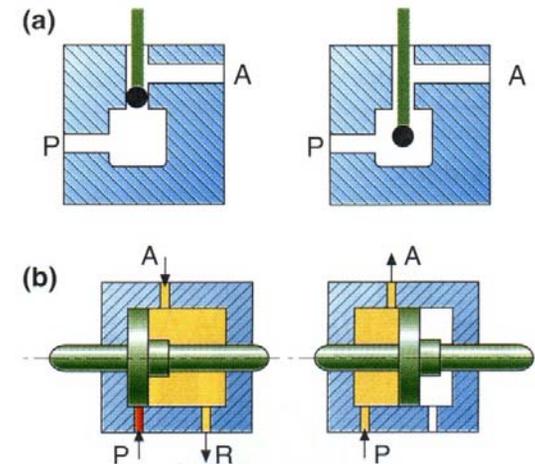
Conexiones habituales a las vías de una válvula.



Formas de conexiones internas de las vías de una válvula.

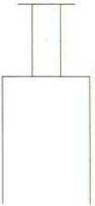
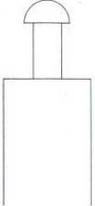
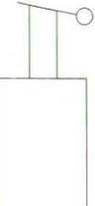
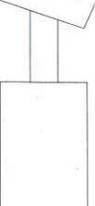
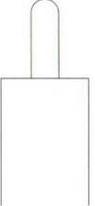
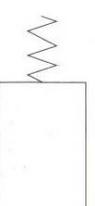
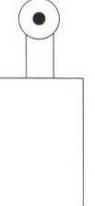
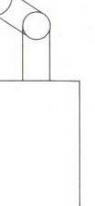
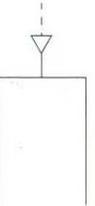
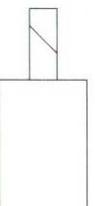


Válvula 3/2 manual, normalmente cerrada.



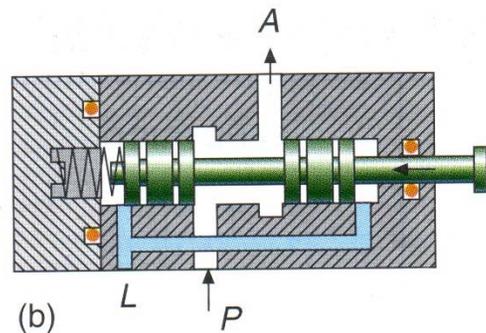
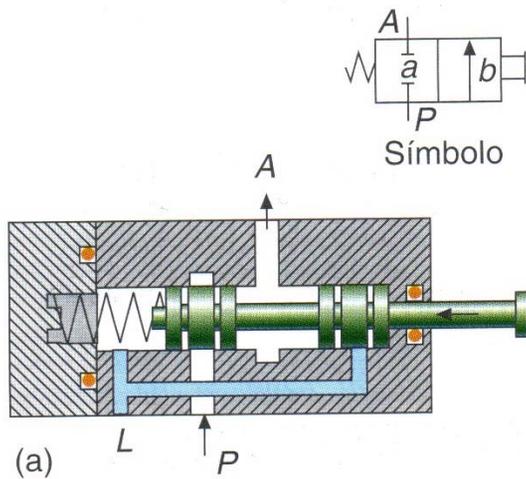
a) Válvula de asiento de la bola de 2/2, normalmente cerrada.
b) Válvula de corredera 3/2.

Accionamiento de Válvulas

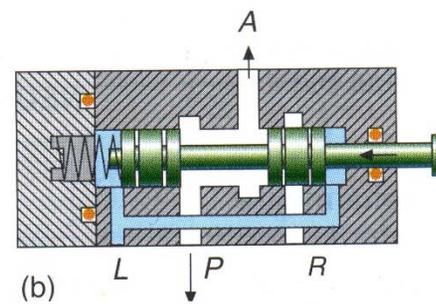
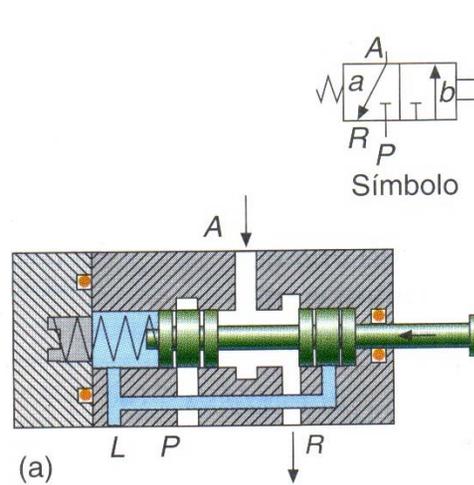
ACCIONAMIENTOS DE LAS VÁLVULAS	
MANUAL	
 Manual general	 Pulsador
 Por palanca	 Por pedal
MECÁNICO	
 Por palpador mecánico	 Por muelle
 Por rodillo	 Por rodillo abatible
NEUMÁTICO	ELÉCTRICO
 Por presión	 Por electroimán

Simbolo de los diferentes tipos de mando.

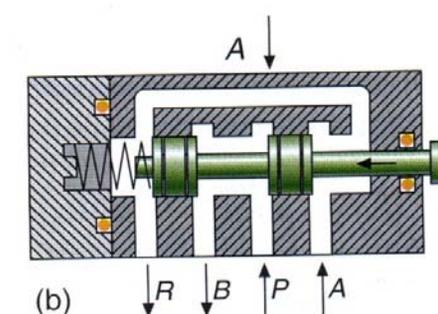
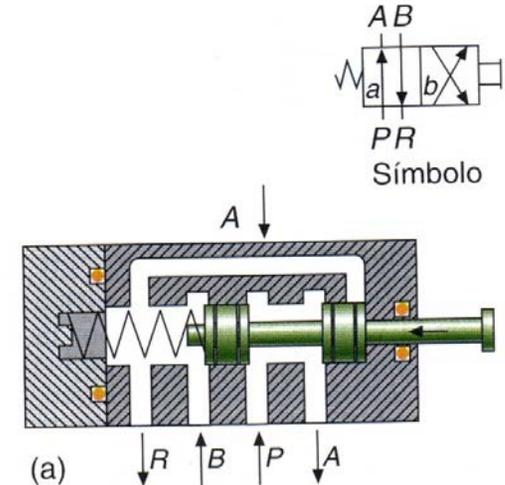
Forma constructiva de válvulas



Válvula 2/2: a) posición de reposo; b) abierta.

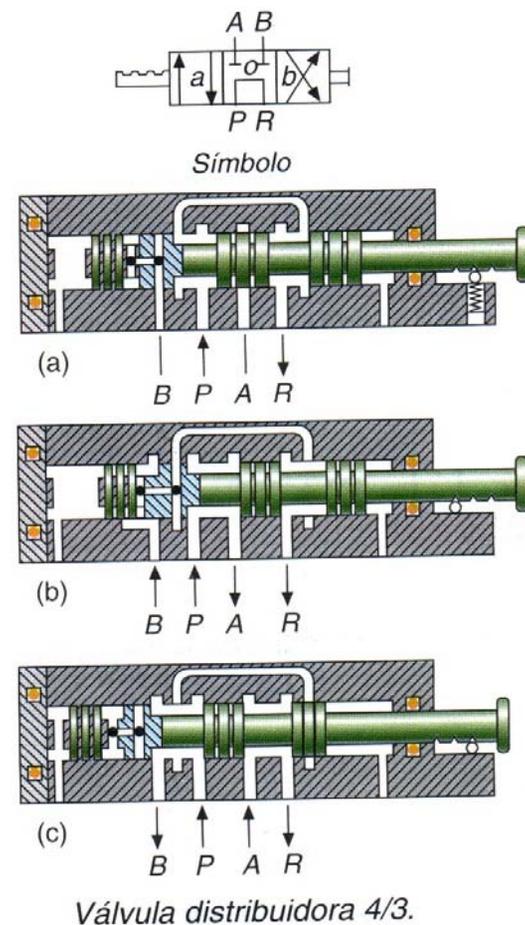
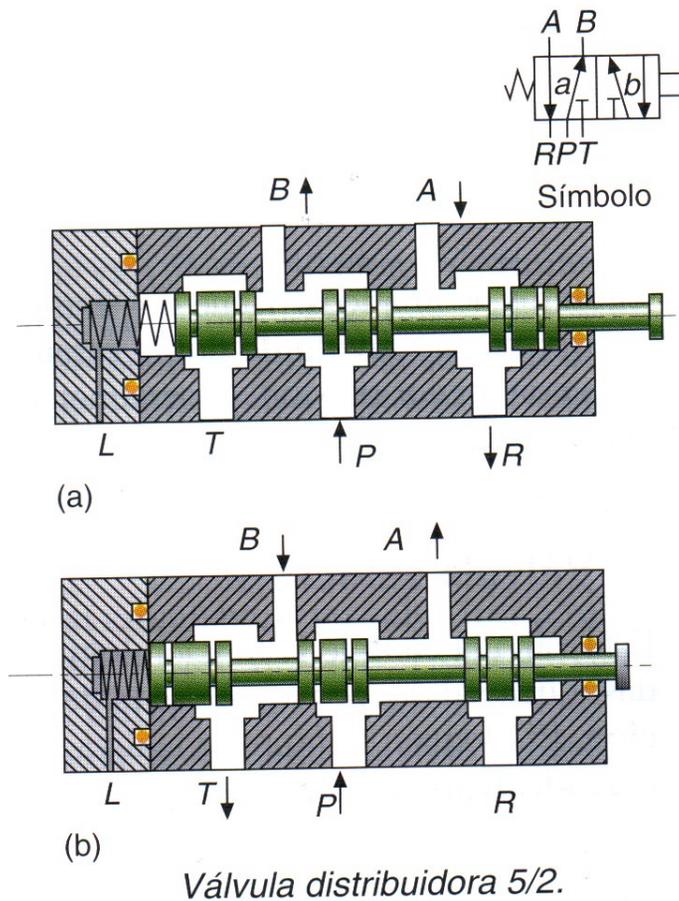


Válvula distribuidora 3/2: a) posición de reposo; b) accionada.

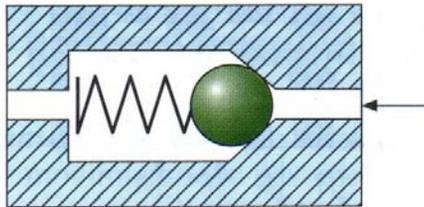


Válvula distribuidora 4/2.

Forma constructiva de válvulas

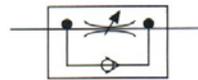
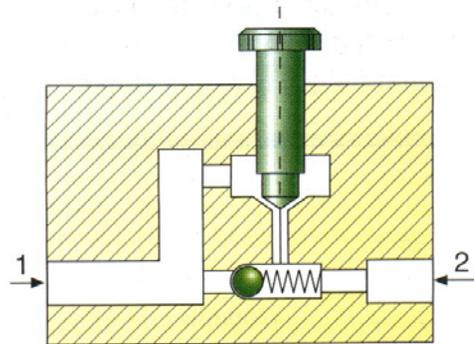


Válvulas de bloqueo y reguladoras



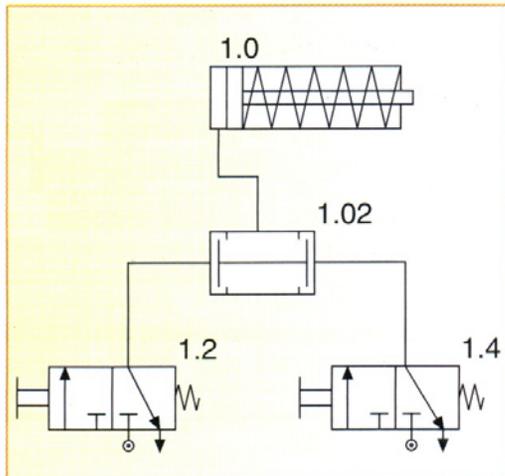
Símbolo

Símbolo de la válvula antirretorno.

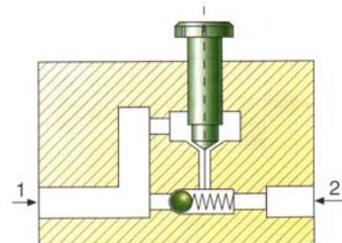


Símbolo

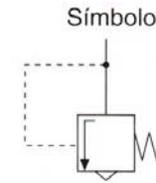
Símbolo de las válvulas reguladoras de flujo.



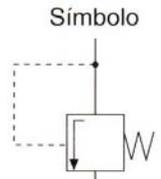
Utilización de una válvula de simultaneidad.



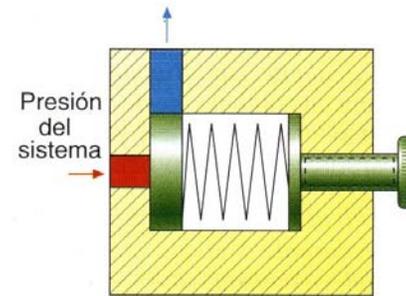
Válvula estranguladora unidireccional.



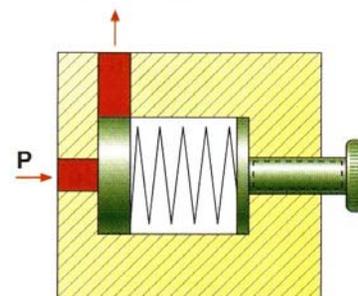
Salida a la atmósfera



Orificio hacia el consumidor



(a)

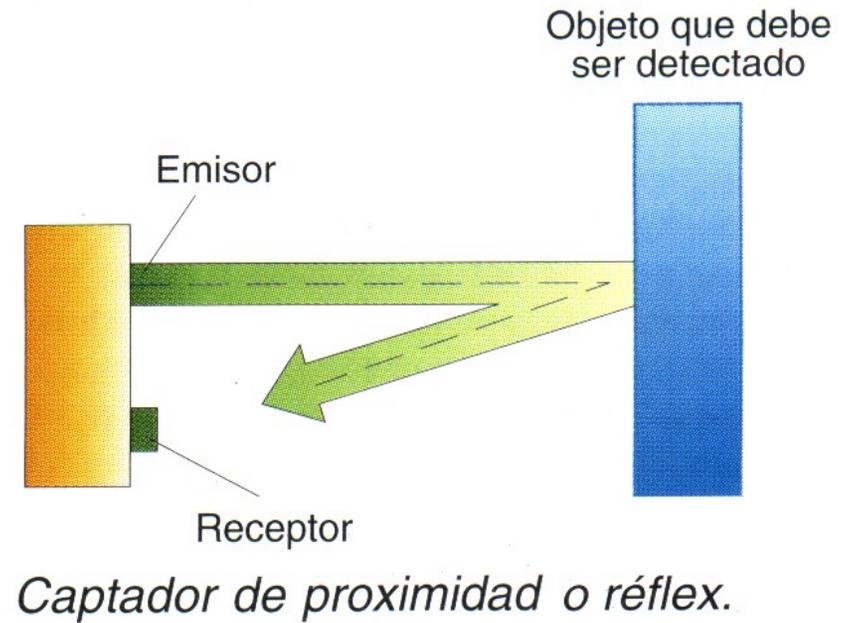
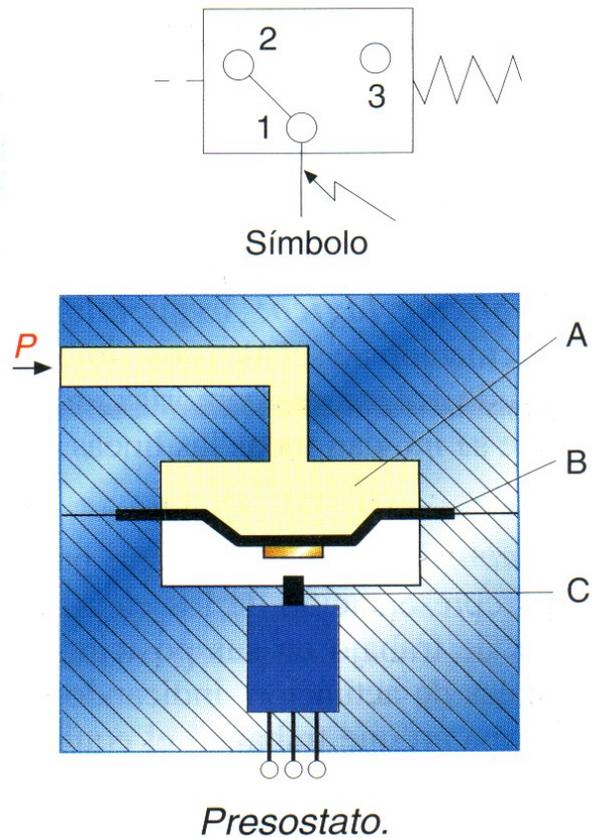


(b)

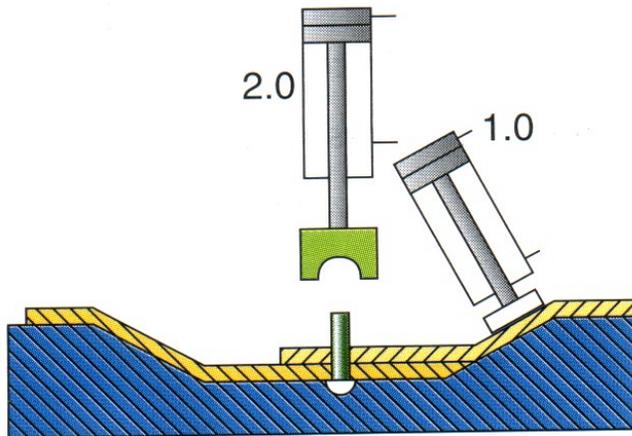
Símbolos de diferentes válvulas reguladoras de presión.

a) Válvula limitadora de presión. b) Válvula de secuencia.

Detectores neumáticos



Diseño de circuitos



Plano de situación.

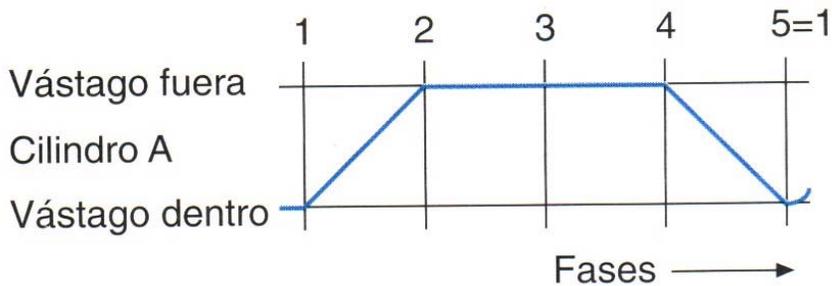


Diagrama espacio-fase.

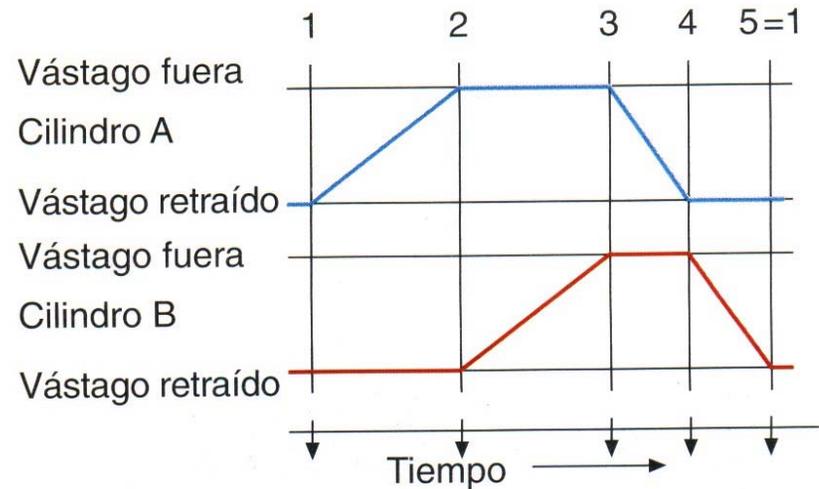


Diagrama espacio-tiempo.

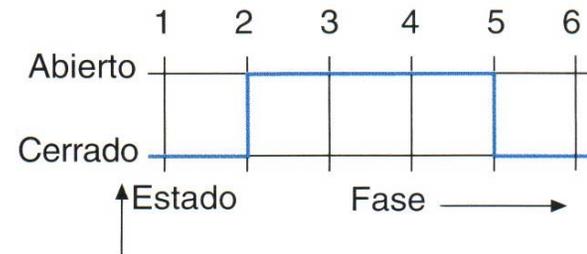
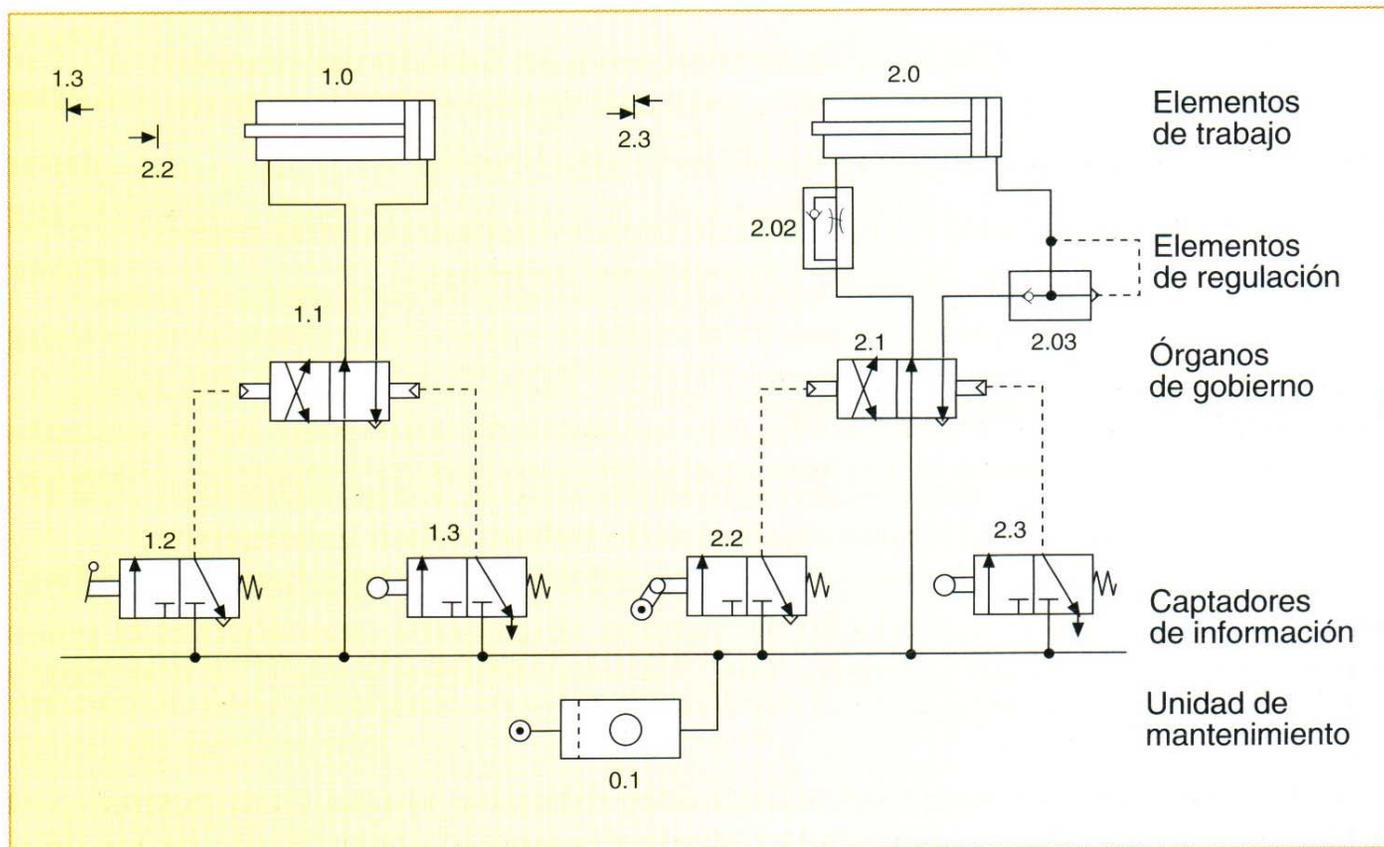


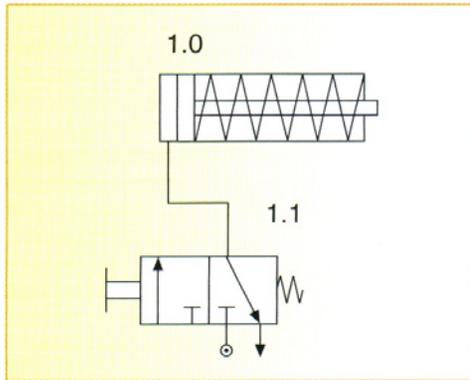
Diagrama de mando de una válvula 3/2 normalmente cerrada.

Esquema neumático

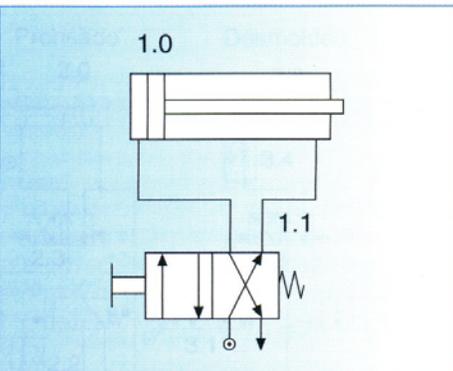


Esquema neumático.

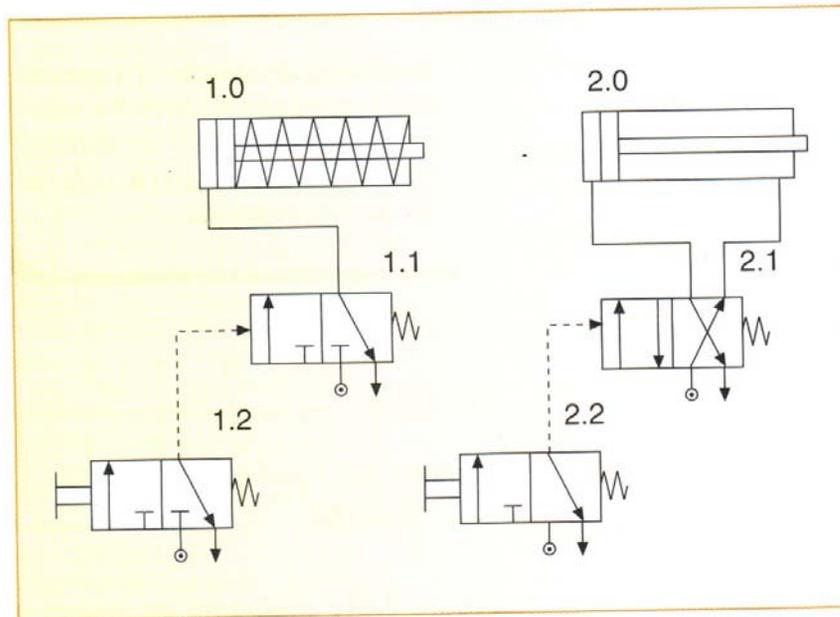
Tipos de mandos



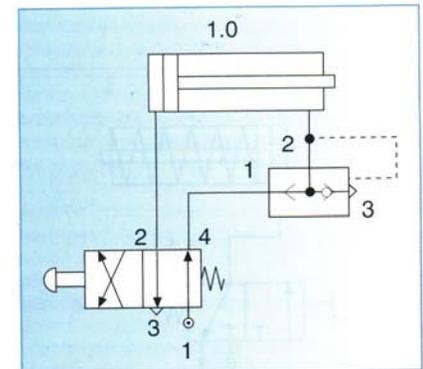
Mando directo de un cilindro de simple efecto mediante válvula 3/2 monoestable.



Mando directo de un cilindro de doble efecto mediante válvula 4/2 monoestable.

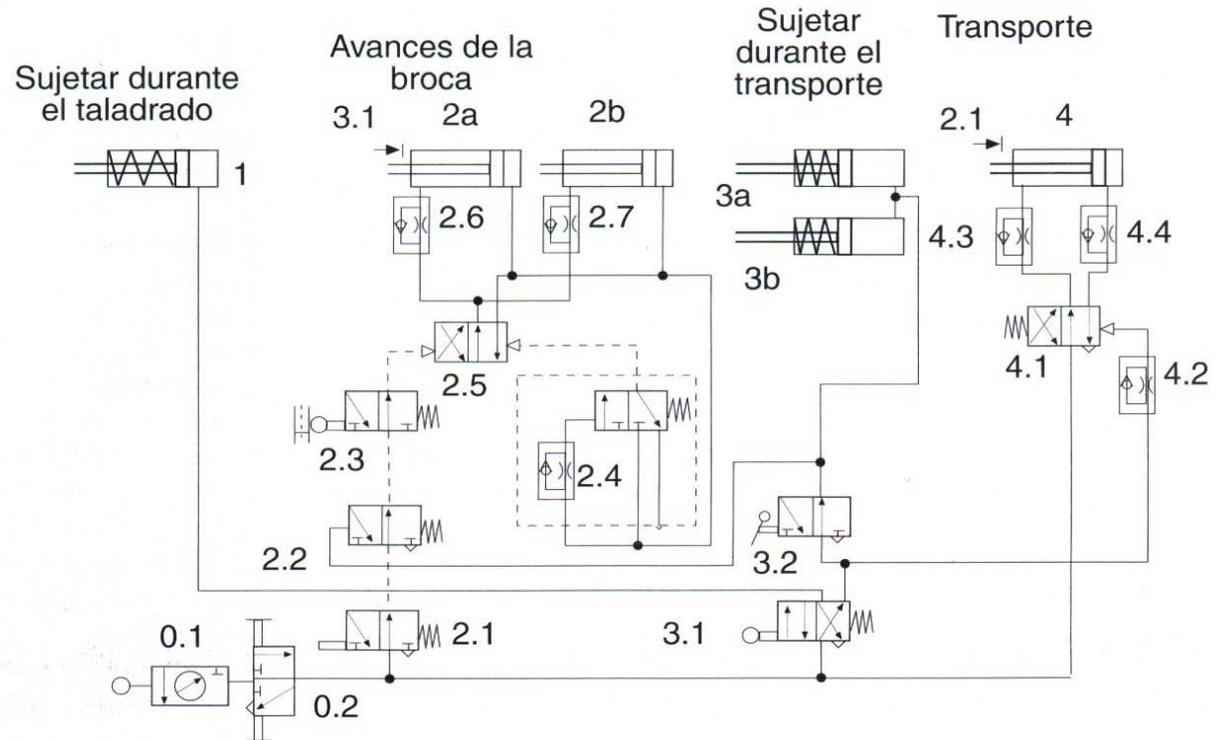
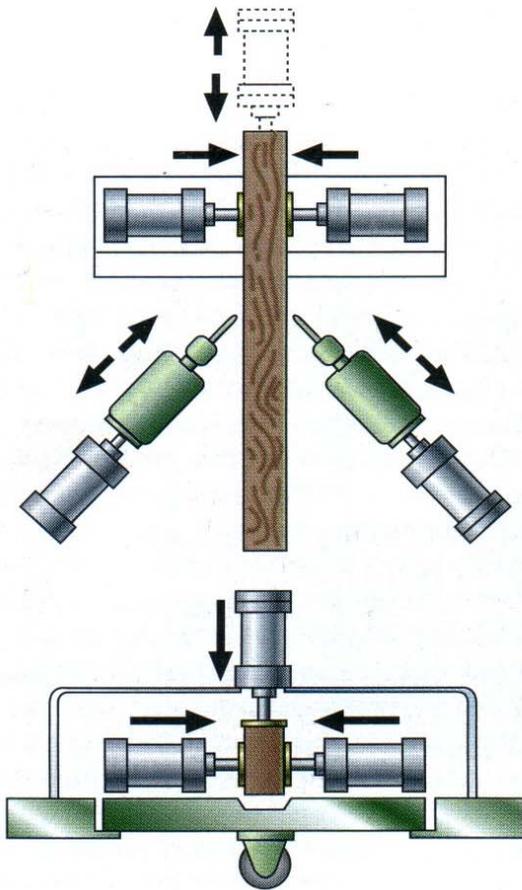


Mando indirecto de cilindros gobernados por válvulas monoestables.

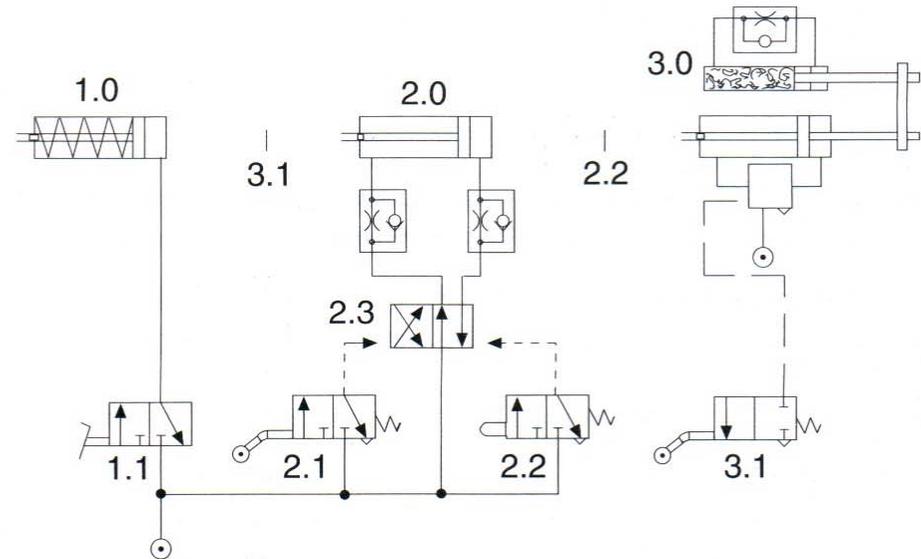
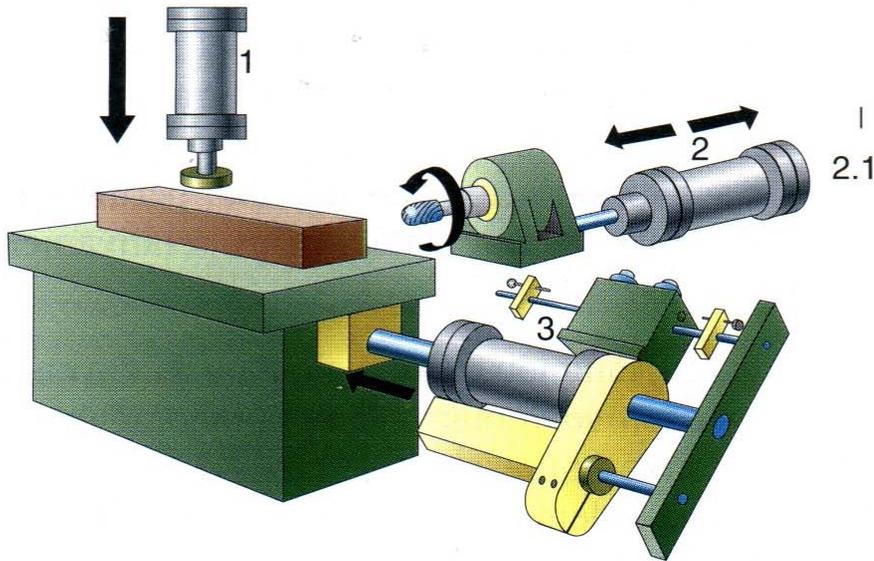


Aumento de la velocidad mediante una válvula de escape rápido.

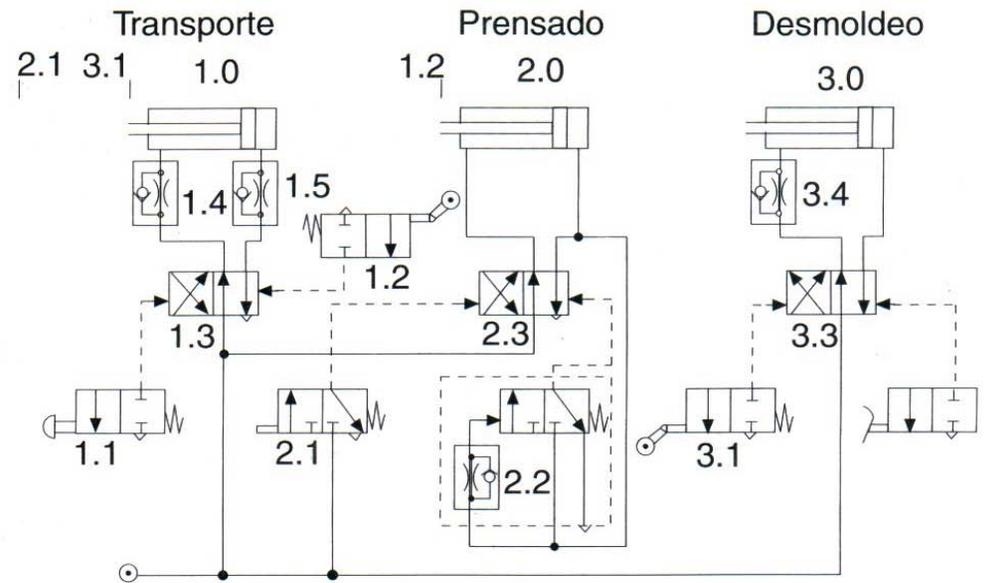
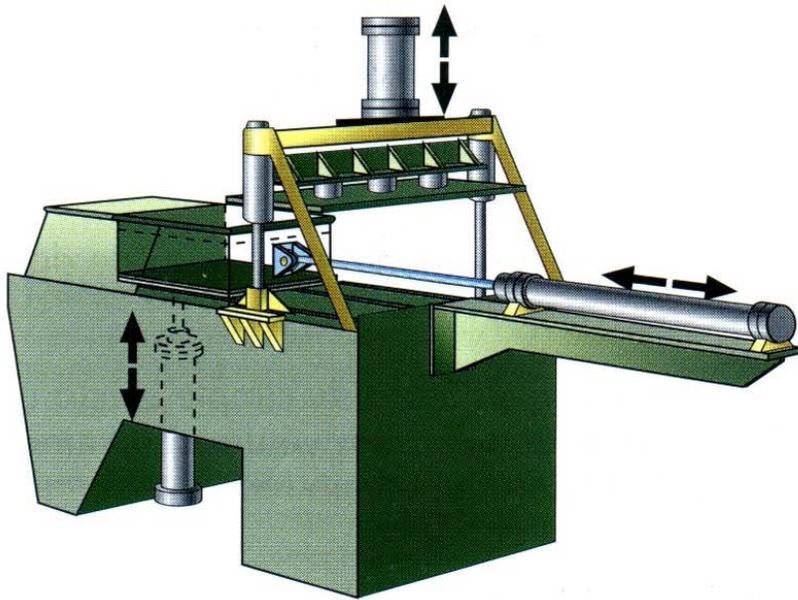
Ejemplo de aplicación 1



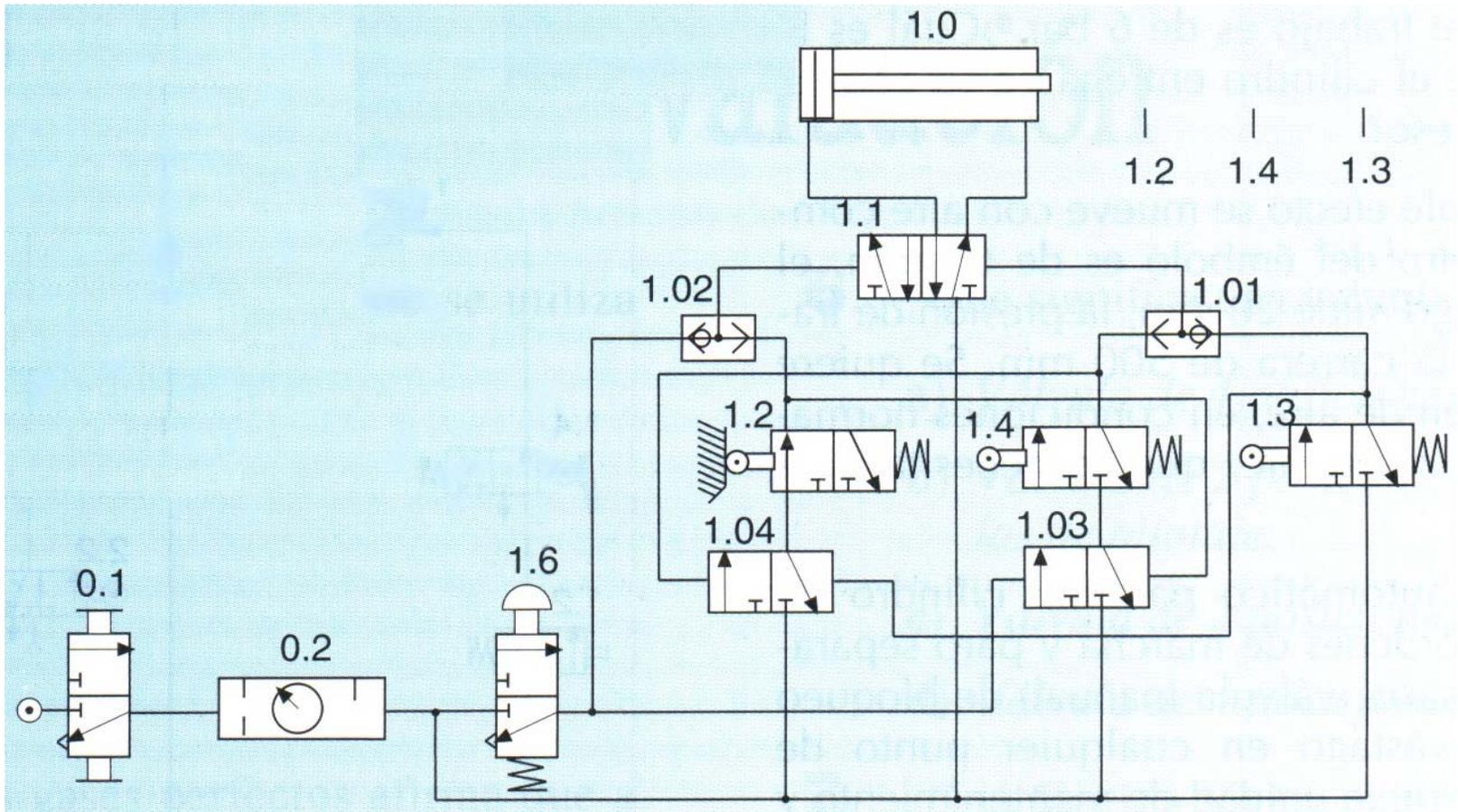
Ejemplo de aplicación 2



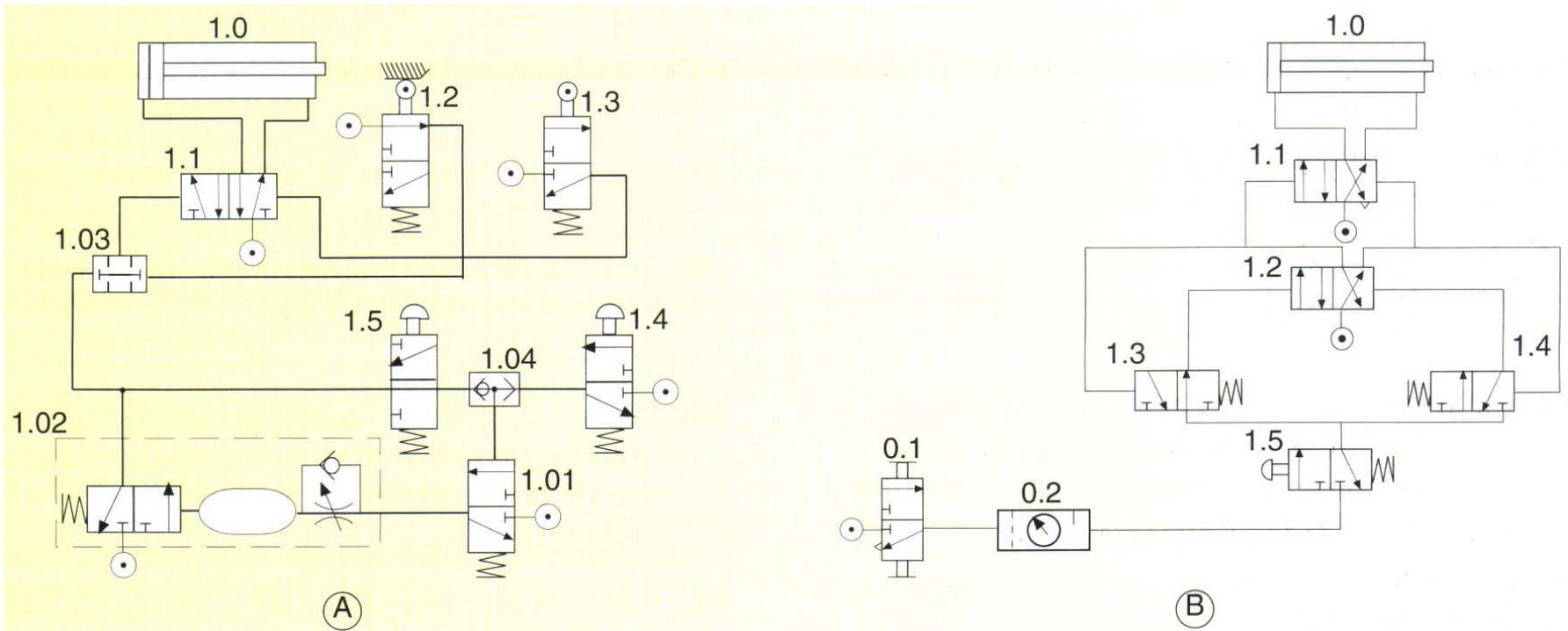
Ejemplo de aplicación 3



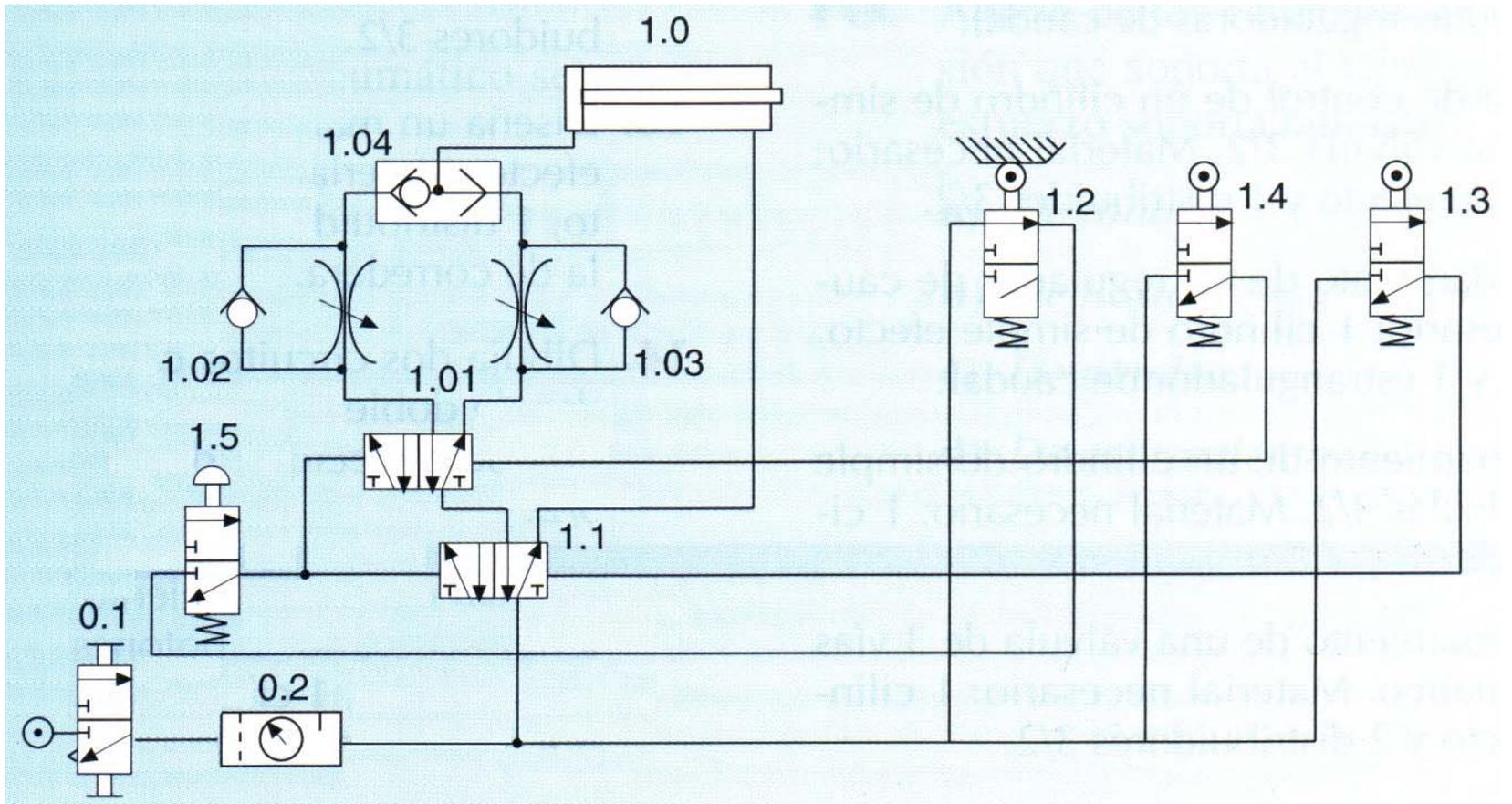
Ejercicio 5



Ejercicio 6



Ejercicio 7



Ejercicio 11

