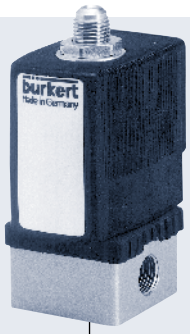
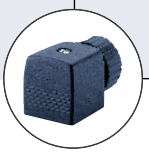
# 3/2–way Miniature Solenoid Valve



- Direct–acting
- High cycling rate
- NC, NO or universal circuit function
- Push–over solenoid system
- Threaded port or sub–base connection
- Approvals: UL FM CSA CE

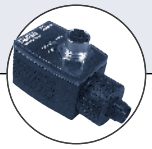
Type 6014 can be combined with…



**Type 2508**
Cable plug



**Type 1078**
Timer unit



**Type 2511**
ASI cable plug



**Type 8600**
Dosing control

Direct–acting Type 6014 valve for individual or manifold mounting with push–over coil, for use with a variety media depending on the materials of construction. Delivered in various body materials and also suitable for use in technical vacuum.

| Power consumption | | | |
|---|---|---|---|
| **Coil Power** | **Inrush** | **Hold** | |
| [W] | AC [VA] | AC [VA/W] | DC [W] |
| 8 | 24 | 17/8 | 8 |

| Technical data | |
|---|---|
| **Orifice** | DN 1.5 – 2.5 |
| **Body material** | Brass, stainless steel, polyamide (manifold version only) |
| **Sealing material** | FKM |
| **Media** | Neutral gases and liquids |
| **Medium temperature** | 14°F to 212°F (-10°C to 100°C) |
| **Ambient temperature** | max. 131°F (55°C) |
| **Voltage tolerance** | ± 10% |
| **Duty cycle**<br>Manifold mounting | 100% continuous rating<br>Intermittent operation 60% |
| **Electrical connection** | Spade connector acc. to DIN 43650 A for Type 2508 cable plug (see accessories) |
| **Installation** | as required, preferably with actuator upright |
| **Protection class** | IP 65 with cable plug |

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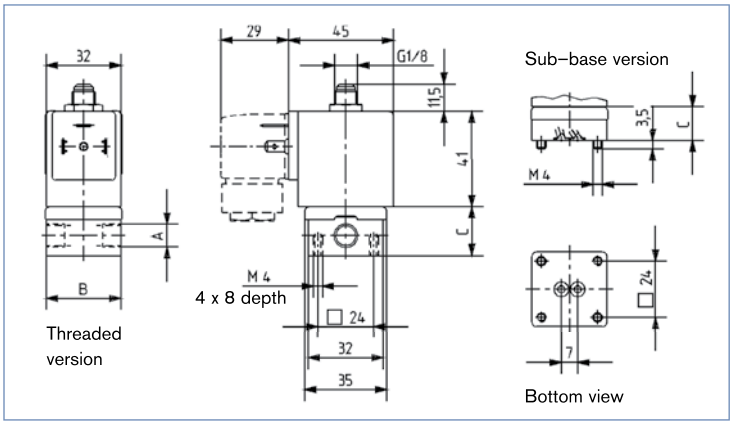
**Burkert Contromatic USA**
2602 McGaw Avenue
Irvine, CA 92614
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www.burkert-usa.com



bürkert
Fluid Control Systems

## Dimensions [mm]

| Dimensions [mm] | | | |
|---|---|---|---|
| **Version** | **A [NPT]** | **B** | **C** |
| Threaded port without manual override | 1/8 | 32 | 20.8 |
| | 1/4 | 46 | 26.8 |
| Threaded port with manual override | 1/8 | 32 | 20.8 |
| | 1/4 | 46 | 26.8 |
| Sub–base | – | 32 | 14.3 |




**Ordering chart for valves** (other versions on rrequest)
with brass body, threaded port connections, FKM seal material, without cable plug (see accessories)

| Circuit function | Orifice [mm] | Port connection | $C_v$ value Water [GPM] | Pressure range [PSI][1)] | Body material | Effective coil power [W] | Voltage/ frequency [V/Hz] | Item no. without manual override UR/CSA/CE | Item no. with manual override UR/CSA/CE | Item no. without manual override UL/FM/CSA/CE | Item no. with manual override UL/FM/CSA/CE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **C** 3/2–way valve NC | 1.5 | NPT 1/8 | 0.08 | 0 – 145 | Brass | 8 | 24/DC | 456 339 E | – | 456 570 A | – |
| | | | | | | | 24/60 | 456 340 K | – | 456 571 X | – |
| | | | | | | | 120/60 | US07599 | – | 456 572 Y | – |
| | | | | | | | 240/60 | 456 342 H | – | 456 573 Z | – |
| | 2.0 | NPT 1/8 | 0.13 | 0 – 145 | Brass | 8 | 24/DC | 456 343 A | 456 369 J | 456 574 S | 456 590 X |
| | | | | | | | 24/60 | 456 344 B | 456 360 P | 456 575 T | 456 591 L |
| | | | | | | | 120/60 | 456 345 C | 456 361 C | 456 576 U | 456 592 M |
| | | | | | | | 240/60 | 456 346 D | 456 362 D | 456 577 V | 456 593 N |
| | | NPT 1/4 | 0.13 | 0 – 145 | Brass | 8 | 24/DC | 456 347 E | – | 456 578 E | – |
| | | | | | | | 24/60 | 456 348 P | – | 456 579 F | – |
| | | | | | | | 120/60 | 456 349 Q | – | 456 580 V | – |
| | | | | | | | 240/60 | 456 350 M | – | 456 581 J | – |
| | 2.5 | NPT 1/8 | 0.18 | 0 – 87 | Brass | 8 | 24/DC | 456 351 A | – | 456 582 K | – |
| | | | | | | | 24/60 | 456 352 B | – | 456 583 L | – |
| | | | | | | | 120/60 | 456 353 C | – | 456 584 M | – |
| | | | | | | | 240/60 | 456 354 D | – | 456 585 N | – |
| | | NPT 1/4 | 0.18 | 0 – 87 | Brass | 8 | 24/DC | 456 355 E | – | 456 586 P | – |
| | | | | | | | 24/60 | 456 356 F | – | 456 587 Q | – |
| | | | | | | | 120/60 | 456 357 G | – | 456 588 Z | – |
| | | | | | | | 240/60 | 456 358 R | – | 456 589 S | – |
| **D** 3/2–way valve NO | 1.5 | NPT 1/8 | 0.08 | 0 – 232 | Brass | 8 | 24/DC | 456 363 E | – | 456 594 P | – |
| | | | | | | | 24/60 | 456 364 F | – | 456 595 Q | – |
| | | | | | | | 120/60 | 456 365 G | – | 456 596 R | – |
| | | | | | | | 240/60 | 456 366 H | – | 456 597 J | – |
| | 2.0 | NPT 1/8 | 0.13 | 0 – 145 | Brass | 8 | 24/DC | 456 367 A | – | 456 598 T | – |
| | | | | | | | 24/60 | 456 368 K | – | 456 599 U | – |
| | | | | | | | 120/60 | 456 369 L | – | 456 600 R | – |
| | | | | | | | 240/60 | 456 370 R | – | 456 601 E | – |
| | | NPT 1/4 | 0.13 | 0 – 145 | Brass | 8 | 24/DC | 456 371 E | 456 400 H | 456 602 F | 456 614 S |
| | | | | | | | 24/60 | 456 372 F | 456 401 W | 456 603 G | 456 615 T |
| | | | | | | | 120/60 | 456 373 G | 456 402 X | 456 604 H | 456 416 U |
| | | | | | | | 240/60 | 456 374 H | 456 403 Y | 456 605 A | 456 617 V |
| | 2.5 | NPT 1/8 | 0.18 | 0 – 87 | Brass | 8 | 24/DC | 456 375 A | – | 456 606 B | – |
| | | | | | | | 24/60 | 456 376 B | – | 456 607 C | – |
| | | | | | | | 120/60 | 456 377 C | – | 456 608 M | – |
| | | | | | | | 240/60 | 456 378 M | – | 456 609 N | – |
| | | NPT 1/4 | 0.18 | 0 – 87 | Brass | 8 | 24/DC | 456 379 N | – | 456 610 A | – |
| | | | | | | | 24/60 | 456 380 C | – | 456 611 X | – |
| | | | | | | | 120/60 | 456 381 Z | – | 456 612 Y | – |
| | | | | | | | 240/60 | 456 399 B | – | 456 613 Z | – |
| **T** 3/2–way universal valve | 1.5 | NPT 1/8 | 0.08 | 0 – 101 | Brass | 8 | 24/DC | 456 404 Z | – | 456 618 E | – |
| | | | | | | | 24/60 | 456 405 S | – | 456 619 F | – |
| | | | | | | | 120/60 | 456 406 T | – | 456 620 C | – |
| | | | | | | | 240/60 | 456 407 U | – | 456 621 Z | – |

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## Ordering chart for valves

**Ordering chart for valves**
Valves with stainless steel body, threaded port connection, FKM seal material

| Circuit function | Orifice [mm] | Port connection | $C_v$ value Water [GPM] | Pressure range [PSI][1)] | Body material | Effective coil power [W] | Voltage/ frequency [V/Hz] | Item no. without manual override UR/CSA/CE | Item no. with manual override UR/CSA/CE | Item no. without manual override UL/FM/CSA/CE | Item no. with manual override UL/FM/CSA/CE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **C** 3/2–way valve NC | 1.5 | NPT 1/8 | 0.08 | 0 – 232 | Stainless steel | 8 | 24/DC | 456 423 K | – | 456 646 A | – |
| | | | | | | | 24/60 | 456 424 L | – | 456 647 B | – |
| | | | | | | | 120/60 | 456 425 M | – | 456 648 L | – |
| | | | | | | | 240/60 | 456 426 N | – | 456 649 M | – |
| | 2.0 | NPT 1/8 | 0.13 | 0 – 145 | Stainless steel | 8 | 24/DC | 456 427 P | – | 456 650 J | – |
| | | | | | | | 24/60 | 456 428 Y | – | 456 651 F | – |
| | | | | | | | 120/60 | 456 429 Z | – | 456 652 G | – |
| | | | | | | | 240/60 | 456 430 W | – | 456 653 H | – |
| | | NPT 1/4 | 0.13 | 0 – 145 | Stainless steel | 8 | 24/DC | 456 431 K | – | 456 654 A | – |
| | | | | | | | 24/60 | 456 432 L | – | 456 655 B | – |
| | | | | | | | 120/60 | 456 433 M | – | 456 656 C | – |
| | | | | | | | 240/60 | 456 434 N | – | 456 657 D | – |
| **T** 3/2–way universal vlave | 1.5 | NPT 1/8 | 0.08 | 0 – 101 | Stainless steel | 8 | 24/DC | 456 435 P | – | 456 658 N | – |
| | | | | | | | 24/60 | 456 436 Q | – | 456 659 P | – |
| | | | | | | | 120/60 | 456 437 R | – | 456 660 L | – |
| | | | | | | | 240/60 | 456 438 S | – | 456 661 H | – |
| Valves with brass body, sub–base connection, FKM seal material | | | | | | | | | | | |
| **C** 3/2–way valve NC | 1.5 | Manifold | 0.08 | 0 – 232 | Brass | 8 | 24/DC | 456 408 D | 456 416 L | 456 622 S | 456 630 E |
| | | | | | | | 24/60 | 456 409 E | 456 417 M | 456 623 T | 456 631 T |
| | | | | | | | 120/60 | 456 410 S | 456 382 S | 456 624 U | 456 632 U |
| | | | | | | | 240/60 | 456 411 P | 456 383 T | 456 625 V | 456 633 Y |
| | 2.0 | Manifold | 0.13 | 0 – 145 | Brass | 8 | 24/DC | 456 412 Q | 456 384 U | 456 626 W | 456 634 W |
| | | | | | | | 24/60 | 456 413 R | 456 385 V | 456 627 X | 456 635 X |
| | | | | | | | 120/60 | 456 414 J | 456 386 W | 456 628 G | 456 636 Y |
| | | | | | | | 240/60 | 456 415 K | 456 387 X | 456 629 H | 456 637 Z |
| **D** 3/2–way valve NO | 2.0 | Manifold | 0.13 | 0 – 145 | Brass | 8 | 24/DC | 456 392 U | – | 456 642 E | – |
| | | | | | | | 24/60 | 456 393 V | – | 456 643 F | – |
| | | | | | | | 120/60 | 456 394 W | – | 456 644 G | – |
| | | | | | | | 240/60 | 456 395 X | – | 456 645 H | – |

- See 2508 or 2509 series data sheets for cable plug ordering charts.
- All UL listed/FM/CSA/CE approved valves include 1/2" conduit plug Type 2509.
- All UR/CSA/CE approved valves include cable plug Type 2508.

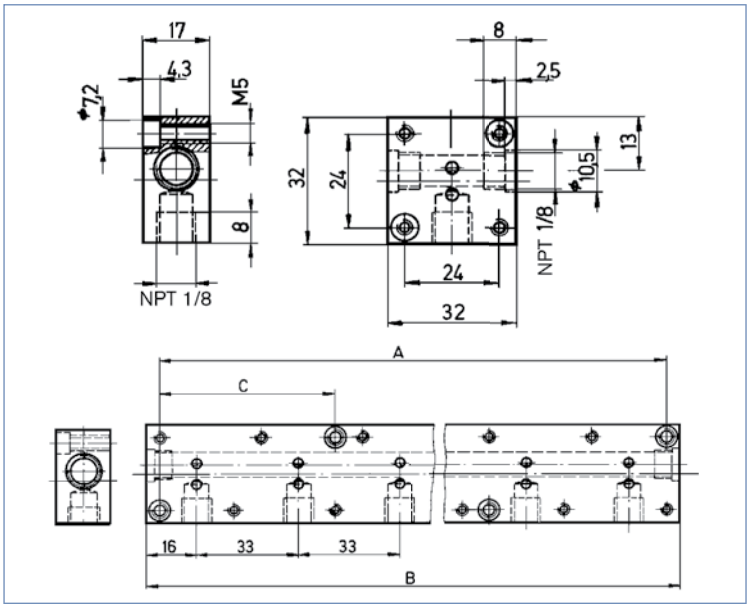
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## Valve version charts

| Valve version Basic version | | Max. operating pressure [PSI] for valve appllication in circuit function | | | | |
|---|---|---|---|---|---|---|
| DN | Circuit cunction | A | B | C | D | T |
| 1.5 | C | 232 | 319 | 232 | 29 | 29 |
| | D | 29 | 36.3 | 29 | 232 | 29 |
| | T | 145 | 232 | 145 | 87 | 87 |
| 2.0 | C | 145 | 203 | 145 | 14.5 | 14.5 |
| | D | 14.5 | 21 | 14.5 | 145 | 14.5 |
| | T | 87 | 145 | 87 | 58 | 58 |
| 2.5 | C | 87 | 130.5 | 87 | 10 | 10 |
| | D | 10 | 14.5 | 10 | 87 | 10 |
| | T | 50.7 | 87 | 50.7 | 36.3 | 36.3 |

### Utilisation in another circuit function

Valves with circuit functions (WW) C, D and T are fitted with different springs. If used in some other circuit function, the permissible operating pressure may change (see table above).




| Circuit function | Connection type | | |
|---|---|---|---|
| | * | ** | *** |
| A | P | blank off | A |
| B | blank off | B | P |
| C | p | R | A |
| D | R | P | B |
| T | P | R | A |

### Connections

For the positions marked with *, ** or *** in the drawing, the connections are marked with the letters shown in the table above, depending on the circuit function. Unused connections in circuit functions A or B will be closed off with a blanking plug or cap nut.

### Manifold mounting

With manifold mounting, please comply with the permissible duty cycle. The pressure port for the manifold is designated with P (R), and the outlet port with A (B). Only connect together ports with the same designation.

2/2-way valves of Type 6013 can be operated together on a manifold with 3/2-way valves of Type 6014, circuit function C (not D or T!) if the operating pressures agree according to the rating plates. The manifolds can also be expanded if the valve functions are taken into consideration. Connector nipples with O–rings are used to connect the P (R) ports.
Caution! Unused, open valve ports must be closed off with covering plates (see Accessories).

**Ordering chart for accessories**

| Accessories | Features | | | | Item no. |
|---|---|---|---|---|---|
| Single manifold | from aluminium | | | | 613 827 M |
| Multiple manifold | from aluminium | Hole spacing A [mm] | Total length B [mm] | Hole spacing C [mm] | |
| | 2 valves | 57 | 65 | – | 006 104 V |
| | 3 valves | 90 | 98 | – | 613 828 W |
| | 4 valves | 123 | 131 | – | 006 106 X |
| | 5 valves | 156 | 164 | 57 | 613 829 X |
| | 6 valves | 189 | 197 | – | 613 598 Y |
| | 8 valves | 255 | 263 | – | 613 831 R |
| Connector nipple | with O–ring, for the comnection of manifolds | | | | 005 040 A |
| Covering plate | with screws and O–ring for closing off unused valve positions | | | | 005 630 E |

In case of special application conditions, please consult for advice.

We reserve the right to make technical changes without notice.

0602/2_US-en

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