

2/2-way Solenoid Valve with servo diaphragm, G 3/8 - G 2



Type 6281 can be combined with...



Type 2508
Cable plug



Type 1078
Timer Unit



Type 2511
ASI Cable Plug

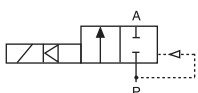
- User friendly - one solenoid for all orifices
- Waterhammer free and low noise
- Circuit function NC or NO
- Manual override optional
- Short installation length
- Explosion proof types

Servo-assisted solenoid valve with servo-diaphragm for the control of liquid or gaseous Medium. A pressure difference of 0.5 bar is required for a complete switchover. The modular coil system allows the interchange of the coils over all orifices to be in line with the nominal power and circuit function.

| Power consumption | | |
|--|----------------------|-----------|
| Inrush AC [VA] | Hold (with hot coil) | |
| | AC [VA/W] | DC [W] |
| Circuit function A | | |
| 24 | 14/8 | 8 (9.5) |
| Circuit function B | | |
| 24 | 16/7 | 8 (9.5) |
| Ex-coil¹⁾ (Circuit function A) | | |
| 9 | 9 | 9 |

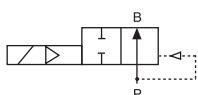
¹⁾ with internal rectifier

Circuit function A



2/2-way valve NC,
normally closed

Circuit function B



2/2-way valve NO,
normally open

| Technical data | |
|------------------------------------|--|
| Orifice | DN 13 - 40 mm |
| Body material | Brass acc. to DIN EN 50930-6 (Stainless steel dezincification resistant on request) |
| Inner part of valve | Stainless steel, Brass, Plastic (PPS) |
| Seal material | NBR, EPDM, FKM |
| Media | NBR EPDM FKM Neutral fluids, e.g. compressed air, water Oil and fat-free fluids, hot water, acetone, aqueous alkali solution Hot air, per-solution |
| Ambient temperature | max. +55 °C |
| Media temperature | NBR EPDM FKM -10° to +80°C -30° to +90°C (with epoxy coil to +100°C) 0° to +90°C (with epoxy coil to +120°C) |
| Voltages | 024/DC, 024/50-60, 230/50-60 |
| Voltage tolerance | ±10 % |
| Duty cycle | 100% continuous rating |
| Electrical connection | Tag connector acc. to DIN EN 175301-803 Form A (previously DIN 43650) for cable plug Type 2508 (see Ordering chart for accessory, p. 5) |
| Protection class | IP 65 with cable plug |
| Installation | As required, preferably with actuator upright |
| Response times²⁾ | 0,1 - 4 seconds (depending on orifice and differential pressure) |

²⁾ Measured at valve outlet at 6 bar and +20°C. *Opening*: pressure build-up 0 to 90%, *Schließen*: pressure decay 100 to 10%

Materials

| | |
|--|--|
| Coil: | Polyamide ¹⁾ or epoxy ²⁾ |
| Stopper: DN 10-40 mm: | 1.4113 |
| Short circuit ring: with Brass body: with Stainless steel body: | Copper (Cu) Silver (Ag) |
| Magnetic core: DN 10-40 mm: | 1.4113 |
| O-rings: | NBR, FKM, EPDM |
| Armature seal: | NBR, FKM, EPDM |
| Spring: | 1.4310 |
| O-rings: | NBR, FKM, EPDM |
| Diaphragm: | NBR, FKM, EPDM |
| Diaphragm-holder: | PPSGF40 |
| Valve body: | Brass or Stainless steel 1.4408 (316) |

¹⁾ with NBR, EPDM seal
²⁾ with FKM seal

Ordering chart for valves (other versions on request)

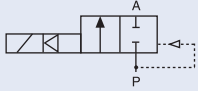
Circuit function A (NC, normally closed), Brass body

| Circuit function | Port connection | Orifice [mm] | Kv value water [m ³ /h] | Pressure range [bar] | Weight [kg] | Item no. per voltage/frequency [V/Hz] | | |
|-------------------------------|--|--------------|------------------------------------|----------------------|-------------|---------------------------------------|-----------|-----------|
| | | | | | | 024/DC | 024/50-60 | 230/50-60 |
| A 2/2-way valve NC | Seal material NBR, Polyamide coil, Medium temperature -10...+80°C | | | | | | | |
| | G 3/8 | 13 | 3.8 | 0.2-16 | 0.58 | 221 841 | 221 842 | 221 843 |
| | G 1/2 | 13 | 3.8 | 0.2-16 | 0.54 | 221 844 | 221 845 | 221 846 |
| | G 3/4 | 13 | 3.8 | 0.2-16 | 0.59 | 221 847 | 221 848 | 221 849 |
| | G 3/4 | 20 | 8.5 | 0.2-16 | 0.89 | 221 850 | 221 851 | 221 852 |
| | G 1 | 20 | 8.5 | 0.2-16 | 1.0 | 221 853 | 221 854 | 221 855 |
| | G 1 | 25 | 12 | 0.2-16 | 1.3 | 221 856 | 221 857 | 221 858 |
| | G 1 1/4 | 25 | 12 | 0.2-16 | 1.5 | 221 859 | 221 860 | 221 861 |
| | G 1 1/2 | 40 | 30 | 0.2-16 | 3.0 | 221 862 | 221 863 | 221 864 |
| | G 2 | 40 | 30 | 0.2-16 | 3.2 | 221 865 | 221 866 | 221 867 |
| | Seal material NBR, Polyamide coil, Medium temperature -10...+80°C, with manual override | | | | | | | |
| | G 1/2 | 13 | 3.8 | 0.2-16 | 0.54 | 221 952 | - | 221 953 |
| | G 3/4 | 13 | 3.8 | 0.2-16 | 0.59 | 221 954 | - | 221 955 |
| | G 3/4 | 20 | 8.5 | 0.2-16 | 0.89 | 221 956 | - | 221 957 |
| | G 1 | 20 | 8.5 | 0.2-16 | 1.0 | 221 958 | - | 221 959 |
| | G 1 | 25 | 12 | 0.2-16 | 1.3 | 221 960 | - | 221 961 |
| | G 1 1/4 | 25 | 12 | 0.2-16 | 1.5 | 221 962 | - | 221 963 |
| | G 1 1/2 | 40 | 30 | 0.2-16 | 3.0 | 221 964 | - | 221 965 |
| | G 2 | 40 | 30 | 0.2-16 | 3.2 | 221 966 | - | 221 967 |

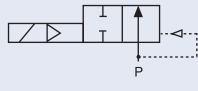
Please note that the cable plug has to be ordered separately, see Ordering chart for accessory and separate datasheet, Type 2508

Ordering chart for valves, continued

Circuit function A (NC, normally closed), Brass body

| Circuit function | Port connection | Orifice [mm] | Kv value water [m ³ /h] | Pressure range [bar] | Weight [kg] | Item no. per voltage/frequency [V/Hz] | | |
|--|---|--------------|------------------------------------|----------------------|-------------|---------------------------------------|-----------|-----------|
| | | | | | | 024/DC | 024/50-60 | 230/50-60 |
| A 2/2-way valve NC  | Seal material FKM, Epoxy coil, Medium temperature 0...+120°C | | | | | | | |
| | G 3/8 | 13 | 3.8 | 0.2-16 | 0.58 | 221 868 | 221 869 | 221 870 |
| | G 1/2 | 13 | 3.8 | 0.2-16 | 0.54 | 221 871 | 221 872 | 221 873 |
| | G 3/4 | 13 | 3.8 | 0.2-16 | 0.59 | 221 874 | 221 875 | 221 876 |
| | G 3/4 | 20 | 8.5 | 0.2-16 | 0.89 | 221 877 | 221 878 | 221 879 |
| | G 1 | 20 | 8.5 | 0.2-16 | 1.0 | 221 880 | 221 881 | 221 882 |
| | G 1 | 25 | 12 | 0.2-16 | 1.3 | 221 883 | 221 884 | 221 885 |
| | G 1 1/4 | 25 | 12 | 0.2-16 | 1.5 | 221 886 | 221 887 | 221 888 |
| | G 1 1/2 | 40 | 30 | 0.2-16 | 3.0 | 221 889 | 221 890 | 221 891 |
| | G 2 | 40 | 30 | 0.2-16 | 3.2 | 221 892 | 221 893 | 221 894 |
| | Seal material EPDM, Polyamide coil, Medium temperature -30...+90°C | | | | | | | |
| | G 3/8 | 13 | 3.8 | 0.2-16 | 0.58 | 221 895 | 221 896 | 221 897 |
| | G 1/2 | 13 | 3.8 | 0.2-16 | 0.54 | 221 898 | 221 899 | 221 900 |
| | G 3/4 | 13 | 3.8 | 0.2-16 | 0.59 | 221 901 | 221 902 | 221 903 |
| | G 3/4 | 20 | 8.5 | 0.2-16 | 0.89 | 221 904 | 221 905 | 221 906 |
| | G 1 | 20 | 8.5 | 0.2-16 | 1.0 | 221 907 | 221 908 | 221 909 |
| | G 1 | 25 | 12 | 0.2-16 | 1.3 | 221 910 | 221 911 | 221 912 |
| | G 1 1/4 | 25 | 12 | 0.2-16 | 1.5 | 221 913 | 221 914 | 221 915 |
| | G 1 1/2 | 40 | 30 | 0.2-16 | 3.0 | 221 916 | 221 917 | 221 918 |
| | G 2 | 40 | 30 | 0.2-16 | 3.2 | 221 919 | 221 920 | 221 921 |

Circuit function B (NO, normally open), Brass body

| Circuit function | Port connection | Orifice [mm] | Kv value water [m ³ /h] | Pressure range [bar] | Weight [kg] | Item no. per voltage/frequency [V/Hz] | | |
|--|--|--------------|------------------------------------|----------------------|-------------|---------------------------------------|---------|---------|
| | | | | | | 024/DC | 024/50 | 230/50 |
| B 2/2-way valve NO  | Seal material NBR, Epoxy coil, Medium temperature -10...+80°C | | | | | | | |
| | G 3/8 | 13 | 3.8 | 0.2-16 | 0.58 | 221 923 | 221 924 | 221 925 |
| | G 1/2 | 13 | 3.8 | 0.2-16 | 0.54 | 221 926 | 221 928 | 221 929 |
| | G 3/4 | 13 | 3.8 | 0.2-16 | 0.59 | 221 930 | 221 931 | 221 933 |
| | G 3/4 | 20 | 8.5 | 0.2-16 | 0.89 | 221 934 | 221 935 | 221 936 |
| | G 1 | 20 | 8.5 | 0.2-16 | 1.0 | 221 937 | 221 938 | 221 939 |
| | G 1 | 25 | 12 | 0.2-16 | 1.3 | 221 940 | 221 941 | 221 942 |
| | G 1 1/4 | 25 | 12 | 0.2-16 | 1.5 | 221 943 | 221 944 | 221 945 |
| | G 1 1/2 | 40 | 30 | 0.2-16 | 3.0 | 221 946 | 221 947 | 221 948 |
| | G 2 | 40 | 30 | 0.2-16 | 3.2 | 221 949 | 221 950 | 221 951 |

Please note that the cable plug has to be ordered separately, see Ordering chart for accessory and separate datasheet, Type 2508

Ordering chart for valves, continued

Circuit function A (NC, normally closed), Stainless steel body

| Circuit function | Port connection | Orifice [mm] | Kv value water [m³/h] | Pressure range [bar] | Weight [kg] | Item no. per voltage/frequency [V/Hz] | | | |
|-------------------------------|---|--------------|-----------------------|----------------------|-------------|---------------------------------------|-----------|-----------|--|
| | | | | | | 024/DC | 024/50-60 | 230/50-60 | |
| A 2/2-way valve NC | Seal material NBR, Polyamide coil, Medium temperature -10...+80°C | | | | | | | | |
| | G 1/2 | 13 | 3.8 | 0.2-16 | 0.54 | 221 968 | 221 969 | 221 970 | |
| | G 3/4 | 20 | 8.5 | 0.2-16 | 0.86 | 221 971 | 221 972 | 221 973 | |
| | G 1 | 20 | 8.5 | 0.2-16 | 0.97 | 221 974 | 221 975 | 221 976 | |
| | G 1 | 25 | 12 | 0.2-16 | 1.3 | 221 977 | 221 978 | 221 979 | |
| | G 1 1/4 | 25 | 12 | 0.2-16 | 1.4 | 221 980 | 221 981 | 221 982 | |
| | G 1 1/2 | 40 | 30 | 0.2-16 | 2.8 | 221 983 | 221 984 | 221 985 | |
| | G 2 | 40 | 30 | 0.2-16 | 3.0 | 221 986 | 221 987 | 221 988 | |
| | Seal material FKM, Epoxy coil, Medium temperature 0...+120°C | | | | | | | | |
| | G 1/2 | 13 | 3.8 | 0.2-16 | 0.54 | 221 989 | 221 990 | 221 991 | |
| | G 3/4 | 20 | 8.5 | 0.2-16 | 0.86 | 221 992 | 221 993 | 221 994 | |
| | G 1 | 20 | 8.5 | 0.2-16 | 0.97 | 221 995 | 221 996 | 221 997 | |
| | G 1 | 25 | 12 | 0.2-16 | 1.3 | 221 998 | 221 999 | 222 000 | |
| | G 1 1/4 | 25 | 12 | 0.2-16 | 1.4 | 222 001 | 222 002 | 222 003 | |
| | G 1 1/2 | 40 | 30 | 0.2-16 | 2.8 | 222 004 | 222 005 | 222 006 | |
| | G 2 | 40 | 30 | 0.2-16 | 3.0 | 222 007 | 222 008 | 222 009 | |
| | Seal material EPDM, Polyamide coil, Medium temperature -30...+90°C | | | | | | | | |
| | G 1/2 | 13 | 3.8 | 0.2-16 | 0.54 | 222 010 | 222 011 | 222 012 | |
| | G 3/4 | 20 | 8.5 | 0.2-16 | 0.86 | 222 013 | 222 014 | 222 015 | |
| | G 1 | 20 | 8.5 | 0.2-16 | 0.97 | 222 016 | 222 017 | 222 018 | |
| | G 1 | 25 | 12 | 0.2-16 | 1.3 | 222 019 | 222 020 | 222 021 | |
| | G 1 1/4 | 25 | 12 | 0.2-16 | 1.4 | 222 022 | 222 023 | 222 024 | |
| | G 1 1/2 | 40 | 30 | 0.2-16 | 2.8 | 222 025 | 222 026 | 222 027 | |
| | G 2 | 40 | 30 | 0.2-16 | 3.0 | 222 028 | 222 029 | 222 031 | |

Circuit function B (NO, normally open), Stainless steel body

| Circuit function | Port connection | Orifice [mm] | Kv value water [m³/h] | Pressure range [bar] | Weight [kg] | Item no. per voltage/frequency [V/Hz] | | | |
|-------------------------------|---|--------------|-----------------------|----------------------|-------------|---------------------------------------|---------|---------|--|
| | | | | | | 024/DC | 024/50 | 230/50 | |
| B 2/2-way valve NO | Seal material FKM, Epoxy coil, Medium temperature 0...+120°C | | | | | | | | |
| | G 1/2 | 13 | 3.8 | 0.2-16 | 0.54 | 228 387 | 228 388 | 228 389 | |
| | G 3/4 | 20 | 8.5 | 0.2-16 | 0.86 | 228 390 | 228 391 | 228 392 | |
| | G 1 | 25 | 12 | 0.2-16 | 1.3 | 228 393 | 228 394 | 228 395 | |
| | G 1 1/4 | 25 | 12 | 0.2-16 | 1.4 | 228 396 | 228 397 | 228 398 | |
| | G 1 1/2 | 40 | 30 | 0.2-16 | 2.8 | 228 399 | 228 400 | 228 401 | |
| | G 2 | 40 | 30 | 0.2-16 | 3.0 | 228 402 | 228 403 | 228 404 | |

Please note that the cable plug has to be ordered separately, see Ordering chart for accessory and separate datasheet, Type 2508

Ordering chart for valves, continued

Circuit function A, (NC, normally closed)¹⁾ explosion proofed version ATEX (Type of protection EX M II G/D T4)

| Circuit function | Port connection | Orifice [mm] | Kv value water [m³/h] | Pressure range [bar] | Weight [kg] | Item no. per voltage/frequency [V/Hz] | |
|-------------------------------|--|--------------|-----------------------|----------------------|-------------|---------------------------------------|---------|
| | | | | | | 024/UC | 230/UC |
| A 2/2-way valve NC | Seal material NBR, Brass body, Medium temperature -10...+80°C | | | | | | |
| | G 1/2 | 13 | 3.8 | 0.2-16 | 0.84 | 228 405 | 228 406 |
| | G 3/4 | 20 | 8.5 | 0.2-16 | 1.2 | 228 407 | 228 408 |
| | G 1 | 25 | 12 | 0.2-16 | 1.7 | 228 409 | 228 410 |
| | G 1 1/4 | 25 | 12 | 0.2-16 | 1.8 | 228 411 | 228 412 |
| | G 1 1/2 | 40 | 30 | 0.2-16 | 3.3 | 228 413 | 228 414 |
| | G 2 | 40 | 30 | 0.2-16 | 3.5 | 228 415 | 228 416 |
| | Seal material FKM, Stainless steel body, Medium temperature 0...+90°C | | | | | | |
| | G 1/2 | 13 | 3.8 | 0.2-16 | 0.84 | 228 417 | 228 418 |
| | G 3/4 | 20 | 8.5 | 0.2-16 | 1.2 | 228 419 | 228 420 |
| | G 1 | 25 | 12 | 0.2-16 | 1.6 | 228 421 | 228 422 |
| | G 1 1/4 | 25 | 12 | 0.2-16 | 1.7 | 228 423 | 228 424 |
| | G 1 1/2 | 40 | 30 | 0.2-16 | 3.1 | 228 425 | 228 426 |
| | G 2 | 40 | 30 | 0.2-16 | 3.3 | 228 427 | 228 428 |

¹⁾ only with Epoxy coil available

Please note: Electrical connection for explosion proof version with 3m cable. Version with terminal box on request.

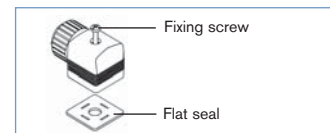
i Further versions on request

- Port connection**
NPT, Rc
- Voltage**
Further voltages
- Temperature**
EPDM version up to +100°C with epoxy coil
FKM version up to +120°C with epoxy coil
- Material**
Brass dezincification resistant
- Approvals**
European gas approval
EPDM with KTW W270

Ordering chart for accessory

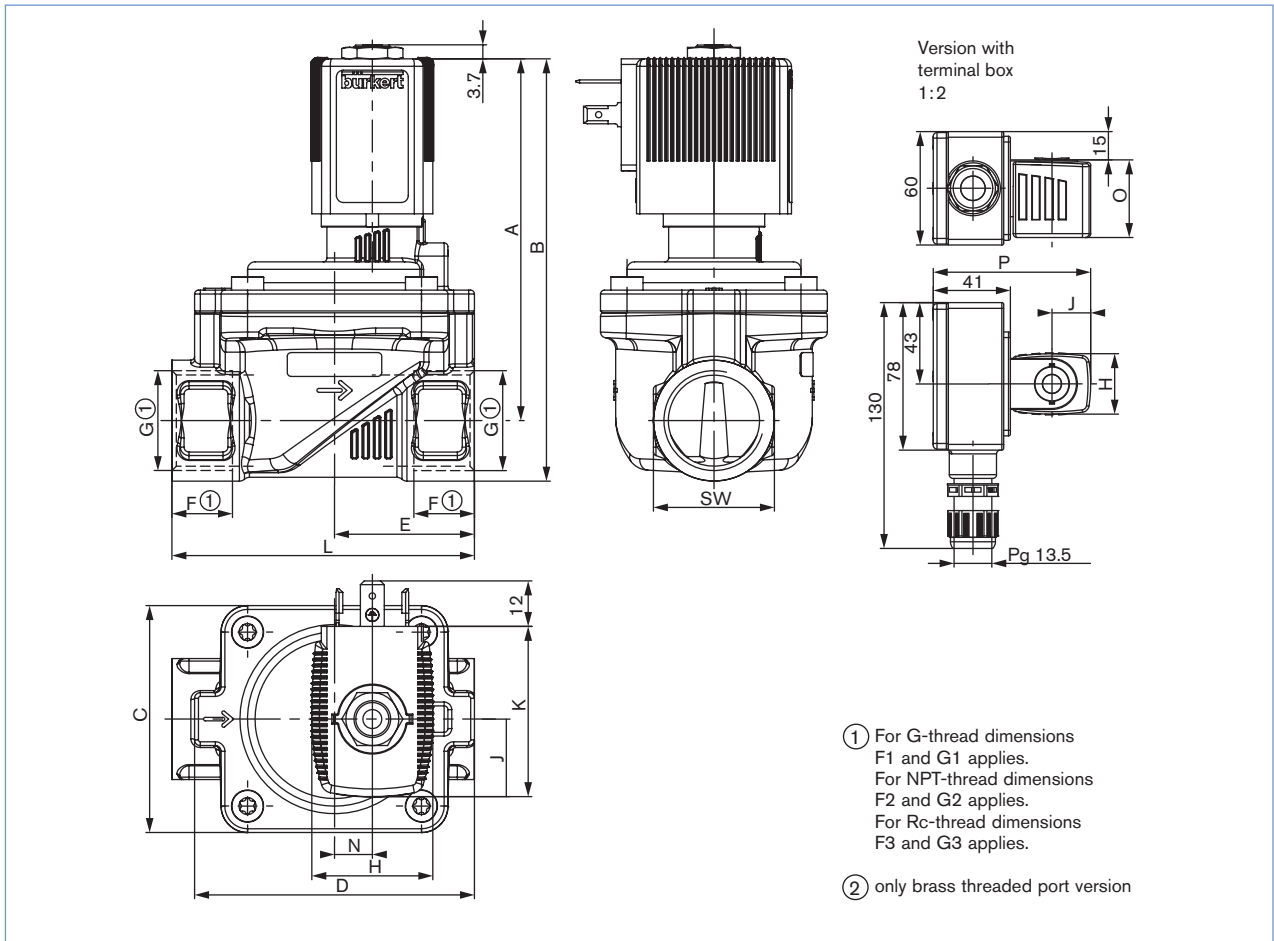
Cable plug Type 2508 according to DIN EN 175301-803 Form A

| | Circuitry | Voltage / frequency | Item no. |
|--|--|---------------------|----------|
| | None (standard) | 0 - 250 V AC/DC | 008 376 |
| | further versions see datasheet Type 2508 | | |



The delivery of a cable plug includes the flat seal and the fixing screw. For other cable plug versions acc. to DIN EN 175301-803 Form A (previously DIN 43650), see separate datasheet Type 2508.

Dimensions [mm]



- ① For G-thread dimensions
F1 and G1 applies.
For NPT-thread dimensions
F2 and G2 applies.
For Rc-thread dimensions
F3 and G3 applies.
- ② only brass threaded port version

| DN | A | B | C | D | E | * G | | * NPT | | * Rc | | H | J | K | L | SW | N | O | P | Coil size |
|------|-------|-------|----|------|-------|------|--------|-------|-----------|------|----------|----|------|----|-----|----|----|------|------|-----------|
| | | | | | | F1 ① | G1 ① | F2 ① | G2 ① | F3 ① | G3 ① | | | | | | | | | |
| ② 13 | 87.2 | 100.7 | 42 | 54.5 | 27.25 | 12 | G 3/8 | - | - | - | - | 32 | 20.5 | 45 | 58 | 27 | - | 41 | 83.3 | 5 |
| 13 | 87.2 | 100.7 | 42 | 54.5 | 32.5 | 14 | G 1/2 | 13.7 | NPT 1/2 | 13.2 | Rc 1/2 | 32 | 20.5 | 45 | 65 | 27 | - | 41 | 83.3 | 5 |
| 13 | 89.2 | 105.2 | 42 | 54.5 | 32.5 | 16 | G 3/4 | 14 | NPT 3/4 | - | - | 32 | 20.5 | 45 | 65 | 32 | - | 41 | 83.3 | 5 |
| 20 | 95.7 | 111.7 | 60 | 74 | 37 | 16 | G 3/4 | 14 | NPT 3/4 | 14.5 | Rc 3/4 | 32 | 20.5 | 45 | 80 | 32 | 10 | 41 | 83.3 | 5 |
| | 98.2 | 118.7 | | | 37.5 | 18 | G1 | 16.8 | NPT 1 | - | - | | | | 80 | 41 | | | | |
| 25 | 102.7 | 123.2 | 70 | 85 | 46 | 18 | G1 | 16.8 | NPT 1 | 16.8 | Rc 1 | 32 | 20.5 | 45 | 95 | 41 | 15 | 41 | 83.3 | 5 |
| | 107.7 | 132.7 | | | 46 | 20 | G1 1/4 | 17.3 | NPT 1 1/4 | 19.1 | Rc 1 1/4 | | | | 95 | 50 | | | | |
| 40 | 121.7 | 151.7 | 99 | 114 | 61 | 22 | G1 1/2 | 17.3 | NPT 1 1/2 | 19.1 | Rc 1 1/2 | 32 | 20.5 | 45 | 126 | 60 | 23 | 41 | 83.3 | 5 |
| | 127.7 | 162.7 | | | 64 | 24 | G2 | 17.6 | NPT 2 | 23.4 | Rc 2 | | | | 132 | 70 | | | | |
| ② 13 | 87.2 | 100.7 | 42 | 54.5 | 27.25 | 12 | G 3/8 | - | - | - | - | 40 | 23.5 | 51 | 58 | 27 | - | 41.4 | 89.3 | 6 |
| 13 | 87.2 | 100.7 | 42 | 54.5 | 32.5 | 14 | G 1/2 | 13.7 | NPT 1/2 | 13.2 | Rc 1/2 | 40 | 23.5 | 51 | 65 | 27 | - | 41.4 | 89.3 | 6 |
| 13 | 89.2 | 105.2 | 42 | 54.5 | 32.5 | 16 | G 3/4 | 14 | NPT 3/4 | - | - | 40 | 23.5 | 51 | 65 | 32 | - | 41.4 | 89.3 | 6 |
| 20 | 95.7 | 111.7 | 60 | 74 | 37 | 16 | G 3/4 | 14 | NPT 3/4 | 14.5 | Rc 3/4 | 40 | 23.5 | 51 | 80 | 32 | 10 | 41.4 | 89.3 | 6 |
| | 98.2 | 118.7 | | | 37.5 | 18 | G1 | 16.8 | NPT 1 | - | - | | | | 80 | 41 | | | | |
| 25 | 102.7 | 123.2 | 70 | 85 | 46 | 18 | G1 | 16.8 | NPT 1 | 16.8 | Rc 1 | 40 | 23.5 | 51 | 95 | 41 | 15 | 41.4 | 89.3 | 6 |
| | 107.7 | 132.7 | | | 46 | 20 | G1 1/4 | 17.3 | NPT 1 1/4 | 19.1 | Rc 1 1/4 | | | | 95 | 50 | | | | |
| 40 | 121.7 | 151.7 | 99 | 114 | 61 | 22 | G1 1/2 | 17.3 | NPT 1 1/2 | 19.1 | Rc 1 1/2 | 40 | 23.5 | 51 | 126 | 60 | 23 | 41.4 | 89.3 | 6 |
| | 127.7 | 162.7 | | | 64 | 24 | G2 | 17.6 | NPT 2 | 23.4 | Rc 2 | | | | 132 | 70 | | | | |

To find your nearest Bürkert facility, click on the orange box → www.buerkert.com

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

Subject to alteration.
© Christian Bürkert GmbH & Co. KG

1201/2_EU-en_00895124