

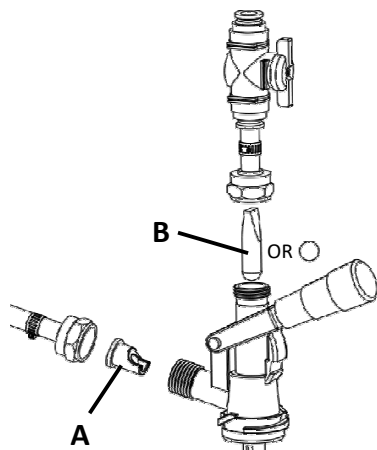
## Manual filling instruction – reusable kegs

### Material required for manual filling

1 x		or	1x		 
2 x			2 x		
1x			1 x		
6 x			3x		

### Preparing

**Step 1:** remove the non-return valves A and B from the metal keg coupler (S type for example, same for A, G, D type)



**Step2:** connecting metal coupler, hose, ball valve and pressure regulating valve as a manual filling set.



**Manual Filling Tool for  
Carbonated Beverages**



**Manual Filling Tool for  
Non-Carbonated Beverages**

## Manual filling instruction – reusable kegs

### Step3: cleaning

- Hot water (100° C) go through all connectors, metal coupler, hose, etc. and keep for 3 minutes
- 75% food grade alcohol to go through inner line of all connectors, metal coupler, hose, etc.
- Food grade CO2 go through inner line of all connectors, metal coupler, hose, etc., to blow away the water and/or alcohol, dry all parts.

**Step 4.** Connecting hose to beverage supply, CO2 (or compressed air) supply.

**Step 5.** Open the ball valve till the beverage fully fills the hose and connectors without foam/bubbles inside the hose, close the ball valve.



### Parameters for filling:

- Temperature of carbonated beverage: 1° C ~ 5° C
- Temperature of non-carbonated beverage  $\leq 30^{\circ}$  C
- Filling pressure for carbonated beverage: 1.5bar ~ 3.5 bar
- Filling pressure for non-carbonated beverage: 1.0 bar ~ 3.0 bar
- Pressurized pressure inside keg prior filling: same as filling pressure;

### Remarks:

- 1) only for carbonated beverages and/or too much CO2 inside the carbonated beverages;
- 2) as high barrier inner bag inside the keg, the gas only goes into the space between the keg and inner bag, never goes into the inner bag and contact with beer; can use compressed air instead of CO2 for keg pressurizing/counter pressure.
- 3) for non-carbonated beverages and/or not too much CO2 inside the beverage, no necessary for pressurizing the kegs prior filling, no counter pressure needed.

### Filling

**Step 1:** spraying 75% alcohol on metal coupler and spear head



**Step 2:** connecting the metal coupler on the spear head of kegs, with the handle of the metal coupler on the opening position (not pushed down); ball valve at closing position.



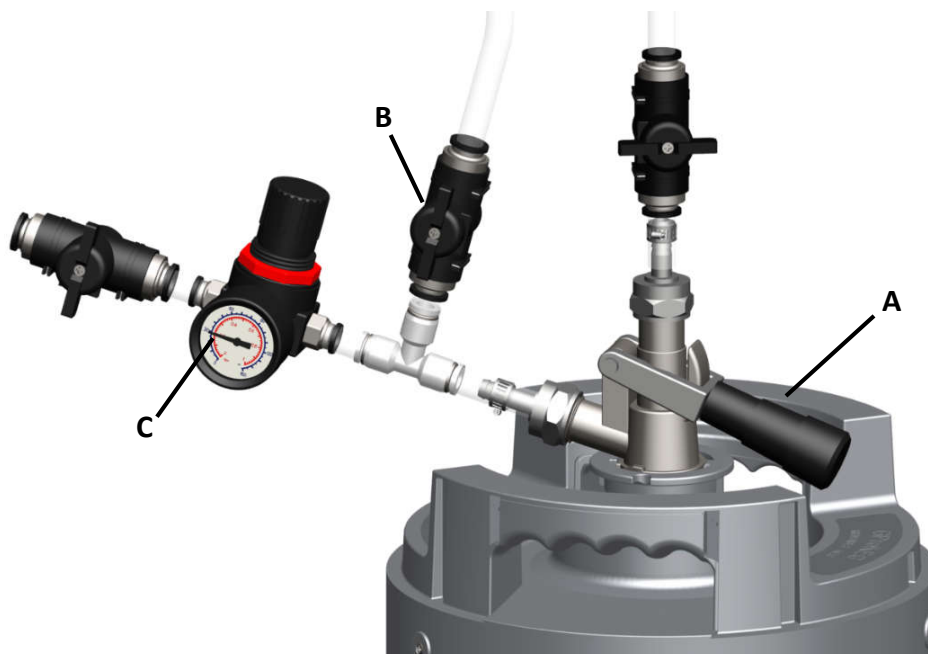
**For Carbonated Beverages**



**For Non-Carbonated Beverages**

**Step 3:** **A:** push the handle of the metal coupler down, **B:** open the ball valve on gas tunnel side to pressurize the keg, **C:** till the pressure inside the keg goes up to be same as the filling pressure;

- for non-carbonated beverages and/or beverages without too much CO<sub>2</sub>, no need to pressurize the kegs, go to step 4 directly.



## Manual filling instruction – reusable kegs

### Step 4: Beer filling

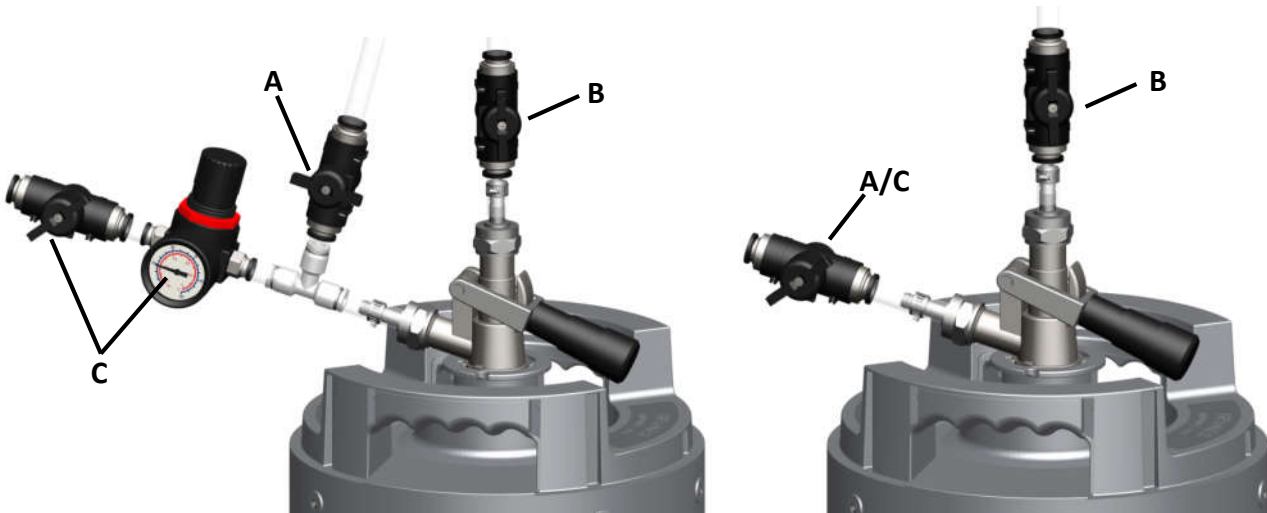
#### For carbonated beer and/or beer with too much CO<sub>2</sub>:

**A:** closing the gas valve; **B:** open the valve on beverage hose; **C:** open the gas exhausting valve slowly, monitoring the counter pressure inside the keg, keep the pressure inside the keg to be about 0.5bar ~ 1.0bar lower than the filling pressure;

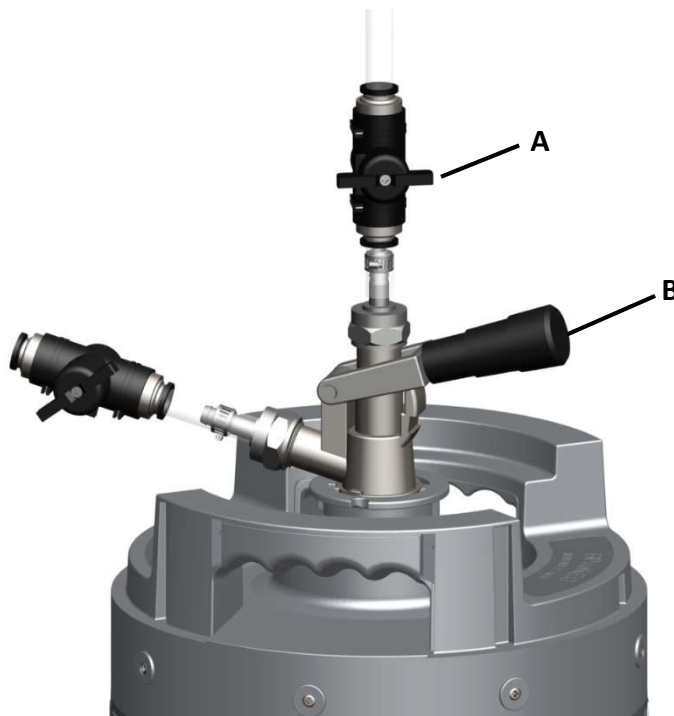
#### For Non-carbonated beer and/or carbonated beer without too much CO<sub>2</sub>:

**A:** closing the gas valve (for carbonated beer); **B:** open the valve on beverage hose, fill the beer into the keg to half volume of the keg, e.g. 15L for 30L keg; **C:** half open the gas valve till the keg is fully filled; **OR:**

**A:** keep the gas valve open (for non-carbonated beer); **B:** open the valve on beverage hose, till the keg is fully filled



**Step 5:** monitoring the weight scale, till the beverage to be filled to required volume, stop the filling by **A:** closing the ball valve, and then **B:** pulling up the handle of the metal coupler (the spear valve will be closed automatically).



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**Step 6:** disconnecting the filling head, cleaning the spear head by 75% food grade alcohol, and then put dust cap on the spear head.

