

Exchanges

There are different types of exchanges where you can trade cryptocurrencies. Centralized and decentralized are main two types. Biggest difference is that on decentralized exchange (DEX) users have control of their funds while in centralized exchange (CEX) users need to trust an exchange with funds. Because centralized exchanges holds a lot of money they are great target for hackers. List of attacked exchanges is too big while there are probably some exchanges that do not even know they were hacked. Another risk factor is that exchange operators could decide to close an exchange and took all funds - so called exit scam. On decentralized exchange (DEX) users holds funds in their own wallet or they send funds to smart contract, but they can withdraw it anytime (if DEX is made correctly). Centralized exchanges are more popular because they are faster and trading can be cheaper because cryptocurrencies do not leave exchange wallet while trading on exchange. That resulted in less liquidity on decentralized exchanges and if there is no liquidity there will not be much trading. Uniswap exchange changed that because it works little different than other decentralized exchanges. There are no buy and sell orders like on other exchanges, just a price at which we can swap cryptocurrencies. Because it is a smart contract anyone can build on top of it and some people created an option to set limit orders (UniswapEx for Uniswap v1) but there is no need to use that. Simplified explanation is that price between two assets are determined based on ratio of two tokens in the pool. Price of assets tends to track market value because if price is incorrect users can perform arbitrage. Arbitrage is performed if someone buy asset on one exchange and sell it on another exchange because difference in the price. Have in mind to cover transaction fee if you do that on Uniswap. That is why Uniswap works best in combination of other markets.

More technical explanation of how it works is available at:

<https://uniswap.org/whitepaper.pdf>

There are two versions of Uniswap - v1 and v2. You can change it in upper right corner of the website. This tutorial is for v2 but v1 works almost the same. For Uniswap v1 we can create only token/ETH pairs, for Uniswap v2 we can create pools between different assets.

For example there is pair GRT-BSOV:

<https://uniswap.exchange/swap?exactField=input?exactAmount=1&inputCurrency=0x26946adA5eCb57f3A1F91605050Ce45c482C9Eb1&outputCurrency=0xb83Cd8d39462B761bb0092437d38b37812dd80A2&theme=dark>

(BSOV is deflationary on transfer, so you will have to set a slippage of 1% or more when you are trying to Sell and Remove Liquidity. You can do this by clicking on “Show Advanced”).)

You can also check history of trading pairs:

<https://uniswap.info/pair/0x795ac412BFc02CD5815727f419050D0E9B331E61>

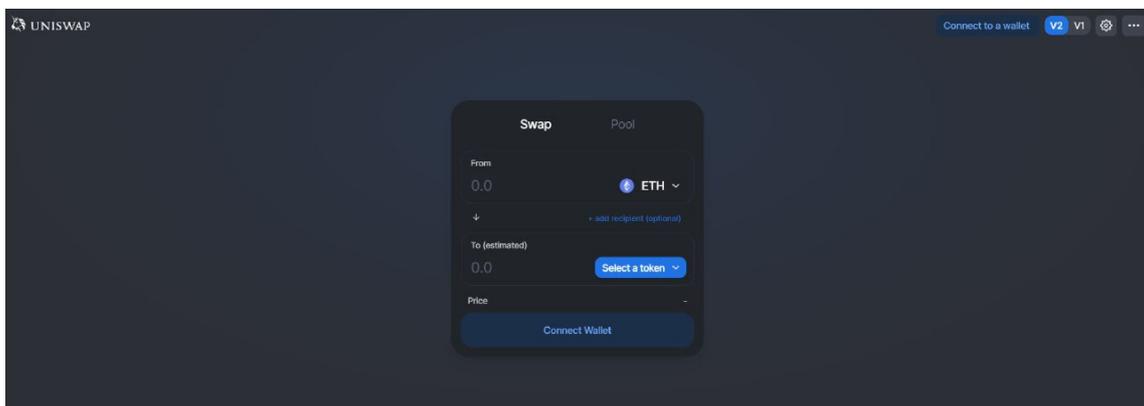
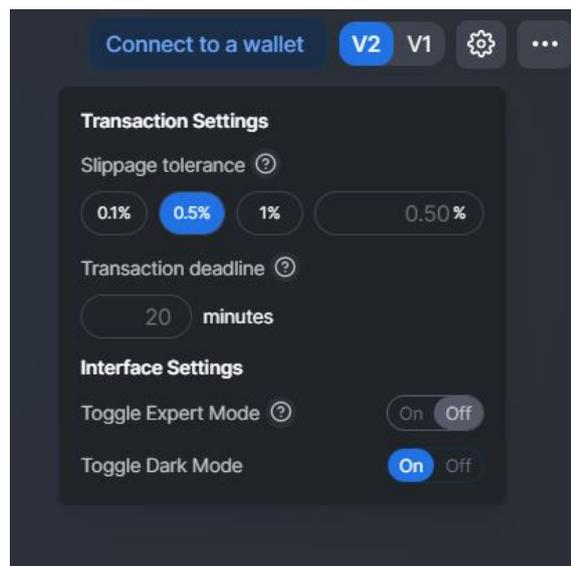
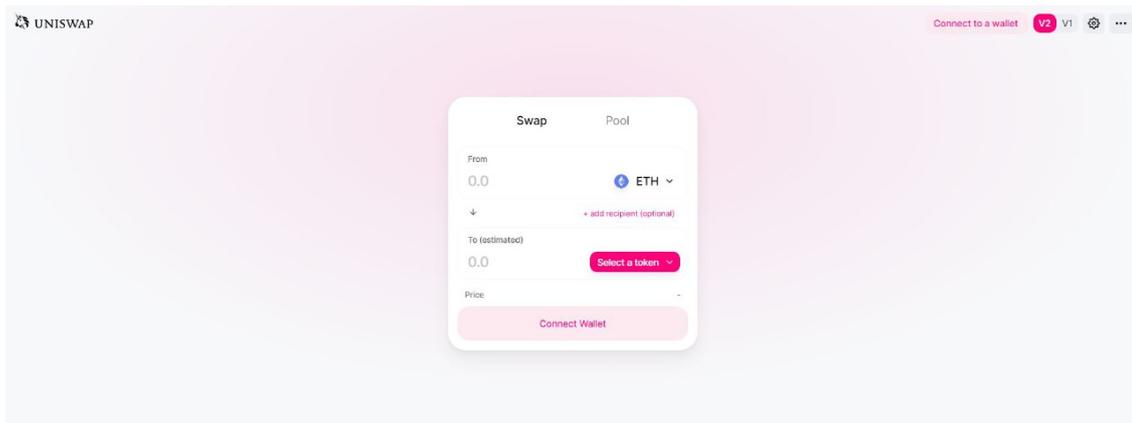
<https://uniswap.info/pair/0x73b078a112529401e0aa538317eea2b95e49680d>

How to trade ERC-20 tokens on Uniswap

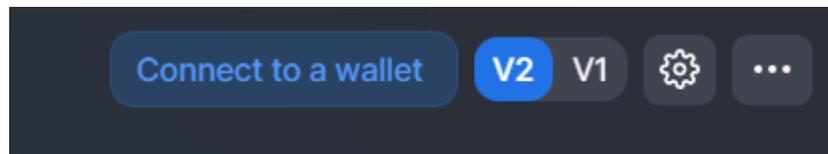
Uniswap enables anyone to create new markets, provide liquidity, and build financial applications that could not have existed before.

To access the service, visit <https://uniswap.exchange/swap>

There are two themes that you can change by settings button at the top right. Click on Toggle Dark Mode to change it.

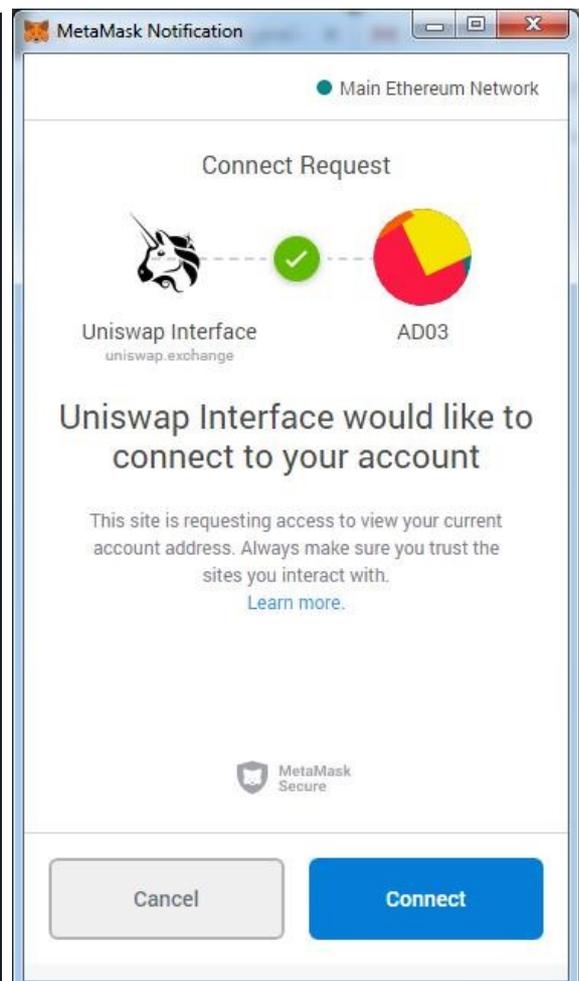
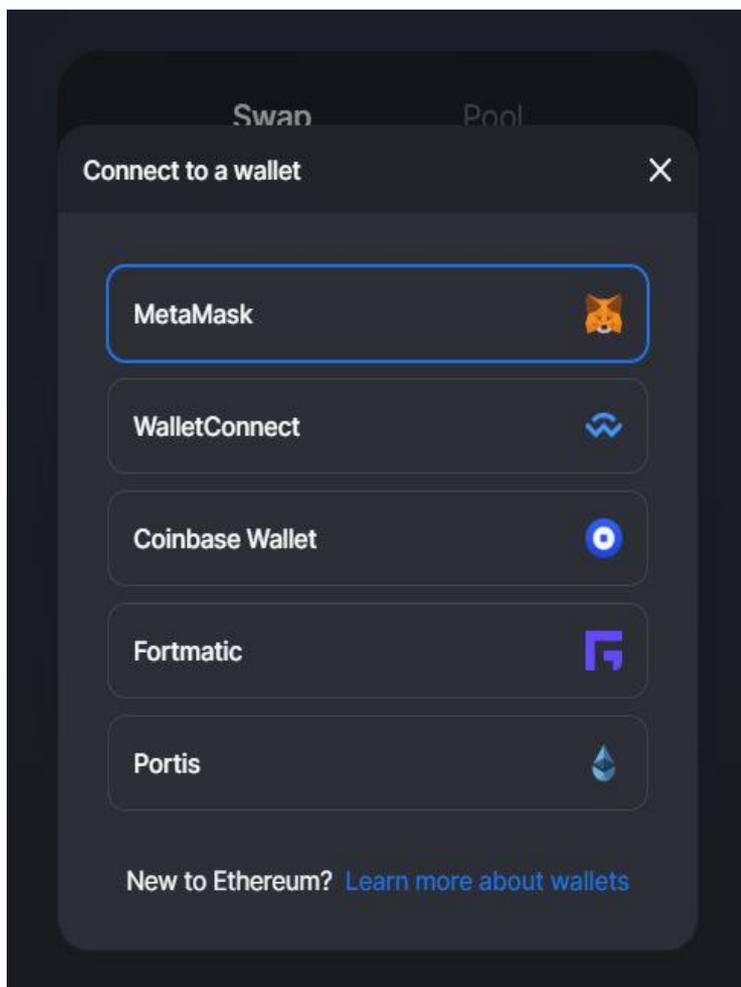


You need a wallet that supports dapps on Ethereum network to access Uniswap. Some wallets will connect automatically and on others you need to click **Connect to a wallet** (top right of the screen) and chose your preferred wallet from the list.



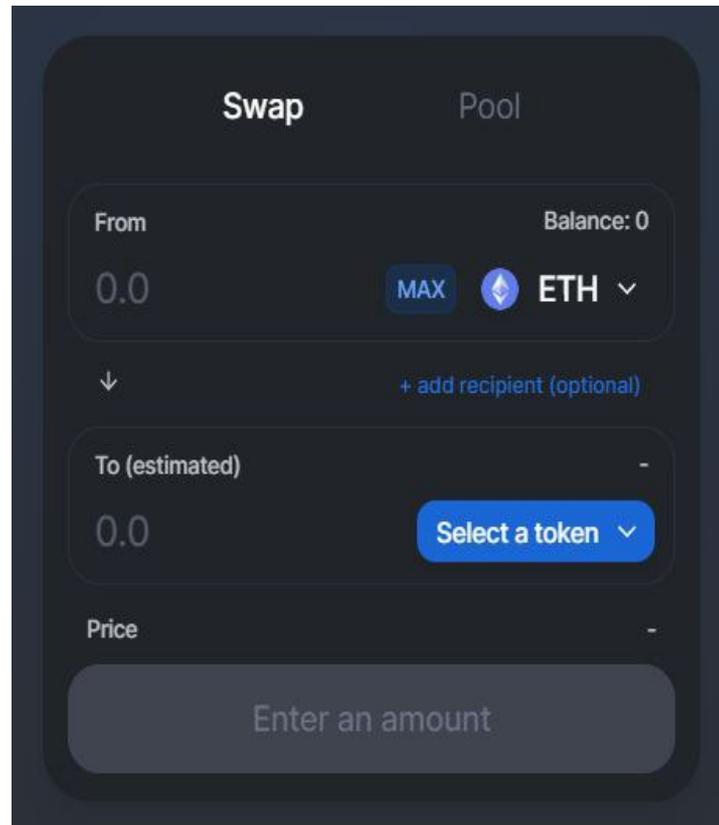
For this tutorial we will connect to Uniswap with MetaMask wallet.

Select MetaMask on the list and click **Connect** to grant Uniswap permission to access your MetaMask wallet.



Uniswap offers two options:

- **Swap** – Swap any ERC-20 token for ETH or another ERC-20 token
- **Pool** – Join a pool and provide liquidity for any trading pair and enjoy a percentage of trading fees in return.



Once your wallet is successfully connected you will see two fields in **Swap tab**:

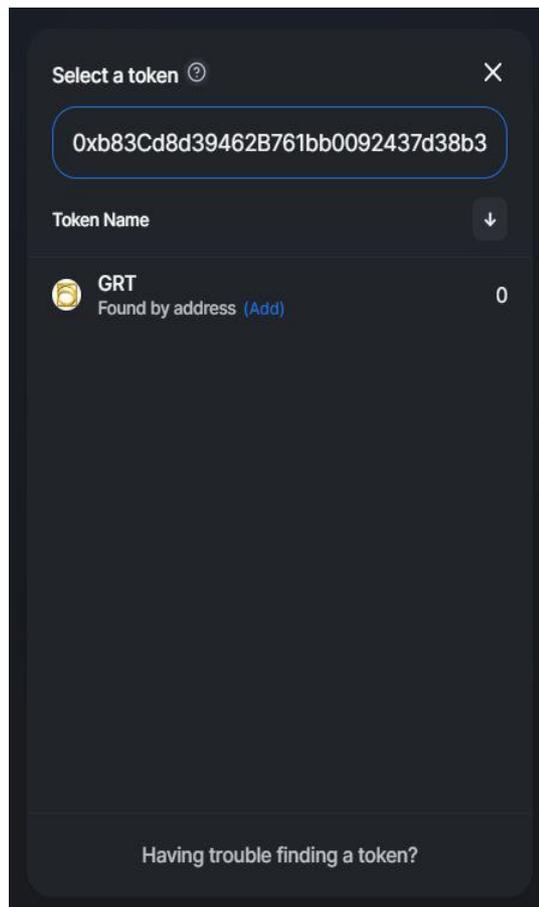
- first one is ETH and displays your ETH balance you want to exchange
- second one has a button to select whichever token you want to swap to.

Between those two fields is an arrow that changes the order if you want to swap token to ETH or ETH to token

In this tutorial we will swap 1 GRT token to ETH.

Click **Select a token** button and change token to GRT. Since GRT token is not yet listed on Uniswap, we will need to select the token manually by copying and pasting GTR contract address:

0xb83Cd8d39462B761bb0092437d38b37812dd80A2
in the search field.



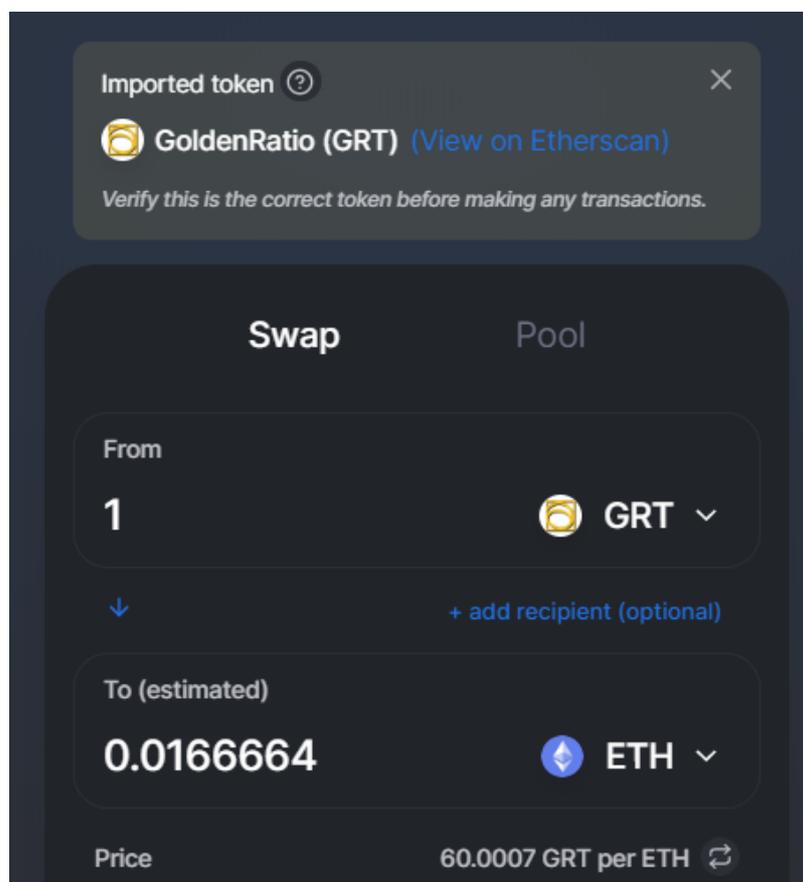
Make sure to double check the contract address! If you use a wrong address, you may lose your funds permanently!

Another option is direct link that will automatically chose GRT token:

<https://uniswap.exchange/swap/0xb83Cd8d39462B761bb0092437d38b37812dd80A2>

We will set the second option to ETH.

Enter amount of GRT you want to swap to ETH or amount of ETH you want to swap to GRT and click **Approve GRT**. If you are swapping ETH to tokens you don't need to approve ETH.

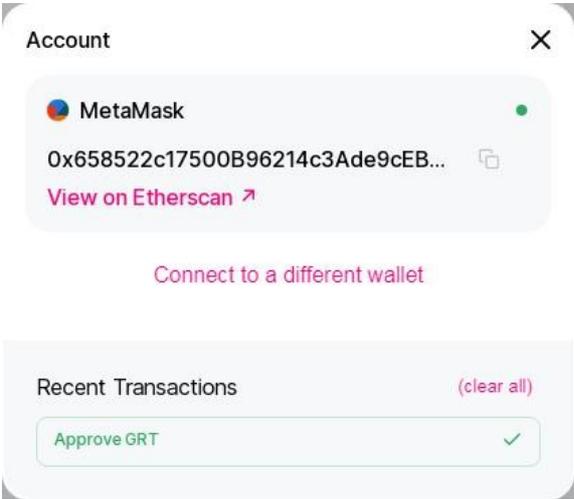


If you want to update slippage tolerance or deadline, click **Show Advanced** and update the settings.

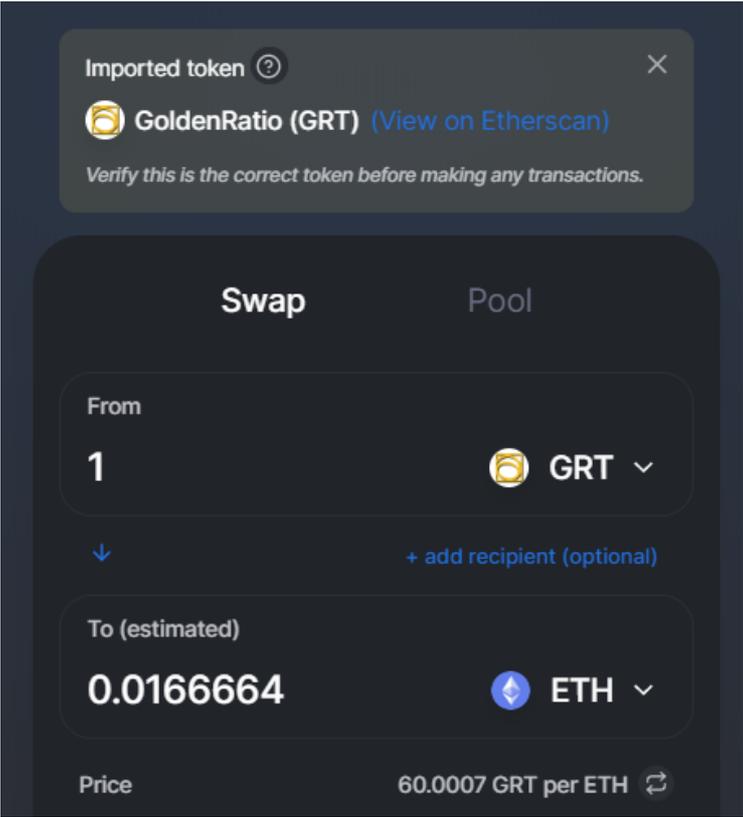
Slippage tolerance means at what price change you still want to perform a swap. You also need to set it if you are trading deflationary tokens.

Deadline means how much time you can wait. Default time is 20 minutes, if your transaction is confirmed by Ethereum network after 20 minutes swap will not happen. It is good to change deadline if you use low gas price. For information what gas price you should use check: <https://www.ethgasstation.info/>

Confirm transaction in MetaMask and wait for confirmation on the blockchain.



Once transaction is confirmed you can click **Swap**.



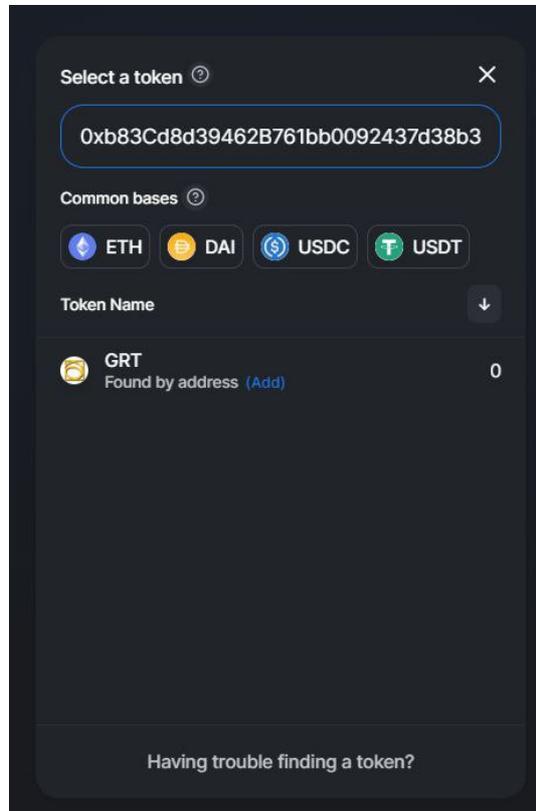
Confirm swap and wait for transaction to confirm.

Once the transaction is confirmed you will receive a popup confirmation and your ETH balance will automatically update.

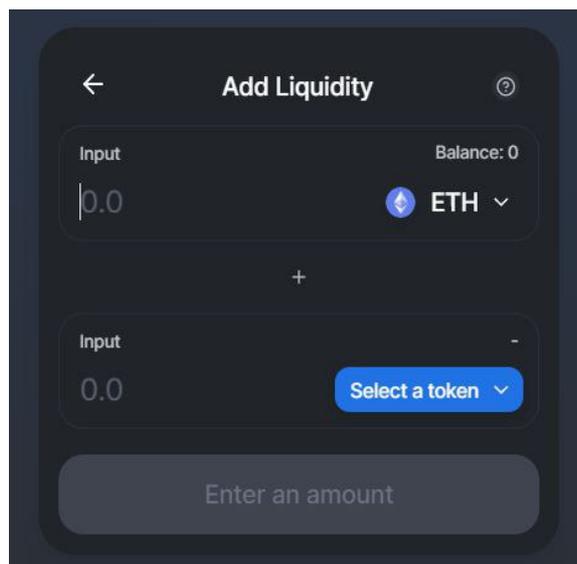
Second tab is **Pool**.

To join a pool click Join a pool.

Type GRT in Search field to display GRT pools and click **Join** to join the pool.



To join a pool you need to add liquidity with ETH and GRT in our example.



By joining a pool you increase liquidity of the pair and in return you receive a share of trading fees.