Common Application Types to Compare Collaborative Robots and Traditional Industrial Robots

Application	Cobots	Traditional Robots
Education and learning about robotics	**Good fit:** They reduce risk of injury, typically don't need guarding, and tend to have a shallow learning curve.	**Mediocre Fit:** More time consuming to learn, will require appropriate safety rated sensors and/or guarding, higher risk of injury.
High speed work (e.g. case packing or pick and place)	**Poor Fit:** Lower speed will reduce cycle time and limit the benefits of automation for high-volume products.	**Good fit:** These systems are designed to run at high continuous speeds.
Very high accuracy work (e.g. assembling micro circuit boards)	**Mediocre Fit:** Accuracy varies with cobot models, but in general it is harder to get very high accuracy in a cobot.	**Good Fit:** Traditional robots are about speed, payload and accuracy so finding one that meets the requirements is frequently much simpler.
High payload work (moving heavy parts)	**Not possible with cobots:** As of this writing, cobots range between 3 and 35 kg.	**Good fit:** Traditional robots have payload capacities up to the weight of a car, so payload is usually not a problem.
Force sensitive work	**Good Fit:** Some Cobots have built in force control which can be integrated into the control loop without extra sensors.	**Mediocre Fit:** Traditional robots can have force control devices added between the tool flange and the end effector, but this is a separate unit and only gives force control at the tool.
Processes in which the robot is working close to a human	**Good fit:** Safety and risk assessments must still be considered, but this is a distinguishing cobot feature.	**Poor Fit:** Not possible without safety systems (e.g. guarding and safety rated switches and sensors) in place.
Explosive environment (e.g. painting)	**Not possible for cobots:** Currently no explosive environment rated cobots.	**Good Fit:** Paint robots are readily available for this application.

AutomationDistribution.com
Orders@AutomationDistribution.com
1-888-600-3080
2398 N Penn Rd Hatfield PA 19440