

VERSUS[®]

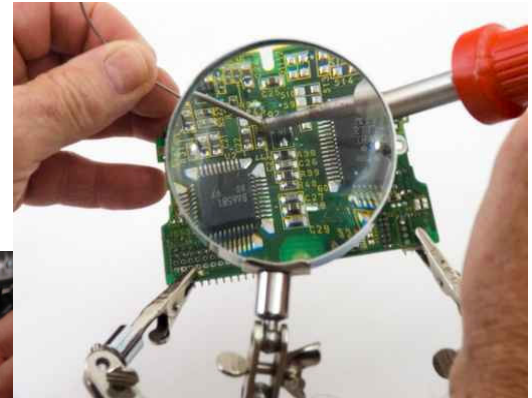
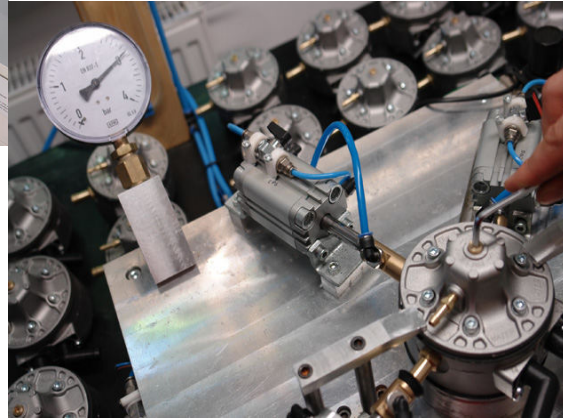
AUTO GAS equipment

History

- 1989 – the collapsing of communism in Poland and Central Europe; the beginning of our free trade activities.
- Since 1991 - assembly and distribution of gas installations mostly of Italian origin. We have started to collect countless opinions and comments concerning individual components of GAS systems.
- Since 1999 - study, research and development. Based on the market research and our own experience we endeavored to design a sequential system that met market expectations; a product with the main features of simplicity of maintenance and total reliability. For over five years we worked on the development of such a product.
- 2005 - close cooperation between electronic engineers and computer programmers, in full consultation with workshops and the drivers, has allowed us to finish the first product of VERSUS group: ECU VERSUS.
- 2006 – the beginning of EURO 4 certification, successful introduction of Sequential Gas Injection system to international markets.
- 2007 – reorganization as a result of improving popularity of “VERSUS” branded Sequential Injection System in international markets.
- 2008 – CNC production line installed. Higher capacity of certified production.
- 2009 – another investments in CNC technology, new market attitude, new possibilities, new range of products and services offered. Better modern and certified style of management.
- Since 2011 – the beginning of EURO5 certification,



Test, Quality & certificates



ERSUS

Ministerstvo dopravy České republiky
Ministry of Transport of the Czech Republic
MONTAŽ, ŠROUBOVY 12, 110 15 Praha 1, Czech Republic

OSVĚDČENÍ o:
UŘEĐENÍ HOMOLOGACE
ROZŠŘENÍ HOMOLOGACE
GOŠMONTAŽI HOMOLOGACE
UKONČENÍ A VÝROBY

APPROVAL GRANTED
APPROVAL EXTENDED
APPROVAL WITHDRAWN
PRODUCTION DEFINITELY DISCONTINUED

typu vybavení LPG podle Předpisu č. 67/01
of a type of LPG equipment pursuant to Regulation No. 67/01

Homologace č.: **67 R - 01 4319** Rozšíření č.: **-**
Approval No.: **67 R - 01 4319** Extension No.: **N/A**

1. Uvažované vybavení LPG
LPG equipment considered:

- Nádrž / Container
- Přikládaná přípojná k nádrži / Accessories fitted to the container:-
- 80% uzavírací ventil / 80 per cent stop valve
- stávající / level indicator
- přetlakový ventil (odpouštěcí, vent) / pressure relief valve (discharge valve)
- přetlakové zařízení / pressure relief device
- Dávková řízení přetlakové ventili a přetlakovým ventilem
- remotely controlled service valve with excess flow valve
- slabé palivového dopravní (LPG) with/without LPG fuel pump
- višňovkový vent, zahřívací nádobička / plášťovými
- multrivale, including the following accessories
- plynová nádobička (gas light housing)
- elektrická průchodka (doplněná/výrobce)
- power supply bushing (supplied/made)
- Palivové čerpadlo / Fuel pump
- Odpařovač/regulátor tlaku / Vaporizer/pressure regulator
- Uzávěrný ventil / Shut-off valve
- Záložní ventil / Non-return valve
- Přetlakový ventil plynového potrubí / Gas-tube pressure relief valve
- Služební spojka / Service coupling
- Chránič hadice / Flexible hose
- Vložky příční jednotka / Remote filling unit
- Zařízení pro vstřík plynů nebo veřřkovů / Gas injection device or injector
- Palivová hlava / Fuel rail
- Dávkovací jednotka plynu / Gas dosage unit
- Směšovač plynu / Gas mixing piece
- Elektronická řídicí jednotka / Electronic control unit
- Třísčový filtr / Fuel filter
- Filtrovací jednotka LPG / LPG filter unit

ZERTIFIKÁT **TUV NORD**

für das Managementsystem nach
EN ISO 9001 : 2008

Der Nachweis der regeltechnischen Anordnung wurde erbracht und wird gemäß TÜV NORD CERT Verfahren bestätigt für

FHT EXPORT-IMPORT
KĘPZYSTOF KĘDZIERSKI
ul. Szczecińska 16 G
PL / 05-300 Mińsk Mazowiecki

Bestellabwicklung, Vertrieb und Beratung
im Bereich von Autogasanlagen

Zertifiziert nach: EN ISO 9001
Audit Bericht: PL 320208

QMS Nr. 0911-021

Kategorie: 2009-021

Dieses Zertifikat wurde gemäß TÜV NORD CERT Verfahren zur Ausfertigung und Zertifizierung durchgeführt

TÜV NORD CERT GmbH Langemannstraße 30 45141 Essen www.tuv-nord.com

MINISTER INFRASTRUKTURY
MINISTER OF INFRASTRUCTURE
ul. Chałubińskiego 4/6, PL-00-928 Warszawa

ZAWIADOMIENIE
COMMUNICATION

dotyczące: **E20**
concerning:
UZBELENIENIA HOMOLOGACJI
APPROVAL GRANTED
ROZSZERZENIA HOMOLOGACJI
APPROVAL EXTENDED
ODMÓWIENIA HOMOLOGACJI
APPROVAL REFUSED
CERNIECIELA HOMOLOGACJI
APPROVAL WITHDRAWN
OSTATECZNEGO ZANIECHANIA-PRODUKCJI
PRODUCTION DEFINITELY DISCONTINUED

typu wyposażenia do zasilania gazem ciekłym (LPG) na podstawie Regulaminu nr 67 EKG ONZ.
of a type of LPG equipment pursuant to Regulation No. 67.

Nr homologacji: **E20 67R-010939**
Approval No.:

- Elementy wyposażenia do zasilania LPG: **E20**
LPG equipment considered:
Zbiornik typu łopatek z zestawem osprzętu podłączanego do niego - jak podano w Dodatku 1 do niniejszego zawiadomienia
Container of a type including the configuration of accessories fitted to the container, as laid down in appendix 1 to this communication.
Zawieszki ograniczające przepływność do 80%
80 percent stop valve
Wskaznik poziomu
Level indicator
Nadciśnieniowy urządzenie bezpieczeństwa (zawieszki sprężarki)
pressure relief valve (discharge valve)
Nadciśnieniowe urządzenie bezpieczeństwa
pressure relief device
Zdalnie sterowany zawieszki roboczej z zawieszki ograniczającym wypływ
remotely controlled service valve with excess flow valve
Zawieszki wlewkowej (wielozawieszki) łopatek z następującym osprzętem:
multivalve, including the following accessories:

PIM
POLSKA IZBA MOTORYZACJI

CERTIFICATE

Polish Chamber of Automotive Industry
hereby declares that the:

CNG pressure regulator Type VR-C

described in audit and test reports, complies with the
ISO 15500-9:2001.

Test report number / date: _____
Audit report number / date: _____

Producer: FHT Export-Import Krzysztof Kępczyński
Szczecińska 16G Street
05-300 Mińsk Mazowiecki
Poland

signature / date: _____

Polish Chamber of Automotive Industry, Chałubiński 13 Street, 02-646 Warsaw, Poland
tel. + 48 22 646 05 18 + 48 22 440 84 90, fax +48 22 646 25 73, e-mail: sekretariat@pim.org.pl
www.pim.org.pl NIP 521 10 66 256, REGON 01029322

MINISTER INFRASTRUKTURY
MINISTER OF INFRASTRUCTURE
ul. Chałubińskiego 4/6, PL-00-928 Warszawa

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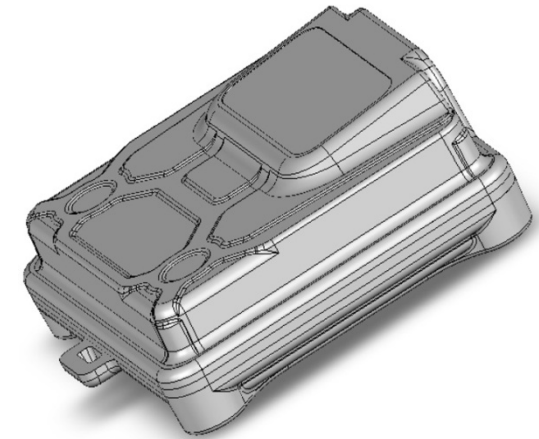
- Elementy wyposażenia do zasilania LPG: **E20**
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80 percent stop valve
Wskaznik poziomu
Level indicator
Nadciśnieniowy urządzenie bezpieczeństwa (zawieszki sprężarki)
pressure relief valve (discharge valve)
Nadciśnieniowe urządzenie bezpieczeństwa
pressure relief device
Zdalnie sterowany zawieszki roboczej z zawieszki ograniczającym wypływ
remotely controlled service valve with excess flow valve
Zawieszki wlewkowej (wielozawieszki) łopatek z następującym osprzętem:
multivalve, including the following accessories:

Basic Products – ECU

ECU VERSUS (Electronic Control Unit) has been designed based on the most recent methods of processing electronic impulses in CNG/LPG dosage systems.

- Main features of ECU VERSUS:
- Efficient processor that supports automatic recognition of engine parameters
- Clear, simple, user friendly interface allowing for time efficient service.
- The software used for the ECU Versus has an option for the calibration of the system under a full load during driving. This allows for performance nearly identical to gasoline. All complicated feeding application processes are under micro-controller responsibility.
- Simplicity in service, configuration and diagnostics of the system
- Environment friendly - complies with exhaust emission standards EURO 4
- Fully automatic operations including automated switching from GAS to Gasoline when the tank is empty.
- Additional functions allow for self-diagnostics of the system and correction of problems when necessary.
- ECU Versus is extremely versatile so that it allows for various configuration of the components making it suitable to be used with almost any car on the market.

ECU VERSUS has E67R-01 approval LPG and E110R approval CNG



Basic Products – VR-L „Standard”

LPG Reducer VR-L Type “Standard”:

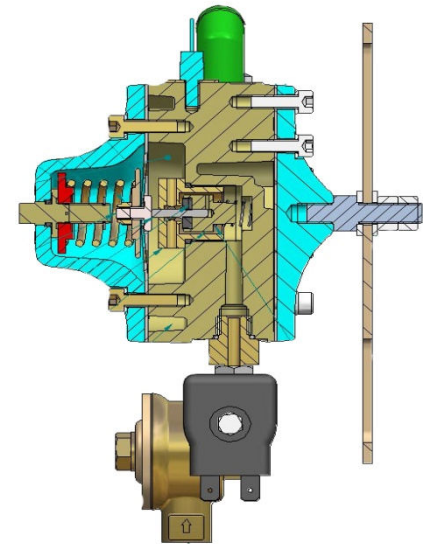
FHT Offers new series of VR-L type of pressure regulators. The latest VR-L reducer was designed on the basis of the most actual engineers knowledge.

It has been tested in extreme conditions. Due to that factor we managed to obtain the most efficient temperature exchange values as well as optimal pressure performance.

The “Standard” reducer is fitted with LPG Solenoid so the valve does not need to be installed separately in the circuit.

VR-L “Standard” Technical Data:

Type of GAS: LPG
Body: Aluminium die cast
Homologations: ECE 67R 01
Gas Outlet Pressure: 1 bar
Maximum Power: 150 KW
Working Temperature Range (°C): -30 /+120
Gas Outlet External Diameter: 12 mm
Gas Inlet: 6 mm
Engine Cooling liquid Outlet/Inlet: 16 mm
Shut-off Valve: supplied
Vacuum nozzle: Present
Solenoid Valve Nominal Voltage: +12V
Overall dimension: 135/190/130 mm
Body Diameter: 100 mm
Weight: 1,0 kg



Basic Products – VR-L „Super”

LPG Reducer VR-L Type “Super”:

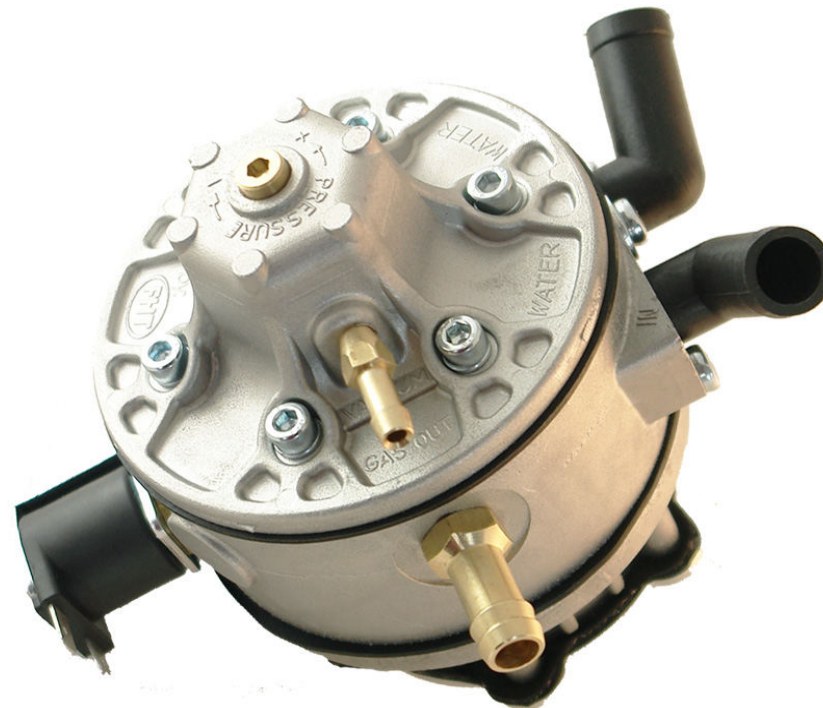
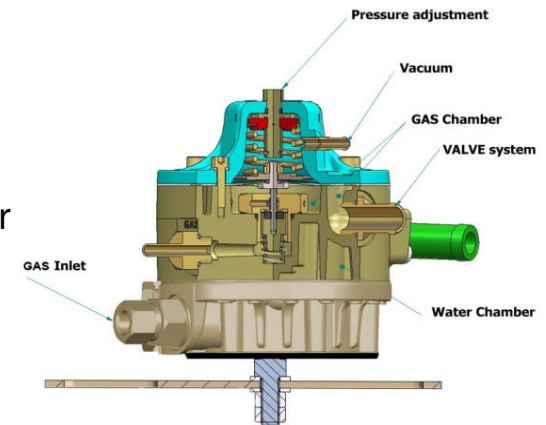
FHT Offers new series of VR-L type of pressure regulators.
The latest VR-L reducer was designed on the basis of the most actual engineer knowledge.

It has been tested in extreme conditions. Due to that factor we managed to obtain the most efficient temperature exchange values as well as optimal pressure performance.

The “Super” reducer is fitted with LPG Solenoid so the valve does not need to be installed separately in the circuit.

VR-L “SUPER” Technical Data:

Type of GAS: LPG
Body: Aluminum die cast
Liquid Gas Heating System “LGHS”: supplied
Homologations: ECE 67R 01
Gas Outlet Pressure: 1,2 bar
Maximum Power: 220 kW (300 HP)
Working Temperature Range (0C): -30 /+120
Gas Outlet External Diameter: 14 mm
Gas Inlet: 8 mm
Engine Cooling liquid Outlet/Inlet: 16 mm
Shut-off Valve: integrated
Vacuum nozzle: Present
Solenoid Valve Nominal Voltage: 12V
Overall dimension: 135/190/130 mm
Body Diameter: 100 mm
Weight: 1,3 kg



Basic Products – VR-C „Standard”

CNG Reducer VR-C Type “Standard”:

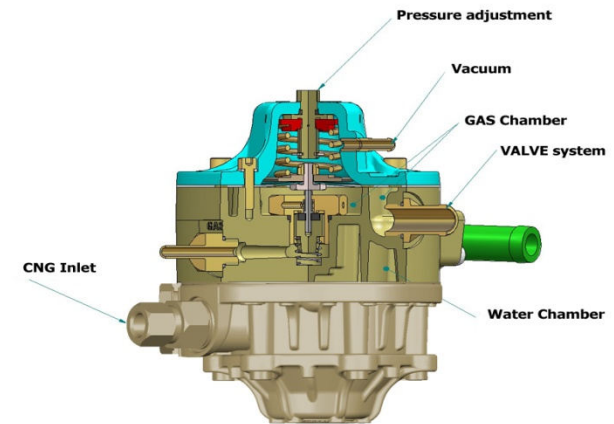
VR-C is a pressure regulator designed by FHT and dedicated to CNG Sequential Gas Injection Systems.

It can be installed in most types of cars. The reducer is supplied with sensitive 1st stage reduction system that warrant stable pressure value in spite of pressure variation coming from the tank.

Thanks to its highly efficient two stage Gas flow control system it ensures the most optimal GAS dosage in any drive conditions.

VR-C “Standard” Technical Data:

Type of GAS: CNG
Body: Aluminium die cast
Homologations: ECE 110R 00
Gas Working Pressure: 1,6 bar
Maximum Power: 180 KW
Working Temperature Range (°C): -30 /+120
Gas Outlet External Diameter: 12 mm
Engine Cooling liquid Outlet/Inlet: a) 16 mm
b) 10 mm
Low Pressure Shut-off Valve: integrated
Vacuum nozzle: Present
Solenoid Valve Nominal Voltage: +12V
Overall dimension: 150/165/145 mm
Body Diameter: 100 mm
Weight: 1,3 kg



Basic Products – VERSUS Injectors FH02

VERSUS Injectors - Type “FH02”:

FH02 Technical data:

Fuel: CNG/LPG

Voltage: 12V

Working Pressure: 0,5-2,5 bar

Maximum working pressure: 4,5 bar

Opening/closing time: 3.0 msec/2.5 msec

Resistance of the coil: 3 Ohm \pm 4%, other upon request

T. range (°C): -30 /+120

GAS Inlet (external): 12 mm, other upon request

Standard Valve seat diameter: 4 mm

Calibration nozzle sizes available: 1,5 - 3,5 mm
(0,25 mm step)

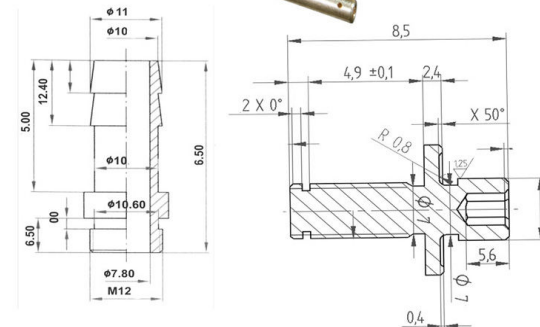
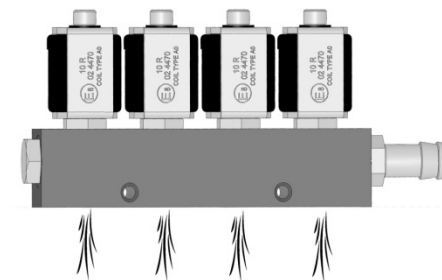
Body composition available: 1-cyl, 2-cyl, 3-cyl, 4-cyl

Normally: closed

Approvals: ECE 67R01, ECE110R00

VERSUS other parts for Injectors:

FHT offers all kind of copper/brass made elements used in NGV installations. Our engineers are ready to prepare any personalized design in that area (nozzles, nuts, other parts).



Basic Products – Others Accessories

NGV/LPG accessories in our offer

- Multivalves
- LPG Tanks
- Shut-off valves
- LPG Level indicators
- CNG Gauges
- Filters, fittings, connections, nuts, others



1. Copper pipe d. 6 mm/8 mm
2. Water rubber hose 16 mm
3. GAS rubber hose 12 mm
4. GAS hose 5 mm
5. GAS hose 6 mm
6. Vacuum hose 4 mm
7. Water T-fittings
8. GAS/Water clamps
9. GAS pressure hose clamps
10. Vacuum clamps
11. Copper pipe support

SJS

Invitation for cooperation

We offer full assortment of NGV/LPG Parts&Accessories.

Detailed catalogs will be sent upon request.

Terms of cooperation with its rules are the subject of negotiation and are given individually.

For more information we encourage you to visit our website.

We strongly believe that in any business development, there should not be any limitations.

VERSUS hereby invite its potential partners to try and discover Polish technology of innovations and functionality.

We address our invitation to automotive industry operators and players:

- **Manufacturers.** Our engineers are ready to meet the most sophisticated expectations.
- **Car dealers.** Recognition of individual ideas of joint projects - any individual business partner requires individual attitude.
- **Distributors.** Every market needs different identity of the products.
- **Engineers.** Close cooperation leads to right targets.
- **Workshops & installers.** Thanks to their feedback we can offer solutions proven in thousands of cars. Mutual exchanging of the knowledge, participation in trainings and listening to different ideas till this moment was a right way. We are going to continue this direction.
- Last but not least; to **end users of "VERSUS"** systems, whose satisfaction is still our main target.

We are certain that there are a lot of opportunities for cooperation and that there are more institutions and companies that could be our potential partners. We pay our attention to long-standing cooperation and warrant satisfaction to any institution that pay attention to the same. Should you have any vision of our cooperation, that would be our pleasure to meet your expectations. We will try to find a way to implement and come your proposals into force.



Sequential Gas Injection system VERSUS:

Because PRECISION

Precision | Precyzja | ความถูกต้อง | Presisjon | 精密 | точность | Préciosité | דחא מש קר הקשמ קויד יכ
Tačnost | Précision | Duyarlılık | Přesnost | ακρίβεια | Precizna | Genauigkeit | Precisión | точний
Précision | Tačnost | Präzision | Hassasiyet | Ayar | Precisione | Nauwkeurigheid | Ekzakteco | Správnost'
дакладнасць | Deujuk | Pontosság | Saktësi | Precisão | Akkuraatheid

has only one name ...

www.versusgas.com

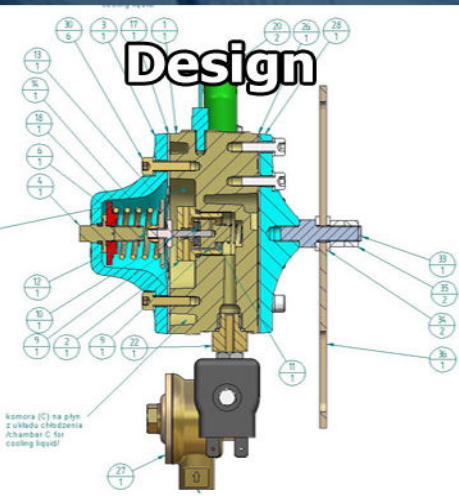


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www.versusgas.com

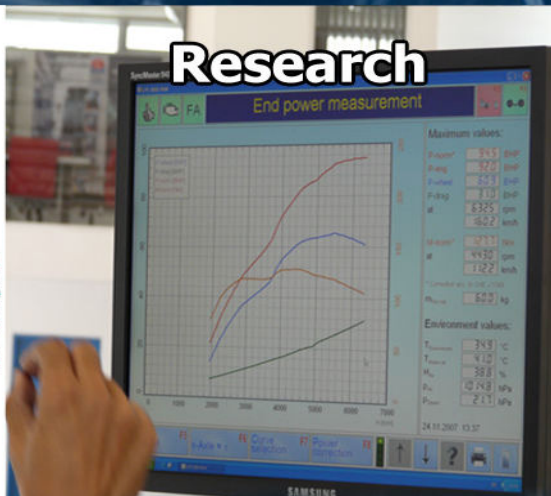
Manufacture



Design



Research



Development

