

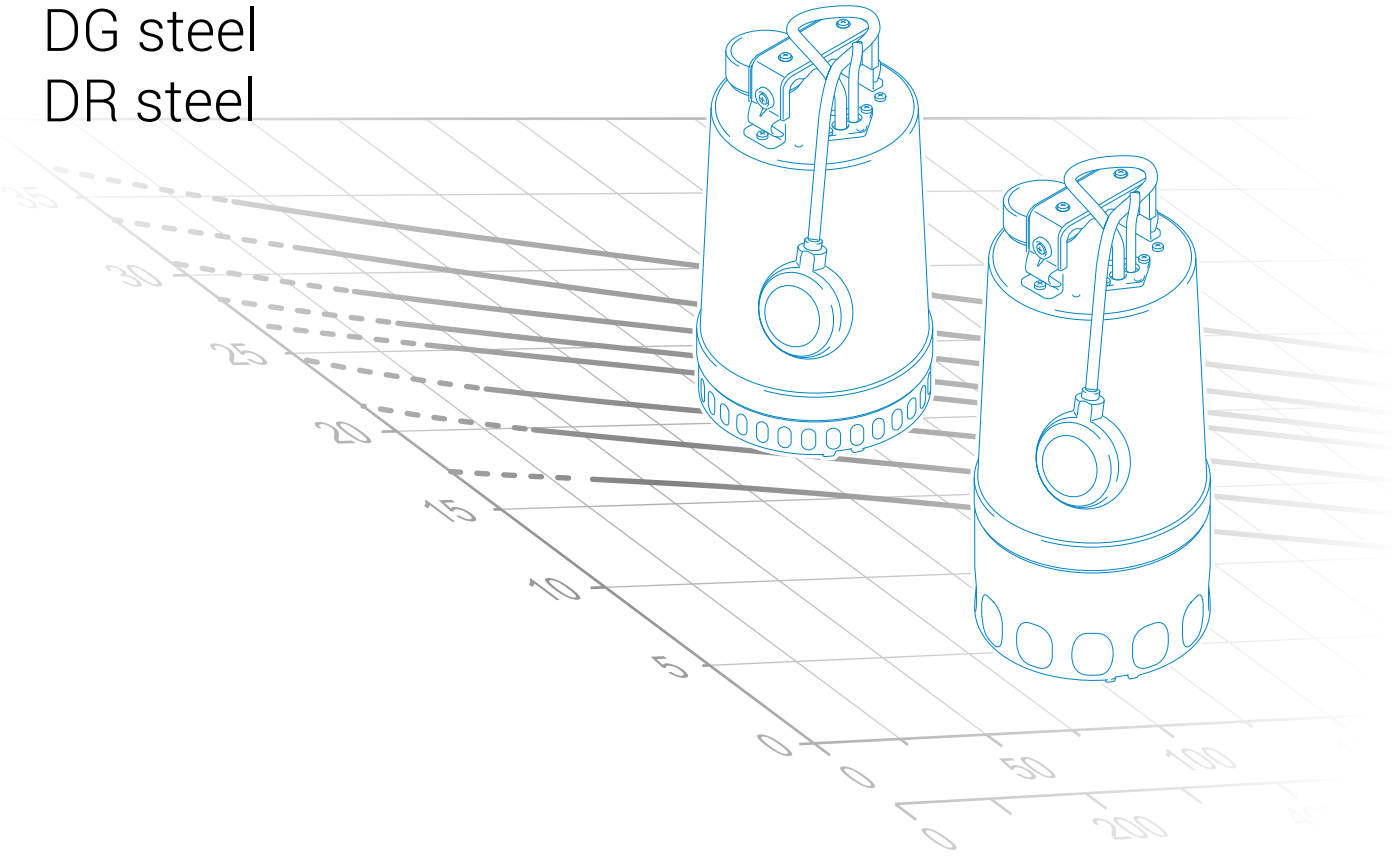
50Hz



water solutions

# Steel Series

DG steel  
DR steel



D A T A   B O O K L E T

EN





water solutions

# steel Series

DG steel

DR steel



D A T A    B O O K L E T

# steel Series

## General characteristics



- Lifting handle: Chrome-nickel steel AISI 304.
- Cooling System: As for the internal recycle pumped liquid system, the motor cooling is guaranteed even if the pump is partially covered by the liquid.
- One silicon carbide mechanical seal (SiC) and one alumina graphite mechanical seal (AL), V-ring
- Impeller: Chrome-nickel steel AISI 304.
- Optional: Vertically sliding level regulator, recommended for installation in small wells.
- DG steel: Chrome-nickel steel AISI 304 Strainer. Max free passage 40 mm.
- DR steel: A special set allows the sewage pump to be transformed into a dry floor one. The minimum level of liquid can be lowered to 5 mm from the ground by setting two special shimming.

## Hydraulic families



### DG (Draga)

page 7

- Set-back vortex impeller
- For clean or slightly dirty water, containing solids up to 40 mm grain size. For sewerage plants, livestock farms, car washes, hydro-sanitary applications.



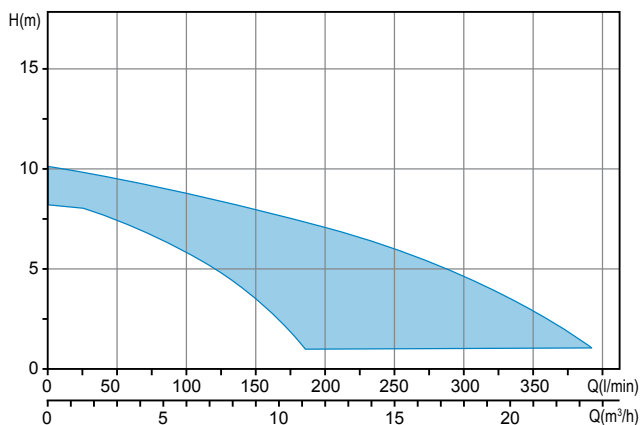
### DR (Dreno)

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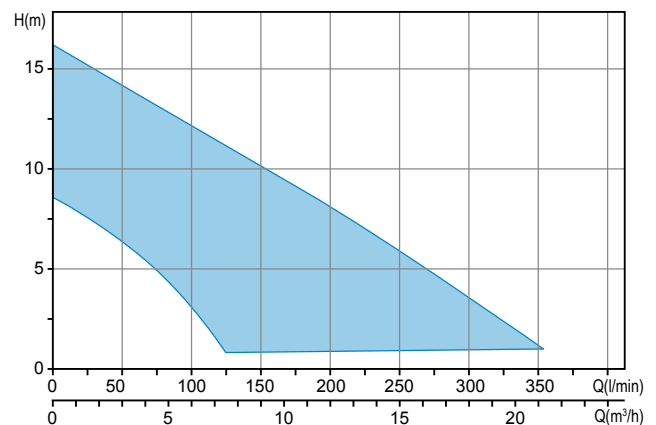
- Multi-channel open impeller
- For clean water containing solids up to 12 mm. For draining rooms or emptying tanks. For water from ponds, streams or pits and for rainwater collection.

## Operating ranges

### DG steel



### DR steel



## Key to product code

### DG steel 37 M5

①      ②      ③      ④      ⑤

- ① Family
- ② Series
- ③ Power (HPx100)
- ④ Motor phases
  - M = Single-phase
  - T = Three-phase
- ⑤ Power supply voltage frequency
  - 5 = 50Hz
  - 6 = 60Hz

## Versions available

### • Electrical variants

#### Single-phase models

- TCG** Thermal protection, capacitor, electrical cabinet, overload protection
- TCW** Thermal protection, capacitor, capacitor, vertical travel float switch

#### Three-phase models

- NAE** No electric accessories installed
- TRG** Thermal protection, relais, float switch

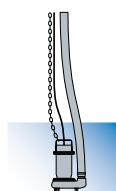
### • Cooling system

- N** No cooling and/or seal flushing system

### • Set of mechanical seals

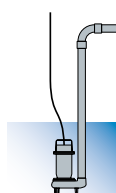
- SICAL** One silicon carbide mechanical seal (SiC) and one alumina graphite mechanical seal (AL), V-ring

## Installations



### Free installation

The electric pump, standing on its feet or base, is connected to the delivery flexible pipe using a joint fixed to the discharge. This installation allows to move easily the electrical pump



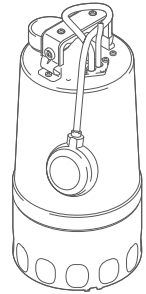
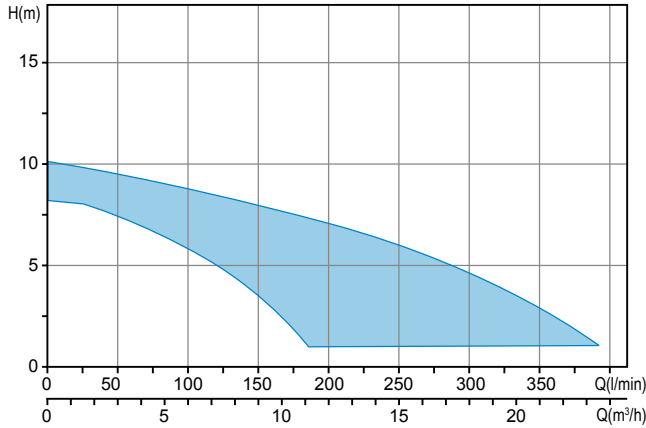
### Fixed installation

The electric pump, standing on its feet or base, is connected to the delivery pipe, which is screwed to the discharge if threaded, or fixed to a bend if the port is flanged. The pump-hose connection may be threaded or flanged, depending on the pump fitting.

## DG steel

### Pumps with vortex impeller

#### Operating ranges



#### Range characteristics

Motor power	0.37 ÷ 0.75 kW
Poles	2
Insulation class	F
Degree of protection	IP68
Discharge	GAS 1/4" - 1 1/2" vertical
Free passage	max 40 mm
Max flow rate	6.5 l/s (392 l/min)
Max head	10.0 m

#### Motor

Dry motor with thermal protections.

#### Cable

H07RN-F - 5 m cable length. Optional 10 m cable length.

#### Mechanical seals

One silicon carbide mechanical seal (SiC) and one alumina graphite mechanical seal (AL), V-ring

#### Applications

For clean or slightly dirty water, containing solids up to 40 mm grain size. For sewerage plants, livestock farms, car washes, hydro-sanitary applications.

#### Versions

Electrical variants	TCG, TCW (single-phase models) NAE, TRG (three-phase models)
Cooling system	N
Mechanical seals	SICAL

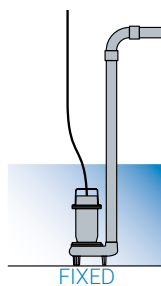
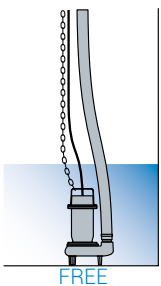
#### Operating specifications

Max operating temperature	40°C (90°C max 3')
PH of treated fluid	6 ÷ 14
Viscosity of treated fluid	1 mm²/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm³
Acoustic pressure max	<70dB
Max starts per hour	30

#### Construction materials

Case	Chrome-nickel steel AISI 304
Hydraulic parts	Chrome-nickel steel AISI 304
Impeller	Chrome-nickel steel AISI 304
Nuts and bolts	Stainless steel - Class A2-70
Standard gasket	Rubber - NBR
Shaft	Stainless steel - AISI 420
Paint type	-

#### Installations

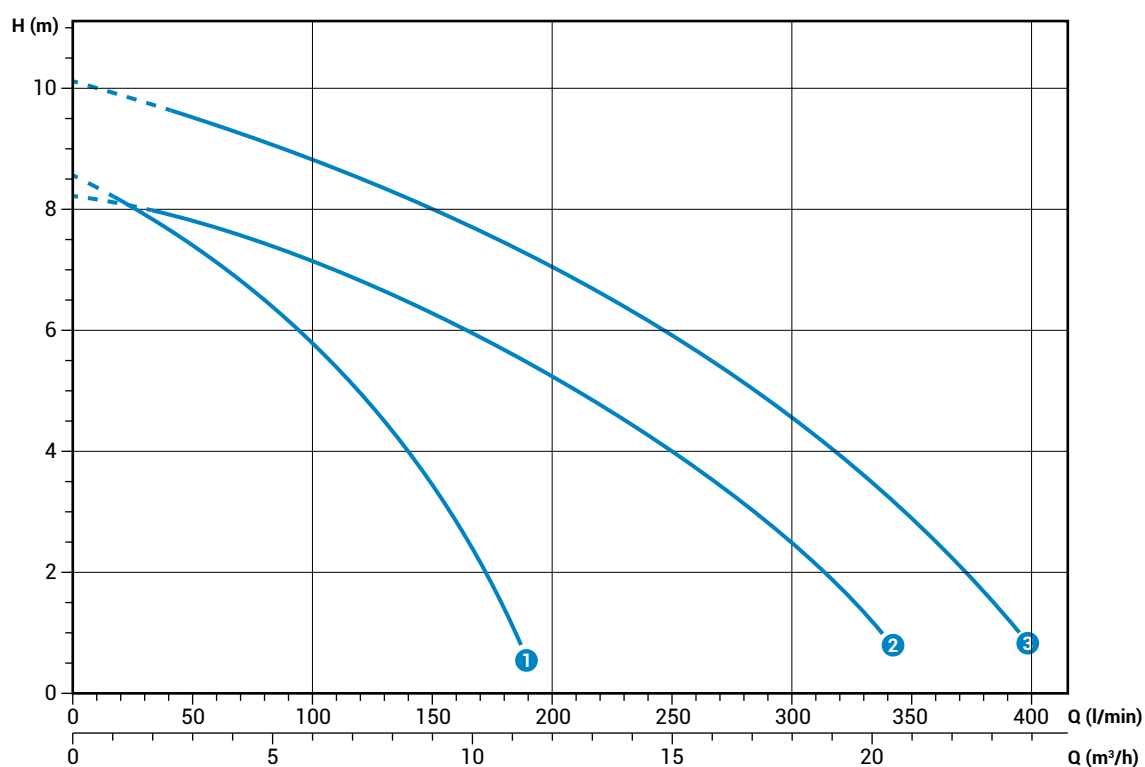


## DG steel 2/G1¼" - G1½"

### Performances

	l/s	0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
	l/min	0	30	60	90	120	150	180	210	240	270	300	330	360
	m³/h	0	1.8	3.6	5.4	7.2	9.0	10.8	12.7	14.5	16.3	18.1	19.9	21.7
① DG-Steel 37 M5		8.7	7.6	7.1	6.1	5.0	3.4	1.3						
② DG-Steel 55 M5		8.1	7.8	7.5	7.0	6.6	6.2	5.7	4.8	4.1	3.2	2.3	1.3	
③ DG-Steel 75 M(T)5		10.0	9.5	9.2	8.6	8.2	7.8	7.5	6.7	6.0	5.2	4.1	3.2	2.1

Characteristic curves according to UNI EN ISO 9906



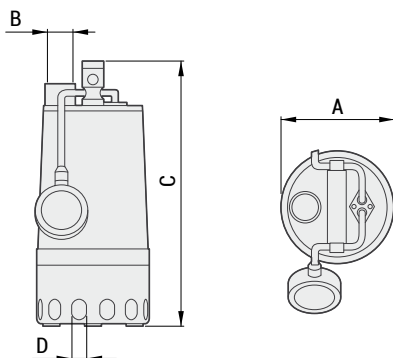
### Technical data


	V	Phases	P1 (kw)	P2 (kw)	A	Rpm	Start	Cable	Ø	Free passage
① DG-Steel 37 M5	230	1	-	0.37	3.0	2900	Dir	3G1	G 1¼"	25 mm
② DG-Steel 55 M5	230	1	-	0.55	4.3	2900	Dir	3G1	G 1½"	40 mm
③ DG-Steel 75 M5	230	1	-	0.75	5.6	2900	Dir	3G1	G 1½"	40 mm

	V	Phases	P1 (kw)	P2 (kw)	A	Rpm	Start	Cable	Ø	Free passage
③ DG-Steel 75 T5	400	3	-	0.75	2.4	2900	Dir	4G1	G 1½"	40 mm

## DG steel

### Overall dimensions and weights



	Ø A	B	C	D	
DG-Steel 37 M5	168.5	G 1¼"	350	25	6.6
DG-Steel 55 M5	216	G 1½"	406	40	8.1
DG-Steel 75 M(T)5	216	G 1½"	406	40	8.9

Dimensions in mm

### Packaging dimension



	X	Y	Z
DG-Steel 37 M5	200	200	400
DG-Steel 55 M5	240	250	470
DG-Steel 75 M(T)5	240	250	470

Dimensions in mm

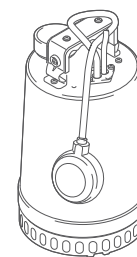
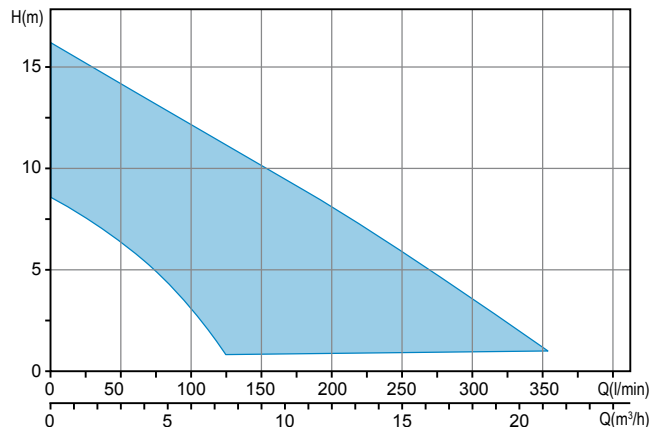
### No. pieces per pallet

For DG-Steel 37 models each pallet (EUR 1000x1200 mm) is able to take 90 pieces.  
 For DG-Steel 55-75 models each pallet (EUR 1000x1200 mm) is able to take 40 pieces.



## Pumps with multi-channel open impeller

### Operating ranges



### Range characteristics

Motor power	0.25 ÷ 0.75 kW
Poles	2
Insulation class	F
Degree of protection	IP68
Discharge	GAS 1¼ - 1½" vertical
Free passage	max 12 mm
Max flow rate	5.9 l/s (355 l/min)
Max head	16.0 m

### Motor

Dry motor with thermal protections.

### Cable

H07RN-F - 5 m cable length. Optional 10 m cable length.

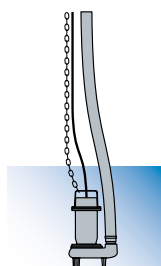
### Mechanical seals

One silicon carbide mechanical seal (SiC) and one lip seal (AL).

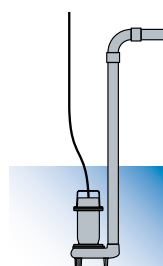
### Applications

For clean water containing solids up to 12 mm. For draining rooms or emptying tanks. For water from ponds, streams or pits and for rainwater collection.

### Installations



FREE



FIXED

### Versions

Electrical variants	TCG, TCW (single-phase models) NAE, TRG (three-phase models)
Cooling system	N
Mechanical seals	SICAL

### Operating specifications

Max operating temperature	40 °C (90°C max 3')
PH of treated fluid	6 ÷ 14
Viscosity of treated fluid	1 mm²/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm³
Acoustic pressure max	<70dB
Max starts per hour	30

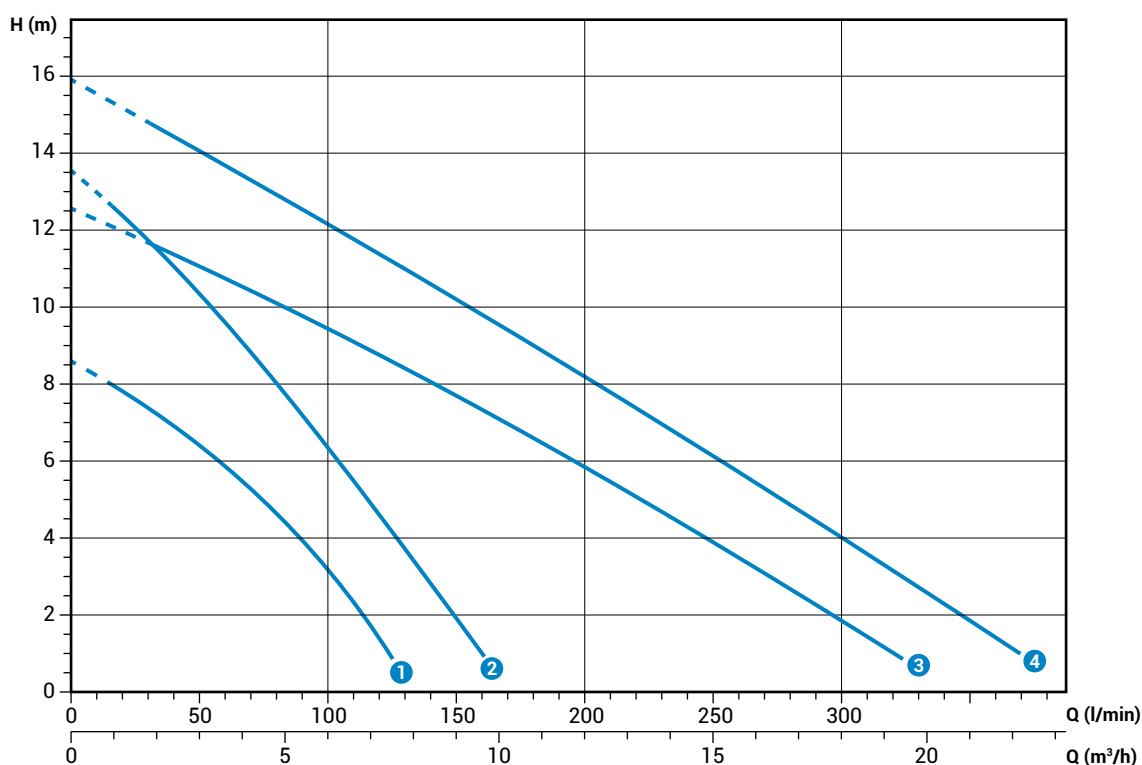
### Construction materials

Case	Chrome-nickel steel AISI 304
Hydraulic parts	Chrome-nickel steel AISI 304
Impeller	Chrome-nickel steel AISI 304
Nuts and bolts	Stainless steel - Class A2-70
Standard gasket	Rubber - NBR
Shaft	Stainless steel - AISI 420
Paint type	-

## DR steel 2/G1¼" - G1½"

### Performances

	l/s	0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5
	l/min	0	30	60	90	120	150	180	210	240	270	300	330
	m³/h	0	1.8	3.6	5.4	7.2	9.0	10.8	12.7	14.5	16.3	18.1	19.9
① DR-Steel 25 M5		8.5	7.0	5.7	4.0	1.3							
② DR-Steel 37 M5		13.6	11.6	9.5	7.0	4.5	1.9						
③ DR-Steel 55 M5		12.4	11.3	10.4	9.2	8.4	7.2	6.3	5.0	4.0	3.0	1.8	
④ DR-Steel 75 M(T)5		16.0	15.0	13.4	12.4	11.2	10.0	8.8	7.6	6.5	5.2	3.8	2.5

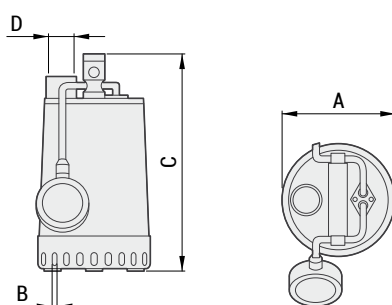



Characteristic curves according to UNI/EN ISO 9906

### Technical data

	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Cable	Ø	Free passage
① DR-Steel 25 M5	230	1	-	0.25	2.3	2900	Dir	3G1	G 1¼"	10 mm
② DR-Steel 37 M5	230	1	-	0.37	3.1	2900	Dir	3G1	G 1½"	10 mm
③ DR-Steel 55 M5	230	1	-	0.55	4.3	2900	Dir	3G1	G 1½"	12 mm
④ DR-Steel 75 M5	230	1	-	0.75	5.6	2900	Dir	3G1	G 1½"	12 mm

	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Cable	Ø	Free passage
④ DR-Steel 75 T5	400	3	-	0.75	2.4	2900	Dir	4G1	G 1½"	12 mm

**Overall dimensions and weights**

	Ø A	B	C	D	 kg
DR-Steel 25 M5	168.5	G 1¼"	299	10	5.9
DR-Steel 37 M5	168.5	G 1¼"	299	10	6.3
DR-Steel 55 M5	216	G 1½"	335	12	7.7
DR-Steel 75 M(T)5	216	G 1½"	335	12	8.4

Dimensions in mm

**Packaging dimension**

	X	Y	C
DR-Steel 25 M5	200	200	350
DR-Steel 37 M5	200	200	350
DR-Steel 55 M5	240	250	400
DR-Steel 75 M(T)5	240	250	400

Dimensions in mm

**No. pieces per pallet**

For DR-Steel 25-37 models each pallet (EUR 1000X1200 mm) is able to take 90 pieces.  
 For DR-Steel 55-75 models each pallet (EUR 1000X1200 mm) is able to take 60 pieces.

## Hydraulic performance data

For quick, easy reference

### DG steel

	l/s	0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
	l/min	0	30	60	90	120	150	180	210	240	270	300	330	360
	m <sup>3</sup> /h	0	1.8	3.6	5.4	7.2	9.0	10.8	12.7	14.5	16.3	18.1	19.9	21.7
① DG-Steel 37 M5		8.7	7.6	7.1	6.1	5.0	3.4	1.3						
② DG-Steel 55 M5		8.1	7.8	7.5	7.0	6.6	6.2	5.7	4.8	4.1	3.2	2.3	1.3	
③ DG-Steel 75 M(T)5		10.0	9.5	9.2	8.6	8.2	7.8	7.5	6.7	6.0	5.2	4.1	3.2	2.1

### DR steel

	l/s	0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5
	l/min	0	30	60	90	120	150	180	210	240	270	300	330
	m <sup>3</sup> /h	0	1.8	3.6	5.4	7.2	9.0	10.8	12.7	14.5	16.3	18.1	19.9
① DR-Steel 25 M5		8.5	7.0	5.7	4.0	1.3							
② DR-Steel 37 M5		13.6	11.6	9.5	7.0	4.5	1.9						
③ DR-Steel 55 M5		12.4	11.3	10.4	9.2	8.4	7.2	6.3	5.0	4.0	3.0	1.8	
④ DR-Steel 75 M(T)5		16.0	15.0	13.4	12.4	11.2	10.0	8.8	7.6	6.5	5.2	3.8	2.5





water solutions

All data made available remain non-binding.  
Zenit reserves the right to make unannounced product changes it deems appropriate.

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